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**Volume 75**

Interaction of Morphology and Syntax. Case studies in Afroasiatic  
Edited by Zygmunt Frajzyngier and Erin Shay
Interaction of Morphology and Syntax
Case studies in Afroasiatic

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Introduction

Zygmunt Frajzyngier and Erin Shay

The Afroasiatic phylum, with its approximately 375 languages, is the fourth-largest language phylum in the world (Ethnologue). The languages of the phylum are grouped into six families: Berber, Egyptian, Semitic, Cushitic, Omotic, and Chadic, although the status of Omotic as a separate family within Afroasiatic or as belonging to Afroasiatic has not been universally accepted (Zaborski 1986; Newman 1980). Some languages of the Afroasiatic phylum, e.g., Arabic, are spoken by many millions of people; some languages are spoken by small but relatively stable populations; some languages are endangered with extinction; and others, e.g. Egyptian, are already extinct.

The present volume consists of a selection of papers from the conference ‘Typology of Afroasiatic Languages’, held in April 2006 in Boulder, Colorado, along with three invited papers. The purpose of the conference was to stimulate and advance typological studies of Afroasiatic languages, including the study of which typological features are associated with Afroasiatic as a whole and which are associated with individual branches of Afroasiatic. The scope of the conference included phonological, morphological, and syntactic issues within the whole Afroasiatic phylum, within one or more of its families, or within individual Afroasiatic languages. Although the announced scope of the conference was quite broad, it so happened that many papers dealt, from various angles, with the interaction between morphology and syntax in Afroasiatic. This coalescence of topics helped us choose the title and focus of the present volume. The goal of this volume is to present a subset of the authors’ findings with respect to domains that, in most instances, have not been discussed for Afroasiatic languages. Unlike other volumes

1. The conference and the preparation of this volume were supported by the Council on Research and Creative Work (CRCW) and the Graduate Committee of the Arts and Humanities at the University of Colorado at Boulder. The editors’ work was partially supported by NSF grant No. 0439940. We would like to thank all participants for their contributions to the conference and the volume. We would like to thank Marian Safran for her expert editing of the papers for this volume.
on Afroasiatic languages that were dominated by studies of Semitic languages, much of the present volume is dedicated to Cushitic and Chadic languages.

Chapters within the present volume address the interaction of morphology and syntax within four families of the Afroasiatic phylum: Berber, Semitic, Cushitic and Chadic. Three chapters explore one or more typological characteristics across an entire language family or branch, while others focus on one or two languages within a family and the implications of their structures for the family, the phylum, or linguistic typology as a whole. The diversity of topics addressed within the present volume reflects the great diversity of language structures and functions within the Afroasiatic phylum.

In “Case marking, syntactic domains and information structure in Kabyle (Berber)”, Amina Mettouchi addresses the interaction between word order and case marking in Kabyle, a language of the Berber family spoken in northern Algeria. Mettouchi proposes that in Kabyle, traditionally described as a VSO language with SVO variations, the choice of word order has to do with contrasts within the system of information structure while the marking of absolute versus integrative case codes functions in semantic and other domains. Among the implications of Mettouchi’s study is that word order and case marking may interact within one or more domains, and that the type of interaction can be determined only through examination of language-internal phenomena.

Three chapters deal with the Chadic family, numbering about 160 languages spoken in northern Nigeria, Niger, Chad, and Cameroon. Christopher Ehret, in “The internal and comparative reconstruction of verb extensions in early Chadic and Afroasiatic”, addresses a question that is important for Chadic linguistics and that has a long tradition of discussion in Semitic, namely the number of consonants in the verbal root and stem. At issue is the question of whether the Semitic verb was biconsonantal or triconsonantal. In previous studies (e.g. Ehret 1995), the author has proposed that the third consonant in Afroasiatic languages represents a verbal extension. This proposal was controversial when first presented (cf. Zaborski 1991; Kaye 1996). In the present study Ehret provides argumentation for his hypothesis by analyzing final consonants of many triconsonantal verbs in Mafa (Central Chadic). He postulates that consonants represent verbal extensions and proposes a specific function for each consonant. Ehret’s analysis not only raises the question whether verb-final consonants in other Chadic languages may also represent erstwhile extensions, but also whether a system of extensions may ultimately be reconstructed for Proto-Chadic and, ultimately, Proto-Afroasiatic.

Zygmunt Frajzyngier’s chapter, “One way of becoming a dative subject”, deals with a phenomenon that has not previously been addressed for Chadic languages. In one type of clause in Wandala (Central Chadic), the subject is marked by the same preposition that precedes the nominal dative/benefactive argument.
Frajzyngier proposes that the use of this preposition is not connected with the semantic role of the argument or with the nature of the verb, as has been proposed in studies of dative subjects in other languages, but rather with the discourse function of the subject. The subject is coded by this preposition when it represents non-topicalizing switch reference.

In “Coding the unexpected: Subject pronouns in East Dangla”, Erin Shay proposes that in East Dangla, a Chadic language of the East branch, the position of the subject pronoun with respect to the verb marks a clause as expected or unexpected, a function that is outside the domain of reference and that has not been previously identified for Chadic languages. The chapter adds to the typology of pronouns proposed in Frajzyngier (1997), which shows that pronominal categories that appear to have a universal function, e.g. marking the third-person singular referent, may in fact have very different functions across languages, depending on the functions coded within the language and the other coding means that are available.

Some languages of the Semitic family are among the best-described languages of the Afroasiatic phylum, and considerable attention has been paid to the morphosyntax of Hebrew, Arabic and others. In his chapter “Ergative and active features of the Ethiopian Semitic type”, Grover Hudson examines a number of morphosyntactic features that are characteristic of the Ethiopian Semitic branch, some of which he postulates to be unique to this branch, and proposes a typological explanation for some of these phenomena. Hudson examines the distinction between geminating and non-geminating verbs; two types of causative constructions; copulas conjugated with object suffixes; and the presence of rich verb-object agreement in topicalization. He associates these characteristics with properties of ergative and active-stative languages, as postulated by Klimov (1977) and Diakonoff (1988). The larger importance of the study is that it highlights a number of phenomena whose existence in Ethiopian Semitic, and in languages of other branches and families, requires a functional, historical, and typological examination.

Three chapters in the present volume deal with languages of the Cushitic family, spoken in northeastern and eastern Africa. Maarten Mous’s chapter, “Number as an exponent of gender in Cushitic”, uses analyses of two Cushitic languages, Iraqw and K’abeena, to support the argument that the category ‘plural’ in Cushitic must be considered a category of gender rather than number. The argumentation is based on the demonstrated interaction between number marking and gender marking in the grammatical systems of these languages. The implications of the proposal go well beyond Cushitic, as it shows that what are traditionally taken to be two different semantic categories are actually members of the same category.
The implication is that grammatical systems may cut across categorizations based on reference to the real world.

The Cushitic language Kambaata (Highland East Cushitic) makes very extensive use of relative clauses, not only in nominal modification but also in adverbial clauses and cleft constructions. In “Relativization in Kambaata,” Yvonne Treis shows that nearly every clause in oral and written texts in Kambaata contains at least one relative construction. The proliferation of relative clauses in Kambaata, and their near absence in the related language Gawwada, raises very interesting questions about the functions of relative clauses cross-linguistically and the other types of constructions that may share the same or similar functional domains.

Mauro Tosco’s chapter, “Between coordination and subordination in Gawwada”, focuses on Gawwada, an East Cushitic language of the Dullay group spoken in Southwest Ethiopia. Though a typical Cushitic language in some respects, Gawwada diverges from other Cushitic languages with respect to its clause-linking strategies. Unlike Kambaata, Gawwada uses relative clauses very sparingly; the verb does not have a subordinate clause paradigm; there is no clefting; and the same coordinator is used to link nominal phrases and clauses. The significance of the last characteristic is that in some Afroasiatic languages, e.g. Chadic, this characteristic is very rare.

The main value of the present volume is that, apart from the issues discussed in Ehret’s chapter, the typological issues herein have not been raised in previous studies of Afroasiatic languages.

References

Case-marking, syntactic domains and information structure in Kabyle (Berber)

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This paper aims at analyzing the relationship between word-order variation, prosody and case-marking in a Northern Berber language, Kabyle. I show that word-order variation is linked to the argumental nature of personal affixes, and codes topic-focus articulation. I also show that prosody interacts with case-marking to delimit functional domains. After investigating the role of case-marking at the level of the clause in parallel with the intra-phrasal level, I come to the conclusion that the binary case system of Kabyle is not to be equated to a marked nominative versus absolute, or ergative versus stative. Instead, I show that the integrative case, now a relational case based on the semantics of dependency (a source and a target, a locative relationship), is likely to have stemmed from a former ablative-locative case.

Introduction

Kabyle\(^1\) (Berber, Afroasiatic) is spoken in the North of Algeria by about four million speakers, five if we include those living in Europe and Canada. It is a tenseless, head-marking language and is generally presented as a VSO language, with possible SVO variations. Although this characterization may capture some general syntactic facts about the language, it does not do justice to the great variation observed in its actual use.

In this paper,\(^2\) I propose to broach the subject of the interaction of syntax and morphology through the question of the relationship between word-order varia-

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1. The variety presented here is a Central Kabyle one, spoken by the At Idjer tribe, in the village of At Ikhlef, district of Bouzeguene.

2. I would like to thank the reviewers and the editors for their rich and insightful comments and suggestions. I am also very grateful to all the speakers that have, over the years, agreed to be recorded, and helped me in my fieldwork.
tion and case-marking. Word-order variation is related to information structuring, and more precisely to the categorical/thetic opposition, whereas binary case opposition (absolute versus integrative) takes on several functions: it distinguishes direct objects from postverbal subjects, and it marks dependency between a nominal and the argument structure of the predication, as it is expressed by personal and possessive affixes and clitics. I will investigate the relationship between those two levels of marking, bearing in mind that the integrative case also has other functions inside the noun phrase: it marks the possessor in genitives, and it bears on the nominal following a quantifier or a preposition.

I will first give an overview of the syntactic domains in the simple sentence in Kabyle, and of the possible word-order variations. In a second part, I will show that word-order variation is linked to topic-focus articulation, thus characterizing Kabyle as a discourse-configurational language. I will then investigate the case system of Kabyle, and show that the integrative case, which is synchronically a dependency marker, is likely to have stemmed from an ablative-locative case.

1. Personal affixes and clitics

1.1 Personal affixes

Kabyle subject affixes are often circumfixes (see Table 1), which convey information about person, gender and number. Their alignment is accusative. Contrary to English or French basic utterances, which must contain at least an unstressed pronoun (*leaves, or *part are not acceptable utterances), Kabyle basic verbal sentences are composed of an affix and a stem (see example 1). The personal affix is obligatory and refers to the main participant of the situation (event or state).

(1) ye-čča subj.3sm-eat(pfv): 'he ate/has eaten'

| basic utterance = personal affix: ye- + stem:  čča |
| stem = root (čč) + aspectual scheme (here perfective, realized -a). |

3. There is one standard set of affixes for all TAM (Tense Aspect Mood) plus specific ones for the imperative, the hortative, and the quality verbs (in the perfective only).

4. Abbreviations are as follows: 1, 2 or 3 refer to person; s = singular, p = plural, F = feminine, M = masculine; subj = subject affix, DAT = dative clitic, ACC = accusative clitic; INT = integrative case (annexation state); ABS = absolute case (free state); pfv = perfective aspect, impfv = imperfective, aor = aorist; caus = causative prefix, pass = passive prefix; neg = preverbal (main) negator, postneg = postverbal (optional) reinforcement of neg; idneg = identificational negation, exneg = existential negation, prox = proximal particle, anaph = anaphoric determiner, irr = irrealis particle, conc = concomitance particle, cop = copula, rel° = realis relative
I have argued against the idea that those affixes should be considered as mere agreement markers (Mettouchi 2005 and forthcoming), on the basis of the fact that neither full NPs nor independent pronouns are grammatically necessary. Indeed, basic sentences composed of a verb and its third-person affix without any “subject” NP or independent pronoun are extremely frequent, and whole stretches of texts can go without either one, even when several protagonists are being referred to, as we shall see below. And when noun phrases are present, they order themselves quite freely, on the basis of the informational structure of the predication (see next section), and not on the basis of grammatical relations: the affix/clitics configuration indicates what the grammatical relations are, and the ordering of NPs indicates what the topic/focus articulation is.

Other languages behave similarly. Chafe (1994:146–152), analyzing the information structure of Seneca, a native language of New York State, and comparing it with English, explicitly states the differences between the two languages as far as pronominal affixes and unstressed pronouns are concerned:

Instead of being used to express given information, the Seneca prefixes refer to the core participants of events and states – referents that are obligatorily included in an event or state idea. When a Seneca speaker chooses to categorize an event or state in a particular way, that categorization dictates the presence of one, two, or occasionally three participants which are obligatorily expressed with a pronominal prefix. Their activation cost is irrelevant. Whereas English uses pronouns to verbalize given referents, Seneca uses pronominal prefixes to verbalize core participants.

(Chafe 1994:149)

Personal affixes differ from personal clitics in that they are the primary arguments of verbs, and that they are not mobile (whereas clitic climbing is the rule). Personal affixes mark a grammatical relation, not a semantic one – they subsume both the Actor and Undergoer semantic macroroles. As early as 1964, Galand claimed

---

Table 1. Personal affixes (here with perfective radical *kker* ‘stand up’)

<table>
<thead>
<tr>
<th>P</th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>masculine</td>
<td>feminine</td>
</tr>
<tr>
<td>1</td>
<td><em>kker</em>-ey</td>
<td>n-<em>kker</em></td>
</tr>
<tr>
<td>2</td>
<td><em>te</em>-kker-<em>ed</em></td>
<td><em>te</em>-kker-<em>em</em></td>
</tr>
<tr>
<td>3</td>
<td>ye-<em>kker</em></td>
<td><em>te</em>-kker</td>
</tr>
</tbody>
</table>

In the terminology of Van Valin and LaPolla (1997).

---

marker; rel* = irrealis relative marker; NPacc = nominal phrase coreferent to the accusative clitic; NPdat = coreferent to the dative clitic; NPPa = nominal phrase coreferent to the personal affix; pa-v = personal affix-verb (= basic utterance).

5. In the terminology of Van Valin and LaPolla (1997).
that the affixes, being the sole obligatory argument markers, were the true subjects. His claim was based on Martinet’s definition of the subject as the necessary appendage of the predicate “l’élément qui, dans tout énoncé non injonctif et non mutilé, accompagne nécessairement le prédicat” (1962:76). Similar arguments have been proposed for other language families:

A central concern in the study of polysynthetic languages has been to explain the connection between two of the most striking features of these languages: highly articulated systems of argument agreement marking on the one hand, and very free ordering and omission of independent phrases expressing the arguments of a clause on the other. One of the oldest answers to this question has been one of the most lasting: Wilhelm von Humboldt (Humboldt 1836) claimed that in Nahuatl it is the affixes on the verb which fill the argument positions of the verb, and that independent expressions are only loosely linked to these affixes.

(Phillips 1993:173)

1.2 Clitics

The basic predicative unit can be followed by clitics (dative and accusative, depending on the valency of the verb and the construal of the event or situation) and a proximal or distal particle. This particle is very frequent, appearing in approximately 20% of verbal predications. The order of clitics is rigid: dative comes first, then accusative.

(2) taqcict te-fka =yas =ten =id
girl.abs subj.3fs-find.pfv dat.3sa cc.3pm prox
‘The girl gave them to him/her’.

Clitics are semantically motivated: accusative clitics are patients or themes, whereas dative clitics are recipients and often function as ethical datives, expressing the affectedness of the recipient. Counts conducted on a narrative corpus showed that among the 33 verbal predications (out of 110) that contained a dative clitic, two thirds introduced a recipient-type argument, and one third were triggered by semantic orientation (affectedness by the event or state) (Mettouchi 2005).

Accusative clitics are also used for some types of nonverbal predications to refer to the main participant in a situation. Those predicates are existential (in the

6. See Mettouchi (forthcoming) for more details, and bibliographical complements.
7. “The element that, in all non-injunctive and non-mutilated utterances, necessarily accompanies the predicate”.
negative), qualifying, and presentative. They are to be related to the thetic “VS” configurations that will be studied in Section 2.3. This use of patient clitics to express primary arguments with some predicates has been considered as evidence in favour of the existence of a split-S system in Berber (Aikhenvald 1995).

(3) \text{ulac}=\text{itent} \quad \text{exneg}=\text{acc3fp}
   
   ‘They are not here/there’.

(4) \text{aql}=\text{it} \quad \text{appear}=\text{acc3ms}
   
   ‘Here he comes’.

(5) \text{d iri}=\text{tt} \quad \text{cop bad}=\text{acc3fs}
   
   ‘She is bad’.

Table 2 shows that the distinction between dative and accusative is blurred in the first person, and that the maximum differentiation appears in the third person.

The string of clitics is attached to the head of the clause. The default head (in an indicative, \textit{realis}, positive main clause) is the verb. Otherwise, preverbal (\textit{irrealis}, progressive, negative, relative) particles take on head status. No noun phrase is ever allowed between the particle and the verb; if there is any NP, it must appear either before the particle (with “free state” (absolute [unmarked] case-marking, see (2’)), in what we call the prehead position, or after the verb and its clitics (with “annexation state” (integrative [marked]) case-marking, see (2’)), in an extended or postcore position. The following examples are the \textit{irrealis} versions of example (2):

(2’) \text{tagcict ad }=\text{as }=\text{ten }=\text{id }=\text{te-fk}
   
girl.LBS \text{IRR }=\text{dat3s }=\text{acc3mp }=\text{prox subj3fs-give.aor}
   
   ‘The girl will give them to him/her’.

9. The semivowel “y” or the vowel “i” appear in certain phonetic contexts only. (k) in 2PF dative is optional.
Personal affixes and clitics can be coreferential to lexical NPs or independent pronouns. In the previous example, for instance, \textit{teqcict} is coreferential to the personal affix \textit{te-}, which is the grammatical subject of the sentence.

The indirect object, as well as the instrumental, are the only oblique arguments. They are introduced by prepositions \textit{i ‘to’} or \textit{s ‘with’}. For indirect objects in postcore position, the whole Prepositional Phrase is coreferential to the dative clitic. When indirect objects are topical, they appear as prehead NPs.

\begin{itemize}
\item \text{(2’’)} \textit{ad} =as =ten =id =te-fk \textit{i weqcic}
\item \text{IRR} =\text{DAT} 3 s =\text{ACC} 3 MP =\text{PROX} \text{ SUBJ} 3 FS \text{-give.aor.to boy.INT}
\item ‘The girl will give them to the boy.’
\item \text{(2’’’)} \textit{aqcic ad} =as =ten =id =te-fk
\item \text{boy.ABS} \text{ IRR} =\text{DAT} 3 s =\text{ACC} 3 MP =\text{PROX} \text{ SUBJ} 3 FS \text{-give.aor.}
\item ‘The boy, she will give them to him.’
\end{itemize}

1.3 Syntactic domains

Syntactically, the analysis of the various positions taken by NPs and affixes and clitics leads to the delimitation of precise domains: on the left and the right of the frame, the prehead and postcore slots; inside the frame, the core delimited by square brackets, and the extended core on its right, delimited by the frame itself; and finally, the basic utterance, inside the core, between brackets.

The basic utterance is referred to as \textit{pa-V} (personal affix-verb), and NPs coreferential to the personal affix and accusative and dative clitics are labelled \textit{NP}_{pa} (coreferent to the personal affix), \textit{NP}_{Acc} (coreferent to the accusative clitic) and \textit{NP}_{Dat} (coreferent to the dative clitic), lexical direct objects being labelled \textit{O}, and clitics \textit{Cl}.

\begin{itemize}
\item \textit{NP}_{pa/Cl} [ head=clitics (pa-V) ] \textit{NP}_{pa/O} \textit{NP}_{pa/Cl}
\end{itemize}

The innermost unit, the \textbf{basic utterance}, cannot be broken further. In examples (2’) and (2’’), it is realized by \textit{te-fk}. The \textbf{core}, between square brackets, is characterized by the fact that no NP can appear in it, and by the mobility of clitics. In examples (2’) and (2’’), the core is \textit{ad}=\textit{as}=\textit{ten}=\textit{id} \textit{te-fk}. Noun phrases can appear in the \textbf{extended core}, but with restrictions: only direct objects and lexemes coreferent to the personal affix are acceptable, in any order (\textit{NP}_{pa/O} or \textit{O}/\textit{NP}_{pa}). The \textbf{prehead} and the \textbf{postcore} slots are similar in terms of syntactic constraints: they
accept noun phrases coreferent to the personal affix as well as to the possessive affix, or to the dative or accusative clitics. They differ however in that the postcore
NP, unlike the prehead one, must bear the annexation state (integrative case). The
postcore slot also contains adjuncts, such as instrumentals, or indirect objects.

As far as complex sentences are concerned, syntactic domains are also quite
rigid.\(^{10}\) Relative clauses, for instance, be they part of a cleft sentence or used as a
noun modifier, never allow an argumental prehead noun phrase, this slot being
taken by the antecedent of the relative clause or the focus of the cleft. If the ante-
cedent refers to the object of the verb of the relative clause, then the NP corefer-
ential to the personal affix (here *weq civic*) can appear, always in the extended core
position:

\[(6) \quad \text{ayrum} \quad || \quad i=s=id \quad ye-fka \quad (\text{weq civic})
\]
\[
\text{bread.abs rel°=dat3s=prox subj3ms-give.pfv} \quad (\text{boy.int})
\]

the bread that he (/the boy) gave to her

\[(6') \quad *\text{ayrum} \quad || \quad aqcic \quad i=s=id \quad ye-fka
\]

\*bread.abs \quad boy.abs rel°=dat3s=prox subj3ms-give.pfv

the bread that he (/the boy) gave to her

\[(7) \quad d \text{ayrum} \quad || \quad i=s=id \quad ye-fka \quad (\text{weq civic})
\]
\[
\text{cop bread.abs rel°=dat3s=prox subj3ms-give.pfv} \quad (\text{boy.int})
\]

it is bread that he (/the boy) gave to her

\[(7') \quad *d \text{ayrum} \quad || \quad aqcic \quad i=s=id \quad ye-fka
\]

\*cop bread.abs \quad boy.abs \quad rel°=dat3s=prox subj3ms-give.pfv

it is bread that he (/the boy) gave to her

\[(\text{COP}) \quad \text{antecedent/focus} \quad || \quad [ \text{REL=clitics (pa-V)} ] \quad (\text{NP}_{pa}) \quad \text{NP}_{pa/Cl}
\]

Complement clauses also preserve the core and extended core, while excluding
the presence of a prehead argumental NP.

\[(8) \quad ye-bya \quad || \quad ad=s=t=id \quad ye-fk
\]
\[
\text{subj3ms-want.pfv} \quad \text{irr=dat3s=acc3ms=prox subj3ms-give.aor}
\quad (\text{weq civic})
\quad (\text{boy.int})
\]

the boy wants to give it to her

\(^{10}\) The (intended) beginning of the subordinate clause is marked here by a double vertical
bar, ||.
In (8) and (8’) the NP coreferential to the personal affix of the main verb can be placed either in the extended core position of the main verb, or in the extended core position of the subordinate verb. But it cannot be placed in the prehead position of the subordinate verb.

\[
(NP_{pa/Cl}) \quad [\text{head} = \text{clitics (pa-V)}] (NP_{pa}) \quad || \quad [\text{COMP} = \text{clitics (pa-V)}] (NP_{pa}) \quad NP_{pa/Cl}
\]

Those syntactic constraints imply that in subordinate clauses, the only two possible configurations should be: the one with only affixes and clitics or the one with the core followed by the NP coreferential to the personal affix (extended core). Phrased in familiar terms, only VS (or V) is possible in subordinate clauses, not SV. This is an argument in favor of the classification of Kabyle as a VSO language. However, this characterization, although it captures some essential features of the language, does not do justice to the high flexibility observed in independent and main clauses. It is therefore important that this flexibility be investigated further, which is the purpose of the next section.

2. Word-order and information structure

It is very common in conversations and narratives to find bare cores – units formed by the verb, its affix, and its clitics without any lexical NPs. It is therefore necessary to include those utterances in the study of word-order alternations: the variation is not between VS and SV, but between \(pa-V\) \(NP_{pa}\) (“VS”), \(NP_{pa} \ pa-V\) (“SV”), \(pa-V\) (“V”), \(NP_{Acc} \ pa-V-Cl_{ACC}\) (“OV”), \(NP_{Dat} \ pa-V-Cl_{DAT}\) (“IndOV”) and \(pa-VO\) (“VO”).

Those alternations are presented in Table 3, where two oral genres have been investigated: conversation and narratives.

11. Possibly with a postcore NP.
It appears that the preverbal (or more exactly, prehead) position is stable across genres; it represents 17% to 18% of our data, and in that position, NPs coreferent to the subject affix are far more frequent than NPs coreferent to accusative clitics.

There is more variation in the extended core (or postcore) positions: the pa-V configuration is stable across genres, whereas there seems to be a complementary distribution between pa-V NP_pa and pa-V in conversation and narratives. I will come back to this later, but for now, I will simply make two remarks: word-order is flexible, and utterances without a NP_pa (a NP coreferent to the personal affix) are very frequent in the corpus.

I will show in this section that those word-order variations are linked to information structure and more precisely to the thetic/categorical distinction presented in Sasse (1987) and (1995):

Categorical utterances are said to be bipartite predications, involving a predication base, the entity about which the predication is made, and a predicate, which says something about the predication base. In other words, one of the arguments of the predicate is picked out as a “topic” in the literal sense, namely, an object about which something is asserted. Thetic utterances, on the other hand, are monominal predications (called “simple assertions” in Sasse 1987); no argument is picked out as a predication base; the entire situation, including all of its participants, is asserted as a unitary whole. (1995:4, emphasis original)

This distinction is mirrored, according to the author himself, by Lambrecht’s sentence-focus versus predicate-focus distinction: “For Lambrecht, what we call here thetic constructions are sentence focus constructions, which involve non-topical

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12. We have only considered verbs completed by 3rd person affixes, and their coreferential S and O, in the form of NPs and independent pronouns. The detailed counts are presented in two former papers, Mettouchi (2005) and Mettouchi (2007a).
subject NPs. These stand in opposition to predicate focus constructions with a topical subject NP” (Sasse 1995: 5, emphasis original).

2.1 Informational status of the bare core

In Section 1.1, I presented the traditional Berberologist analysis, according to which personal affixes have argumental status and can be considered as subjects. One of the arguments supporting this approach is the fact that there are rather long stretches of discourse where only the personal affix appears. The narrative sequence below shows on which basis the reference-tracking system of personal affixes is organized: seven girls have been left at home by their father for seven years, with the express command that they shouldn’t open to anyone. A bitch guards them in the yard, but an ogre tries to coax her way into the house. Third-person affixes that are not directly (i.e. in the same or the preceding intonation-unit) coindexed with an NP or pronoun are framed, the last NP’s coreferent to the framed affixes are in bold.

(9) te-kker / te-lli=tt=id
  subj3fs-stand.up pfv / subj3fs-open pfv=accus3fs-prox
  tmeqqrant-nni /
  big.f.int-anaph /
  ‘The eldest sister decided to open it (the door) /
  te-nna=yas tmectuhl-nni argu /
  subj3fs-say pfv=dat3s small.f.int-anaph wait.imp2s.aor /
  the youngest asked her to wait /
  te-nna=yas a weltma ur=tt=id
  subj3fs-say pfv=dat3s voc sister.abs neg=accus3fs-prox
ttell open.imp2s.impfvp postneg
  she said “Sister don’t open it (the door)
alamma uliy yer ttaq n tkanna //
  until climb pfv-subj1s to window of attic.int //
  until I am up at the attic’s window”//

13. The translation is intentionally close to the Kabyle recording, in order to retain a sense of the way affixes are used. These are translated by pronouns in English. The Kabyle text is perfectly understandable and clear for a native speaker, whereas the step by step English translation sounds very strange, and underspecified at times.
the little sister stood up / she said /

*te-nna=yas* subj3fs-say.pfv=dat3s

*te-kker* subj3fs-stand.up.pfv small.f.int

Rebbi /

*ogress.abs-anaph* subj3ms-punish.aor

*ogress* may God punish her /

in courtyard.int /

she said “however, kill the bitch there in the courtyard /

*bac* subj3fs-say.pfv=dat3s however

*te-līl-mt* subj2-open.aor-subjfp

doors.abs //

so that you can open the door for me” //

as kill.pfv-subj3fp dog.f.abs-anaph in courtyard.int /

so they killed the bitch in the yard /

*akken* subj3fs-say.pfv=dat3s

as kill.pfv-subj3fp dog.f.abs-anaph in courtyard.int /

she killed the bitch in the yard /

*tekker* subj3fs-say.pfv=dat3s

the little sister stood up and she said

*te-tℓ̲ef=itt* subj3fs-take.pfv=accus3fs

in hand.abs-poss3s/

she took it in her hand /

*te-nna=yas* subj3fs-say.pfv=dat3s

wait.imp.aor-2fp neg

*dat3s=prox=open.imp.impfv-2fp* subj3fs-tell-mt

dat3s=prox=open.imp.impfv-2fp

she said “wait don’t open it (the door)

*ara* subj3fs-say.pfv=dat3s

postneg

*postneg* door.abs until

*postneg* climb.pfv-subj1s to window

*till I am up at the attic’s window” //
We have two female protagonists here: the little girl and the ogress. The personal affix in the last two intonation units refers to the ogress, which has been mentioned lexically for the last time seven intonation units before; another participant, the little girl, is referred to by the third person affix in between. The seven little girls who are mentioned lexically thirty-nine intonation units before are referred to solely by a third-person plural feminine affix from time to time. This shows that the relationship between affixes and lexical NPs is one of coreference, not agreement.

Moreover, all the instances when the NP $p_a$ is not mentioned correspond to a topic continuity: we are in the same episode of the tale, things are developing smoothly forward: the eldest sister decides to open the door and kill the bitch, and the youngest one asks her to wait until she gets to the attic, and to give her (as a viatic) the bitch’s tail. Only when topic continuity is disrupted do prehead NPs appear, as is the case here for the ogress, tteryel.

Indeed just before the ogress is mentioned in prehead position, the storyteller is about to say that the little girl asks for the bitch’s tail. The relevant intonation units are underlined: te-kker tmcetuht / tenna-yas, ‘the little girl stood up and said’. However, the girl cannot possibly ask for the tail before the ogress has killed the bitch. The storyteller therefore introduces the missing micro-episode: the ogress managing to get the bitch killed before the little girls open the door. Once this demand has been satisfied, the storyteller resumes the line of the story, using the same formulation five intonation units later: te-kker tmcetuht-nni tenna=yas / fke-mt=iyi taze tt’as. The flashback or story line disruption is introduced by an NP $p_a$ in prehead position, which is the position of contrastive topic or topic shift.
2.2 Informational status of the prehead slot

Indeed, prehead NPs always appear as starting points of predications. The information status of the utterance is categorical,\(^\text{14}\) as is the case for utterances without lexical NPs. In Lambrecht’s\(^\text{15}\) terminology, those utterances are predicate-focus: there is a topic within the pragmatic presupposition, while the predicate phrase expresses a comment about the topic.

NP-less utterances like those described in Section 2.1 are also predicate-focus, but their topic is unmarked: topic continuity is expressed by the fact that no lexical NP appears in prehead position. Lexemes coreferent to the personal affix can also appear in extended core position without disrupting topic continuity, but those configurations bear special values which will be discussed in Section 2.3.

Prehead NPs can express topic shift, as in excerpt (9) above, but they can also mark contrastive topics, as in example (10), or they can select a topic for an assessment,\(^\text{16}\) as in example (11).

\begin{verbatim}
(10)  i-laq     ad n-uyal    ar ansi=d
   subj3ms-lack.pfv  irr subj1p-return.aor  to from.where=prox
   ne-kka /
   subj1p-come.from.pfv /
   ‘We have to go back to where we came from /
   ad  n-eegged /  ad ne-ggez /
   irr subj1p-shout.aor /  irr subj1p-jump.aor /
   (we have) to shout / to jump /
\end{verbatim}

\(^{14}\) In the sense of Sasse (1987:511): “categorical sentences contain a predication base about which some state of affairs is predicated, while thetic sentences are simple nonpredicative assertions of states of affairs”.

\(^{15}\) Lambrecht (1994) defines focus as ‘the semantic component of a pragmatically structured proposition whereby the assertion differs from the presupposition’ (1994:213). The pragmatic assertion is ‘the proposition expressed by a sentence which the hearer is expected to know or believe or take for granted as a result of hearing the sentence uttered’ (1994:52), whereas the pragmatic presupposition is ‘the set of propositions lexico-grammatically evoked in an utterance which the speaker assumes the hearer already knows or believes or is ready to take for granted at the time of speech’ (1994:52). A constituent is a topic expression “if the proposition expressed by the clause with which it is associated is pragmatically construed as conveying information about the referent of the constituent” (1994:131).

\(^{16}\) Especially in non-verbal predications such as \textit{taqcict d tagugamt}, <girl.ABS cop mute. F.ABS>, ‘the girl is/was a mute’.
In example (10) the topic _arraw-nney_, ‘our children’, is contrasted to the speaker and his generation, who suffered under the Communist government.

In example (11), the NP in prehead position is the starting point of an assessment. It comes as a commentary on the fact that as soon as the young girl entered the room, it became illuminated.

(11) _taqcict-agi_ _t-lul=ed_ _s_ _twenza_ _n_

_ girl.ABS-DEICT_ _SUBJ3FS-be.born.PFV=PROX_ _with_ _forehead.INT_ _of_

_uwray_

yellow.INT

‘This girl was born with beautiful blond hair (lit. with a golden forehead)’

Topicalization, in my data, consists of marking a pause in the narrative or conversation, in order to introduce an element that will either explain the preceding utterance or trigger a new orientation in the exchange or narrative. The prehead position has to do with planification of the thematic structure of the exchange, in the sense of Tomlin and Rhodes (1992: 123), who define thematic information as “that knowledge which the speaker assumes is relevant to the goal of the communicative event”. In that respect, the traditional Berberologist term ‘indicateur de thème’ (Galand 1964) is perfectly appropriate, although no precise study of its pragmatic role was conducted.
This prehead slot must not be confused with the slot for contrastive focus in clefts (example (12) below), or wh- questions (example (12’)).

(12) d ayrum i=s=id ye-fka (weqcic)
cop bread.abs rel°=dat3s=prox subj3ms-give.pfv (boy.int)

‘It is bread that he (/the boy) gave to her’

(12’) d acu i=s=id ye-fka (weqcic) ?
cop what.abs rel°=dat3s=prox subj3ms-give.pfv (boy.int) ?

‘What did (he/the boy) give to her?’

Both constructions can be analyzed as containing a fused relative clause, with an XP or a wh- pronoun introduced by a copula, in first position, for questions. The prosodic contours for both of those constructions are completely different from those of categorical sentences.17

2.3 Informational status of the extended core

In Kabyle, the pa-V NP pa ("VS") configuration corresponds to sentence focus, which is a sentence construction formally marked as expressing a pragmatically structured proposition in which both the subject and the predicate are in focus. The postverbal NP coreferential to the personal affix is in the annexation state (integrative case), and is situated either immediately after the verb or after the object of the verb. In all cases it is prosodically included in the domain of the basic utterance (see Mettouchi 2005 and 2006 for more details).

Example (13) presents a pa-V O NP pa configuration. Although there are two lexical NPs, only one of them corresponds to a new referent: the direct object, which is a semantic filler for the verb (‘pancake-cooking’). The extended core NP pa is given in the preceding context. Cognitive processing is therefore rather undemanding.

(13) ufa-nt t-xeddem=ed tiyrifin
find.pfv-subj3fs subj3fs-do.impfv=prox pancakes.abs

‘They found

tmeṭṭut=nmi n babatsent /
wife.int=anaph of their.father /
their stepmother cooking pancakes’ /

17. For prosodic analyses of clefts and simple clauses, see Mettouchi (2003a and b), and Mettouchi (2006).
Those examples are rather rare, but not totally absent from narratives. In the corpus, they tend to occur when the storyteller wants to give a full picture of the situation, a summary of a particularly salient fact or situation. Here the little girls that have been abandoned in the woods have finally found their way back home, only to find their stepmother cooking pancakes, joyful at the idea that she would never see the little girls again. On a prosodic level, those utterances all show an F0 (fundamental frequency) prominence (here on tiyrifin ‘pancakes’), and a rise in intensity.

But most of the time, only one lexical argument appears in utterances, in accordance with DuBois’s (2003) preferred argument structure constraints.18 Typically, extended core NPpa appear in locative-existential contexts, such as the introduction of new referents, which are liable to become topics afterwards.

(14) te-lla yiwet / te-mmut tmeṭṭut-is /
subj3fs-be.pfv one.f / subj3fs-die.pfv wife.int-poss3s /
‘There was a woman / his wife had died /
wemyar-nni / i-sea sebea yessis //
old.man.int-anaph / subj3ms-have.pfv seven daughters //
of this man / he had seven daughters //
deg yessi= deg yessis-nni sebea /
in daughters= in daughters-anaph seven /
among his seven daughters /

In example (14), typically, new referents are introduced through an existential verb, ili (‘be’, ‘exist’), in the perfective. In the conversational data, 17 occurrences of extended core NPpa out of 60 (32%) appeared after this verb. Indeed, a frequent context for extended core NPpa is thetic utterances, in the sense of Sasse (1987:511): “categorical sentences contain a predication base about which some

In example (14), typically, new referents are introduced through an existential verb, ili (‘be’, ‘exist’), in the perfective. In the conversational data, 17 occurrences of extended core NPpa out of 60 (32%) appeared after this verb. Indeed, a frequent context for extended core NPpa is thetic utterances, in the sense of Sasse (1987:511): “categorical sentences contain a predication base about which some

state of affairs is predicated, while thetic sentences are simple nonpredicative assertions of states of affairs”.

In my analysis, predications are considered thetic whenever their main argument’s reference depends on the predicate’s realization, and is not asserted independently. Non-thetic utterances are therefore always topic-comment, or more exactly predicate-focus predications in the sense of Lambrecht (1994), whether the topic be expressed lexically in the same clause, or higher up in the text (in that case it is represented in the current verbal clause by a personal affix).

The notion of subject as it is used in this paper is independent of information structure and only codes a grammatical relation. In Kabyle, topicality is encoded by the presence/absence and position of lexical NPs or independent pronouns, subjecthood being encoded by the obligatory presence of a personal affix on the verb’s radical.

Theticity in the broad sense of the term also involves change of state verbs that refer to appearance or coming into existence: in the corpus I found, among others, ydel ‘change’, ffey ‘go out’, yly ‘fall’, kcem ‘enter’, kker ‘stand up, begin’. The predication depicts the manifestation of a state of affairs, instead of stating something about a topic.

In example (15), taken from the sequence in 2.1, the NP pa follows a motion verb, kker, ‘stand up’, which is also grammaticalized in the language as an inchoative.

(15) te-kker tmecṭuht=nni te-nna=yas
    subj3fs-stand.up pfv little.int=anaph subj3fs-say pfv=dat3s
    ‘The little girl stood up and she said
     fke-emt=iyi tazeṭṭa-s
     give.imp.aor subj2fp=dat1s tail.abs-poss3s
     “give me the (bitch’s) tail”’

Other examples with verbs pertaining to other semantic categories can be found in the corpus, but the context always points to sentence focus, as in the following examples, where the little girls, on their way back home, having been stranded in the woods, encounter a lion.

(16) mi d=wwd-ent yer webrid / ufa-nt=ed
    when prox=arrive pfv subj3fp to path / find pfv subj3fp=prox
    izem/
    lion.abs /
    ‘When they reached the path / they found a lion /
As is often the case with pa-V NP\textsubscript{pa}s, the referent is first introduced as an Object, ‘they found a lion’, then the whole predication is stated theoretically, ‘a lion cut their path’ (manifested itself). Similarly, in the same example, we can see that the speech introductory verb \textit{tluεa} has an extended core NP\textsubscript{pa}; this type of predication (involving turn-taking verbs) can be reduced to ‘X speaking’; it does not involve a separate predication base.

The prosodic curve of the first part of the utterance is reproduced below, and we can see that the sentence-focus construction \textit{ye-zwar=asent=id yizem} forms a block, with an integrative curve for the core and extended core. We will see in Section 2.4 that postcore NPs are prosodically separated from the core.

Other frequent contexts for NP\textsubscript{pa}s in extended core position are relative clauses. In the conversational corpus, out of 60 \texttt{<pa-V NP\textsubscript{pa}>} combinations, 10 (16.6\%) occurred in relative clauses. In the next example, the NP\textsubscript{pa} \textit{yid} ‘night’ is necessarily in postverbal position, regardless of the semantics of the verb (which

![Prosodic curve](image-url)

\textbf{Curve 1.} Prosodic curve of \textit{ufa-nt=ed izem / ye-zwar=asent=id yizem} // (example 16)
would have triggered a <pa-V NP_pa> order in a main clause anyway). This syntactic constraint, mentioned in 1.3, is not without informational motivation: indeed relative clauses favour backgrounded information that is best packaged as a bundle, in a thetic configuration.

(17) $mi=d \quad ye-yli \quad yid$
    when=PROX subj3ms-fall.PFV night.INT
    qql-emt=ed
    come.back.IMP.AOR-subj2FP=PROX
    ‘When night has fallen come back’

Finally, NP_pa s in extended core position are found in collocations and expressions, as in example (18):

(18) $ad \quad kem=ye-xdee$
    Rebbi
    irr acc2fs=subj3ms-punish.aor God
    ‘May God punish you’

Here again, the construal of the predication is thetic; it is the whole malediction which is in focus, and we do not have a topic-comment organization.

It must be noted that in <pa-V NP_pa> structures, it is not the NP_pa which is in focus, but the whole predication, which is completely different. Those configurations often contain given or activated referents, and the activation state of the NP itself is not predictable.

I do not state that this overview of the pragmatic values taken on by the <pa-V NP_pa> configuration is exhaustive. But it gives us a fairly precise idea of the features that the various uses have in common: the close relationship between pa-Vs and NP_pa s, the construal of a sentence-focus predication, the affinity with existential predications, or more generally the expression of the manifestation or coming into existence of an event or state of affairs.

The investigation of the informational value of those configurations leads us to reject the traditional Berberologist analysis, which considers both extended core and postcore NP_pa s as referential complements of the verbal affixes and clitics. This view does not take into account the affinity between <pa-V NP_pa> and sentence focus, nor does it take into account the difference between postcore and extended core.

2.4 Informational status of the postcore slot

An antitopic is defined by Lambrecht as “a construction in which a lexical topic NP is positioned at the end of the clause containing the information about the
topic referent” (1994:202). Sometimes, such an NP appears on the right periphery of the clause. It can be coreferential to the personal affix or to personal clitics. It shares with NP\textsubscript{pu}s of the extended core the fact that it bears the annexation state (integrative case), but it is clearly different from the latter because:

- its coreference is not limited to the personal affix, but extends to the accusative clitic and the possessive affix as well,
- it is characterized by a clear prosodic break (see Mettouchi 2005 and 2006).

In example (19), the accusative clitic =tt refers to the pit that the father dug in order to abandon his daughters. The referent is expressed lexically, as an afterthought by the speaker; not necessarily because there is ambiguity or because the referent may be out of the current focus of consciousness, but rather in this case because the storyteller wants to underline the importance of the pit in the story.

(19) \texttt{ye-qqaz tasraft / ye-qqaz ye-qqaz ye-qqaz ye-qqaz /} \\
\texttt{subj3ms-dig.impfv pit.abs / subj3ms-dig.impfv [x 4] /} \\
\texttt{‘He dug a hole / he dug and dug /} \\
\texttt{armi=tt i-fukk sebea yyam / tesraft-nni //} \\
\texttt{until=acc3fs subj3ms-finish.pfv seven days.int / pit.int=anaph //} \\
\texttt{until he finished it at the end of seven days / the hole’ //}

These antitopics allow the speaker to complete the basic utterance, either because (s/)he senses that there might be a referential ambiguity or to emphasize the refer-

Curve 2. Prosodic curve of \texttt{armi=tt i-fukk sebea yyam / tesraft-nni} (example 19)
ent, because (s/)he considers that the co-speaker hasn’t realized its importance for the current exchange.

Their prosodic contour shows that the postcore slot is not integrated into the core, as the extended core is. It is nevertheless part of the clause, and this is indicated by the integrative case.

2.5 Synthesis

The various positions and their informational values can be summarized as follows:

- the pa-V NP_{pa} (“VS”) configuration, where the NP coreferent to the subject affix is in postverbal and core-internal position corresponds to sentence focus;
- the NP_{pa/poss/Acc/Dat} pa-V (“SV”) configuration, where the NP coreferent to the subject or possessive affix or an argumental clitic is in prehead position, corresponds to predicate focus, with a marked topic (topical shift or topical anchoring for an assessment);
- the pa-V(O) configuration, where no coreferent NP is expressed, corresponds to predicate focus, with un unmarked topic (topic continuity);
- the pa-V(+Clitic) / NP_{pa/poss/Acc/Dat} configuration, where the NP coreferent to the subject or possessive affix or an argumental clitic is right-dislocated, corresponds to predicate focus, with an antitopic (referential ambiguity, or referent pinpointing).

In terms of syntactic domains, the abbreviations SVO, VSO, and so on are somewhat misleading. They convey a false impression of symmetry around the verb. My investigations show that Kabyle is characterized by a postverbal domain that is richer and more complex than the preverbal one. In particular, the extended core, which is prosodically and syntactically distinct from the postcore slot, is more closely related to the core and basic sentence than to the prehead or postcore positions. The syntactic weight is clearly on the right of the head. But we mustn’t forget that the prehead position is not exceptional at all for NPs, and that it is motivated, not grammatically, but pragmatically (by information structure constraints). Contrary to English, which combines topical, subjective, and very often agentive dimensions on the preverbal NP, Kabyle encodes those dimensions separately: the subject as a strictly grammatical relation is encoded by the affix,

19. This had never, to our knowledge, been noted and investigated in Berber before our studies on information structure.
and topicality by the presence or absence of a prehead NP. One thing remains to be understood more thoroughly: the cognitive process by which the coreference between affixes and NPs is recognized.

One clue is to be found in the binary case system of Kabyle, which we are now going to investigate.

3. The case system of Kabyle

The case system of Berber has long been a challenge for linguists. Unlike the complex case systems of some Indo-European languages, the Berber system only has two terms, one which corresponds to the citation form of the noun, and the other one, marked by the phonological alteration of the first vowel: in the citation form, corresponds to weqcic 'boy' in the annexation state. Similarly, the annexation state corresponding to taqcic 'girl' is teqcict. Berberologists chose the label “annexation state” because the relationship indicated by the marker is one of dependency: the motivation for the label is that postverbal NPs, which bear the “annexation state”, are attached to the core, whereas the relationship between the prehead NPs (which are in the citation form) and the core is freer. For my part, following Creissels (2006:52–53), and in the aim of adopting a less idiosyncratic terminology, I call the citation form “absolute case” and the other one “integrative case”.

Whereas for marked topics, the NP is always in the absolute case, in sentence focus and for antitopics, the NP that is coreferent to an affix or clitic is in the integrative case. In terms of syntactic configuration, all prehead NPs are in the absolute case. The situation is more complex for the postverbal NPs: direct objects are in the absolute case, whereas all NPs coreferential to a personal or possessive affix or a personal clitic must be in the integrative case.

The question is whether we should analyze those facts as pointing to a subject-marking strategy, or to a broader phenomenon. I will show that although the

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21. For a more detailed description, see Chaker (1988).

22. This terminology encompasses nominative-accusative systems, absolutive-ergative ones, and all binary systems where a case limited to certain syntactic contexts ("integrative") is opposed to a form that is used for citation, and in the syntactic contexts where the integrative is not used.
first stance is clearly insufficient, it provides insights for a global analysis that I will present in Section 3.2.

3.1 Detopicalization and noncanonical subjecthood

A semantic study of NP\textsubscript{pa}\textsuperscript{8} in the extended core shows that they do not refer to prototypical agents, and are not necessarily definite. Those properties seem to identify the utterances containing those postverbal NPs with the “sentence-focus constructions” mentioned in Lambrecht (2000:624): “SF [sentence-focus] marking involves cancellation of those prosodic and/or morphosyntactic subject properties which are associated with the role of subjects as topic expressions in PF [predicate-focus] sentences”. Indeed, the use of the “annexation state” in clausal contexts could be considered as a detopicalizing device, together with the postverbal position of the NP, and its prosodic fusion in the verb’s intonational curve. All those features the NP\textsubscript{pa} shares with complements. And in fact, Galand (1994:83) states that: “la traduction française et une certaine routine ont fait (et parfois font encore) considérer [le complément explicatif] comme le ‘sujet’ du verbe, mais l’obligation de mettre le nom à l’état d’annexion prouve que son rôle syntaxique est bien celui d’un complément”.\textsuperscript{23}

However, the notion of detopicalization, because it implies that the topic should be the basic element of the predication, would give topicality an importance and a precedence which it does not have in Berber: we are not confronted to a language that is primarily SVO and occasionally or secondarily VSO; it is rather the contrary: extended core NP\textsubscript{pa}s are on the whole more frequent than prehead ones, and their range of uses is richer.

Another approach consists in considering that NP\textsubscript{pa}s bearing the integrative case are in some way noncanonical. Indeed in many languages, there are subclasses of subjects bearing a case that is neither nominative nor ergative, but genitive, dative, or locative, etc. (Aikhenvald, Dixon, and Onishi 2001; Bhaskararao and Subbarao 2004). In the preface to the first book, Dixon, Aikhenvald, and Onishi (2001:ix) use examples to define noncanonicity: “For example, in a nominative-accusative language, S and A functions\textsuperscript{24} may be marked by nominative case for most verbs (the canonical marking) but by dative or genitive case for a small set of verbs (the noncanonical marking). In an absolutive-ergative language, a function

\textsuperscript{23} “Because of the French translation and a certain degree of routine, the [postverbal NP\textsubscript{pa}] has been, and is still considered as the verb's ‘subject’, but the fact that the ‘annexation state’ is obligatory proves that this syntactic role is indeed that of a complement”.

\textsuperscript{24} O is the object, S the intransitive subject and A the transitive subject.
will receive the canonical ergative marking with most transitive verbs, but may receive noncanonical locative or dative marking, with two small sets of verbs”.

Onishi (2001: 25) states that there are several semantico-syntactic verb classes associated with noncanonical marking of subjects, cross-linguistically:

Class I: One- or two-place (Primary-A\(^{25}\)) verbs with affected S (or A), e.g. be chilled, have a headache, be sad, be surprised.

Class II: Two-place (Primary A-B) verbs with less agentive A (or S)/less affected O (or E), e.g. see, know, like, look for, follow, help, speak to, resemble.

Class III: Two-place Secondary verbs with modal meanings, e.g. want, need, can, try, seem.

Class IV: intransitive/transitive verbs expressing “happenings” (They usually have canonically marked counterparts with agentive meanings).

Class V: verbs of possession, existence and lacking.

In addition, Onishi (2001: 36) points out that lack of control or volition, stativity, and modality (irrealis among others) are features associated in some languages with noncanonical subject marking. The first two features are in fact related to verb Classes I, IV and V.

It happens that many verb-types associated to extended core NP\(_{pa}\)s in Kabyle roughly correspond to Classes IV and V. In addition, I have shown (Mettouchi 2004) that Kabyle is a language where stativity, linked to intransitivity, is the basic aspect/valency format, transitives being morphologically derived for a high number of verbs. We are therefore in a language that is likely to show noncanonical subject marking. However, this approach of the problem needs to be tested further, since if stativity is undoubtedly fundamental in the predicative system of Kabyle, it is not the stative predicates (Onishi’s Class I) which specifically trigger the use of the integrative case.

Moreover, the integrative case is not limited to NP\(_{pa}\)s in Kabyle: all right-branching NPs that are coreferent to a personal or possessive affix, or to a personal clitic, must bear this case-mark. The problem is therefore not specifically that of subject marking. Rather, it concerns all NPs that imply reference to a participant in the predication.

\(^{25}\) Primary verbs can be identified to full lexical verbs, and Secondary verbs to operators and auxiliaries. A further subdivision holds between Primary-A, which never accept a complement clause, and Primary-B, which accept complement clauses to instantiate a functional position.
3.2 The locative-ablative hypothesis

Not only does the integrative case-marking concern arguments other than the subject, but it also appears inside NPs as an intra-phrasal marker. The relevant contexts are those of nominal or prepositional complementation: genitive, prepositional phrases, numeral, or quantifier complements.

Genitives:26

(20) *axxam* [house.abs] *umeksa* [shepherd.int]
   ‘The shepherd’s house.’

Comparison of equality:

(21) *axxam=agi* [house.abs=deict] *am wexxam=iw* [house.int=poss1s]
   ‘This house is like my house.’

Numeral or quantifier complements:

(22) *tlata tegcicin* [three girls.int]
   ‘Three girls.’

Prepositional phrase:

(23) *deg wexxam* [in house.int]
   ‘In the house.’

3.2.1 Intra-phrasal contexts

Basing his analysis on the fact that prepositions are former nouns that have grammaticalized into adpositions, Chaker (1988:689) considers that there is a unity underlying all those uses: “tous se ramènent en définitive à la relation déterminative entre deux nominaux: nom déterminé lexical pour le ‘complément de nom’, grammatical pour l’explicitation des personnels”27.

26. For most genitives, the integrative case is doubled. Phonetically, the realized phoneme is a tensed version of the first (semi-)consonant: *aqjun tegcict* [dog.abs girl.int.int, the girl’s dog], *aqjun wweqicit* [dog.abs boy.int.int, the boy’s dog]. Syntactically, however, Berberologists consider that a preposition n (‘of’) has to be reconstructed, and therefore, the standard orthography is *aqjun n tegcict / n weqicit*, with simple integrative case after the preposition. Genitives where the possessor is a lexeme whose integrative case is in *i* - or *u* - (instead of *we* - or *te* -) do not double, as for *umeksa* in our example.

27. “all cases can be reduced to the determinative relation between two nominals: a lexical determined noun for the ‘prepositional noun complement’, a grammatical determined item for the explicitation of personal affixes”. 
I think that if this analysis is synchronically acceptable, it can however be made more precise, and related to an actual case-marker, which I am now going to define.

First of all, instead of considering only the relationship as one of determinateness, we might investigate further and try to characterize semantically the relationship that holds between the two terms in those intra-phrasal units.

The genitive can be seen as relating a source, the shepherd, to a target (the house, the referent that the speaker is trying to determine). The shepherd is the anchoring-point, and the house is an element that is related to it, not qualitatively as a adjectival modifier would be, but in terms of its being part of the set of possible belongings of the shepherd. In other words, the genitive construes a potential domain around the anchoring point, and from this virtual set, it extracts one element that is the thematic goal of the predication. This analysis of the genitive underlines the fact that the NP bearing the integrative case can be considered as the starting point of a cognitive relational process. In the framework of Langacker’s (1993) cognitive grammar, the reference point (the possessor) locates the target (the possessed item), and the integrative case is the conceptualizer which establishes mental contact with the target entity by means of the reference point.

Quantifiers and numerals also extract elements from a set: saying ‘three girls’ implies that a set of countable items is presupposed, which is the basis for the selection of some members of the set. Those members are not considered qualitatively, but quantitatively. Once again, we can notice that the integrative case bears on the reference point, which is here the set of countable items.

The integrative case on nominals following prepositions is a somewhat more complex phenomenon, but it can be explained if we keep in mind the fact that not all prepositions trigger the integrative case. Two of them, among the most ancient ones, are followed by nominals in the absolute: s ‘to, towards’ and ar ‘until, towards’. Those prepositions are “allative”; they refer to a movement towards a target. Conversely, among the prepositions followed by the integrative case, we find seg “from (origin)”, deg “in (stative location)”. Prepositions therefore fall into two subsets: on the one hand, the allative subset, associated to the absolute case, and on the other hand, the ablative-locative subset, associated with the integrative case. It is interesting to note that most of the time in Kabyle, the ablative and the locative prepositions are subsumed under a common reduced form, g. Also relevant to my hypothesis is the fact that the lexeme following the comparative am (“like, as” (example (21)), which is the reference point of the comparison, is in the integrative case.

Those facts are arguments in favour of my claim, according to which an ancient ablative-allative opposition characterized the system of prepositions. This system is somewhat blurred, because the integrative case has been extended to
almost all prepositions, thus concealing the former semantic unity of the original configuration: it has become a dependency marker. This extension of the integrative case on NPs following prepositions can be put in parallel with the extension of that case-marker to all lexemes to the right of the verb (extended core and postcore).

I will now show that in the same way as the semantics of ablative-locative is relevant to the intra-phrasal contexts explored above, it is also relevant to NP\textsubscript{pa}s in the extended core. Similarly, the extension of the integrative case on NPs in the postcore slot, just like the extension of the integrative case to all kinds of prepositions (except \textit{s} and \textit{ar}), is motivated by an extension of the ablative-locative dimension to the more abstract one of relational dependency.

3.2.2 From intra-phrasal to intra-clausal
I showed in Section 2.3. that the \textless pa-V NP\textsubscript{pa} \textgreater \’s informational status was linked to sentence focus, and theticity. It is possible to link that informational status to semantico-cognitive values: in \textless pa-V NP\textsubscript{pa} \textgreater constructions, the NP\textsubscript{pa} can be considered as the anchoring-point of the predication, the verb being its manifestation. Example (24) is a typical instance of such thetic, sentence focus predications.

\begin{equation}
(24) \text{ye-wwed}=d \quad \text{wayzen}
\quad \text{subj3ms-arrive pfv=prox ogre.int}
\quad \text{‘The ogre arrived.’}
\end{equation}

It is possible to reformulate the utterance in the following way: “arrival of the ogre”, or “manifestation of the existence of the ogre”. The ogre is the reference-point, the source of the predication, the verb being rather empty semantically (or at least very frequent and apt to be complemented by a number of possible NPs). The same organisation characterizes existential predications and, by extension, all the predicates that regularly contain an NP\textsubscript{pa} in the extended core, namely, those containing change of state verbs that refer to appearance or coming into existence: among others, \textit{ydel} ‘change’, \textit{ffey} ‘go out’, \textit{ylly} ‘fall’, \textit{kcem} ‘enter’, \textit{kker} ‘stand up, begin’.

When the use of an NP\textsubscript{pa} in the extended core is not motivated by the semantics of the verb itself, the sentence focus or the thetic format provides the same semantic motivation for an ablative-locative case: the whole situation is construed globally, there is only one focus of interest, and the manifestation is not that of a referent, but that of a whole predicative relation. The case-marker here indicates

\footnote{I consider that the integrative case on antitopics is a further development in Kabyle, since the available data seems to show that in other dialects the integrative only appears on extended core NP\textsubscript{pa}s.}
that what is salient is the coming into existence of a situation or event, of which the experiencer is the locus.

The Berber languages in which there is an absolute/integrative opposition do not all use the integrative in the postcore slot, i.e. for antitopics. Kabyle does, and I hypothesize that this is due to the extension of the function of this ablative-locative case to that of a dependency marker.

The proposed scenario is that due to the argumental nature of person affixes and clitics, NPs were felt to be adjuncts coreferential to those person-markers, in particular at the right of the core, since the head-initial syntax of the language implies that cognitive processing co-indexes right-branching NPs to clitics and affixes that are on its left, and borne by the TAM particle or the verb. If we go back to the phrase-internal use of the integrative in the domain of prepositions, we can see that the extension of the integrative from an ablative-locative to an oblique follows the same path: the more abstract and general dependency relation stems from a more precise ablative-locative relation. This extension also explains why the absolute/integrative opposition also holds for NPs in nonverbal predicates, as is shown in (25).

\[(25)\] taqcict-nni d tagugamt
girl.ABS-ANAPH COP mute.F.ABS
'That girl is/was mute.'

\[(25')\] d tagugamt teqcict-nni
COP mute.F.ABS girl.INT-ANAPH
'That girl is/was mute.'

Although (25') is far rarer than (25), or than the basic nonverbal utterance d tagugamt 'she is/was mute', it is nevertheless perfectly acceptable, and shows that there is no need to have personal affixes or clitics in order for the integrative case to be used. This may point to a development by which the integrative case would have become only a position-marking case, as was suggested by an anonymous reviewer. However, we must keep in mind that not all postverbal NPs are in the integrative: direct object NPs are in the absolute. I would therefore argue in favour of a relation-marking case linking the nominal in the integrative to the overt or covert argument structure of the predication, the (covert) argument structure of a nonverbal predication such as (25) being <Experiencer/Predicate>.

This hypothesis according to which the integrative case of Kabyle would stem from the reanalysis of a locative-ablative case-marking into a dependency marker has never been proposed, to my knowledge. I have developed it in several publications (Mettouchi 2005, 2006, and 2007a).
Other hypotheses have been put forward, namely, that the integrative case-marker of Berber should actually be a genitive. Sasse (1984:120), for instance, explicitly links genitive and integrative (here called ‘dependent form’): “The ‘dependent’ form signals the non-focalized subject, the adnominal genitive, and the object of prepositions (normally = genitive in Afroasiatic)”. According to Sasse, the Proto-Cushitic case-system had three cases (subject, absolute, and genitive or possessive), to which he proposes that the binary case-opposition of Berber should be the functional equivalents: “The functional range of the ‘independent’ form of Berber is equivalent to that of the Cushitic Absolute (with one minor difference, that the subject of nominal sentences in Berber is in the ‘independent’ form), and that of the dependent form to that of the Cushitic Subject Case + Genitive. The formal identity of Subject Case and Genitive is a common feature of Cushitic languages” (1984:121). This hypothesis is interesting in that it relates subject and possessor, but in the absence of a thorough investigation of the functional range mentioned in the quote, it is very difficult to go beyond tentative parallels, and even more difficult to explain those similarities.

The same criticism can be addressed to König (2006), in which she proposes that the Berber system should be interpreted in terms of a marked nominative (my integrative) opposed to an accusative (my absolute). She classifies Berber among Type-1 languages, in which “the accusative is the morphologically un-marked form and the nominative the morphologically marked form” (2006:658). She states that in such languages the accusative covers O and the marked nominative S and A (2006:658). One of the problems is that the so-called accusative is also the form taken by topical and focused NPs in Kabyle, as well as by NPs in nominal predicates. Although König is aware of this fact, she does away with it in a way that might be relevant for other African languages (2006:726, n. 27), but is not for Kabyle: in Kabyle as I showed, not only topical (i.e. prehead) NPs bearing the absolute (“accusative”) case-marker can be S, O, or A, but antitopical (i.e. postcore) NPs bearing the integrative (“marked nominative”) case-marker can also be S, O, or A. Moreover, I showed that possessive affixes also trigger the use of the integrative case on the coreferent NP (which is neither A, O, or S). König’s generalization is valid for Kabyle only if we exclude entirely the prehead and postcore slots, which is somewhat problematic. No explanation is given to account for the fact that the unmarked case (sometimes a “zero”, sometimes an “accusative”) should be shared by topical NPs and Object, and the “marked nominative” by antitopical NPs and A or S postverbal NPs.

29. König’s interpretation of other authors’ analysis of Berber data unfortunately leads to some oversimplifications, for lack of access to first-hand data, and therefore to the complexity of the actual case-marking systems of Berber.
As far as I am concerned, my claim is that case-marking has to do with coreference with the overt or covert argument structure of the predication, and through that coreference relation, inclusion in the syntactic domain of the sentence, be it as an extended core NP_{pa} or as a postcore NP_{pa, poss} or Cl. Even in former stages that can be reconstructed language-internally as well as by dialectal comparison, case-marking in clauses is best ascribed to the semantico-cognitive construal of events and situations, not to the grammatical status of NPs.

Another suggestion is made by Lipinski (1997/2001), who relates the integrative case of Berber to an “ergative”, and the absolute case to a “non-active” case. This opposition between ‘ergative’ and ‘non-active’ (2001: 259–265) suggests that agentivity\(^{30}\) should be a feature of extended core or postcore NP_{pa}'s. Synchronically, nothing of the sort can be stated for Kabyle.

However, given the tendency of extended core NP_{pa}'s to occur with unaccusative verbs (see 2.3 above), it is possible that intransitivity might be an original feature of such constructions. In that case, the correlation would be: A + O = absolute case, and S = integrative case. But this would only be valid for the core of the sentence, since topicality and antitopicality clearly neutralize grammatical relations (all topics are in the absolute in Kabyle, whereas all antitopics are in the integrative). Moreover, the counts conducted in Mettouchi (2007b) do not show a marked bias in favour of intransitivity for extended core NP_{pa}'s: the use of the integrative case for extended core NP_{pa}'s in transitive predications is synchronically frequent.

### 3.3 Synthesis on the binary case-system of Kabyle

My diachronic scenario involves a first stage in which the ablative dimension of the annexation state was still predominant. This gave rise to a treatment of the \langle pa-V NP_{pa} \rangle clausal sequence on the same model as \langle numeral NP_{integrative} \rangle, \langle ablative preposition NP_{integrative} \rangle, or \langle Possessed NP NP_{integrative} \rangle in intra-clausal constituents.

In a second stage, in the realm of the clause, all types of sentence focus, not only those which were semantically motivated by an ‘ablative’ dimension, became thus marked by the integrative case. The common factor uniting those types of clauses is the notion of “block”: pa-V and NPs are closely associated in a sentence-focus construction; the entire situation, including all of its participants, is viewed as a unitary whole. This notion of unit or block led to a conception of the annexa-

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30. “Ergative” being presented by the authors as an equivalent of “agent case”, at least in Semitic.
ation state as representing the right boundary of the clause, thus reinforcing the coreference relationship to the personal affix.

The relationship between the coreferent NP and the personal affix was then extended to other coreferential relationships, namely, the one between personal clitics or possessive affixes and antitopical NPs. This stage is characteristic of Kabyle, and corresponds to the reinterpretation of the annexation state as a dependency marker.

Now what does it mean that a language should consider the ablative-locative as such an important semantic case that it places it at the heart of the system? I propose that the explanation lies in the overall architecture of the language in question. For Kabyle (and other Berber languages), a fundamental dimension that pervades the whole system at various levels is deixis: the TAM system is tenseless and the underived predicates are very often stative, the proximal particle is very frequent and grammaticalizes as a present relevance, benefactive, and testimonial marker, among other values. The irrealis particle is a former speaker-oriented deictic, so that future events for instance are conceptualized as coming towards the speaker, not stemming from their intention or projections. The nonverbal copula is also of deictic origin. All this points to a general architecture where the incidence of globalized events and situations on the speaker is first and foremost, in many areas of the language. I consider that the importance of the ablative-locative dimension should be related to the same principle, and pertains to the same vision whereby the predications construed by the speaker are massively conceptualized as stable global entities that exist, happen, manifest themselves, appear in the speaker’s realm, and possibly affect him/her.

It would be interesting to work in this perspective on case-marking in African languages, in order to check whether such mental construals could be the motivation for at least some absolute/integrative case systems (including absolutive/ergative ones), especially in Afroasiatic.

Conclusion

The interplay between word-order, the pronominal argument system, prosody, and case-marking is an example of complex coding of topic-focus articulation, grammatical relations, and the delimitation of syntactic and functional domains.

I have demonstrated that word-order variation in Kabyle largely depends on topic-focus articulation, thus classifying Kabyle as a discourse-configurational

language. I have related syntactic domains to information structure values in the following way:

- the \( \text{pa-V NP}_{\text{pa}} \) ("VS") configuration, where the NP coreferent to the subject affix is in postverbal and core-internal position corresponds to sentence focus; it is associated with an integrative prosodic curve.
- the \( \text{NP}_{\text{pa/poss/Acc/Dat}} \text{pa-V} \) ("SV") configuration, where the NP coreferent to the subject or possessive affix or an argumental clitic is in prehead position, corresponds to predicate focus, with a marked topic (topical shift or topical anchoring for an assessment);
- the \( \text{pa-V(O)} \) configuration, where no coreferent NP is expressed, corresponds to predicate focus, with an unmarked topic (topic continuity);
- the \( \text{pa-V(+Clitic)} / \text{NP}_{\text{pa/poss/Acc/Dat}} \) configuration, where the NP coreferent to the subject or possessive affix or an argumental clitic is prosodically right-dislocated, corresponds to predicate focus, with an antitopic.

I have investigated the role of case-marking at the level of the clause in parallel with the intra-phrasal level. It is only by studying both syntactic contexts that we can see that case-marking in Kabyle cannot be equated to an argument-marking case such as the nominative, but has to be analyzed as a relational case, based on the semantics of dependency (a source and a target, a locative relationship).

More precisely, I have shown that the integrative case, which is synchronically a dependency marker, is likely to have stemmed from an ablative-locative case, originally the marked member of a binary opposition with an allative case. Ablative prepositions on the one hand, and situational, eventive, or presentational thetic sentences on the other hand, were the original contexts for this case-marker which was later reanalyzed as a dependency marker. This reanalysis at clause level is probably due to the argumental nature of the personal affixes and clitics, which implies that their coreferential right-branching NPs should be related to them. At phrase level, the behaviour of prepositions as syntactic heads probably played a role in the reinterpretation of the ablative-locative case into a plain, general oblique. However, the ablative-locative dimension of the integrative case is still very much perceptible in the system, be it at clause or at phrase level.

I would like to conclude this chapter by underlining the importance of a thorough study of language-internal phenomena, on the basis of first-hand, authentic, and if possible nonelicited data, in order to form a sound basis for typological generalizations and for theoretical debate. It is particularly important to insist on this for Berber, since current typological studies include it more and more in their search for universals.
References


Verb extensions have a high frequency in many of the Chadic languages. The present study compares the evidence previously presented by Paul Newman and Russell Schuh for West Chadic with new evidence from a second primary branch of Chadic, drawn specifically from the Mafa language, with the aim of discovering whether this pattern might go far back in Chadic linguistic history. Applying the methods of internal reconstruction to the Mafa verb lexicon reveals a large number of formerly productive extensions in that language. The comparison of the Mafa and West Chadic findings indicates that most of these morphemes can be reconstructed back to proto-Chadic and that proto-Chadic therefore likely possessed a complex system of productive verb extensions. Inter alia, this study supports Schuh’s as well as this writer’s contention in previous works that recurrent stem-augmenting processes, and not ‘loss of radicals’, accounts for most roots in Afroasiatic languages with more than two consonants.

As I see it, the reconstructability of root-augmenting suffixes in Chadic should lead those who have not already done so to rethink the Semitic-influenced concept of “loss of radicals” as a way to account for verbs with fewer than three consonants in language families such as Berber and Chadic. A much more likely picture, sketched broadly in Newman (1991), is an ancient and continuing process of ADDING radicals as one of a number of stem-augmenting processes in all families, Semitic included [emphasis in original].

With these words Russell Schuh (2003) succinctly identifies a key question in Afroasiatic (Afrasian, Afrasan) linguistic reconstruction and provides the answer the evidence from West Chadic requires – that the original verb stems of Afroasiatic generally had fewer than three consonants and that the addition of verb suffixes/extensions was an important stem-augmenting process in producing stems with
more than two consonants. His article, together with this author’s contribution to the same volume (Ehret 2003b), highlights something already evident in numerous previous studies (e.g., de Colombel 1989, 1990; Frajzyngier 1986, 1987, 2002; Jagger 1988; Wolff 1979; among others), namely, the high frequency and productivity of verb extensions in many of the Chadic languages. The present study widens the investigation of verb extensions in the deeper Chadic past by matching the evidence previously presented from West Chadic against new evidence from a second primary sub-branch of Chadic, specifically applying the methods of internal reconstruction to the Mafa language. The Mafa evidence projects back to proto-Chadic the existence of most of the extensions so far proposed from West Chadic.

The case for concluding that verb extensions were numerous and productive features in early Afroasiatic verb morphology has been argued in detail, from extensive bodies of evidence, in several previous publications (Ehret 1989, 1995, 2003a, 2003b; for a different perspective on this issue, see Bohas 1997). This idea has often been met with disbelief, especially from scholars of Semitic. Part of the scholarly unease with this evidence may reflect an idea that a simultaneous productivity of the full range of proposed extensions is being postulated. Some of this unease might dissipate if one considers that the history of Afroasiatic covers a very great span of time, far longer than that of Indo-European. Throughout the early stages in the evolution of the family, Afroasiatic speakers were pre-agricultural (Ehret 1999; Diakonoff 1981, 1998; contra Militarev 2003). That is to say, the early eras in Afroasiatic history date before the first food production in north-eastern Africa, thus to before 8500 B.C. and probably several thousand years back before that (Ehret 1999). Over such long periods new verb extensions could have come into productivity, even as other, older extensions were becoming moribund, eventually to be preserved only as lexicalized additional stem consonants.

Even if not all the proposed verb extensions were productive at one and the same period in the history of the family, there nevertheless must have been some early periods in which large numbers of them were productive at the same time. What do real language situations have to tell us about the capacity of languages to maintain simultaneously a large number of productive extensions? One approach to this question is to take a cross-familial perspective. The other is to engage an actual Afroasiatic case study. This investigation takes the cross-familial tack first, and then turns to the case study.

For cross-familial testimony, one need look no farther afield than the Bantu branch of the Niger-Congo language family of Africa for confirmation that a very large number of extensions can indeed be productive at one and the same period in a single language. Scholars who object to the postulation of verb extensions in pre-proto-Semitic, in particular, have found it difficult to believe that such a very high proportion of third consonants could be explained as formerly functioning
The internal and comparative reconstruction

As verb extensions (Ehret 1989). But the very real case of proto-Savanna-Bantu, spoken around the second millennium B.C., completely undercuts this objection. Almost every member of the consonant system participated as the consonant element in one or more of the more than twenty productive verb extensions in that language.

Table 2 lists the reconstructed verb extensions dating to the proto-Savanna period. In most of the descendant languages of proto-Savanna-Bantu, the majority of these extensions are still productive; in a few languages, nearly all the extensions are productive. (The comparative reconstruction of these extensions goes back many decades and is a project to which a variety of scholars have contributed; Guthrie 1967–1972 provides summary listings.)

The number of Savanna-Bantu verb extensions well exceeds the number of consonants in the proto-Savanna language, and most of the extensions can be reconstructed still further back, to the proto-Bantu language spoken around 5,000 years ago. All the consonants except *nd, *ŋj, and *b appear in the list of extensions. The consonant *y is not overtly present but can be argued to have been the underlying consonant in the causative *-i- (< earlier *-iy-). As the Bantu evidence demonstrates, large numbers of verb extensions can function together in the same

Table 1. Proto-Savanna-Bantu consonants

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Table 2. Savanna-Bantu verb extensions

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<td>1. *-am-</td>
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<td>reciprocal</td>
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<td>11. *-i-</td>
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<td>12. *-u-</td>
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language. That early Afroasiatic might similarly have had a wide array of productive extensions seems, in this light, no longer such a startling proposition.

**Chadic verb extensions**

Two very recent publications relate directly to the issue at hand with respect to Chadic: Schuh’s (2003) comparative identification and analysis of verb extensions/suffixes in several West Chadic languages, and this writer’s comparative and internal reconstruction of a number of Chadic extensions (Ehret 2003b). These proposals are listed in Table 4 at the end of this chapter. In that table the proposed verb extensions/suffixes for Bade and Bole, represented in italics, are Schuh’s. The Ngizim entries in that table combine the proposals of Schuh (2003) and Ehret (2003b).

One further extension can be added, on the basis of the comparative evidence, to the Bade (and Ngizim) instances identified by Schuh (2003). He recognizes the possibility that cases of the voiceless lateral obstruent /l/ (orthographically tl) in the third-consonant position might also qualify as a verb suffix/extension. Comparative evidence in West Chadic, shown in Table 3, indicates the relatively recent productivity of this marker in the Bade-Ngizim subgroup. In three of the four cases in Table 3, it goes with a pluractive, apparently iterative, function. In the fourth case, though, the Ngizim reflex has what might better be characterized as an action-away sense, contrasting the Ngizim meaning ‘ask’ with the meaning ‘answer’ in the proposed Tangale cognate, where the extension is lacking.

Applying the methods of internal reconstruction to the Mafa verb data generates a large body of suffixed elements to be compared to the verb suffixes/extensions identified by Schuh (2003) and those in Ehret (2003b). That evidence is presented for the first time here, so an extended analysis and formulating of the data occupies us next. Finally, a comparative tabling of the Mafa findings with the reconstructed extensions/suffixes in Schuh and those in Ehret (Table 4) reveals the ancient productivity of a large number of Chadic verb extensions.

**Table 3. Examples *l extension in West Chadic**

<table>
<thead>
<tr>
<th>Ngizim</th>
<th>Other West Chadic</th>
</tr>
</thead>
<tbody>
<tr>
<td>đâľţû ‘to cut into small pieces’</td>
<td>Tangale đâř ‘to pierce with blows’</td>
</tr>
<tr>
<td>gâľđû ‘to cut notch in’</td>
<td>Bade gârlu ‘to cut into small pieces’</td>
</tr>
<tr>
<td>càkwďû ‘to peck (hen, etc.)’</td>
<td>Bade càkwľlu ‘to poke in ribs’</td>
</tr>
<tr>
<td>tâľślû ‘to ask, make enquiries’</td>
<td>Tangale tôb ‘to answer’</td>
</tr>
</tbody>
</table>
Inferring extensions in Mafa and pre-Mafa

The available Mafa data (Barreteau and Le Bléis 1991) allow the identification of at least twenty-seven extensions, some of them probably still productive and others not. Their former or present productivity can be identified from applying the methods of internal reconstruction to pairs of Mafa lexemes containing the same root element and having clearly linked meanings, but different stem-final additions. Several of the stem-final additions are very well attested.

Numerous verb pairs attach the element /d/ to one member of the pair and a different element to the other member. The members with /d/ tend to express decisive or forceful action. In example (1) the second verb, (1b), implies repeated cutting; (1a), on the other hand, conveys an intensive action (i.e., dismembering, tearing apart).

(1) a. wulađ- ‘démembrer, écarteler’
   b. wulał- ‘découper des morceaux de viande’

The second pair has a closely parallel pattern, with (2a) implying a forcefully carried out action, splitting with an ax, contrasting with a multiply repetitive action conveyed by its mate, (2b).

(2) a. tsarđ- ‘fendre (avec une hache)’
   b. tsarah- ‘découper en pièces un animal de boucherie, dépecer’

In (3) the item with final /d/ connotes an intensive action, in contrast to a single action with no implication of intensity for its paired item with final /k/, and also in contrast to an extended action implied by the third member, with final /hw/.

(3) a. varđ- ‘bousculer’
   b. vark- ‘retourner (un recipient)’
   c. vûrhw- ‘labourer, retourner la terre (avec une machine)’

Set (3) exemplifies a stem-vowel alternance between a back high vowel and the equivalent central vowel with the addition of different suffixed elements ((3c) versus (3a) and (3b)). Several other examples involving this alternance (15), (19), (22), (43)), and also the parallel alternance of high front *i with *ə (34), (37), (55)), appear in the data here. This kind of alternance likely reflects an older morphophonemic stem-vowel shortening rule with the addition of certain extensions, since the Chadic central vowel *ə usually corresponds to a reconstructed short high vowel in the wider Afroasiatic picture, e.g., in Cushitic (Ehret 1995), whereas *i and *u correspond to long high vowels.
In pair (4) the action of (4a) is inherently intensive in that stretching (i.e., tuning) a harp string involves stretching it out very tightly. In (4b) the element /ɬ/, replacing /d/, appears to be a focus-shifter, with (4b) expressing not the stretching itself of the harp string, but rather the effect that stretching the string, either too loosely or too tightly, brings about.

(4) a. mɔrd- ‘tendre les cordes d’une harpe’
   b. mɔrd- ‘désaccorder une harpe’

In (5) the gloss for (5a) expresses a forceful action, wedging/cramming. In (6) and (7) the action of the first member of the set can be understood as intensive in contrast to a lesser intensity for the second member. The underlying verb meaning in (6) can be argued to have been ‘pull’. To stretch (rope) in (6a) requires pulling strongly on it. The action connotated by (6b) involves pulling off or apart. Example (7a) connotes direct extraction of something embedded in the ground; (7b) involves the extended action of removing earth scoop by scoop. Verb (8a) implies an intensive action (écarter), while (8b) expresses a more extended and less intense action. Set (9) has the same pairing of suffixed elements as (4) and (8), but in this instance the implication of intense action is not self-evident in the gloss of (9a) as given in the Mafa lexicon.

(5) a. tɔrd- ‘coincer, fourrer’
   b. tɔrts- ‘fourrer dans un trou’

(6) a. ndɔrd- ‘tendre (une corde)’
   b. ndɔrts- ‘défaire une corde, découdre, enlever un fil’

(7) a. gwɔgúd- ‘déterrer, déraciner (un objet bien accroché en terre)’
   b. gwɔgúr- ‘évider; élargir (un trou)’

(8) a. bɔlɔd- ‘écarter, écarter, arracher en écarterant’
   b. bɔlɔstå- ‘enlever, desceller, extraire (de terre)’

(9) a. wurd- ‘écarter, séparer deux objets qui se touchent (pailles, barres de fer, bois)’
   b. wurstå- ‘écarter, séparer deux objets; desceller une pierre’

Examples of each of the alternative final elements in the cases (1)–(9) appear elsewhere in the available Mafa vocabulary (Barreteau and Le Bléis 1991).

At least six additional verb pairs, (10)–(15), have one member containing the final element /ts/, already encountered in (5) and (6). A range of meanings seems to inhere in verbs with attached /ts/: focused and intense (‘enfoncer, jeter dans une fente’), focused and repetitive (‘fourrer dans un trou’; ‘défaire une corde, découdre’; ‘découper, arracher’; ‘couper en brindilles, briser en petits morceaux’; ‘égratigner, érafler’), or repetitive and intense (‘écraser gros’; ‘déchirer’).
(10) a.  borts- ‘concasser, écraser gros’
   b.  børh- ‘assommer, abattre’

(11) a.  kúrts- ‘décirer’
   b.  kurt- ‘couper (de l’herbe verte avec la main)’

(12) a.  mututs- ‘couper, découper, arracher’
   b.  mutul- ‘arracher’

(13) a.  kúrts- ‘enfoncer, jeter dans une fente’
   b.  kurv- ‘jeter’

(14) a.  húrts- ‘couper en brindilles, briser en petits morceaux’
   b.  hurs- ‘écraser, effriter (dans le main)’

(15) a.  durts- ‘égratigner, érafler’
   b.  dârgâl- ‘frictionner (corps)’

Reflexes of the proto-Chadic and proto-Afroasiatic *s causative, seen in the transitive verb of (14b) above, appear relatively rarely in Mafa verbs. The productive transitive formative in the language is -d, found elsewhere in Chadic. In (16) the final /s/ of (16a) is overtly causative in effect, i.e., ‘bring to a boil’. The /m/ element in (16b), in clear contrast, marks an intransitive verb, at least in this case a verb denoting an action with duration. The former productivity of *s as a transitive is also apparent in (17). The single case in which the underlying stem, *gur-, *bend, *fold, adds /s/, (17a), is the sole transitive member of the quartet of derivations from this root. In (18), again the member with final /s/, (18a), is transitive, while the adjective, ‘trembling’, is built on a differently extended stem, kekir-, apparently a former intransitive verb, plus the adjective suffix of Mafa, -e’e, -a’a (see also (41), (42), and (55) for this suffix).

(16) a.  kúdatas- ‘porter à ebullition (un liquide)’
   b.  kudom- ‘cuire lentement’

(17) a.  gurs- ‘retrousser’
   b.  gurb- ‘se plier, se torde’
   c.  gǔrbôdokw- ‘s’agenouiller’
   d.  gurbédif- ‘s’agenouiller’

(18) a.  kakás- ‘secouer pour faire tomber des saletés’
   b.  kekir-kekirré’e ‘tremblotant’

A fourth common third-consonant element in the linked root pairs of Mafa is the lateral obstruent, /l/. It often connects with action that removes, often in the direction of the actor, as already was seen in (1b) and (12b) above and as appears to be the case in examples (19)–(22) below. In examples (23) and (24), however, /l/ seems to have iterative implication, as it strongly does in (15b) above.
(19) a. *pull* ‘détèrrir, déraciner’
    b. *palat* ‘enlever un caillou d’un mur, retirer une pierre du sol; écorcer’

(20) a. *lúb* ‘tordre’
    b. *lúbát* ‘retourner en arrière’
    c. *lúbát* ‘tordre’

(21) a. *tsāral* ‘verser en libation un peu de bière de mil ou de l'eau farineuse par terre ou sur une poterie sacrificielle’
    b. *tsúrf* ‘suinter (plaie, pus)’

(22) a. *pór* ‘délier’
    b. *purl* ‘arracher (dent, racine, pierre)’
    c. *purgwat* ‘enlever par la force, arracher’

(23) a. *tsawal* ‘faire des vagues (à la surface d’un liquide)’
    b. *tsawal* ‘rincer un recipient’

(24) a. *tsukwat* ‘bouiller’
    b. *tsukuf* ‘mousser, écumer, bouillonner’

Another relatively common third-consonant addition, /f/, may principally link to pluraction. Two instances just preceding, (21b) and (24b), attach /f/ to verbs of durative/repetitive action involving liquids, as is the case in (25b) below. In (26) both the non-extended and the extended verbs have reference to separating; in (26b) with added /f/, the action is overtly multiple ('secouer'). In the other three other instances, (27)–(29), the pluractive implication is less clear. In (27b) a plural-stional implication is possible if we understand placing something in equilibrium to have originally had a concrete reference to the teetering of something about a balance point. In (28a) the action of pushing/shifting something aside could also be understood as implying duration, whereas to put something onto a shelf, (28b), is a single action carried to completion.

In (29a) the significance of /f/ is obscure because of the identical gloss given the alternant shape with /m/, (29b). Possibly /f/ reflects an original focus in (29a) on the multiple movements involved in a tumbling fall. The evidence discussed below indicates that *m was originally an intransitive, with a possible implication of extended intransitive action. If *m was indeed an intransitive that also often went with extended action, the original semantic implications of (29a) and (29b) might have been only slightly different, allowing a subsequent full convergence in meaning to have taken place.

(25) a. *duw* ‘verser’
    b. *duwuf* ‘remplir (d’eau une jarre)’
The internal and comparative reconstruction

(26) a. kósáf- ‘secouer des fibres pour en séparer les brins et rendre chacun de deux malléable’ [semantics: separating multiple strands by shaking apart]
   b. kósár- ‘éparpiller, jeter’ [semantics: separating by scattering]

(27) a. gudza ‘trembler’
   b. gudzaf- ‘mettre en équilibre’

(28) a. kólaf- ‘pousser à coté, déplacer’
   b. kólaw- ‘poser sur une étagère’

(29) a. bódáf- ‘tomber (dans une case en passant par le toit), s’enfoncer (dans un trou à cause de l’effondrement d’un couvercle); s’effondrer (pour le toit d’une véranda, d’un séchoir, ou la plafond d’une maison)’
   b. bódom- ‘tomber (dans une case en passant par le toit), s’enfoncer (dans un trou à cause de l’effondrement d’un couvercle); s’effondrer (pour le toit d’une véranda, d’un séchoir, ou la plafond d’une maison)’

Still another common third-consonant addition in the Mafa verb pairs, /t/, has so far turned up with a verb of repeated action (as proposed in Wolff 1979; Ehret 2003b), (11b), and in a verb, (20c), where it possibly had that implication or, alternatively, may have been semantically empty. Cases (30b), (31a), (32a), and (33a) go with action that is implicationally durational; e.g., thorough (démolir) in (30a), continuous (pouring) in (31a), and extended (chewing on poorly cooked food) in (32a).

(30) a. mbód- ‘renverser, démoliir, retourner’
   b. mbódat- ‘retourner en sac (ou un vêtement) pour en sortire le contenu’

(31) a. kwokut- ‘répandre (farine, cendre)’
   b. kwokul- ‘se rincer la bouche’

(32) a. hambat- ‘manger (boule de mil mal cuite)’
   b. hambaz- ‘bouffer, manger gloutonnement’

(33) a. humbat- ‘serrer contre soi’
   b. humbax- ‘prendre plusieurs objets contre soi’

(34) a. ndzrát-, ndiret- ‘fienter, faire un petit écrement mou’
   b. ndirbíc- ‘serrer (les fesses)’

(35) a. hórt- ‘étrangler’
   b. hóráb- ‘prendre dans le bras, prendre à deux mains’

A somewhat less common third-consonant element in the Mafa verb pairs is /z/. Two examples, (32b) and (33b), occur just above. In both cases /z/ attaches to
a verb connoting action pluractively and strongly carried out: ‘bouffer, manger gloutonnement’ (32b) and ‘prendre plusieurs objets...’ (33b). The case of /z/ in pair (37) fits this pattern of plurative, intensive action: ‘amasser une grande quantité’. As for (37), in the environment of an adjacent front vowel, pre-Mafa *z and *s both palatalized. This internally reconstructed shift is abundantly evident in the occurrence patterns of /z/ and /ʒ/ and /s/ and // in the Mafa lexicon. The regular allomorph of /z/ after /i/ is thus [ʒ], as it is in (36b) below, which again is a verb of strong repetitive action. The element in (37b) cannot be identified with the widespread Chadic *d causative because the verb stem in this case was clearly already transitive. It is likely therefore to have been an augmentative (‘grande quantité’) or plurative (‘amasser’), corresponding to Bade’s *d ‘additive’ (Schuh 2003).

(36) a. darz- ‘amasser une grande quantité’
   b. darḍ- ‘amasser une grande quantité’

(37) a. gad- ‘secouer’
   b. gidʒ3- ‘secouer un jujubier en le frappant avec une pierre’

Another moderately common third-consonant element in the Mafa verb pairs is the labialized velar /kw/. We can assign this item to the already reconstructed proto-Chadic completive verb extension *kw (Jaggar 1988; Ehret 2003b). The implication of fully completed action is overtly evident in examples (28a) (‘chercher partout’) and (39b) (‘tomber raid mort’) and implicit in (40b).

(38) a. kúrkw- ‘chercher partout’
   b. kúrv- ‘chercher d’un endroit à l’autre, rechercher’

(39) a. tsukw- ‘descendre’
   b. tsúkárkw- ‘mourir, tomber raid mort’

(40) a. mburtsockw- ‘pincer (avec la main); griffer (avec la patte, pur un animal)’
   b. mbirc- ‘pincer entre deux doigts’
   c. mbir ly- ‘prendre en étau (entre deux doigts, sous le bras)’

The testimony of items (41b) and (42b) is opaque as to the meaning of /kw/ because it is embedded in an adjective formation: as these two examples, along with (18b) above, indicate, that the element -aə is a Mafa nominal suffix, a modifier deverbative.

(41) a. dâf- ‘chauffer’
   b. dofukw-aə ‘tiède’

(42) a. fůrkw- ‘s’accoupir’
   b. fůrzukw-aə ‘rond comme un petit trou’
A further moderately well attested third-consonant addition is /b/. Three examples have already been encountered: gurb- ‘se plier, se torde’ (17b), hsráb- ‘prendre dans le bras, prendre à deux mains’ (35b), and ndirbic- ‘serrer (les fesses)’ (34b). The function of this extension is unclear. The element /b/ in (34b) and also in (44a) and (45a) below each has a different extension element added after it, further obscuring its semantic contribution in those instances.

(43) a. surb- ‘passer le main sur, frotter’
   b. sordak- ‘glisser vers’ (see items (1)–(9) for *d; for *k, see Table 4)

(44) a. turfúts- ‘rétrécir, étrangler (une ouverture, un toit, un panier)’
   b. turjók- ‘rétrécir, étrangler (une ouverture)’ (see (38)–(42) for -kw-; -j- is a probable allophone of the *z extension in (36), (37), and (42), implying earlier *turjók-)

(45) a. húrbts- ‘rapprocher les deux extrémités d’une tige ou les deux lèvres ouverture, tordre, replier’
   b. húrm ‘plier les deux dernières phalanges d’un doigt’
   c. húrv- ‘se courber, être courbé’

The item (45b) in (45), húrm- ‘plier les deux dernières phalanges d’un doigt’, attests to a less common third-consonant addition to Mafa verb stems, /m/. This ending has appeared previously in (16b), kudóm- ‘cuire lentement’, and (29b), bódóm- ‘tomber…’ Consistently, the extension /m/ occurs in intransitive verbs. In the instance of verb pair (16), its intransitive function in kudóm- explicitly contrasts with the transitivity of kudás- ‘porter à ébullition (un liquide)’, in which the old causative *s fills the same morphological slot as /m/. An intransitive (or de-transitive) *m extension in pre-Mafa seems consistently indicated by this evidence. A sense of extended intransitive action, as implied by ‘cuire lentement’, may have been a secondary effect of this extension.

An additional extension, in *w, appears also in the Mafa verb data. Two examples are:

(46) a. hów- ‘enfler (pour une plaie)’
   b. hóřjaw- ‘élever (la voix); parler fort’ (semantics: see (49a))

(47) a. ngal- ‘entourer, faire le tour, cerner’
   b. ngélëw- ‘faire un cercle avec le bras devant qqn.’

In the wider Afroasiatic evidence, an extension in *w, sometimes an inchoative and sometimes acting as a semantically empty addition to a verb stem, characterizes languages right across the family (see Wolff 1979 for a Chadic reconstruction of this affix). The Mafa cases in (46) and (47) appear to be clearly relatable to this generally occurring and frequently still productive Afroasiatic verb extension. A
previously noted example in (28) – *kalaw- ‘poser sur une étagère’ (28b) versus *kalaf- ‘pousser à coté, déplacer’ (28a) – may be an example of the addition of *-aw as a semantically empty space filler, since in this instance a transitive meaning is present.

Still another recurring third-consonant of the Mafa verb pairs is /l/. In two previously encountered cases, (23b) and (31b) the verb meanings (respectively, ‘rincer un recipient’ and ‘se rincer la bouche’) have a narrow locus of action. Further examples are (48b) and (49a). In (49) the form without /l/ implies an extended consuming, while the form with /l/ has a focused locus for the action of ingesting.

(48) a. *taÅ- ‘boire une grande quantité à la calabasse’
   b. tÅb-Ål- ‘manger le haut d’une herbe’

(49) a. *hÅbÅl- ‘élever (la voix, un enfant)’
   b. hÅbÅr- ‘soulever le terre’

An additional instance of /l/ as an extension appears in (55b) below, again linked to a narrow focus for the action involved. The extension *l may, therefore, have originally been a marker of focused, but possibly durational, action.

The match-up of *hÅbÅl- ‘élever’ and *hÅbÅr- ‘soulever le terre’ in (49) allows the internal reconstruction of a further extension, in *r, contrasting with *l. Examples of this /r/ occurred previously in (7), gwogÅr- ‘évider; élargir (un trou)’ versus gwœgÅd- ‘déterrer, déraciner (un objet bien accroché en terre)’. In both this case and (49b), the presence of /r/ accompanies an action covering a span of time or else a repetitive action to bring about a result (‘soulever le terre’ and ‘évider; élargir…’). Similar implications of duration (‘expose au vent pour sécher’) or of repetitive extended activity (‘entasser, faire un tas’) appear in (50b) and (51a):

(50) a. *fatÅ- ‘refraîchir (pour le vent)’
   b. fatÅr- ‘expose au vent pour sécher’

(51) a. *jïgïr- ‘entasser, faire un tas; se vanter, se faire valoir’
   b. jïgïn- ‘élever (un animal domestique)’

The implication that the extension in *r had pluractional or durative effect in pre-Mafa seems strong.

Incidentally, example (51) requires the existence of a rare extension of former productivity, in *n. The semantics of *jïgïn- ‘élever (un animal domestique)’ involve a relation carried out over a span of time, as opposed to the repetitive action expressed by its mate, *jïgïr- ‘entasser, faire un tas’, suggesting the element /n/ may possibly have been a durative.
Another extension, in /h/, shows up in three instances here. One instance, found in (2) above, pairs up with the proposed intensive *d: tsərd- ‘ fendre (avec une hache)’, conveying a focused intense action of splitting with an ax, in contrast to tsərah- ‘découper en pièces un animal de boucherie, dépecer’, involving iterative action. In (52) ‘fouetter’ is a vigorously repetitive beating action. Whether the adding of final /h/ in (53) accompanies plural action is not apparent from the gloss, but since holes are usually something into which things are repeatedly deposited, plural action does seem probable here too.

(52) a. kəd- ‘ tuer, frapper’
   b. kədəh- ‘ fouetter une sauce de graisse pendant qu’elle chauffe pour qu’elle blanchise’

(53) a. koy- ‘jeter par terre (des graines)’
   b. koyah- ‘jeter (dans un trou, dans de l’eau)’

An extension visibly present in a number of the previous cases is Mafa /b/. This element has two contrasting, environmentally non-overlapping forms, [b] medial and [v] verb-stem final. The verb pair (54) shows the former reflex:

(54) a. bəkəd- ‘se lever pour partir’
   b. bəkambəd- ‘se lever’ (*ə > a by regressive vowel assimilation?)

Three instances with stem-final [v] appear in the previously considered sets: (13), kurv- ‘jeter’ versus kürts- ‘enfoncer, jeter dans une fente’; (38), kürv- ‘ chercher d’un endroit à l’autre, rechercher’ versus kürkw- ‘ chercher partout’; and (45), hûrv- ‘ se courber, être cobbé’ versus hûrm- ‘ plier les deux dernières phalanges d’un doigt’ and hûrbəts- ‘ rapprocher les deux extrémités d’une tige ou les deux lèvres ouverture, tendre, replier’.

The semantic implication of extended action is present in (38). A second semantic feature, present in three cases of /b/, (38), (45), and (54), is intransitivity. The example of (54b) is, of course, a less telling case, because it combines /b/ with /m/, which was previously proposed to have been an intransitive. Additional support for /b/ as an intransitive comes from the quartet of verbs in (17) above: gurs- ‘retrousser’ (17a), gurb- ‘se plier, se torde’ (17b), along with gûrbədəkw- ‘s’agenouiller’ (17c) and gûrbədîf- ‘s’agenouiller’ (17d). The last of the four is especially arresting, because its final element, -if-, appears to be the regular allomorph of old causative *s in a front-vowel environment (see discussions above) – yet the meaning of the extended verb (17d) is specifically intransitive. Something has to have offset the effect of the added causative for the verb to have remained intransitive, and that something may have been /b/.
An added contribution in both (17c) and (17d) comes from still another lexicalized extension, in /d/. There are three possible sources for this element in the wider comparative Chadic frame: the widespread Chadic *-d- transitive extension, the *d ‘additive’ of Bade, or a *d intransitive seen, for example, in Ngizim da- stative. In view of the intransitive action of both (17c) and (17d), the latter relation is the more probable.

Another rare extension in Mafa has /p/ as its consonant. In (55a) the verb with /p/ has been converted into a modifier by addition of the Mafa suffix -âa.

(55) a. kòdap-kòdappâa 'avec des gros crachats'

b. kidêl- ‘laisser décantar un liquide dans une récipient’

What the implication of the addition of /p/ in (55a) might be remains unclear. Perhaps it was an affix of ‘movement out’, as Frajzyngier (2002:265–267) proposes for the Hdi extension in p.

A probably much more recently productive extension in Mafa was based on the voiced lateral obstruent /l/. Five cases, (4b), (8b), (9b), (10b), and (40c), appear in the previously observed verb sets. In the case of (4a), it was proposed that /l/ had a self-referential effect on verb stems: i.e., mòrl- ‘désaccorder une harpe’ (4b) versus mòrd- ‘tendre les cordes d’une harpe’ (4a), with the stem plus /l/ expressing not the stretching itself of the harp string, but rather the effect that stretching the string, either too loosely or too tightly, can bring about. For example (10) a similar semantic implication can be argued – that the original focus of bòrl- ‘assommer, abattre’ (10a) was the severe outcome of the beating rather than on the hitting itself. Again, in set (40), the gloss of (40c), mbirîl- ‘prendre en étau (entre deux doigts, sous le bras)’ focuses on the how of the gripping (‘en étai’) rather than on the act of gripping by itself. Example (8) does not overtly have that kind of effect: bòlâl- ‘enlever, desceller, extraire (de terre)’ (8b) expresses certain actions, while its mate with the added intensive *d, bòlal- ‘écarter, écarteler, arracher en écartelant’, conveys the effects of the actions if carried on intensely. In case of (9b) the implication is unclear.

Two instances of an extension in /k/ have already appeared in the Mafa data. They have contrasting implications as to the function of /k/: sòrədk- ‘glisser vers’ (43b) goes with a durational action (in keeping with Wolff’s 1979 and Ehret’s 2003b proposals for this affix); vərk- ‘retourner (un recipient)’ (3b) lacks this implication.

Two items with final [c] appear in the evidence, ndirbic- ‘serrer (les fesses)’ (34b) and mbîrc- ‘pincer entre deux doigts’ (40b). Cases of [c] in Mafa occur only in front-vowel environments, so they clearly derive from palatalization of some other voiceless consonant or consonants; among the possible candidates as sourc-
The internal and comparative reconstruction

es of [c] are /k/, /t/, and /ts/. In both (33a) and (39a) the final [c] goes with focused strong action, a combination of functions attributed previously to the *ts extension (see (10)–(15) above), suggesting that in these particular instances [c] may be an allomorph of *ts.

Finally, one instance each of third-consonant /hw/, /g/, and /gw/ appear in the data above, each in a context certifying to their having been an additional distinct affix in origin: vúr-hw- ‘labourer, retourner la terre (avec une machine)’ (3c) versus vór-d- ‘bousculer’ (3a) and vór-k- ‘retourner (un recipient)’ (3b); dšr-g-ál- ‘frictionner (corps)’ (15b) versus dur-ts- ‘égratigner, érafler’ (15a); and pur-gw-ál- ‘enlever par la force, arracher’ (22c) versus pur-l- ‘arracher (dent, racine, pierre)’ (22b). The velars and labialized velars constitute phonemically distinct subsets of the consonants of Mafa. Their patterns of contrasting co-occurrence in third-consonant position with other consonants means that each of them, even though rare, fits the systemic positioning with respect to the verb stems indicative of their having been verb extensions. The single case of /hw/ (vúrhw- ‘labourer, retourner la terre (avec une machine)’) supports the possibility that it was plurative and intensive (plowing has repetitious duration and is also more intensively digs up the soil than does a hoe). The possible semantics of /g/ and /gw/ remain opaque, however.

Comparing the verb extensions across Chadic

Out of the examination of the Mafa lexical data, there emerge a large number of reconstructed verb extensions and former extensions, a portion of them well attested, but others rare and very unclear as to function. When these proposed affixal elements are lined up against the reconstructions of verb extensions/suffixes in Newman (2000), Schuh (2003), and Ehret (2003b), strikingly parallel outcomes appear. The total number of internally reconstructed pre-Mafa extensions is twenty-six. Notably, all but four of the twenty-six (-hw-, -gw-, -b-, and -p-) have already been separately reconstructed as verb extensions (or affixes) in one or more of the West Chadic language groups, providing thus both West and Central branch attestations. These affixes show the regular sound correspondences of the Chadic languages involved and, wherever a meaning/function has been proposed previously, they also turn out to have similar meanings or functions. Table 4 lays out the comparative findings. Altogether, the combined internal and comparative evidence makes a case for the productivity in early Chadic of as many as twenty-seven verb extensions.

A recurrent tendency in Chadic studies has been to search for historically recent sources for extensions in existing locational/directional morphemes and
Table 4.

<table>
<thead>
<tr>
<th>Hausa</th>
<th>Bole</th>
<th>Bade</th>
<th>Ngizim</th>
<th>Mafa</th>
<th>Early Chadic extensions and proposed functions</th>
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<tr>
<td>-da</td>
<td>-d-</td>
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<td>-d-</td>
<td><em>d</em> (pluractive?) intensive</td>
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<td>-ts-</td>
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<td>-ts-</td>
<td><em>ts</em> (pluractive?) intensive</td>
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<td>-sa</td>
<td>-s/-sh-</td>
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<td>-s-</td>
<td>-s-</td>
<td>s     causative</td>
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<tr>
<td>-d-</td>
<td>transitive</td>
<td>-d-</td>
<td>-d-</td>
<td>-d-</td>
<td>d     transitive (productive)</td>
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<tr>
<td>da-</td>
<td>additive</td>
<td>-d-</td>
<td>-d-</td>
<td>-d-</td>
<td>d     augmentative (see 36b)</td>
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<tr>
<td>tl-</td>
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<td>-tl-</td>
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<td>t     ventive</td>
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<tr>
<td>-f-</td>
<td>extended action?</td>
<td>-f-</td>
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<td>-f-</td>
<td>f     pluactive</td>
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<td>-b-</td>
<td>intensive</td>
<td>-z-</td>
<td>-z-</td>
<td>-z-</td>
<td>z     repetitive intensive</td>
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<td>-m-</td>
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<td>-m-</td>
<td>-m-</td>
<td>-m-</td>
<td>m     intransitive iterative</td>
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<tr>
<td>ra (Schuh *-la)</td>
<td>-l-</td>
<td>-r-</td>
<td>-r-</td>
<td>-r-</td>
<td>r     pluactive</td>
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<td>na</td>
<td>-n-</td>
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<td>-n-</td>
<td>-n-</td>
<td>n     intransitive</td>
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<td>ka</td>
<td>-k-</td>
<td>-k-</td>
<td>-k-</td>
<td>-k-</td>
<td>k     effective?</td>
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<tr>
<td>ga</td>
<td>-g-</td>
<td>-g-</td>
<td>-g-</td>
<td>-g-</td>
<td>g     completive intensive</td>
</tr>
<tr>
<td>ya</td>
<td>-y-</td>
<td>-y-</td>
<td>-y-</td>
<td>-y-</td>
<td>y     inchoative; verbalizer</td>
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</table>

(Wolff 1979 'repetitive')
Table 5.

<table>
<thead>
<tr>
<th>early Chadic</th>
<th>ancient Egyptian</th>
<th>proto-Afroasiatic</th>
</tr>
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<tbody>
<tr>
<td>*d' (pluractive?) intensive</td>
<td>*z intensive (manner)</td>
<td></td>
</tr>
<tr>
<td>*ts (pluractive?) intensive (*s?)</td>
<td>*t' durative intensive</td>
<td></td>
</tr>
<tr>
<td>*s causative</td>
<td>s- causative (productive)</td>
<td>*s causative</td>
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<tr>
<td>*d causative</td>
<td></td>
<td></td>
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<tr>
<td>*d augmentative</td>
<td>d extended action</td>
<td>*d durative</td>
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<tr>
<td>*d stative</td>
<td>d stative</td>
<td>*d stative</td>
</tr>
<tr>
<td>*l pluralive</td>
<td>š ongoing action</td>
<td></td>
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<tr>
<td>*l ventive</td>
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<td>*l venitive</td>
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<tr>
<td>*f pluralive</td>
<td>f ?</td>
<td>*f iterative</td>
</tr>
<tr>
<td>*t extendative; verbalizer</td>
<td>t continuing action</td>
<td>*t durative</td>
</tr>
<tr>
<td>*z pluralive intensive</td>
<td>z extended action</td>
<td>*dz extendative fortative</td>
</tr>
<tr>
<td>*k'w compleve</td>
<td>k intensive? (one case)</td>
<td>*k'w finitive</td>
</tr>
<tr>
<td>*b intensive?</td>
<td>(p)</td>
<td>*p' finitive fortative</td>
</tr>
<tr>
<td>*m intransitive iterative</td>
<td>m durative; ongoing effect</td>
<td>*m extendative</td>
</tr>
<tr>
<td>*w intransitive?</td>
<td>w intransitive durative</td>
<td>*w inchoative; verbalizer</td>
</tr>
<tr>
<td>*l single action? (completive?)</td>
<td>r completed action</td>
<td>*l finitive</td>
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<tr>
<td>*r pluralive</td>
<td>z extended or diffuse action</td>
<td>*r diffusive</td>
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<td></td>
<td>3 focused action</td>
<td>*? concisive</td>
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<tr>
<td>*n durative?</td>
<td>n durative</td>
<td>*n non-finitive</td>
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<tr>
<td>*h pluralive</td>
<td>h iterative, durative</td>
<td>*h iterative</td>
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<td></td>
<td>h iterative?</td>
<td>*h amplificative</td>
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<tr>
<td>*x'w pluralive intensive?</td>
<td>h repetitive</td>
<td>*x'w extendative fortative</td>
</tr>
<tr>
<td>*b intransitive? durative?</td>
<td>b extended; state; intransitive</td>
<td>*b extendative/stative</td>
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<td>*l' middle voice?</td>
<td>d middle voice</td>
<td>*dl middle voice</td>
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<tr>
<td>*k pluralive</td>
<td>k duration? (one case)</td>
<td>*k durative</td>
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<td>*g compleve intensive?</td>
<td>g single action? (one case)</td>
<td>*g finitive fortative</td>
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<td>*g'w ?</td>
<td>g repetitive? (one case)</td>
<td>*g'w durative</td>
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<td>*y inchoative; verbalizer</td>
<td>i - y inchoative; verbalizer</td>
<td>*y inchoative; verbalizer</td>
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<td>*p ?</td>
<td>p intensive</td>
<td>*p intensive (manner)</td>
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<td>s extended action</td>
<td>*s non-finitive</td>
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<td>t focused or single action</td>
<td>*t' focative</td>
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<td>c partitive; itive</td>
<td>*i partitive (sunderative)</td>
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<td>k intensive</td>
<td>*k' intensive (effect)</td>
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<td>k possible itive?</td>
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<td>h intensive? (one case)</td>
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<td>h complementive?</td>
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<td>*x precipitative</td>
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<td>*s' fortative</td>
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verbs of movement. And it does seem clear that a number of Chadic languages have been sites of extension creation. Frajzyngier (2002) makes a compelling case for such items in the Hdi language.

But as is often the case in historical linguistics, it is good to spread one’s net wider, so as gain a more inclusive perspective on the range of possible explanations. If one does so, a goodly number of the Chadic extensions turn out to have plausible correlates in other branches of Afroasiatic. Table 5 presents a version of the wider Afroasiatic context. It places in three parallel columns (1) the proposed early Chadic extensions; (2) the productive and lexicalized extensions argued to have been embedded in ancient Egyptian lexicon (Ehret 2003a); and (3) the previously proposed early Afroasiatic extensions (Ehret 1989, revised in Ehret 1995). (The sound change rules governing the phonological matching of items in the three lists come from Ehret 1995.)

The investigation of the verb extensions and their meanings, functions, and productivity is still in its infancy for the Chadic branch, so there is far more to be learned and there are surely still other extensions to be identified. The proposals made here reveal Chadic to be the branch of Afroasiatic that has most widely kept alive the productivity of what was surely a much older system in Afroasiatic for modifying and elaborating the meanings and functions of verb roots. The comparative study of Chadic verb grammars promises to be the primary avenue of discovery into this aspect of the linguistic past of Afroasiatic.

But more than that, the Chadic evidence has implications for the historical comparative study of language families in general. One has only to consider the still largely unresolved problem of the numerous root additions evident in the proto-Indo-European lexicon to see the explanatory promise of such work. The historical linguistic investigation of root additions in Chadic is a field of potentially global significance for the future development of historical linguistic theory.

References


One way of becoming a dative subject

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Dative subjects have been studied in many languages and in a wide variety of linguistic theories. They have been explained as being idiosyncratic instances of case assignment within some versions of Case Theory; as having a specific set of semantic properties assigned by the dative case marker (Smith 2001); as being associated with specific types of verbs (the most frequent explanation, invoked for a large number of languages); and as coding the speaker’s attitude toward a proposition (Barðdal 2004). For some languages, e.g. Icelandic, several motivations contribute simultaneously to the presence of dative subjects (Barðdal 2001, 2004). All these explanations consider the dative (like other case markings) as belonging to the functional domain of the clause. The aim of this study is to analyze for the first time ever coding of subjects through the same preposition that also precedes the dative/benefactive nominal argument in Wandala (Central Chadic). Such a coding has not been reported in any other Chadic language, not even in closely related Malgwa (Löhr 2002), or in more remote Hdi (Frajzyngier with Shay 2002) and Lamang (Wolff 1983). The study demonstrates that the use of the ‘dative/benefactive’ preposition is motivated by two complementary factors, viz. (1) the need to include a nominal subject in a clause that marks an event as the background for subsequent discourse and (2) non-topicalizing switch reference. Thus, the preposition that otherwise precedes nominal dative benefactive argument, does not assign any semantic role to the subject nor is its presence motivated by referential (semantic) properties of verbs.

1. The problem

In independent, pragmatically neutral clauses in Wandala,¹ pronominal subjects precede the verbs, and nominal subjects follow either the simple or the reduplicated form of the verb:

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1. Wandala (Mandara) is a Central Chadic language, spoken in the Extreme North province of Cameroon and in North Eastern Nigeria. The present work on Wandala is supported by a
(1) tátsámdá žílé
tá tsá md-á žílé
3pl get-up people-gen man
‘People of the groom get up,’
tásabðýá mdáműksé
tá sð bðýá md-á mûksé
3pl come meet people-gen woman
‘they come to find the people of the bride.’

(2) ḡóqhè lvá hârdá,
ḥṣ-ā-û-ḥ lv-ā hârdá
finish-go-appl-finish business-gen farm
‘When the farming finished, ...’

Yet in clauses with the punctual suffix ḡè (phrase-final form) or ḡ (phrase-inter-
nal), the nominal subject following the verb is marked by the preposition gð. That
the argument so coded is the subject is proven by the fact that the verb must be
preceded by subject pronouns a ‘3sg’ if the nominal argument following the verb
is singular or ta ‘3pl’ if the nominal argument following the verb and preceded
by the preposition gð is plural. The preposition is glossed as ‘TO’ because in other
predications it precedes the dative/benefactive nominal argument:

(3) à sð-m-hð gð víyà
3sg come-in-pnct TO rainy season
‘There came the rainy season.’

(4) tà njí-hð gð târ màm ántår gdz-rè
3pl remain-pnct TO 3pl mother conj small-nomin
‘There remained mother and child.’

grant Nr. 0439940 from the National Science Foundation to Zygmunt Frajzyngier and Erin
Shay, and by the Jane and Charles Butcher Award. Most of the data were gathered in Cameroon,
where I was hosted over many years by the Institut de Recherche Agricole pour le Développe-
ment in Maroua, which also provided me with much-needed institutional and logistic support.
I am most grateful to its former director Seini Boukar Lamide and its current director Dr. Noé
Woin for support during my fieldwork in Northern Cameroon. I am grateful to Erin Shay,
for comments on the substance and the form of the paper, and to Joan Maling and Jóhanna
Barðdal, who also pointed me to relevant literature on Icelandic and shared their knowledge of
Icelandic and issues of dative subjects. Jóhanna Barðdal’s comments, in particular, forced me to
substantially revise several hypotheses. I am most grateful to Marian Safran for editorial work
on this paper. None of the persons who were so helpful in the work on this study is in any way
responsible for the errors that undoubtedly are there.
The preposition $g$ also precedes nominal recipients, beneficiaries, and addressees of verbs of saying. The recipient or the addressee, whether represented by a noun phrase or not, must also be coded by the pronominal object suffixed to the verb:

(5) yó mamá á v-á-n-tó ká sàwàrí šágrà gö gādzrē
    well mother 3sg give-GO-3sg-T NEG advice (f) good TO child
   ‘The mother does not give good advice to her child (daughter).’

(6) tālavàngtāksē dāgiyā nó nó nó
    tā lv-à-n gö láksē dāgiyā nó nó nó
    3pl say-GO-3sg TO chief COMP here here here
   ‘They say to the chief, here, here, here, . . .’

The marking of the single nominal argument by the preposition $g$ is not conditioned by the types of events that the verb refers to (sometimes called semantic properties of verbs) (a proposal advanced in Onishi’s Introduction to Aikhenvald et al. 2001 and in many other studies of dative subjects). The occurrence of the marker $g$ before the subject noun phrase is linked with the punctual aspect. This is shown by the fact that the same verb can occur with the subject coded solely by the position after the verb as well as by the preposition $g$. Compare example (7) with example (4) repeated here for convenience:

(7) a. s-á-m-sà viyà
    come-GO-IN-come:GO rainy season
   ‘There came the rainy season.’ (elicited)

b. à ss-á-m-hà gā viyà
    3sg come-IN-PNCT TO rainy season
   ‘There came the rainy season.’

Compare also the following pair:

(8) a. à mtsò dàdà
    3sg die father
   ‘The father died.’ (elicited)

b. à nába mtsò-hè gā dàdà
    3sg then die-PNCT TO father
   ‘The father died.’

The presence of the preposition before the nominal subject is required by the punctual aspect as coded by the suffix $hè$ and by the fact that the subject occurs after the verb. In natural discourse, if there is no suffix $hè$, subjects are marked by the preposition $g$ only with a few verbs which are inherently punctual and only
when the subject follows the verb. Subjects are never marked for their grammatical role by any other preposition. The main question of the present study is: Why is the post-verbal subject sometimes marked by the preposition gê? In order to answer this question, one must also answer the question: What is the function of the suffix hê?

The paper is organized as follows: Since it is subjects marked by the dative preposition that are at issue, I first discuss briefly the current approaches to dative subjects in other languages. I then discuss the functions of the suffix hê, whose presence requires the nominal subject following the verb to be marked by the preposition gê. I postulate that the suffix hê is a portmanteau morpheme combining functions belonging to three domains. Then follows a description of the functions of the preposition gê. The study of the factors involved indicates that the preposition gê codes non-topicalizing switch reference for the nominal subjects. The paper concludes with a discussion of the implications of facts of Wandala for the origins of dative subjects.

2. Approaches to dative subjects

The term “dative subject” refers in the literature to an argument that instead of being coded as a canonical subject in a given language is coded in the same way as a recipient, beneficiary, or indirectly affected object. Behind this definition lie the following tacit assumptions: (1) Every clause has to have a subject; (2) Even if there is no overt subject coded in the clause there exists some entity called “logical subject”; (3) If an intransitive verb has only one noun phrase, that phrase is the subject; (4) there exists a default, or canonical, way to mark the subject. Each of these assumptions is quite controversial, given the fact that the category “subject” is not universal (Mithun 1991); the term “logical subject” has no universally valid set of characteristics; cross-linguistically not every clause has to have a subject; and in many languages the coding of the single argument may indeed indicate a semantic relationship between this argument and the predicate, rather than the grammatical relation “subject”.

The importance of the issue of dative subjects is that it has been reported in a number of unrelated languages (Moore and Perlmutter 2000; papers in Aikhenvald et al. 2001; Barðdal 2001, 2004; Maling 2001; Smith 2001; Eythórsson 2002; papers in Bhaskararao and Subbarao 2004; Lazard 2005; and numerous references in older studies. These reports imply the existence of a cluster of semantic and pragmatic phenomena associated with dative subjects cross-linguistically. If one could understand the functions of dative subjects, and if it turned out that these functions were similar across unrelated languages, one could understand
some cause-effect relationships between form and function that transcend one language or one language family.

In this paper I shall use the term “dative subject” to refer to categories so labeled in the literature and to the subject arguments in Wandala marked by the preposition gə, without however, accepting the assumptions about or the implications of the category “subject” as listed above. The reason I use the term “dative subject” with respect to a grammatical construction in Wandala is that the preposition gə also precedes dative/benefactive nominal arguments, and the term ‘subject’ because the subjects preceded by the preposition gə trigger the number agreement with subject pronouns preceding the verb. Since Wandala has a phenomenon that to some degree resembles dative subjects of other languages, its description not only enriches the existing body of data on the phenomenon in question but may also contribute to the understanding of the phenomenon and hence to the explanation of the cause-effect relationships responsible for it.

3. Basic information about Wandala

Here are some basic facts about Wandala syntax that are necessary for understanding the argumentation. In pragmatically neutral clauses, in all aspects other than perfect, verbs are preceded by subject pronouns. In pragmatically neutral clauses, a nominal argument, whether subject or object, follows the verb. The term “argument” refers to that member of a verbal predication that is the least marked in the language.

The category “subject” is postulated because there are specific formal characteristics that set this category apart from other categories in the language. The verb in the perfect, coded by the reduplicated form, marks the person and number of the subject through subject pronouns inserted between the reduplicated parts of the verb. The third-person singular subject is unmarked. The nominal subject follows the verb (ex. 9):

(9) əməlməhəra sərməmdənə
    ə məhəra s-à-rə-m-s-à mədə nə
    well now come-GO-3PL-IN-come-GO people DEF
    ‘And now, those people came.’

The simple form of the verb and the imperfect coded by reduplication (as opposed to the perfect coded by reduplication and the subject pronouns inserted between the reduplicated parts) are preceded by a subject pronoun regardless of whether the clause has a nominal subject:
(10) ànábà ūlápallátàrè
à nábà ūl-à páll-á-tàrè
3sg THEN depart-GO one-GEN-3PL
‘And then, one of them left.’

The nominal subject may occur in the clause-initial position in topicalization or focus, which are also marked by other means:

(11) tàkkàtàà ŋànnà tàkídyèmà [pause] tà dó hàràrà
tàkkàt-hà ŋànnà tà kídyè mà tà dó hàràrà
friend-PL DEM 3PL three AND 3PL GO farm
‘And these three friends went to farm.’

The object noun phrase occurs in the post-verbal position:

(12) tà hàràrà fàtànàrè
3PL hàràrà field-gen-3PL AND
‘And they finished farming.’

In pragmatically neutral clauses, the verb may have only one nominal argument, either subject or object. The second nominal argument may also occur in clause-initial position for the same pragmatic functions as the subject, viz. topicalization and focus. Pronominal objects are suffixed to the simple form of the verb and inserted between the reduplicated form of the verb:

(13) yó álv wàndál ŋànnà á fár màlrùwà [error]
yó álv wàndál ŋànnà á f-y-àrà màl-rùwà
well talk Wandal DEM 3SG put-1SG-ON lder-1SG
‘This Wandal talk is authorized/asked of me by my boss.’

Noun phrases in roles other than as subject or object, and complements other than inherently locative nouns, are coded by prepositions.

4. Function of the form hè

In order to understand the construction with the nominal subject marked by the preposition gà one must first understand the function of the suffix hè. This suffix has been noticed but not described in previous studies of Wandala and a similar suffix has been observed in related Malgwa. Mirt (1969/1970) does not describe the function of this marker, saying only that it appears to be a particle. In the closely related Malgwa, Löhr (2002) postulates the existence of the high-tone suf-
fix *hé* as one of three suffixes that nominalize verbs. She provides a list of verbs that take this suffix, a list that includes intransitive, transitive, and derived transitive verbs. She does not offer an explicit description of the function of this suffix as opposed to two other nominalizing suffixes. It may well be, that despite segmental similarity, the Malgwa *hé* is unrelated to Wandala *hè*. The form *-hè* in Wandala is not a nominalizing suffix, as shown by the fact that it occurs only in verbal predications, and the verbs to which it is added do not have syntactic or morphological properties of nouns.

The hypothesis about the marker *hè* is that it is a portmanteau morpheme, with three functions, each belonging to a different domain. The first domain is aspect. The suffix *hè* codes punctual aspect. The second domain is the point of view. The suffix *hè* codes the point of view of the subject. The third domain is discourse. The suffix *hè* codes event backgrounding. What follows is the evidence for the three functions that are represented at the same time by the suffix *hè*.

4.1 Punctual function of the suffix *hè*

The suffix *hè* has the aspectual values punctual and completed and always has past time reference:

(14) tà tsáhá tūwá hāyñānà
tà tsá-*h* á tū w-á hāy ñānà
3pl stop-PNCT PRED before mouth-GEN river DEM
‘They stopped at the river shore.’

(15) tànáb hād àbàdàlyé
tà náb âptsâ-*h* á dàm ñānà hābè á dâlyé
3pl then return-PNCT PRED go:IN field DEM again PRED again
‘They returned to the field again.’

(16) tàdúhè ñúmtâtâyà ɔvgâñannà tàtsâhé
tà dú-*hè* dá-m tâtâyà ɔvgâ ñânnà tà ts-á-*hè*
3pl go-PNCT go-IN search grave DEM 3pl stop-go-PNCT
‘They got going in search of that grave, and they stopped.’

The evidence that *hè* in Wandala is a grammatical marker is provided by the fact that its presence cannot be predicted from the other elements in the clause, and the same clause can occur with or without the marker *hè*. Thus, one can omit the suffix *hè* from example (15):
(17) tâná bóptsá dó-m fānā́nnā ḥābā́dā́lyé
tā́ nā̀b ptsá á dó-m fā nā́nnā ḥābā́dā́lyé
3pl then return pred go-in field dem again
‘They returned to the field again.’

The evidence that the suffix *hè has punctual and completive aspectual values is provided by the fact that it cannot co-occur with other marked aspectual categories, viz. with the imperfect marked by the form PRO R1R2 (PRO represents the subject pronoun, R represents the root, and R1R2 represents the first and the second parts of the reduplicated root), with the perfect marked by the form R1PROR2, with the stative, habitual, or progressive aspects:

(18) á tijè sá-wá lâksé
3sg prog come-vent Sultan
‘While the Sultan was coming...’

Compare the ungrammatical usage with the suffix *hè:

(19) *á tijè só-m-hà lâksé
3sg prog come-in-pnct Sultan
for ‘While the Sultan was arriving’

Additional evidence of the punctual value of the form *hè is provided by the fact that the marker *hè cannot be used with verbs that are inherently unbounded, such as the verb tàtàyà ‘search’. Such a coding would result in an internal contradiction within one proposition:

(20) *á tàtàyà-myá-hè
3sg search-1pl-pnct
for ‘he searched for us’

The systemic evidence for the punctual function of the marker *hè is provided by the fact that it cannot co-occur with inherently punctual verbs. The use of such a marker would result in a tautology within one proposition. Here is an example with the verb kyá ‘split’, which in propositions involving human affected arguments means ‘disperse’:

(21) á kyá mdè
3sg disperse people
‘He dispersed people.’
tà kyá mdè
3pl disperse people
‘They dispersed people.’
One way of becoming a dative subject

With verbs of movement the punctual aspect codes the inception of the movement:

(22) tàdúhè důmtátâyà ávgòñánnà tàtsáhè
tà dú-hè dí-m tátáyà ávgò ñánnà tà ts-á-hè
3pl go-PNCT go-IN search grave dem 3pl stop-go-PNCT
‘They got going in search of that grave, [and] they stopped [at the grave].’

With verbs of posture, the punctual aspect codes a change of posture:

(23) tàtsá-thà tânábòdámhùdáksè
tà tsá-t-h tà nábò dám hùd-á ksè
3pl stand-T-PNCT 3pl then go-IN belly-gen town
‘They got up and they went inside the town.’

Subjects coded by the preposition gò occur only in punctual constructions. The following pattern obtains: A non-punctual verb followed by the suffix hè can have the subject coded by the preposition gò. An inherently punctual verb without the suffix hè can also be followed by the subject coded by the preposition gò:

Verb-h 
gò Nominal subject
[–punctual]
Verb 
gò Nominal subject
[+punctual]

A nominal argument that undergoes change cannot occur in the position immediately following the verb kyá ‘split, disperse’:

(24) *tà nábà kyá mdè
3pl THEN disperse people
for ‘and then people dispersed’

The only way that a nominal argument that follows the verb can be interpreted as the affected subject is by marking it with the preposition gò:

(25) tà nábà kyá gò mdè
3pl then disperse TO people
‘The people dispersed.’ (elicited)

Here are additional examples of the punctual function of the suffix hè:
(26) tànábòyishè
tà nábà yí-s-hè
3pl then dig-s-PNCT
‘They dug up.’

(27) tà nábà yí-s-hè ddá tárè
3pl THEN dig-S-PNCT father 3pl
‘Then they dug up their father.’ (elicited)

The punctual aspect may co-occur with indirect object pronouns:

(28) tànjánnúhè
tá nj-á-n-n-ú-hè
3pl stay-3sg-3sg-appl-PNCT
támlánnú màgàlrà
tá mlá-n-n-ú-wà màgà l̀rà
3pl help-3sg-3sg-vent do work
‘they remain with her to help her with the work.’

There is also systemic evidence that the nominal object cannot occur in the punctual aspect. The suffix hè can be used with the affected, pronominal subject:

(29) à sba-v-hè
3sg hide-AFF-PNCT
‘She hid [herself].’

4.2 Discourse function of the marker hè

Although the suffix hè codes the punctual aspect, it is not always used when the event is punctual, regardless of whether the verb is inherently non-punctual or punctual. That indicates that the suffix hè has yet another, potentially more general, function. That other function is to indicate that the described event constitutes necessary background for the understanding of the events in the subsequent discourse. Support for the proposed hypothesis is provided by the structure of sentences, by the structure of discourse, and by a number of distributional facts that the hypothesis can explain. Each of the explanations constitutes part of the evidence for the hypothesis.

4.3 Evidence from sentence structure

In sequential clauses in isolation, the first clause provides background for the events in the second clause. Consequently, the first clause has the marker hè and
the second clause does not, because it is not expected to be followed by anything else in discourse. In the following example the predicates of both clauses are inherently punctual, and yet only the verb of the first clause has the suffix $hè$:

(30) ám à šòrdá-k-hà nábò-mbò-dà
       á-m à šòrdá-k-hè à nábò mbò dà
    PRED-IN 3SG slip-PNCT 3SG then fall
    ‘when he slipped he fell’ (elicited)

A clause ending in $hè$ cannot be the last clause in the discourse, as in that position it cannot provide the background for anything. In the following example, neither predicate is inherently punctual, and yet the first one receives the suffix $hè$ but the second does not:

(31) à dá-h à dò-m mbà-rà ántàrà à bárfè
    3sg go-PNCT pred go-IN home-3sg conj 3sg wash
    ‘He returned home and washed.’ (elicited)

(32) à dá-h à dò-m mbà-rà
    3sg go-PNCT pred go-IN home-3sg
    ‘He returned home.’ (cannot be the last sentence of a discourse)

And here are two natural discourse examples:

(33) tàtsō-thà tânábò-dómhùdàksè
    tā tsé-t-hà tā nábò dò-m hùc-f-à ksè
    3pl rise-ON-PNCT 3pl then go-IN belly-GEN town
    ‘They got up and went to the town.’

tàdòmbàlòksè
    tā dò mb-à làksè
    3pl go house-GEN Sultan
    ‘They are going to the Sultan’s.’

In the following example, the first sentence has the punctual marker $hè$ providing the background for the second sentence, so that the place where people arrived would be known:

(34) tâná bòptsáhà dòmfànànn hàbà dàlỳè
    tā náb àpts-á-hà á dò-m fò ñàn àn hàbà dàlỳè
    3pl THEN return-GO-PNCT pred go-IN field DEM again
    ‘They returned to the field again.’
émmàhjàrà sàrà msàmdànà
cà màhjàrà sà-rà-m-s-à mdà nà
well now come-3PL-IN-come-GO people DEF
‘And now, those people came’ (the ones whom the Sultan sent)

4.4 Systemic evidence

The suffix hè cannot occur in negative clauses. In the following example, the verb jà-myá-mmà ‘meet-1INCL-TOG’ cannot have the punctual suffix hè added. The absence of an event is less likely to constitute the necessary background for the understanding of the ensuing discourse than the presence of an event:

(35) kà màgà-nó stàrà á wàyàa
2sg make-3SG how PREP yesterday
‘How did you make yesterday, that
jàmyàmmà kònà
jà-myá-mmà kò nà
meet-1INCL-TOG NEG DEF
we did not meet?’

The suffix hè cannot occur in content-interrogative clauses. Asking a specific question cannot serve as background for the interpretation of subsequent events in discourse.

The data gathered contain one elicited example of the marker hè with a polar interrogative clause. Even this example constitutes background for the subsequent discourse, as evidenced by the counter-expectation rather than the straight interrogative meaning of the clause:

(36) à jí-hè hè
3SG hit-1SG-PNCT Q
‘But did he hit me?’ (elicited)

4.5 Evidence from discourse structure

The backgrounding of the event helps to understand the subsequent event. In the following fragment of a narrative sentence, (37a) provides the background for the sentence (37b).
(37) a. tànbùpùm hâ dúmhûdâ hàyè [not in the recording]  
   tâ nábà pû-m-hè á dú-m hûd-á hâyè  
   3pl THEN fell-IN-PNCT PRED go-IN belly-GEN river  
   ‘Then they threw themselves into the river.’  

d. gôgôgôgôgô yàwà dàgdzám hûdâ hâyè  
   gôgôgôgôgô yàw à dàgdz á-m hûd-á hâyè  
   gul, gul, gul, water 3sg run PRED-IN belly-GEN river  
   ‘gul, gul, gul, the water runs within the river.’

The use of the punctual aspect may provide the necessary background for an  
event that comes much later in discourse. In the first sentence of the following  
fragment, the suffix hè provides the background for the rest of the narrative but  
not for the immediately ensuing sentences:

(38) dàcí ànábò bòjìf-hè gôşiïyà zàrvá târ pàllé  
   dàcí à nábò bòjìv-hè gô şíli-á zàrv-á-târ pàllé  
   then 3sg THEN fall-PNCT TO sand-GEN sesame-GEN-3pl one  
   ‘Then, one grain of their sesame seeds fell down.’

([39) tèycàs hàyè tànbàbsà tswàhè ńànà [not on the recording]]  
   tà ic-s hàyè tà nábà ts á-t wà hàyè ńànà  
   3pl cut-S river 3pl THEN stop PRED-T mouth river DEM  
   ‘They crossed the river, [and] then they stopped at the shore of the river.’

(40) tèycàs hàyè  
   tà ycà-s hàyè  
   3pl cut-S river  
   ‘They crossed the river.’

A discourse fragment may have several events backgrounded, so that they all con-  
tribute to the understanding of the ensuing discourse. The first sentence in the  
following fragment provides the necessary background for the second sentence:

(41) ànábûmtsïgh gô Hàdà  
   à nábà mtsï-hè gô Hàdà  
   3sg then die-PNCT TO father  
   ‘The father died.’

(42) àdyàtâr màmà ântârgdzrè [ântârgdzrè]  
   à dy-â târ màmà ântârgdz-rè  
   3sg leave-GO 3pl mother CONJ child-NOMIN  
   ‘He left the mother and the child.’
The information about the coming of the rainy season is crucially important for the understanding of the subsequent discourse where the participants are involved in the farm-work. The rainy season does not make an appearance in the discourse again:

(43) àsámhà gòviyà
    à só-m-hà gò viyà
    3sg come-in-PNCT TO rainy season
    ‘There came the rainy season.’

(44) táníjìhà gòtār màngántargdzrè
    tà njí-hà gò tār màm ántàr gdz-rè
    3pl remain-PNCT TO 3pl mother conj small-NOMIN
    ‘There remained mother and child.’

(45) tâhàrdà fàatârè
    tà hârd f-áa-tārè
    3pl farm field-gen-3pl
    ‘They worked on their field.’

Here is another fragment of discourse, where the punctual marker hè provides the necessary background, including time, place, and the participant, for the ensuing sentence:

(46) a. àdásâmhmà gòkàksé
    à dà só-m-hà gò lâksé
    3sg seq come-in-PNCT TO Sultan
    ‘And/when the Sultan came,’

b. tàlvángágdzánà bóstláhàńùrwàrà
    tà lv-á-n gò gdzó nà ból lâh-á-ń-á râwârà
    3pl say-go-3sg TO child def sing song-gen-2sg-gen rem.dem
    ‘They told the child, “Sing that song of yours again!”’

In natural discourse the punctual always codes the end-point of an event. After the punctual aspect, another event must begin:

(47) a. tà ycò-s háyè
    3pl cut-s river
    ‘They crossed the river,’

b. tà tsáhà tòwà háynánà
    tà tsá-h à tò w-á háy ñànnà
    3pl stop-PNCT pred before mouth-gen river dem
    ‘they stopped at the river shore.’
c. à bò pállé ddá ŋimà
   à bò pállé dd-á ŋimà
   3sg say one man-gen listening
   ‘The one who listens said, …’

5. Functions of the preposition gá

5.1 The preposition before the dative/benefactive argument

The preposition gá, glossed as ‘TO’, precedes the nominal and the independent pronominal benefactive argument. The preposition gá, however, is not the sole coding means of the dative/benefactive relation that obtains between the noun and the verb. That function is coded by object pronouns suffixed to the verb (in the examples that follow, object pronouns and the preposition are bolded). When the argument marked by the preposition gá is an independent pronoun, the dative function is coded by the third-person singular object suffix n added to the verb:

(48) má žžàr án gdzàr-á-mi ŋánnà
    HYP look ASSC child:pl-gen-1pl.incl dem
    ‘When one looks at our children [girls],
    kíntà gústwànà wà  ámb tànkò gàmýà
    kíntà pù st-wà-nà wà  ámbtà-n kò gà míyà
    as 3pl loaf dem-dem-def com good-3sg neg TO 1.incl
    as they so loaf around, it is not good for us.’

The nominal addressee of the verb of saying is preceded by the preposition gá, and its semantic role is again coded by the object pronoun suffixed to the verb:

(49) yà šà-tr-ú gà ŋàmá
    1sg speak-3pl-appl TO population
    ‘I speak to the people.’

(50) tàndà nànú gà dádà kínnì
    tà ndàvà-n-ú gà dádà kínnì
    3pl ask-3sg-appl TO father bckg
    ‘They ask the father.’

(51) észìlé ándânà gàmdâtàrè gànní
    észìlé á ndà-nà gà md-à-tàrè gànní
    like man 3sg tell-3sg TO people-gen-3pl comp
    ‘And then the man (groom) says to the members of his family …’
5.2 The preposition coding purpose and reason adjuncts

The nominal complements of reason and purpose are preceded by the preposition gà:

(52) àbànjannè kòndàngù kòbùnà
à bà njannè kò ndah-à-n gà wè kò bùu nà
3sg say 3sg 2pl say-go-3sg TO what 2pl two def
‘He says, “Why do you say ‘you two’?”’

The purpose and reason clausal adjuncts are not coded by pronouns on the matrix clause verb, and the preposition g is the sole marker of their role:

(53) yò cámànkininí nàzù akátánórwa
yò cámàm kínni nàzù à kátá-n úr wá
well first of all bckg what 3sg want-3sg person com
bà gà nj-à-ñjà án hèer-àn klápi-rè
FOC TO stay-go-3pl-staya ssc peace(Ar)-assc healthy-nom
‘First of all, what one wants is for them to remain in peace and good health.’

(54) tā pwámbà njannà gâbâkirà žîlmtú
tā pw á-m mbà njannà gà bâk ir-á žîl mtú
3pl pour pred-in house dem TO neg.ex head-gen man or
‘They [the girls] loaf around the house because of the absence of man or ...’

5.3 Preposition gà in comparative construction

The preposition gà codes the target of a comparative construction (the second sentence of the following example):

(55) má bâní lisâfiy-à dúksà bâdâmè
má bâní lisâfi-à dúksà bâdâmè
hyp concern calculation(-f)-gen thing all
‘If it concerns any kind of calculation,’

bà kûr tâtâtáyà à jîg-iyì bâkà
bâkà ûrà tâ à tâtâtáyà à j-à-û
neg.ex person neg pred search 3sg surpass-go-appl

g-iyà bâkà
prep-1sg neg.ex
‘no person can surpass me.’
5.4 Preposition gə codes kinship relations

The preposition gə codes kinship relations ‘parent of ...’, ‘father of ...’, and ‘mother of ...’ but not ‘child of the mother’ or ‘child of the father’:

(56) cáàmàn kíni ŋá dàrgə gdzrè
cáa màn kíni ŋá dàr gə gdzrè
before/past BCKG 1PL.EXCL parent TO child
‘First of all, we are the parents of the daughter.’

The range of functions of the preposition gə resembles that of some of the dative case markers and dative/benefactive prepositions of Indo-European languages, such as English ‘for’ and ‘to’, and the recipient/benefactive functions of the dative case in Latin, French (for pronouns), Germanic (Maling 2001), and Slavic languages.

6. Switch reference function of the preposition gə

The preposition gə is the switch-reference marker for non-topicalized nominal subjects. The scope of switch-reference is the subject of the immediately preceding clause. The evidence for the switch reference function is provided by the fact that each time the preposition precedes the nominal subject, the subject is different from the subject in the immediately preceding clause. Here is the evidence.

(57) a. gəgəgəgəgəgəgəgəváwá dàgzám hùdá hàyè
gəgəgəgəgəgəgəyəwá dàgəzá á-m hùd-á hàyè
gul, gul, gul, water 3SG run PRED-IN belly-GEN river
‘Gul, gul, gul, the water runs within the river.’

b. dàcí ànábò bʃí-f-hè gəšíiłyá zàrvá tár pállè
dàcí á nábò bʃí-v-hè gəšíi-á zàrv-á-tár
then 3SG THEN fall-AFF-PNCT TO sand-GEN sesame-GEN-3PL
pállè one
‘Then, one grain of their sesame seeds fell down.’

Cf. an ungrammatical sentence with the preposition gə omitted:

(57) c. *dàcí ànábò bʃí-f-hè šíiłyá zàrvá táré
dàcí á nábò bʃí-f-hè šíi-á zàrv-á táré
then 3SG THEN fall-AFF-PNCT sand GEN sesame-GEN 3PL
for ‘Then, one of their sesame seeds fell down.’
If there were no preposition preceding the noun phrase after the verb with the suffix *hè*, the bare noun phrase could be interpreted as the object. The presence of the preposition before the subject noun phrase is motivated by the principle of functional transparency, which says that the role of every element of the utterance must be transparent to the hearer in the sense of knowing to what domain the form belongs and what the function of the form within a given domain is (Frajzyngier and Shay 2003). The evidence that the preposition is a coding means required by the principle of functional transparency is provided by the fact that it does not occur if the subject occurs in clause-initial position for the purpose of topicalization:

(59) dàcí *màlà-hà* ñrè tà dò sò-hè

then parent-pl:gen 1.excl 3pl seq come:vent-pnct

tà bór záhó nà

3pl find snake def

‘When our parents came there, they found the snake.’

Non-topicalizing switch reference in the imperfective aspect in Wandala is coded by the use of the bare noun in the position immediately following the verb:

(60) a. tànábùpúmhádúmhú

tà nábà pú-m-hè á dú-m hàd-á hàyè

3pl then fell-in-pnct pred go-in belly-gen river

‘Then they threw themselves into the river.’

b. gógógógógó á dàgzàyawè

gógógógógó’ á dàgzá yáwè

gulgulgul 3sg run water

‘Gul, gul, gul, runs water.’

(61) a. mábà kòjà kùlá wá àjìyù kògìyà

má bà kòjà kùlá wá à ji-y-ù kà gò iyà

hyp foc count calculus com 3sg surpass-1sg-appl neg to 1sg

‘If it concerns counting, nobody surpasses me.’
b. ábà pállè kíni wá
   á bà pállè kíni wá
3sg say one bckg com
‘Another says:’

The topicalizing switch reference is coded through the position of the subject before the verb:

(62) žílé mávácatàná á dátattàyá múksò náwá
   žílé má-vácà á-tā-nā á dō tāttāyá múksò ná wá
man hyp-time pred-t-3sg 3sg go search woman def com
‘The man, at the time when he will go to look for a woman,’
átsé áhálà mánūrárà
á tsé á áhálà m-án úr-á-rà
3sg get up 3sg go hyp-a ssc man-gen-3sg
‘he gets up he goes either with his man.’

(63) a. tándà vânú gò dàdà kíni
   tá ndávà-n-ú gò dàdà kíni
3pl ask-3sg-appl TO father bckg
‘They ask the father.’

b. è dàdò kíni mátsatsà bàtrá
   è dàdò kíni má tsà-tsè á bà-trá
eh, father bckg hyp rise-rise 3sg say-3pl
‘Eh, the father, sometimes, tells them,’

7. Conclusions about Wandala

In the punctual aspect, non-topicalizing switch reference with the subject in its scope is marked by the destinative preposition gò. The same preposition codes the nominal dative/recipient, the target of comparative constructions, the purpose adjunct, and a host of other relations. The punctual aspect codes event backgrounding, whereby the whole event, rather than its separate components, is presented for the understanding of the ensuing discourse. The use of the preposition, as opposed to the use of the bare noun phrase, is motivated by the principle of functional transparency. The choice of the preposition gò rather than some other preposition is motivated by the fact that it is the least marked preposition in Wandala.
8. Implications

The first question that emerges from this study is whether subjects marked by \( g\mathring{o} \) in Wandala are in some way equivalent to dative subjects reported for other languages. The preposition \( g\mathring{o} \) does code the dative function of the nominal argument, but it alone cannot mark this function, as the verb must have the third-person pronominal object marker as well. Thus the “dative” part of the pairing is not exactly the same as dative subjects reported for other languages. The nominal arguments coded by the preposition are subjects; thus the “subject” part of the pair is the same.

There is another correlation between the functions of the preposition \( g\mathring{o} \) in Wandala and the means to code the dative relationship in IE languages which reinforces the possibility of a functional commonality between the two sets of markers. The preposition \( g\mathring{o} \) codes the parent-to-child relationship and not the child-to-parent relationship.

One of the languages that has engendered much discussion of dative subjects in the past twenty-five years is Icelandic (cf. Smith 2001, who also reviews some of the scholarship regarding dative subjects in Icelandic). Smith (2001), writing within the Cognitive Grammar model, offers a semantically based explanation for dative subjects: “Prototypically, the dative case marks experiencer entity in the event that is construed as simultaneously affected by the event and in turn reacting to that event (bilateral involvement)” (Smith 2001:155). Barðdal (2001), working within the Construction Grammar/Usage based model, describes dative subject construction as a “verb-class-specific construction, assigned only to verbs of that particular semantic class”. She does accept semantic case assignment, whereby the dative is assigned to experiencer subjects (and also to beneficiaries). All clauses with the punctual aspect represent the event from the point of view of the subject. That function subsumes the subjects being the experiencers. There are, however, subjects that are not experiencers in any sense of the word, even though the event is represented from the point of view of the subject.

So, on the face of it, nominal subjects marked by the preposition \( g\mathring{o} \) are similar to some dative subjects in Icelandic, in that under some very vague interpretation they are “experiencers”. But are we really dealing with the same phenomenon? Unlike in Icelandic, where dative subjects are associated with some classes of verbs, nominal dative subjects in Wandala are associated with the punctual aspect, rather than with specific characteristics of verbs. The semantic similarity between the experiencer function of the dative coded nouns in Wandala and their equivalents in Icelandic is a similar outcome of different functions. Finally, an argument against the semantic relationship between the argument and the verb is provided by the fact that verbs with the marker \( h\mathring{e} \) can have a dative/benefactive
argument that is different from the subject. Consider again an example whose part was quoted earlier, which has a third-person singular dative/benefactive pronoun *n*. The semantic role of the pronoun is coded through the use of another third-person object pronoun:

(64) yò jibámdânà tânjàmbá žîlnà
yò jib-á mdô ná tá njà mb-á žîl-nà
well variety-gen people dem 3pl remain house-gen man-def
‘Well, the type of people who remain at the husband’s

tántàrò gdzàgyâlnà őskô málârjârâ
tá ântârò gdzâ gyâl-nà őskô mâlârê ńârâ
3pl conj young girl-def like aunt 3sg
‘who are with the young girl, are like her aunt

őskô gdzâmônârâ tânjânnûhê tâmlànnû màgâlîrâ
őskô gdz-á mó ńârâ tá nj-á-n-nû-hê
like child-gen mother 3pl 3pl remain-go-3sg-3sg-appl-pnct

tá ml-á-n-nû màgâ ńrâ
3pl help-go-3sg-3sg-appl do work
‘like her sister, they remain with her to help her with the work.’

The dative/benefactive experiencer is the participant other than the subject. The subject is not marked by the preposition *gô* because it occurs before rather than after the verb.

There is another interesting parallel between dative subjects and subjects marked by the preposition *gô* in Wandala. This time it is the case of Polish. For several types of verbs, a single argument, whether nominal or pronominal can be marked by the dative case. The verb has the third-person singular neutral subject inflection regardless of the person, number, or gender of the argument marked by the dative case. Such verbs also require the ‘reflexive’ marker *się*:

(65) a. zmarło mu/jej się
die:3sg:n 3sg:m:dat/3sgf:dat refl
‘he/she died’ (Polish)

b. ànà büm-tsâgh gô dâdà
à nábâ mtsâ-hê gô dâdà
3sg then die-pnct TO father
‘The father died.’ (Wandala)

(66) a. yà ãrdâkâ-hê
1sg slip-pnct
‘I slipped down’ (Wandala)
b. poślizgnąłem się  
slip:past:1sg:m refl  
'I slipped' (Polish)

One should not automatically generalize findings regarding a form-function pairing in one language with the form-function pairings in other languages. Nevertheless, one should not ignore such pairings when they occur across many languages, and especially across unrelated languages. The form-function comparison cannot be complete unless all functions have been examined. While the present study has demonstrated clause-internal similarities between subjects marked by the preposition $g\theta$ and dative subjects of some Indo-European languages, it did not demonstrate the identity of functions. The fundamental function of the preposition $g\theta$, that of switch-reference coding, has not been reported for the dative subjects in Indo-European languages.

**Abbreviations**

| 1 | First person | INCL | Inclusive |
| 2 | Second person | M | Masculine |
| 3 | Third person | N | Nominative |
| AFF | Affected | NEG | Negative |
| APPL | Applicative | NOMIN | Nominalizing |
| ASC | Associative | PAST | Past tense |
| BCKG | Background marker | PL | Plural |
| COM | Comment marker | PNCT | Punctual |
| COMP | Complementizer | PRED | Predicative marker |
| CONJ | Conjunction | PREP | Preposition |
| DAT | Dative | Q | Question marker |
| DEF | Definite | REFL | Reflexive |
| DEM | Demonstrative | REM | Remote |
| EX | Existential | S | Source |
| F | Feminine | SEQ | Sequential |
| FOC | Focus marker | SG | Singular |
| GEN | Genitive | T | Target |
| GO | Goal | TOG | Together (coding participation of many subjects) |
| HYP | Hypothetical | VENT | Ventive |
| IMPER | Imperative |  |  |
| IN | Extension coding inner space |  |  |
References


Coding the unexpected

Subject pronouns in East Dangla

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Frajzyngier (1997a) shows that seemingly homogeneous pronominal categories may have very different functions across languages. This paper adds to the typology of pronoun functions by showing that the position of the subject pronoun with respect to the verb in East Dangla, a Chadic language of the East branch, marks the entire clause as either expected or unexpected. Unexpectedness of the subject itself is marked by means outside of the pronoun system. The functional distinction of the unexpected has not been posited before for Chadic languages.

1. Introduction

Frajzyngier (1997a) shows that seemingly homogeneous pronominal categories may have very different functions across languages. The function of a given pronoun depends on the distinctions available within the pronoun system and on the functions coded by other means in the language.

East Dangla, a Chadic language of the East branch, has a pronoun system that includes both preverbal and postverbal subject pronouns for all person, gender and number categories. The language also has distinct direct and indirect object pronouns, as well as independent pronouns, for all person, gender, and number categories. Because either a preverbal or postverbal pronoun may code the subject under the same referential conditions, it appears that the position of the subject pronoun with respect to the verb marks a distinction outside the domain of reference. The present paper shows that the position of the subject pronoun with respect to the verb codes a distinction between the domain of the unexpected, coded by a preverbal subject pronoun, and the domain of the expected, coded by a postverbal subject pronoun. The distinction between the expected and the unexpected domains cuts across the distinction between pragmatically dependent and pragmatically dependent clauses, as posited in Frajzyngier (1997b), in that a
clause with a given function (content question, conditional/temporal protasis or apodosis) may be marked either expected or unexpected.

2. **Aim of the present paper**

The aim of the present paper is to show that the position of the subject pronoun with respect to the verb in East Dangla marks a clause as either expected or unexpected, a distinction that has not been posited before for Chadic languages. Based on an examination of the types of clauses in discourse that have subject suffixes, an expected clause has at least the following characteristics: affirmative modality; indicative mood; a subject that is known to or may be readily deduced by the hearer; and some type of temporal and/or causal relationship with preceding discourse. A subject pronoun before the verb indicates that the clause does not meet one or more of the conditions of an expected clause. Coding means outside the pronoun system, such as complementizers and conjunctions, indicate which element of the clause is unexpected.

The first section below describes the formal means of marking the East Dangla subject. The second section presents evidence for the posited functions of pre- and postverbal subject pronouns. The final section proposes how the pronominal system of East Dangla may have evolved and how the position of the subject pronoun may have come to code the functions of expectedness and unexpectedness.¹

3. **Subject coding**

The unmarked word order in East Dangla is SVO. There are segmentally and/or tonally distinct preverbal subject clitics and subject suffixes for most person, gender and number categories (see Table 1). Exceptions are the first-person singular, the first-person plural (exclusive), and the second-person plural, which use the same form for pre- and postverbal subject. (Phonological differences between preverbal clitics and suffixes are accounted for by regular phonological rules.) Third-person subject clitics also distinguish between non-referential subject, coded by mid tone (unmarked) on the pronoun, and referential subject, coded by low tone on the preverbal pronoun. Direct and indirect object pronouns constitute

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three additional pronoun sets (see Dittemer et al. 2004 for comprehensive lists of contrasts exhibited in Chadic pronoun systems).

Unlike in many Chadic languages, every clause in East Dangla must have an overt subject. This is true even when there is no ambiguity with respect to the referent. In the following passage, there is only one potential subject referent. The subject of each clause is co-referential with the subject of the preceding clause, yet every clause has a subject suffix:

(1) ëk-díu  às-dyi-t  dúkúmá  mìn  dúkàm-dyi-t-ìk
dem-neg come-3m-go cut prep cut-3m-go-dem
gàâ-dyi-tè  mìn  dúkàm-dyi-t-ëk  kùlùm  gudbàyy
flee-3m-go prep cut-3m-go-dem tamarind tree ideò
yàarà, dàâ-dyi-t  dyigilà
large all-3m-go hide
‘At that, he cut [the ropes]. As soon as he had cut them, he fled. As soon as he cut them, he went and hid in a huge tamarind tree.’

A clause that does not have a subject noun must have a subject pronoun either before or after the verb. The subject pronoun before the verb is a clitic: It may be followed only by the main verb or an auxiliary, but it does not assimilate to the following morpheme:

(2) nó  dùn-ga  zùg-ìrá
1sg tie up-3m house-loc
‘I tied him up in the house.’

Table 1. East Dangla pronouns (all references to East Dangla are to Shay 1999 or Shay field notes unless otherwise stated)
In a clause with a subject clitic and an auxiliary verb, the auxiliary occurs between the clitic and the main verb:

(5) ŋà às nyípá
   3M come climb
   ‘he mounted’

(6) ŋa daa gàs bóosi.
   3M all find fish
   ‘He went and found some fish.’

The subject pronoun following the verb is a suffix; it assimilates to the verb stem and may be followed by one or more other suffixes:

(7) bèr-in-dyi-g ku tàt-níŋ
give-1SG-3M-3M PREP father-1EX
   ‘I gave him to my father.’

(8) eel-iny-tyè bùge
    spend the day-2M-GO draw water
   ‘You spent the day drawing water.’

In a clause with an auxiliary verb, the subject marker is suffixed to the auxiliary:

(9) às-tí-t tyóká
    come-3F-GO climb
    ‘She climbed it.’

(10) dàa-dyi-tì iy buwà.
    ALL-3M-3F bring milk
    ‘He went and got her some milk.’

The same referent may be marked by a subject clitic and a subject suffix in adjoining clauses within the same larger construction:

(11) tyà ràw kó-ðk às-tí-g tik tiúr às-dyi-t dimà
    3F exhaust already-DEM come-3F-3M let jar come-3M-GO break
    ‘She was exhausted; she let go of the jar and it broke.’
A subject noun can co-occur with a subject suffix but not with a subject clitic:

(12) a. gándà às-dyi-dyi át ku kanya-r
    jackal come-3M-3M go PREP dog-LOC
    ‘The jackal went to the dog.’

b. *gándà ṣà às-dyi kát ku kanya-r
    jackal 3M come-3M go PREP dog-LOC
    for ‘The jackal went to the dog.’

A subject clitic and a subject suffix cannot co-occur in the same clause:

(12) c. *ŋà às-dyi-dyi kát ku kanya-r
    3M come-3M-3M go PREP dog-LOC
    for ‘He went to the dog.’

Subject suffixes are not agreement markers, as they are not obligatory. A clause with a subject noun may have a bare verb with no subject suffix:

(13) ṣàar gə̆gły barkày noon giy áwgi
    3M tend cattle 1SG TOP goats
    ‘He was tending the cattle and I [was tending] the goats.’

(14) bàa gə̆m tee kó giy tąpàk-gi-y ak
    temp people eat already TOP assemble-IMPF-3PL PREP
    kərínà-r dimildašmil.
    town square-LOC IDEO
    ‘After the people have eaten, they crowd into the town square.’

To summarize, every clause must have a subject noun or a subject pronoun, and some clauses may have both a subject noun and a subject suffix. The possibilities for subject coding are as follows:

a. Preverbal clitic;

b. Verbal suffix;

c. Subject noun with verbal suffix; or

d. Subject noun alone.

This list has two important implications: First, because a subject noun and a subject clitic cannot co-occur in the same clause, it is assumed that subject nouns and clitics have functions within the same domain. Second, because a subject noun and a subject suffix can co-occur in the same clause, it is assumed that these means have functions in different domains. Thus, the function of a subject clitic is different from the function of a subject suffix. Because either a subject clitic or subject suffix may occur under similar referential conditions, the position of the
pronoun with respect to the verb appears to have functions outside the domain of reference.

4. Hypothesis

Marking the subject by means of a verbal suffix indicates that the clause describes an expected state or event, while marking the subject by a preverbal clitic indicates that the clause, or some component of the clause, is unexpected. The scope of expectedness, as coded by the subject suffix, is the entire clause. When any component of the clause is unexpected, the subject is marked by a clitic before the verb. The unexpected component may be an unexpected event, an unexpected participant, an unexpected consequence, a gap in temporal sequencing, a lack of causal connection, or some other unexpected element. The scope of unexpectedness, as coded by the subject clitic, is the entire clause. Subdomains of the unexpected are coded by markers external to the pronoun system, such as complementizers or conjunctions. Use of a subject clitic does not code unexpectedness of the subject itself; this function is coded by use of an independent pronoun and markers outside the pronoun system.

5. Previous approaches

Ebobissé (1979) describes the position of the East Dangla subject pronoun in terms of tenses and aspects, which are coded on the verb stem by tonal and vocalic changes. In this approach, a perfect stem with a subject clitic (prefixed dependent pronoun, in Ebobissé’s terminology) is called the independent perfect, while a perfect stem with a subject suffix is called the relative perfect (Ebobissé 1979: 105). In this analysis, clauses with subject markers before the verb are the unmarked type and clauses with subject suffixes are the marked type. Jungraithmayr (1994), using data from Ebobissé (1979), briefly describes the function of postverbal subject markers in East Dangla as coding semantic dependency.

6. The evidence

In what follows, I describe the domains of the expected and the unexpected and show that the position of the subject pronoun with respect to the verb codes the distinction between the two domains.
6.1 Subject suffixes and the domain of the expected

A clause with a subject suffix is affirmative; it has a temporal and/or causal connection with preceding discourse; and its subject is known to the hearer or may be easily deduced by the hearer. A clause that lacks one or more of these characteristics belongs to the domain of the unexpected.

A subject suffix is usually, but not always, coreferential with the subject of the preceding clause:

(15) **Gàllàam** gàs ˈɪy-gà  bà  gööl-ény-ika.’  əs-dyi-t  ɪty

G.  COM  bring-3M  RESP  knife-2M-DEM  come-3M-GO  take
gòöl-ik  ðàa-dyi-gà  ɪs  akka  bàar-ít  əs-dyi-tí
knife-DEM  ALL-3M-3M  stick  in  PREP  blood-LOC  come-3M-3F
oo  ooy  ak  gàaday-tí.
smeare  PREP  neck-3F

‘Gallaam said, “Bring me your knife, please.” And he took the knife, went and stuck it in the blood, and smeared it on her neck.’

Coreferentiality is not a condition for use of the subject suffix, but rather a consequence of the fact that coreferentiality of the subject is the expected situation in discourse. The evidence for this is that lack of coreferentiality with the subject of the preceding clause does not obviate use of the subject suffix. When the event of the clause is expected and the referent for the subject pronoun may be readily deduced, the subject may be coded by a suffix even if it is not coreferential with the subject of the preceding clause:

(16) ˈɪy-dyi-tí  kum  ka  seedine-r  táa-gí-tí

bring-3M-3F  meat  DEM  animal-LOC  eat-IMPF-3F

‘He brought her meat from wild animals, and she ate it.’

The following comes from a text with only two participants, both feminine. In the first clause the subject suffix -tí refers to the hare. The same subject suffix in the next clause refers to the woman. The woman is the expected subject of (17b) because the listener knows from preceding discourse that it was the woman, not the hare, who was on her way home:

(17) a.  kàypò  əs-tí-gù  ʊsà
hare  come-3F-3pl  drink

‘The hare came and drank it.’

b.  əs-tí-t  kát  géer  bàla  amày
come-3F-GO  go  home  without  water

‘And she (the woman) went home without water.’
While coreferentiality with the subject of the preceding clause is not a pre-
requisite for use of the subject suffix, a connection with preceding discourse is a
prerequisite. Consider the following opening line of a text. In the second clause,
‘woman’ is marked by both a full noun and a subject suffix:

(18) a. gín kàypò, in  dàađí. dàáđ kàt-tí-t amày
make rabbit ASSC woman woman go-3f-go water
‘Once there was a rabbit and a woman. The woman went to get water.’

The sentence is grammatical without the subject suffix, but the connection with
preceding discourse is lost:

(18) b. gín kàypò, in  dàađí dàáđ kàt amày
make rabbit ASSC woman woman go water
‘Once there was a rabbit and a woman. A/the woman (not necessarily
the same woman) went to get water.’

The presence of a subject suffix does not indicate a particular type of con-
nexion between events. The events of two clauses with subject suffixes may be
simultaneous or sequential:

(19) hìyya, gĕem-it  às-tí-tí-gū  zūg  amày,
so woman-DEM come-3f-3f-3pl set down water
às-tí-t tyéep  biråaigin-tí
come-3f-go pull out  yoke-3f
‘So, the woman set down the water for her and (then) pulled out her yoke.’

Evidence that a subject suffix codes an expected sequence or consequence is that
a sentence in which the only marker of the subject is a suffix is not acceptable in
isolation:

(20) *kàt-dyi-t-ik  b:ęk-dyi  kòkir ti  pùrtà
go-3m-go-DEM chase-3M hen REL white
for ‘He went off and started chasing a white hen.’ (not acceptable in isolation
or as the first line of a text)

The same sentence is acceptable when a discourse context is provided, even if the
antecedent for the subject suffix is not available in the preceding clause:

(21) a. ñás ‘dù daanè, iy-ôr amày ku a-n sen’
com conj now bring-1sg water rel pot-1sg drink
‘He (the man) said, “And now, bring me some water to drink.”’
6.2 Subject clitics and the domain of the unexpected

A subject clitic before the verb indicates that the whole clause, or some component of the clause, lacks one of the identified components of expectedness. Additional markers outside the pronominal system may be used to indicate which element of the clause is unexpected. Evidence that the scope of unexpectedness is beyond the subject itself is twofold: First, a subject clitic has a known or deducible referent and is often coreferential with the subject of the preceding clause. Second, as shown below, the language has independent means of indicating that the subject is unexpected.

The following example illustrates the function of the subject clitic. The subject, a boy, has been asked to bring his guest some water. The first two clauses, with suffixed subjects, describe the expected consequence: The boy goes and finds a calabash in which to serve the water. But instead of handing his guest a water-filled calabash, the boy puts the calabash down, finds another one, picks it up, sets it down, and so on. Each action is described by a clause with a subject clitic. It is the course of events, not the subject, that is unexpected:

(22) \( kàt-dyi-[i-ik \quad b:\text{è}-dyi \quad kòkir \quad ti \quad pùrtà \)
\[ \text{go-3M-go-dem \ chase-3M \ chicken \ rel \ white} \]
\[
\text{'He (the boy) went off and chased a white chicken.'}
\]

Evidence that the scope of the unexpected is not limited to the subject is that the same referent may be marked by a subject suffix in one clause and a subject clitic in the next clause, though the participants and their grammatical roles have not changed and there is no possibility of ambiguity:

(23) \( gìn-gì-\text{y-gà \ kò \ riyò.} \quad nù \ kat-gà \ atày, \quad nù \ kat-gà \ amày \)
\[ \text{make-3PL-3M \ compl \ work \ 3PL \ go-3M \ wood \ 3PL \ go-3M \ water} \]
\[
\text{'So they put him to work. They made him carry wood, they made him carry water.'}
\]

A clause in isolation is necessarily unexpected, since there is no preceding discourse with which it may be connected. In sentences elicited from a native
speaker in response to the question ‘How do you say [Sentence]?, the subject pro-
noun in the first clause of a complex sentence is a clitic. The fact that the subject is
non-referential is marked by mid tone rather than low tone on the pronoun:

(24) ŋa gidày-tya bèrka súginí-rá
    3M trade-3F cow market-LOC
    ‘He sold the cow at the market.’ (elicited)

Cf. the third-person masculine anaphoric pronoun:

(25) gem-ika, ŋàs ŋà láwáy gàiìam kí s įàarà.
    man-dem COM 3M seek liar like 3M
    ‘This man, he was trying to find a liar like he was.’

A subject suffix occurs in the second clause of an elicited sentence if the event
of the second clause is temporally or causally related to the first clause:

(26) ŋa tee kar wedý-dyi-tè
    3M eat then sleep-3M-GO
    ‘He ate and then he slept.’ (elicited)

(27) tya gin téj gidày-tí-gà súgin-írá
    3M make food trade-3F-3M market-LOC
    ‘She cooked food and sold it at the market.’ (elicited)

Thus, a subject clitic tells the hearer that the clause or one of its components is
unexpected, but it does not specify which component of the clause is unexpected.
If the scope of unexpectedness is the entire clause, no further marking is needed.
If the scope is limited to single component, which may be the subject itself, addi-
tional markers are used, as described below.

6.3 Subdomains of the unexpected

Evidence that the subject clitic codes unexpectedness of the entire clause is that
markers outside the system of pronouns are used to indicate which component
of the clause is unexpected. These markers include full nouns, independent pro-
nouns, complementizers, conjunctions and markers of modality. Subdomains of
the unexpected include switch reference; negation; temporal/conditional prota-
sis; conditional apodosis; and interrogative modality.

6.3.1 Switch reference

In proposing a taxonomy of pronominal functions across languages, Frajzyngier
(1997a) shows that a language with obligatory subject marking on the verb (agree-
ment) may code switch reference through the use of an overt subject pronoun. In the following example in Polish, the absence of a subject pronoun in the complement of the clause of saying codes coreference with the subject of the matrix clause. The presence of a subject pronoun (bolded) in the final clause indicates lack of co-reference with the subject of the preceding clause:

(28) \textit{Ocec móvi, ze ňe ųe,}
\hspace{1cm} \textit{father say:3sg:pres com neg know:3sg:pres}
\hspace{1cm} \textit{cy uona źrystańe}
\hspace{1cm} \textit{whether 3f agree:3sg:fut}
\hspace{1cm} ‘The father\textsubscript{1} says that (he\textsubscript{1}) does not know whether she will agree.’
\hspace{1cm} (Frajzyngier 1997a: 126, from Nitsch 1960: 138; parentheses and bold type are mine)

In East Dangla, which has no inflectional subject coding on the verb, the pronominal subject of the complement of a verb of saying is coded by a subject clitic. This is true regardless of whether the subject of the complement is coreferential with the subject of the matrix clause:

Coreference:

(29) \textit{yàa-níŋ tyàs yrùm màt tar}
\hspace{1cm} \textit{mother-1excl com Greater Kududie dem}
\hspace{1cm} \textit{àr tya daa sòke kumà.}
\hspace{1cm} \textit{there 3f all gather meat}
\hspace{1cm} ‘My mother said a Greater Kudu died over there and she is going to get some meat.’

Switch reference:

(30) \textit{ŋà àn-tí ŋàs ŋà kat àar géeró}
\hspace{1cm} \textit{3m say-3f com 3m go behind house}
\hspace{1cm} ‘He\textsubscript{1} told her he\textsubscript{2} wanted to go behind the house.’
\hspace{1cm} or ‘He\textsubscript{1} said to her, “He\textsubscript{2} went behind the house.”’

The subject of the complement clause cannot be marked by a subject suffix:

(31) \textit{*ŋà àn-tí ŋàs kat-dyi-t àar géeró}
\hspace{1cm} \textit{3m say-3f com go-3m-go behind house}
\hspace{1cm} for ‘He\textsubscript{1} told her he\textsubscript{1/2} wanted to go behind the house.’ (or any other meaning)

When there is potential ambiguity with respect to the referent of a third-person subject in the complement clause, East Dangla uses a direct speech complement:
The fact that the position of the subject pronoun with respect to the verb is not available to code switch reference vs. coreference in the complement clause provides evidence that the scope of the unexpected, as coded by the subject clitic, is not the subject itself.

East Dangla does have a means of coding switch reference in some types of clauses. One means is the use of a full noun referring to the subject. Each of the next three clauses has a different subject, as indicated by the use of subject nouns. The events described by the clauses are not unexpected, as indicated by the presence of a subject suffix in each clause. These clauses would be grammatical without subject suffixes, but their connection with preceding discourse would be lost:

(33) a. bóori hambil-lúdu-ik às-tí-t úty gadaw
   hyena endure-NEG-DEM come-3F-GO get up run
   ‘The hyena couldn’t stand it, and she ran away.’

b. mityil às-dyi-ty àtik bóori kée
   lion come-3M-3F chase hyena long time
   ‘The lion chased the hyena a long time.’

c. éwki às-dyi-t úty təwtaw-dyi-t
   goat come-3M-GO get up gather-3M-GO
   gam-èy nàa sá gaa-dyi-tè.
   things-3M 3M still run-3M-GO
   ‘The goat also jumped up, gathered up his things and ran away.’

The unexpected nature of a clause with a nominal subject coding switch reference is marked by the absence of a subject suffix:

(34) iyà méer-niŋ mät kar àrè
   mama uncle-1EXCL die DEM there
   ‘Mama, our uncle died out there.’

Switch reference for a pronominal subject is coded by the use of an independent pronoun followed by the topic marker giy(a). Note that the verb kät ‘go’ in (35b) is followed by a subject suffix, which codes the expected nature of the whole event in spite of the change of subject referent:
6.3.2 Focused subject

Contrastive focus on the subject is coded by the marker be after the subject noun or independent pronoun:

(36) ɲàs ˈabge  kìn be  ân-tí  ku  sàalìŋko

com  bustard  2m  conj  say-3f prep  stork
kìs  tya-dà  álāal-liu  ròn-tì?’

com  3f-1sg  throw-NEG  child-3f

‘He said, “Bustard, did you tell Stork not to throw me her children?”’

(37) ɡòy-tì-t  këedy  èk-dùu  á-tì  dòre
be-3f-go  long  time  dem-NEG  pot-3f  hear
dùuuf-ik  ɲà  be  ák  ko
neg-dem  3m  conj  come  already

‘She stayed there a long time, and then suddenly she heard him coming.’

Non-contrastive focus is marked by the independent pronoun without any additional markers:

(38) ɲáar ʃ-tyɔ, ɲùur ʃnydyid  kikirik  ak  ger-tyò.

3m  arrive-3pl  3pl  enter  ideo  prep  home-3pl

‘He caught up with them just as they were entering their house.’

Evidence that the independent pronoun is distinct from the subject clitic is that the independent pronoun may co-occur with the subject suffix, i.e. in the clause marked expected:
The fact that the unexpected nature of the subject is marked by the use of independent pronouns and other markers indicates that the subject clitic does not mark the unexpected nature of the subject but rather some other domain, namely the unexpected nature of all or some portion of the event.

### 6.3.3 Interrogative modality

Affirmative modality is among the components of expectedness. Interrogative modality is a subdomain of the larger domain of the unexpected, as shown by the fact that subjects of interrogative clauses are clitics. The specific type of subdomain is marked by the clause-final interrogative marker:

(40) \[ \text{kí dòr-ga sargè keë?} \]
\[ 2m \text{hear-3m hunting horn dem:interr} \]
‘Did you hear the hunting horn?’

(41) \[ \text{kí gàs gàŋ wer ki páyà?} \]
\[ 2m \text{find berbere field place rel again:interr} \]
‘Did you find a berbere field somewhere else?’

In a content question, the question word occurs \textit{in situ}. If the question word refers to the subject, it precedes the verb and there is no other subject marker:

(42) \[ \text{wà gà a-kè iyé roŋ-kè?} \]
\[ \text{who emph pot-2f bring child-2f} \]
‘Who will bring you your child?’

If the question is posed about another constituent, the subject is marked by a clitic and the question word occurs \textit{in situ}. In most cases, the non-referential subject marker \(ŋa(a)\) precedes the subject clitic:

(43) \[ \text{ŋaa ká dôs maa bàla amày-kè?} \]
\[ 3m:nref 2f return why without water-2f \]
‘Why do you come back without your water?’

(44) \[ \text{ŋaa kí às mità?} \]
\[ 3m:nref 2m come when \]
‘When did you arrive?’

If the subject is a full noun, there is no subject pronoun, since subject nouns and subject clitics do not co-occur:
(45) yàa-kòŋ kàt tar mòŋ?
mother-2pl go DEM where
‘Where did your mother go?’

6.3.4 Negative modality
Affirmative modality is a component of expectedness. Negative clauses are marked by subject clitics and a separate negative marker díuu(dé), which follows the verb. In every non-rhetorical negative clause in the corpus, the subject is marked by a full noun or a subject clitic and never by a subject suffix:

(46) yàa-tyò giy tàra gin riỳ ta kòrrre-r-it
mother-3pl TOP INTERJ make work DEM beer-GEN-DEM
giy tyà tal-ga díuu kaa lòkúmò-r ke
TOP 3F see-3M NEG DEM camel-LOC DEM
‘The mother, having been at work making beer, had not seen the one on the camel.’

(47) ŋà kàt díuu láwyé ám-iyó
3M go NEG seek water-LOC
‘He didn’t go to look for water.’

(48) gin-tí-t mèenái, yállà tyà gèty-gu
make-3F-GO days INTERJ 3F try-3M
làw-tí, tyaa 3te díuu sèrékí
hair-3F 3F.POT arrive NEG far
‘She waited a few days and then she tried out her feathers, (but) she didn’t get far.’

(49) ŋà gèty tyóké ŋà gèdir-rúudé
3M try climb up 3M succeed-NEG
‘He tried to climb up, (but) he couldn’t.’

The negative particle díuudé is often used as a rhetorical device in an affirmative clause. The rhetorical negative indicates that the event of the clause occurred suddenly, though the event itself may have been expected by the listener or by participants in the story. In the rhetorical negative, the subject suffix is often used:

(50) às-tí-t ól-ik díuu tyòoloy-tí-tì-gà dòkíny-dyi
come-3F-GO bend over-DEM NEG tear off-3F-3F-3M all-3M
‘Suddenly, she bent over and tore it all off.’
‘Shewaited a long time, and suddenly she heard him coming’ (not ‘she didn't hear him coming’)

The occurrence of a subject suffix with the negative marker thus instructs the hearer to interpret the clause as affirmative, i.e. as belonging to the domain of the expected.

6.3.5 Disjunctive constructions
East Dangla appears to have no native disjunctive marker corresponding to English ‘or’. A clause with the disjunctive marker *wàllà*, an Arabic borrowing, has a subject clitic or a subject noun:

(52)  táb  kí  iban  gèr-tì-àl  [wàllà]  kí  iban-núudé?
      INTERJ  2M  know  house-3F-CONJ  REL  know-NEG
      ‘Do you know where she lives, or don’t you?’

(53)  ká  be  aa  ìtyé  gàeëpin  ku  gìn  sewèny  wàllà,
      2F  CONJ  POT  take  horns  REL  make  fat  CONJ
      kán  be  aa  ìtyé  kàa  kí  gìn-níu  màakít-ìka?
      2F  CONJ  POT  take  head  REL  make-NEG  thing-DEM
      ‘Will you take the horns, which are full of fat, or will you take the head, which has nothing?’

(54)  ròm-òr-it  kaaw  sàya-àl  [wàllà]  tyà  debà?
      daughter-1SG-DEM  speak  truth-CONJ  3F  lie
      ‘Does my daughter here tell the truth or is she lying?’

6.3.6 Conditional/temporal constructions
Conditional and temporal protasis clauses belong to the domain of the unexpected. A conditional or temporal protasis clause is marked by the clause-initial conjunction *bàa* followed by a subject noun or clitic. The apodosis may have a subject clitic or subject suffix, depending on whether the apodosis is unexpected or expected. The following describes an annual ceremony. The protasis is marked unexpected and the apodosis is marked expected:
always temp millet ripen compl temp 3f make compl
ta ey-m-iri geem gin-gi-y koriya
prep eat-nom people make-impf-3pl koriya
‘Always, when the millet is ripe, the people celebrate Koriya (the harvest festival).’

The position of the subject pronoun in the apodosis clause is not a function of tense, aspect or mood, as shown by the following sentences. In both examples, the protasis is marked perfective and the apodosis is marked irrealis. The apodosis in (56a) has a subject suffix:

(56) a. baa no paay a-n obé dá ak pósín-dù
temp 1sg descend pot-1sg catch resp prep hand-1sg
‘When I come down, I would like to have a switch in my hand.’

The apodosis in (56b) has a preverbal subject:

(56) b. baa ṃo róop-gu ṇaa gǐny-tyò ṛada
temp 3m meet-3pl 3m.pot make-3pl difficulty
‘When he meets them, he will make trouble for them.’

Switch reference between protasis and apodosis does not necessarily mean that the event is unexpected and so does not necessarily require use of the subject clitic. In the next example, the protasis and apodosis have different subjects, but the use of the subject pronoun in the apodosis indicates that the event of the apodosis is expected:

(57) baa ṃu ñmil be ṃu wee giy a-ny-tè
temp 3pl leave conj 3pl bear top pot-2m-1incl
dey dìkiyanjye ë-ye sëntí kɔrr-ër
finish calabash pot-1incl drink-3f beer-1sg
‘When they grow and bear fruit, you will finish the calabashes for us and we will drink my beer.’

In each of the next examples, the subject of the protasis and apodosis is the same; the subject clitic in the apodosis indicates that the event of the apodosis is unexpected:

(58) baa tyà wédy kó āandô-ðk tyà al kó di
temp 3f sleep compl night-dem 3f cry compl only
‘When she went to bed at night, all she did was cry.’
(59) báa  nyà  sìmól  âtke, nyà  dêbêr-gi-tí
   temp  3m  leave  hunt  3m  close-impf-3f
   ‘When he was leaving to go hunting, he shut her in.’

7. Conclusions

In East Dangla, the subject pronoun may occur before or after the verb. Only a subject suffix may co-occur with a subject noun. All clauses with a subject suffix, including clauses that also have full noun subject, share the following characteristics: Affirmative modality, indicative mood, a subject whose referent is known or available to the hearer, and some type of temporal or causal connection with preceding discourse. These characteristics constitute the domain of the expected. A clause that lacks one or more of these characteristics is marked as belonging to the domain of the unexpected. The subject of an unexpected clause is marked by a preverbal subject clitic or a full noun subject, but never by a subject suffix.

Although the domain of the unexpected is marked by the position of the subject pronoun with respect to the verb, the scope of this domain extends beyond the subject itself. A clitic subject or a suffixed subject may or may not be coreferential with the subject of the preceding clause. The presence of a subject clitic (or, when the subject is a noun, the absence of a subject suffix) indicates only that all or part of the clause is unexpected. If the only marker of unexpectedness is the subject clitic, the scope of unexpectedness is the entire clause. A clause with a subject clitic may also have another marker, such as an interrogative marker or a negative marker, which codes a specific subdomain of the unexpected.

8. Evolution of subject marking in East Dangla

The above findings raise two historical questions: First, how did both subject clitics and subject suffixes evolve, and second, how did the functions of expectedness and unexpectedness come to be coded by the position of the subject pronoun? In what follows, I propose a path of evolution that may have led to the current system in East Dangla.

8.1 Shift to subject-initial order

Some contemporary Chadic languages have SVO as the unmarked word order, and some have VSO as the unmarked order. Frajzyngier (1983 [2002]) argues for
VSO as the older word order on the grounds that although many contemporary Chadic languages with VSO order in the unmarked clause have the option of fronting the subject for pragmatic reasons, contemporary Chadic languages with SVO in the unmarked clause do not use VSO order for focus, topicalization or any other function.

Frajzyngier and Shay (ms.) proposes that in some Chadic languages the first- and second-person pronouns were moved from postverbal position to clause-initial position in the shift from verb-initial to subject-initial word order. The evidence in East Dangla suggests that subject pronouns remained in postverbal position and that a new set of pronouns was grammaticalized for use in clause-initial position. Evidence for the retention of subject pronouns in postverbal position is that the object suffix has the same form as the subject suffix in the first and second person. The role of the suffixed pronoun must be deduced from the presence or absence of a preverbal subject in the clause:

(60) \[ \text{no } \text{dē-e-ken-\text{-g}a} \]
\[ 1\text{sg } \text{finish-2pl-3m} \]
\[ \text{‘I finished it for you.’} \]

Cf. the same pronoun in object role:

(61) \[ \text{iy-\text{-ôn-no}.} \]
\[ \text{bring-2pl-1sg} \]
\[ \text{‘Bring me (to him).’} \]

(62) \[ \text{iban-\text{k}oŋ } \text{tēŋ } \text{buw-työ} \]
\[ \text{know-2pl eat.inf milk} \]
\[ \text{‘You know how to drink their milk.’} \]

Cf. the same pronoun in object role:

(63) \[ \text{ŋuu-k } \text{gās-\text{k}on-tē } \text{mön?} \]
\[ \text{3pl-cop find-2pl-go where} \]
\[ \text{‘Where did they find you?’} \]

Further evidence that preverbal subject pronouns represent innovations, rather than postverbal pronouns moved to preverbal position, is provided by the fact that subject clitics are phonologically reduced forms of independent pronouns (Table 2).

The innovation of preverbal pronouns and retention of subject suffixes allows the position of the subject pronoun to code functions other than the grammatical role. The fact that independent pronouns and markers outside of the pronoun system are available to perform the functions associated with fronted arguments,
including topicalization, focus, and switch reference, allows the subject clitics derived from independent pronouns to perform other functions. The richness of the pronominal system allows East Dangla to code at least one distinction not attested in other Chadic languages, namely, the distinction between the domain of the expected and the domain of the unexpected.

9. Conclusions and implications

The present study adds to the taxonomy of pronoun functions proposed in Frajzyngier (1997a) and supports Frajzyngier’s finding that the function of a given morpheme, even one with a seemingly unambiguous and universal function, depends on the availability of other forms in the same domain and on the functions of other coding means available within the language. The present paper also adds to the range of functional domains identified for Chadic languages. In East Dangla, the fact that the subject may be coded by one of four different means – preverbal clitic, verbal suffix, subject noun alone, or subject noun and verbal suffix – allows the position of the subject pronoun to code functions outside the domain of reference.

Table 2. East Dangla independent pronouns

<table>
<thead>
<tr>
<th>Independent pronoun</th>
<th>Subject clitic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sg noono</td>
<td>no</td>
</tr>
<tr>
<td>2m kííŋké</td>
<td>kí</td>
</tr>
<tr>
<td>2f káníŋké</td>
<td>ká</td>
</tr>
<tr>
<td>3m ŋàarà</td>
<td>ŋà</td>
</tr>
<tr>
<td>3f tyàarà</td>
<td>tyà</td>
</tr>
<tr>
<td>1incl nìírà</td>
<td>nì</td>
</tr>
<tr>
<td>1excl niíniní</td>
<td>ní</td>
</tr>
<tr>
<td>2pl kúnúŋké</td>
<td>kú</td>
</tr>
<tr>
<td>3pl ŋùurà</td>
<td>ŋù</td>
</tr>
</tbody>
</table>
Appendix

The following abbreviations and symbols are used in this paper:

<table>
<thead>
<tr>
<th>ALL</th>
<th>allative</th>
<th>GO</th>
<th>goal</th>
<th>PL</th>
<th>plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>COLL</td>
<td>collective</td>
<td>IDEO</td>
<td>ideophone</td>
<td>POT</td>
<td>potential</td>
</tr>
<tr>
<td>COM</td>
<td>complementizer</td>
<td>IMPF</td>
<td>imperfective aspect</td>
<td>PREP</td>
<td>preposition</td>
</tr>
<tr>
<td>COMPL</td>
<td>completeive</td>
<td>IN</td>
<td>inclusive</td>
<td>REL</td>
<td>relative pronoun</td>
</tr>
<tr>
<td>CONJ</td>
<td>conjunction</td>
<td>INTERJ</td>
<td>interjection</td>
<td>NREF</td>
<td>non-referential</td>
</tr>
<tr>
<td>DEM</td>
<td>demonstrative</td>
<td>INTERR</td>
<td>interrogative</td>
<td>RESP</td>
<td>respect marker</td>
</tr>
<tr>
<td>DIM</td>
<td>diminutive</td>
<td>LOC</td>
<td>locative</td>
<td>SEQ</td>
<td>sequential marker</td>
</tr>
<tr>
<td>EMPH</td>
<td>emphatic</td>
<td>M</td>
<td>masculine</td>
<td>SG</td>
<td>singular</td>
</tr>
<tr>
<td>EX</td>
<td>exclusive</td>
<td>MOT</td>
<td>motion</td>
<td>TEMP</td>
<td>temporal conjunction</td>
</tr>
<tr>
<td>F</td>
<td>feminine</td>
<td>NEG</td>
<td>negative</td>
<td>TOP</td>
<td>topic marker</td>
</tr>
<tr>
<td>FUT</td>
<td>future</td>
<td>NOM</td>
<td>nominalizing suffix</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Ergative-active features of the Ethiopian Semitic type

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Twelve rather idiosyncratic and seemingly independent features of Ethiopian Semitic languages are examined, including the distinction of A- and B-type verbs, variable tense interpretation of subordinate verbs, similarity of suffix-subject and suffix-object pronouns, copula conjugated with object-suffixes, past-form verb of presence with present-tense meaning, causatives distinguished by transitivity, rich verb-object agreement, etc. All these are argued to show possibly shared descent from an ergative-absolute or active-stative stage of language. Arguments for Semitic and Afroasiatic as ergative or active-state languages are reviewed, as well as the theory of Klimov for active and ergative as successive evolutionary stages of language within which theory the Ethiopian Semitic features are interpreted. The tendency to interpret ergative and active-state evidence in modern languages in ethno-psychological terms is noted and denied.

1. Introduction

Below are presented twelve morpho-syntactic features characteristic of Ethiopian Semitic languages, mainly exemplified from Amharic. Some of these are known elsewhere in Semitic and Afroasiatic. Many are idiosyncratic and unconnected with the others, so that, when taken as a group, the features seem prominent and remarkable in the Ethiopian Semitic (ES) languages, which suggests their validity as characteristic of a particular type which deserves unitary explanation if possible, even if only tentatively. After presentation of the features, and for each brief suggestion of its explanation in history, an explanation for all will be offered in the possible history of the features as descendant from ergative and/or active states of language.

Only two of the twelve features happen to be among those mentioned by Hetzron (1972: 17–19) as arbitrary innovations significant for the establishment of the ES branch of South Semitic: present-tense verb of presence ($2.3$) and causative in
as- or at- (§2.8). But all twelve seem to fulfill Hetzron’s requirements of arbitrariness and innovativeness, and none are among those shared widely by Semitic, Cushitic, and Omotic languages in the Horn of Africa as features of the “Ethiopian language area” (cf. Tosco 2000), and which as such might be considered to result from diffusion by long contact.

The ES languages are twelve (Hudson 2004), if as seems so none of the named varieties here listed as dialects are mutually unintelligible with others of their group. Two are extinct, plus probably the Mesmes variety (Ahland 2003).

†Ge’ez
Tigrinya
†Gafat
Soddo (Kistane) with dialects Dobbi (Gogot) and Galila
Mesqan
Chaha with dialects Muher, Ezha, Gumer, and Gura
Inor (Ennemor) with dialects Enner, Endegegn, Gyeto, and †Mesmes
Amharic
Argobba
Harari (Adare)
Silt’e with dialects Ulbareg, Enneqor, and Welane
Zay

Tigre is traditionally included in ES, but since 1991 it has been a language of independent Eritrea only peripherally spoken in Ethiopia.

ES plus the Ancient and Modern South Arabian languages are usually grouped as the South branch of Semitic (Faber 1997:11), but this is somewhat controversial. It is a reasonable assumption that because adequate description of ES languages is relatively recent in comparison with that of the classical Semitic languages Hebrew, Arabic, Aramaic, and Akkadian, the ES languages are yet insufficiently reflected in the conventional wisdom about the “Semitic-type” (cf. Appleyard 2002:401–403).

2. Twelve features of Ethiopian Semitic

2.1 Lexical contrast of consonant length in verbs

In ES the most frequent verbs are of two lexically determined types termed “A” and “B”. See the more-or-less uncontroversially reconstructed system (Hetzron 1972:23–24) in Table 1, of Sg.3m forms; the roots are sbr ‘break’ and fs’:m ‘accomplish’.
Phonetic writing here follows IPA rather than typical practice for ES, with a, i, and s’ (glottalized ejective consonant) for ä, a, and s, respectively. Notice the long consonant in the North ES A-type nonpast verb (that in Ge’ez and traditionally thought cognate with the Akkadian nonpast/imperfect) and in the South ES A-type past. But as seen in the right-hand three columns of Table 1, a long consonant is the prominent and consistent characteristic only of the B-type, which has the characteristic in the past, nonpast, and jussive paradigms.

B-type verbs also have a front vowel characteristic in the nonpast, shown as e in Table 1 (some languages have i). This vowel characteristic is absent in Amharic, where it was lost, having caused palatalization of preceding stem-initial coronals, with subsequent centralization as ä, and this vowel analogically replaced e after non-coronals; so in Amharic *yifess’im > yifass’im (Leslau 1957) with consequent merger of nonpast and jussive.

Type A is formally unmarked and is the presumed default type, with the result that there is a numerical prevalence of A-types, more prominent in North ES. In Ge’ez, for example, B-types are less than 20% of A-types in the count of Ambros (1991:60), whereas Amharic B-types number some 60% of A-types in the verb lists of Bender & Fulass (1978:24–25).

The A/B-type difference is prominent in ES, and must be understood in light of the somewhat different use of consonant length to make verbal-stem distinctions in other Semitic languages. In Akkadian and North ES, this characterizes the non-past or “imperfect” verb. In most other Semitic languages, the long-consonant type (“Stem II” or “D-stem”), is traditionally thought to be derived from the other (basic “Stem I”). Often there is admission that derivation is no longer productive, so that, effectively, Stems I/II are lexicalized as are A/B in Ethiopia.

Lipinski (2001:390) says of Stem II that “it is likely that this stem originally represented the conjugation of transitive verbs ... in functional opposition to Stem I”, and Diakonoff (1988:85) explained the contrast of short and long consonant stems as having contrasted active perfect and active imperfect in Proto-Semitic (and Proto-Cushitic, Proto-Berber), as follows:

<table>
<thead>
<tr>
<th>Table 1. A-type and B-type in ES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>North ES</strong></td>
</tr>
<tr>
<td>Past</td>
</tr>
<tr>
<td>səbrə</td>
</tr>
<tr>
<td><strong>South ES</strong></td>
</tr>
<tr>
<td>A-type</td>
</tr>
<tr>
<td>səbrə</td>
</tr>
</tbody>
</table>
Indeed, according to Klimov (1974:18) in “active” languages, which formally distinguish active and stative verbs, “active verbs always have a significantly higher number of conjugation paradigms than stative verbs”.

On Diakonoff’s theory, the “stative” evolved as the perfect everywhere except in Akkadian, where its function continued as a “stative” or “verbal adjective” (Huehnergard 1987, 2000). His “active imperfect” evolved as the Akkadian and Ethiopian non-past and elsewhere as Stem II, and his “active perfect” evolved as the Central Semitic (Arabic, Hebrew, etc.) nonpast and ES jussive.

Greenberg (1991) argued that the meaning of the Semitic long-consonant stem was verbal (object) plurality, and Kouwenberg (2001) that the Akkadian “imperfect” (nonpast) long-consonant (geminating) stem reflects an originally iconic characteristic according to which:

a geminate in a motivated word reflects, or used to reflect, some kind of extension in its meaning compared to the meaning of the corresponding word without gemination; this extension is usually realized as an increase in number (plurality), in duration (permanence, habituality), or in salience... In the course of time grammaticalization has led to erosion of the iconic nature of gemination; as a result iconicity has partly lost its association with notions such as plurality and salience and acquired various grammatical functions in which its extensional nature vis-à-vis the corresponding simple forms is less obvious and more abstract; the most important of these functions as far as verbal forms are concerned are those of underlining a high degree of transitivity... (Kouwenberg 2001:15–16)

In ES today, no semantic correlation is felt for A- and B-types, and both include transitives, intransitive actives, and intransitive statives, as seen in (2), although B-type intransitives are relatively few.

(2) A-type transitive: \( yik\text{š}ft \) ‘he opens’
   intransitive active: \( yi\text{š}d\text{k}’ \) ‘he falls’
   stative: \( yi\text{š}kr \) ‘he is drunk’

B-type transitive: \( yif\text{š}l\text{lg} \) ‘he seeks/wants’
   intransitive active: \( yik\‘\text{š}l\text{k}d \) ‘he jokes’
   stative: \( yi\‘\text{š}m\text{m}\text{mt} \) ‘he is calm’

Yet an understanding must be given of the ES A vs. B form distinction as the survival of a semantic distinction, and this probably stative vs. active, or intransitive vs. transitive (as argued by Hudson 1991, 1994, 2005), and as in the proposals of Lipiński (intransitive/transitive) and Diakonoff (stative/active) mentioned above.
It is difficult to imagine any other explanation for the present more or less competing status of the types in the modern ES languages, according to which (a) both are well and stably represented; (b) both have transitive and active and intransitive and stative members; while, however, (c) in Amharic, B-types are about 2 to 1 transitives, vs. an approximate 50/50% split of transitives and intransitives among the A-types, which difference Bender and Fulass (1978:78) found to be statistically significant. Hudson (1983) presents Amharic evidence for the nominal (stative) origin of the suffix conjugation. Implicit in the traditional view which associates the Ethiopian B-type with Semitic Stem II (cf. Greenberg 1991:579) is the alternative theory that the B-type represents lexicalization of the Stem II derived verbs. This, however, would seem normally to have soon resulted in leveling in favor of the basic type, the result presumably seen outside Ethiopia (and as an extension of the Ethiopian result) where the transitive type (e.g. Stem II) is reduced to a small minority of verbs. But such degree of leveling seems inconsistent with the relatively stable ES facts in which the B-type is still vigorously represented.

2.2 Tense distinction of stative and active verbs

Amharic verbs in the suffixing conjugation termed “past” or “perfect” are differently interpreted for tense in active and stative main verbs, as in the following examples of active verb ‘tell’ and stative ‘be tall’.

(3) Active verb naggar-ku ‘I told’
    Stative verb raazzm-ku ‘I was tall’ or ‘I am tall’

As in these examples, an Amharic suffix-conjugated active verb is necessarily past, but a suffix-conjugated stative verb may be understood as either past and/or (still) present. Leslau (1995:290) says of this phenomenon in Amharic, “With certain intransitive verbs or with verbs that have the meaning of becoming a condition, or with ‘impersonal’ verbs, or in general statement, the perfect may express the present, especially if the action occurs at the moment of speaking.” Leslau’s (1995) examples are intransitive and stative, if we include two cases of ‘come’.

In a presumably related phenomenon, Amharic verbs in the prefix-conjugation termed “nonpast” or “imperfect” may be interpreted as either present or future (Leslau 1995:301, 344), according to context. Indeed, it seems that this tense variability of nonpasts is primarily true of transitive and active verbs, as in Leslau’s examples (344): ‘break,’ ‘bless,’ and ‘want.’

Furthermore, verbs of both the prefix and suffix conjugations may appear in subordinate clauses, and in this case their tense interpretation is pragmatically
determined with respect to the main verb, as in the examples of (4a–d). The first two have subordinate clauses with the prefix s- ‘when’, which constructs only with the nonpast conjugation, yielding both past and nonpast meaning as appropriate for the main verb. The next two have bo-... gize ‘when’ (lit. ‘at the time that’), which constructs only with the past conjugation, again yielding both past and nonpast meaning, according to the main verb (Leslau 1995: 669, 678). (As main verbs (MV), the Sg.1 nonpast verbs of the examples have the suffixed auxiliary -allahu.)

(4) a.  
\[ s-im\text{t}’u \quad hed-ku \]  
when-come.they go.PAST-I  
‘I went when they came.’

b.  
\[ s-im\text{t}’u \quad i-hed-allahu \]  
when-come.they I-go.NONPAST-MV  
‘I will go when they come.’

c.  
\[ bo-m\text{tt}’\text{a}-hu \quad gize \quad mannimm \quad al-ayy\text{a}-hum \]  
at-go-I time no.one neg-see.PAST-I  
‘I didn’t see anyone when I went.’

d.  
\[ bo-m\text{tt}’\text{a}-hu \quad gize \quad ayy\text{a}-h-allahu \]  
at-come-I time see.I.NONPAST-YOU-MV  
‘I will see you when I come.’

The tense variability of the suffix and prefix conjugations, usually termed past and nonpast, and as main verbs generally so functioning, may reasonably reflect their history as primarily expressing something other than tense, such as transitivity/stativity, and as preserving the former tenselessness in subordinate clauses.

The mixed set of verbal form-meaning relations resulting from such history might explain what Rabin (1984: 391) had in mind in saying that “the classical Semitic tense system is characterized by having two tenses which also serve as aspects or aspects which also serve as tenses.” Dawkins (1969: 12), though not insisting on the different treatment of stative and active verbs, says that “in the Amharic tense scheme, though time distinctions are not without importance, the great dividing line runs, rather, between ‘Perfect Action’ and ‘Imperfect Action’... Perfect Action, being something completed, most commonly coincides with Past Time... but sometimes this is not so... Likewise Imperfect Action, being something uncompleted, most coincides with Present or Future Time..., but again not invariably so.”

In Ge’ez, in fact, there are two lexical classes of A-type verbs distinct in the vowels of their suffix-conjugated stem and exemplified by nagora ‘he told’ and labsa ‘he put on (clothes)’. The two classes are usually thought to be cognates of those in Arabic (and other Afroasiatic languages) which distinguish stem vocalization in
a vs. i or u and usually termed, but never with consistent correspondence to the
facts, transitive vs. non-transitive (Lipiński 2001:352), in e.g. kataba ‘he wrote’
(transitive) vs. hasuna ‘he was beautiful’ (intransitive). Ge’ez nagara represents
the transitive a-class, and lbsa the intransitives in i or u, which short high
vowels of Ge’ez both syncopated to zero in medial open syllables
(Gragg 1997:252). As lbsa ‘put on (clothes)’ shows, transitive verbs now appear
in the intransitive (or stative) class. Traces of this form distinction are preserved
in the jussive conjugation of a few South ES languages (Leslau 1951, 1964).

The characteristic of the Amharic past and nonpast conjugations seen in (4)
can be a result of the old Semitic and ES distinction of transitivity or stativity
hypothesized in §2.1, which upon its decline has been reinterpreted as tense or
aspect in main verbs, but the non-temporality of which persists in minor verbs, to
be interpreted pragmatically by reference to main verbs.

2.3 Verb of presence with only present-tense interpretation

In contrast with other verbs of stative meaning whose suffix-conjugated form is
past or present, Amharic and other ES languages have a suffix-conjugated “verb of
presence” (presence in a place), coming from <*hlw (as in Ge’ez), whose meaning
is only present-tense and never past. For presence in the past another root serves,
nbr (nbr ‘sit’ in Ge’ez, with presumably metaphoric meanings ‘inhabit, reside’);
and for the future there is a form of the same nbr root, nor (<nonpast stem nnbr).
See Amharic examples in (5).

(5) alla-hu
    is.present-I ‘I am (*was) present’
    yohannis i-bet alla
    Yohannes at-house is.present ‘Yohannes is (*was) at home’
    nabbr-ku
    was.present-I ‘I was present’
    yohannis i-bet nabbr
    Yohannes at-house was.present ‘Yohannes was at home’

Derivatives of *hlw are also the only past-form (subject-suffixing) verbs to con-
struct across ES (Hetzron 1972:18) with the time-clause subordinator s- which
otherwise requires nonpast (subject-prefixing) verbs, e.g. Amharic s-alla ‘when
it is (*was’).

An understanding for such difference of tense interpretation of the verb of
presence unlike other statives is perhaps that for ‘presence (in a place)’ tense is
pragmatically more critical. While permanent state ‘is tall’ is expected from ‘was
tall', and even impermanent state ‘is sick’ from ‘was sick’, ‘is present’ must usually contrast with ‘was present’. ‘Was present’ typically excludes ‘is present’. The peculiar restriction of the *hlw root to the present may also have been facilitated by the availability of the nbr ‘sit’ root, which moved into the role of past-tense verb of presence (and past-tense verb of being, where it contrasts with the present-tense copula, for which see §2.6), in Amharic and other ES languages.

The later emergence of tense or aspect as a grammaticized and obligatory category in South ES, as suggested in §2.2, plus the tense restriction of the two roots *hlw and *nbr, may contribute to the explanation of why, also, these have come to be employed in Amharic and other ES languages as obligatory main-clause auxiliary verbs: forms of *hlw suffixed to main verbs in the present (which Hetzron (1972:18) considered “an extremely important pan-Ethiopian feature”), and forms of *nbr as the past-tense auxiliary, for which see Amharic examples in (6).

(6) sisəbir ‘when he breaks’ (subordinate verb, no auxiliary)
yisəbr-all ‘he breaks’
səbro-all ‘he has broken’
səbro nəbbər ‘he had broken’
tisəbir nəbbər ‘she used to break’

2.4 Lesser differentiation and narrower distribution of prefix subject pronouns

See Table 2, which presents four Amharic pronoun paradigms (lacking are the independent pronouns). The prefix verb-subject pronouns under-differentiate the full paradigm in three ways: (i) Sg.2m and Sg.3f are the same; (ii) a suffix -i differentiates Sg.2f from Sg.2m; and (iii) a suffix -u differentiates Sg.2/3 and Pl.2/3. This is a common Semitic characteristic, but a particular characteristic of Amharic and other South ES languages is the absence of gender differentiation in Pl.2 in all four paradigms.

As the least differentiated paradigm and the set extended by suffixes, it is a presumption that the subject-prefix paradigm is, compared to the others, a later arrival in Semitic. In fact, the prefix conjugation is not reconstructible for Afroasiatic, as only Berber, Cushitic and Semitic have it (Egyptian, Chadic, and Omotic don’t). According to Hodge (1969:371) Proto-Afroasiatic pronouns are not reconstructible, but it seems apparent that the suffix pronouns are more archaic within Semitic and Afroasiatic (Hayward 2000:87; Blažek 1995:37).

Thus the prefix pronouns appear to have arisen later and in a function different from that of the others. Satzinger (2004) discusses the ergative implications of Semitic and Afroasiatic pronoun comparisons, for example, “the lack of a proper
accusative form in these languages” (p. 494). And recall the hypothesis of Diakonoff (1988:85) that the prefix paradigm was for active verbs, and that of Lipiński (2001:390) that this was for transitives.

Tentatively accepting a synthesis of these ideas, as the evidence generally supports a later paradigm with prefixes in a function different from that of the suffix conjugation usually presumed to have been stative and whose suffixes generally appear also as objects and possessives, one idea would be that the prefix-subjects are historically ergative vs. the others as absolutive, with the unmarked absolutive function assigned, typically, to the more diverse and semantically broader paradigm.

But such a hypothesis is premature at this point. Eight more characteristics of ES languages are to be seen.

### 2.5 Similarity of the noun-possessive, verb-object, and verb-subject suffixes

Most of the ES verb-object suffixes are plainly cognate with the noun-possessive suffixes, and both of these often cognate with the subject suffixes of the past. Again see Table 2. The three Amharic paradigms apart from the subject prefixes typically share forms (cf. Satzinger 2004, with conclusions relevant for those here); all have Sg.2m -h, Sg.2f -š, Pl.1 -n, Pl.2 -hu, and Pl.3 -u (> -w after vowels). The object suffixes and subject-suffixes share Sg.3 -at (> -ačč in one case), and only Sg.1 is fully differentiated with object -ňň, possessive -e < -ya (as in Ge'ez), and subject -ku. The object pronouns are also those of the copula (see §2.6). The correspondences

<table>
<thead>
<tr>
<th>Table 2. Four Amharic pronoun paradigms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Verb-subject prefixes (nonpast)</strong></td>
</tr>
<tr>
<td>1 i-qr¹</td>
</tr>
<tr>
<td>2 m ti-qr</td>
</tr>
<tr>
<td>2 f ti-qr-i</td>
</tr>
<tr>
<td>3 m yi-qr</td>
</tr>
<tr>
<td>3 f ti-qr</td>
</tr>
</tbody>
</table>

³ 'I remain' ⁴ 'he hit me’ ⁵ Suffix is t- after verb-final u, e.g. mattu-t ‘they hit him’

¹ I remain’ ² ‘he hit me’ ³ Suffix is t- after verb-final u, e.g. mattu-t ‘they hit him’

² ‘my house’ ⁵ ‘I pulled’
of possessive, object, and subject suffixes are far from perfect, particularly in the first-person, but the paradigm of subject prefixes of the prefix-conjugation is quite apart in phonetic form, head/dependent order, and differentiation of referents.

That is, we see basically two pronoun sets: prefixes and suffixes, with necessarily different history. On the above hypothesis of the prefixes as active or transitive (ergative in the latter case), the general unity of the others may support their interpretation as descendants of the expected contrast to ergative, absolutive. This would be consistent with the above-noted and somewhat well-established origin of the Semitic suffix conjugation as stative (Diakonoff 1988:87; Lipiński 2001:368), so again a distinction in the proto-language between transitive and intransitive, with forms of the pronouns of the latter surviving in the functions of subject of the past (old stative), object-of-transitive, and genitive.

2.6 Copula conjugated with object or suffix-subject pronouns

See Table 3, the copula in South ES Amharic, Zay, and Chaha, and, for the latter two languages, comparisons with the direct object and subject suffixes of the past conjugation. Amharic direct object and subject-suffix pronouns were presented in Table 2. Some complexities have been suppressed by presenting reconstructions for a few forms.

| Table 3. Amharic copula, and copula, suffix object, and subject pronouns in Zay and Chaha |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|
| Amharic copula                  | Zay   | Chaha |
|                                 | Singularg |       |       |       |       |       |       |
|                                 | Cop    | Obj   | Sub   | Cop    | Obj   | Sub   |
| 1 nə-ŋəň                      | nə-hu  | -ŋəň  | -hu   | -n-xw  | -i   | -xw   |
| 2 m nə-ŋ                          | nə-ho  | -h    | -h    | -n-xə  | -xə  | -xə   |
| 2 f nə-š                          | nə-šo  | *-iš   | -š   | -n-xɬ   | -xɬ  | -xɬ   |
| 3 m nə-w                          | nu    | *-i    | -ə    | -u    | *-u   | -ə    |
| 3 f n-at, nə-čč                 | nə-tu  | -a    | -t    | -n-ya  | *-a   | -čč   |
| 1 nə-n                        | nə-nu  | -n    | -n    | -n-də  | -də  | -n    |
| 2 m nə-ŋɬhu                    | nə-ŋɬhum | -hnum | -h   | -n-xma  | -xma | -xma |
| 2 f n-əiɬhu                  | n-ohumo | -ohum | -hum  | -n-xma  | -xma | -xma |
| 3 m n-əiɬ                        | n-omu  | -om   | *-u   | -n-əma  | -əma | -ma   |
| 3 f n-əiɬ                        | n-omu  | -om   | *-u   | -n-əma  | -əma | -ma   |

Across South ES, as in these three languages, the copula has the stem $n$-. In North ES by contrast, the copula is expressed by use of the independent pronouns, for example, Ge‘ez bəsiʾ ʔamə ‘I am a man’ / bəsit ʔanti ‘You (Sg.f) are a woman’ (Lambdin 1978:29). That the North ES languages and Semitic languages beyond Ethiopia generally have different and variant forms of the copula is evidence that the copula is a category which arose after the proto-language period and independently in the branches, even within Ethiopia.

The Amharic copula has two forms for Sg.3f. Including the first listed of these, $n$-at, this conjugation employs exactly the verb-object pronouns (see Table 2). Pronouns of the Zay copula, however, are perhaps more like the subject suffixes of the past, while those of the Cha ha copula more like the verb objects. The second listed Amharic Sg.3f copula $n$-čč, nowadays more common, has the subject suffix of the past, which suggests, with the Zay and Cha ha comparisons, that the South ES copula may be undergoing restructuring on analogy with the past conjugation. However, while the copula is present tense, the suffix conjugation is usually past, although present as well as past for stative verbs (§2.2). Perhaps its historical stativity rather than tense is the semantic parallel which enables the suffix conjugation to be an analogical model for the copula, despite its contrast of tense.

Also relevant here: the copula is another stative paradigm conjugated with suffix pronouns and in contrast with the prefix-conjugated hypothetical historical active or transitive.

### 2.7 Impersonal verbs conjugated by object pronouns

South ES languages have a number of “impersonal verbs” (Leslau 1995:435), certainly dozens in Amharic, constructed as a verb stem, an ordinarily “impersonal” Sg.3m subject, and an object suffix expressing a human complement; cf. French *il me plaît*. (English *lican* ‘like’ was such a verb, taking as its personal complement a dative, presumably in the meaning ‘please’, but this was eventually reanalyzed with the nominative as its personal pronoun complement.)

The Amharic verb of ‘having’ is of such type, with the possessed as impersonal subject and the possessor as object, e.g. *allo-ɲn* ‘I have’ (‘it is present to me’); most other such verbs express involuntary states, including ‘be hungry’, ‘be thirsty’, and ‘understand’. See three other examples in Table 4, in which the glosses are the usual translations rather than attempts to accurately render the meaning; thus for *dakkanɔ-ɲn* ‘I am tired’, preferred might be ‘it (something) tires me’, and for *ammənɔ-ɲn* ‘it sickens me’.

The presence of the class of impersonal verbs in other ES languages which unlike Amharic lack thorough descriptive grammars is apparent in their dictionaries.
and word lists, where impersonal verbs are listed as stem+hyphen, in Zay, for example, idbo- ‘be in need’ and rāb- ‘be hungry’.

It is reasonable to see the impersonal verbs as a diminishing class perhaps undergoing replacement and regularization. Thus Amharic ‘be tired’, at least, also now conjugates both impersonally and as a regular verb: there is dkkam-nn ‘I am tired’ but also dkkam-ku ‘I am tired’. Dawkins (1969:60) and implicitly Kane (1990:1815) say that the impersonal form of the verb means ‘I feel tired’ vs. non-impersonal ‘I am tired’, but this may be a secondary distinction motivated by the usual sense that different forms must have different meanings.

Also suggestive of ongoing reanalysis of the impersonal verbs is the variable accusative-case marking of the object noun phrases when these are present in addition to the object suffix: definite accusatives in Amharic are suffixed by -n, and one finds, for example, both ine raba-nn ‘I am hungry’ and ine-n raba-nn (Leslau 1995:435). The latter would be obligatory if the verbs were not of a special class.

Such a class of stative verbs (whose subject = the object of transitives), including such verbs of internal state, is a characteristic of active and, derivatively, ergative languages, according to Klimov (1974:19 and 1979:329; cf. also Nichols 1986:144).

Table 4. Three Amharic impersonal verbs

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>dkkam-nn 1 ‘I am tired’</td>
<td>dkkam-nt 2</td>
</tr>
<tr>
<td>2</td>
<td>dkkam-h</td>
<td>dkkam-ct</td>
</tr>
<tr>
<td>3</td>
<td>dkkam-s</td>
<td>dkkam-at</td>
</tr>
<tr>
<td>4</td>
<td>dkkam-w</td>
<td>dkkam-ct</td>
</tr>
</tbody>
</table>

1 Also dëkkëm-ku ‘I am tired’, etc.

2.8 Two causatives suffixes

ES languages, except for Ge’ez, have two verb-causative prefixes, a- and at- or as-, as- appearing productively in Amharic and Argobba only. Compared to its use in South ES, North ES Tigrinya (and in Tigre) at- seems to have restricted range and productivity vs. a-.

Following earlier analyses, Dawkins (1969:32) says the two causatives are respectively for direct and indirect (intermediated) causation. Leslau (1967:377,
431) says instead that a- is “mainly” for the causative of intransitives, and the “normal” use of as- is for the causatives of transitives and passives. See in (7) two examples each of Amharic a- and as- consistent with these generalizations.

(7)  

<table>
<thead>
<tr>
<th>Amharic</th>
<th>Transliteration</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>mättä‘he came’</td>
<td>a-mättä‘he brought’</td>
<td></td>
</tr>
<tr>
<td>k’ollst‘ã‘it melted’</td>
<td>a-k’ollst‘ã‘he melted’</td>
<td></td>
</tr>
<tr>
<td>mättä‘he hit’</td>
<td>as-mättä‘he caused to hit’</td>
<td></td>
</tr>
<tr>
<td>wəddədə‘he liked’</td>
<td>as-wəddədə‘he caused to like’</td>
<td></td>
</tr>
</tbody>
</table>

There is a natural association between the causative-of-transitive and indirect causation, which may explain Dawkins’s understanding.

The prefix at- seems analyzable as causative a-t-, in which t- is the passive-reflexive prefix (see §2.12) exemplified by Amharic tə-sabbəra ‘it was broken’ and t-att’oš ‘he washed (himself)’ (sabbəra ‘he broke’, att’oš ‘he washed (something)’). Since passives and reflexives must ordinarily be based on transitives, causative a-t- would naturally have competed in the semantic territory of the as-causative of transitives, and if so appears to have replaced the latter in South ES languages other than Amharic and Argobba; in the latter two languages as- won out over at-. Only for Amharic has the use of as- been well studied, so discussion will be restricted to this language.

Further evidence of the association of as- with transitives is a peculiarity of ES verb-causative morphology apparently shared by all those languages for which we have information: when an A-type verb forms a causative with as- or at-, that verb is remodeled and treated as if it were B-type, the type hypothesized in §2.1 to be descendant from the class of transitives. This is exemplified in (8) by Amharic and Zay A-type verbs and their respective as- and at- causatives (Zay from Leslau 1999:88).

(8)  

<table>
<thead>
<tr>
<th>Amharic</th>
<th>Zay</th>
<th>Transliteration</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>rəzzəma‘it was long’ (vi)</td>
<td>wərdə‘he descended’ (vi)</td>
<td>y-as-rəzzim</td>
<td>‘he causes to lengthen’</td>
</tr>
<tr>
<td>wəssədə‘he took’ (vt)</td>
<td>y-at-wërid</td>
<td>y-as-wəssəd</td>
<td>‘he causes to take’</td>
</tr>
<tr>
<td>morə ‘he irritated’ (vt)</td>
<td>y-at-mərīr</td>
<td>y-at-wërid</td>
<td>‘he irritates’ (vt)</td>
</tr>
</tbody>
</table>

Recall that in Amharic both of types A and B have a long-consonant in the past stem. In the Amharic nonpast, however, the as-causative of an A-type verb acquires the long consonant of the B-type. In Zay, a language which has lost consonant length but in the past and nonpast preserves the front vowel characteristic of the B-type, the at-causative of an A-type verb acquires the front vowel.
There are, however, many Amharic exceptions to Leslau’s generalization that 
a- is for intransitives and as- for transitives, as shown by Amberber (2002) and 
earlier, Appleyard (1972); for example, in (9) intransitive and transitive verbs 
forming causatives of both types.

(9) $gوبا$ ‘he entered’ (vi)  \[a-gوبا\] ‘he married’  
\[as-gوبا\] ‘he made enter’  
$막קור’ ‘he advised’ (vt)  \[a-막קור\] ‘he became a novice’  
\[as-막קור\] ‘he made advise’

Some of these may be understood as cases in which the original causative has 
become idiomatically narrowed, for example, $a-gوبا$ ‘he married’ < ‘made enter’, 
having forced derivation of an as- causative in the regular meaning, $as-gوبا$ ‘he 
made enter’ even though as- is normally for transitives.

A common and general type of exception to Leslau’s generalization, and one 
the existence of which can further explain the breakdown and loss of a former 
regular association of a- to intransitives and as- to transitives, is intransitive verbs 
with stem-initial a, such as $abb다$ ‘be insane’ (vi) and $arr다$ ‘rest’ (vi). (Verbs with 
stem-initial a result from loss of stem-initial laryngeal and pharyngeal consonants.) 
Whether transitive or intransitive, these verbs form causatives with as-: $as-abb다$ 
‘make insane’, $as-arr다$ ‘make rest’, which may be understood to have resulted from 
normal competition between a- and as- causatives for a-initial verbs, which may be 
transitive (e.g. $akk따$ ‘treat (medically)’) or intransitive ($add따$ ‘pass the night’). 
Such competition would reasonably have been resolved by regularization in favor 
of as- because this preserves the integrity of the prefix, which would have tended to 
be lost in the sequence of $a-+a$. Such understanding depends on the preference of 
as- for transitives having been lost or at least weaker at the time of the regulariza-
tion than the phonological preference for as- with a-initial verbs.

This class of verbs would have contributed a large number of exceptions to 
the association of a- with intransitives and as- with transitives, and then have 
presented itself as the analogical model for subsequent other crossovers of type, 
leading to an eventual breakdown of the association of causative prefixes with 
transitivity, an association which, however, survives as a clear tendency.

The distinction of the two causatives is perhaps only historical today; certain-
ly the number of exceptions must make it difficult to acquire. But the existence 
of the two causatives of ES can hardly be understood as other than a relic of an 
earlier state in which intransitive and transitive, or co-related static and active, 
was a formally well recognized distinction of Amharic, when the two verb types 
A and B and the two causatives a- and as- were associated with these, respectively. 
The greater (two-segment) form of the transitive type as as- is consistent with the 
formal markedness of the transitive in ergative systems.
Moreno (1948:128) considered the two-causative system to have been borrowed from Ethiopian Cushitic languages, which also have two causative affixes (suffixes in these consistent SOV languages), approximately -s and -sīs (cf. Hudson 1976:271 for Highland East Cushitic), also used generally for intransitive and transitive verbs, respectively, although for stative and active, respectively, in Wellegga Oromo according to Gragg (1976:186). Except for its apparent absence in Semitic outside Ethiopia, however, there seems no reason to suppose that this ES feature was borrowed; certainly the forms were not borrowed. Lipiński (2001:395–399) argues contrarily that both a- (of Arabic stem IV) and the s of as- (cf. Akkadian causative š-) descend from Proto-Semitic.

2.9 Exceptional causative verb classes

Evident in Amharic are two somewhat coherent classes of verbs (the evidence is suggestive but incomplete for other ES languages) which appear to contradict the usual associations of a- and as-. One is verbs which although transitive form their causatives with a-, not as-, and the other is verbs which although intransitive form causatives with as-, not a-.

The former class may be seen to have meanings which involve ‘benefit to the self’, or reflexivity, as in the examples of (10).

(10) bolla ‘eat’ (vt) a-bolla ‘make eat’
     t’ōtt’a ‘drink’ (vt) a-t’ōtt’a ‘give to drink’
     k’omməsa ‘taste’ (vt) a-k’omməsa ‘give to taste’
     labbəsa ‘put on (clothes)’ (vt) a-labbəsa ‘dress another’

Amberber (2002:37–38) labels these a class of “injessive” verbs, but does not suggest why such meaning would remove them from the class of as-causative “transitive” verbs.

These are a class perhaps related to Klimov’s (1979:329) “verbi sentiendi” of languages which contrast stative and active, or related to Diakonoff’s (1988:101) Afroasiatic “ingressive verbs”, which he supposed to have been “probably aspectless”. As Klimov suggests, such verbs may be survivals of those earlier felt as stative. These may derive seeming active meaning via a stage of reflexivity, for example ‘be fed’ (> ’feed oneself’) > ‘I eat’, ‘thirst be slaked’ (> ’slake one’s thirst’) > ‘drink’, and ‘be informed as to taste’ (> inform oneself as to taste’) > ‘taste’.

The second exceptional class of Amharic verbs consists of intransitives which form their causatives with as-, exemplified in (11).
One understanding of these (Amberber, 28) is that they are actually transitive in accepting a “cognate object”, as in laugh a laugh, joke a joke, dance a dance – although much less likely is migrate a migration. Presence of the cognate object, moreover, is rare, and gives the verb the intuitive feel of analogy to a transitive, rather than redundant fulfillment of basic transitivity.

Amberber (34) interestingly notes that these “are a broad homogeneous class, in that they all encode a kind of activity, rather than a kind of state or change of state”, and he suggests (with reference to others) that their set membership may be related to a semantic dichotomy of “internal versus external control”, which perhaps would associate them with a distinction, respectively, of causative of stative (taking a- ) vs. causative of active (taking as- ). These verbs, indeed, appear to parallel the class of “verba affectum” thought by Klimov (1979: 329, mentioning ‘laugh’, ‘cry’, and ‘think’) to be ambiguous as to activity and to be “a residual feature in some ergative languages”.

2.10 Object-marked non-objects

Case marking is quite variable across Ethiopian Semitic, and direct objects are typically marked only if definite. See Table 5 for case marking in eleven of the twelve ES languages (information on Mesqan is lacking), plus Tigre.

Six of the languages mark direct objects with the affix which is used also for either genitive (y-) or dative (l-). There is no evidence in Ethiopia for the case system often assumed to be common Semitic: nominative -u, accusative -a, genitive -i. Owens (1998: 58–59), however, provides arguments for reconstructing this three-case system in Proto-Semitic, especially its vigor in Akkadian and (Classical) Arabic, and in different branches of the family which seem unlikely to have innovated it independently. Owens and Lipiński (2001: 272) agree that cases like Ge'ez -a (< -a) and Silt’e -a(ː) probably don’t derive from Semitic accusative -a.

Hetzron (1970: 301) suggested that Amharic case marking is the result of the language trying “to make use of its Semitic morphological devices to express Cushitic case-categories”; however, the Cushitic neighbors of Amharic have quite different case marking, in general and in details (see Tosco 1994).

Amharic has accusative -n, typically only for definite objects but sometimes for non-definites including generics and abstracts, as in (12) (Leslau 1995: 182):
Ergative-active features of the Ethiopian Semitic type

Table 5. Accusative, dative, and genitive in twelve ES languages

<table>
<thead>
<tr>
<th>Language</th>
<th>Accusative¹</th>
<th>Dative²</th>
<th>Genitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>North ES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tigre</td>
<td>ḭigīl N</td>
<td>ḭīl, ḭigīl N</td>
<td>na:y N</td>
</tr>
<tr>
<td>Tigrinya</td>
<td>na-</td>
<td>nay N, N nay</td>
<td></td>
</tr>
<tr>
<td>Ge’ez</td>
<td>-a, l-a-</td>
<td>l-a-</td>
<td>l-a-, za-</td>
</tr>
<tr>
<td>South ES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gafat</td>
<td>-(ə)n</td>
<td>yə-, l-</td>
<td>yə-</td>
</tr>
<tr>
<td>Soddo</td>
<td>yə-, nə-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chaha</td>
<td></td>
<td>yə-</td>
<td></td>
</tr>
<tr>
<td>Inor</td>
<td></td>
<td>a-</td>
<td></td>
</tr>
<tr>
<td>Amharic</td>
<td>-n</td>
<td>l-a-</td>
<td>yə-</td>
</tr>
<tr>
<td>Argobba</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harari</td>
<td>-u, -w</td>
<td>l-e</td>
<td>zi-</td>
</tr>
<tr>
<td>Silt’e</td>
<td>-a(ː)</td>
<td>l-a-</td>
<td>ya-</td>
</tr>
<tr>
<td>Zay</td>
<td>-e (&lt;-a- y ?), -y</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹ Typically only definite objects are so marked.
² Dative and locative/directional ‘to’.

(12) kitbat bošita-n ləməkkələkəl yirədall
vaccine disease-obj to.prevent it.helps
‘Vaccines help to prevent diseases.’

mot-in yəmm-a-yfəru
death-obj which-NEG-they.fear
‘those who don’t fear death’

Often, however, even non-objects are marked by -n, as emphasized by Hetzron (1970). Besides a direct object, Amharic -n may mark, as in (13), a dative, ablative, goal, or other oblique-case noun, respectively.

(13) geta-w səratəñočč-u-n gənzəb kəʃəl-aččə
master-the workers-the-obj money paid.he-them
‘The master paid money to the workers.’ (Leslau 1995: 183)

setiyyo-wa-n and mas’iḥaf gəzza-h”-at
women.the-obj one book bought-I-her
‘I bought a book from the woman.’ (Hetzron 1970: 313)

agər-u-n təməlləssa
country-his-obj returned.he
‘He returned to his country.’ (Leslau 1995: 185)
people-the god-obj believed-they-on-him
‘The people believed in God.’ (Hetzron 1970: 309)

In the first example, dative soratnyočču-n ‘the workers’ is resumptively marked on the verb as the suffix pronoun -aččōw, and in the second ablative setiyyo-wa-n ‘the woman’ is resumptively marked as -at. Oblique non-objecthood of igziābher-n ‘God’ in the last example is shown by its resumptive marking as -t of -bbō-t ‘in it’.

Appleyard (2004) proposes that Amharic object-suffix -n is cognate with the usual dative and accusative affix l of ES languages, which is a prefix in some languages and a suffix in others. Problematic for this hypothesis is the fact that Amharic also has dative-benefactive l-, and there is little evidence for an Amharic sound change l > n. What the evidence more generally suggests is that Proto-ES lacked a case system, and the languages have evolved accusative marking relatively recently and independently, and perhaps as an extension of oblique (or absolutive) marking.

According to Klimov (1979: 331), on the evidence of Caucasian, identity of direct and indirect objects is an ergative-language characteristic, and according to Klimov (1974: 21) “the case category is almost completely absent” in languages of “active typology”, such as Dakota and other Na-Dene languages of North America, which type he believes typically precedes the ergative. Lacking in ES, however, is evidence of an ergative affix, which is the marked (affixed) case in an ergative system vs. unmarked (unaffixed) absolutive.

2.11 Object agreement

Amharic and it appears on present, if insufficient, evidence all the other ES languages have extensive object and instrumental agreement expressed as verb suffixes, for the paradigm of which see Table 2. In addition to examples in (13), see Amharic examples of object agreement in (14) (Getatchew 1971:102), which suggest how O-S word order and topicalization correlate with the presence of resumptive pronouns.

(14) betu-n Almaz ba-mat’rəgiya-w t’ərrəg-ačč-iw
house-the-obj Almaz with-broom-the swept-she-it
‘Almaz swept the house with the broom.’
ba-mat’rəgiya-w Almaz bet-u-n t’ərrəg-ačč-ibbō-t
with-broom-the Almaz house-the-obj swept-she-with-it
‘Almaz swept the house with the broom.’
As these two sentences suggest and as Getatchew argued for Amharic (but is yet to be shown for other ES languages), obligatory object agreement is dependent on the two factors of definiteness and topicality. Definiteness, of course, tends to follow from topicality.

Extensive object agreement is a prominent active-language characteristic, presumably necessitated in active languages by their lack of case marking (Klimov 1974:21). Diakonoff (1988:101) claims that extensive object marking is an ergative-language characteristic. In Klimov’s theory, this characteristic persists in ergative languages, which follow upon the active stage.

That in Amharic and probably other ES languages object agreement correlates with topicalization and/or definiteness is a result which would arise, over time, upon the rise of case marking (§2.10), as functionalization accompanied by gradual elimination of disfunctional redundant agreements.

2.12 Morphological passive-reflexive

Semitic languages commonly have verbs with a t-prefix functioning, generally, as reflexive (Lipiński 2001:4–4). The prefix seems particularly prominent and even productive in all the ES languages, where, however, it yields both reflexives and passives, as in Amharic kaffato ‘he opened’ / ta-kaffato ‘it was opened’ (‘it opened’ (vi)) and satt’a ‘he gave’ / ta-satt’a ‘it was given’.

As Lipiński (2001:404) says, the original function of the Semitic t-prefix was reflexive in contrast with “passive” n- (cf. presumably cognate and readily reconstructible Cushitic reflexive *-d’ and passive *-m, which are suffixes consistent with these being consistent SOV languages). Passive n- has only relic survivals in ES and elsewhere perhaps because, as Lipiński (401) says, following the subject prefixes of the prefix conjugation, n- would have tended to fully assimilate to the first consonant of the verb stem, for example, Amharic *yi-n-kaffat > yikkaffat, reanalyzed as coming from yi-t-kaffat, with reflexive t-.

Because the t- is usually word-initial and separated from the stem by a vowel (*ta-kaffato ‘it was opened’) in the suffix conjugation, where it could not assimilate, the foregoing explanation is successful on the assumption that the merger of t- and n- in favor of the latter happened in the prefix conjugation, the passive being absent in the suffix, stative, conjugation. Similarity or overlap of meaning of passive and reflexive, and the minority of passive vs. reflexive verbs (as in ergative languages, the passive category being absent in active languages according to Klimov (1974:18)), would also have encouraged such merger.

Amharic intransitives may have t-passives, for example, ta-folla ‘it was boiled’ (folla ‘it boiled’), and ta-kobbəra ‘he was praised, honored’ (kobbəra ‘he was ex-
alted, honored’), which Leslau (1995:463) analyzes, if strictly from a synchronic point of view, as passives of a-causatives: *a-fälla* ‘he boiled (vt.)’ and *a-käbbär* ‘he honored (vt).’ Amharic intransitives with t- may also express a ‘generalized impersonal’ (Leslau 1995:465), which can perhaps be understood as arising from a reflexive meaning, for example, *tə-matt’a* ‘one comes’ (*matt’a* ‘he came’), *tə-tənña* ‘one somehow sleeps’. The reflexive use of t- is transparent in verbs such as *tə att’ebb* ‘he washed (himself)’ and *tə-lačč’ebb* ‘he shaved (himself)’; compare *att’ebb* ‘he washed (another)’ and *lačč’ebb* ‘he shaved (another).

The morphological passive-reflexive in t- receives tentative understanding in light of the hypotheses of stative-active and ergative-absolutive stages of language suggested in connection with histories of other features discussed above. It is plausible that at the stage of stative-active contrast verbs like ‘open’ and ‘break’ are as likely to be stative as active, and that, in such a case, the reflexive of e.g. ‘open’ (modern Amharic *tə-kaffat’a*) would mean ‘itself-opens’, which upon conversion of the verb from stative to active would be naturally reinterpreted as passive ‘it is opened’.

3. Afroasiatic and Semitic ergativity

An example of an ergative language is Sumerian, for which see (15) (Thomsen 1984:50), characterized in the typical way by the morphological feature that subjects of intransitives and objects of transitives are marked the same, as absolutive, versus the differently marked subjects of transitives, as ergative. Also as typically, the absolutive is literally unmarked as zero-marked, and the ergative marked, in Sumerian in (15) by -e.

(15) /lú-e (erg.) saq-Ø (abs.) mu-n-zìg/ ‘the man raised his head’
    /lú-Ø (abs.) i-ku₄-r-Ø/ ‘the man entered’

Throughout his review of comparative Semitic, Lipiński (2001) gives much attention to Diakonoff’s (1965, 1988) “important conclusion that Afro-Asiatic belonged originally to an ergative language type”. Early on (p. 22) Lipiński mentions the evidence of Classical Arabic, in which the morphological marking of the intransitive subject in *mā ṣakrama l-’amira*, “How noble is the emir!”, is the same as that of the transitive object in *qatalū l-’amira*, “they killed the emir”. Instead, there is a different morphological marking of the transitive subject in *qatala-hū l-’amiru*, “the emir killed him”.

This minority usage has been termed “exclamatory accusative”, which Lipiński interprets as
Ergative-active features of the Ethiopian Semitic type

a remnant of the ergative pattern, generally replaced in historical times by the nominative one. Syntactic processes have preserved traces of the ergative as well. Thus, the intransitive pronominal subject of the stative is suffixed to the root like the transitive pronominal object, e.g. Assyro-Babylonian zikar-ā-ta, “you are a man”, and ḫabat-ka, “he seized you”. Instead, the transitive pronominal subject is prefixed to the root, e.g. ta-ḥabat-anṇi, “you seized me”. The changing function of the stative disrupted this pattern.

Later, Lipiński (p. 353) remarks that the Semitic distinction of transitive and intransitive is one “extremely important in any ergative language”.

In Semitic, this distinction was based mainly on the intransitive function of the basic stem (B/G), used with a subject in the non-active a-case, and the transitive function of the causative-factitive stems (D and/or Š), used with a subject in the ergative u-case … However, a semantic development took place in an early phase of Proto-Semitic or even in Afro-Asiatic with the result that the basic stem of numerous Semitic verbs can be used both transitively or intransitively; e.g. Arabic qariba ṭa-rāḡula “he approached the man”, and qariba ṭa-rāḡulu “the man came near … Besides, the basic stem of the historically attested languages contain exclusively transitive verbs as well.

He goes on (p. 353) to suggest that this is what led to loss of ergativity: “In consequence, the originally ergative character of Semitic was reduced mainly to the opposition of the active and non-active nominal components of the sentence.” An alternative hypothesis, that of Klimov (1979) suggested above, is that active/stative is a prior dichotomy, traces of which persist into and through a stage of ergativity.

The hypothesis of Proto-Semitic and Proto-Afroasiatic ergativity may yet be controversial, but has been useful above as a way, certainly also not without objection, to hypothesize a unified understanding of twelve characteristic and somewhat idiosyncratic features of ES.

Diakonoff (1988:101–102) proposed a number of features of Afroasiatic (Afrasian) which he interpreted to show “almost certainly … that the Afrasian languages originally had an ergative construction of the sentence, which is still preserved in some Cushitic and Omotic languages”.

1. “The Nominative case was used only in order to express a subject of the verb, but not for simple nomination of a person or a thing.” Such ergative character, it was suggested here, may be reflected in the South ES copula (§2.6), which is typically conjugated by what are elsewhere object pronouns.

2. “The Semitic accusative case probably arose from the absolute case of the subject of a state (they partially coincided in the oldest form of Old Akkadian and in Amorite, and are not distinguished in certain Cushitic languages;
they probably were not distinguished in Proto-Cushitic either).” Such later evolution of the accusative is perhaps apparent in ES in its variable and often prepositional expression of the accusative, also often used for non-accusatives (§2.10).

3. “In verbs, the pronominal marker of the subject of action (and only later also of the subject of state, which originally was not expressed by any verbal predicate) originated from pronouns in an oblique case, and not from direct case pronouns.” This would-be ergative feature was suggested as underlying the contrast of prefix subjects of the (transitive/active) nonpast vs. suffixes of the (intransitive/stative) past (§2.2), and also the peculiar ES dichotomy of A- and B-type verbs, in which, as suggested by Diakonoff (1988:85), the long-consonant (B) type descends from the original prefix conjugation of the active or, in the preference of Lipiński (2001:390), transitive verbs, the form of which was only later extended to the short-consonant (A) type of statives or intransitive actives (§2.1).

4. “Intransitive ingressive verbs were probably aspectless; the category of state was originally expressed by nominal predicates only.” Here the ES survival of “ingressive verbs” was suggested to be the self-benefiting class which, although transitive, form their causative with the generally otherwise intransitive associating prefix a- (§2.9).

5. “The verbs of action actually had a ‘bilateral’ concord both with the subject of action (via the subject pronominal elements of the verb), and with the subject of the state resulting from this action, i.e., with the direct object, via suffixed pronominal elements ... The possibility to mark not only a subject, but also an object of action (sometimes even an oblique object) by a special marker attached to the verbal form is another feature which connects Afrasian languages with their sentence structures of a, generally speaking, nominative type, with ergative languages.” Regarding this, noted here was the extensive ES use of oblique object agreement, now in topicizing function (§2.11).

6. “Originally the Afrasian languages did not have an opposition of active and passive voices, the Passive emerging later, originating in impersonal and reflexive forms.” In this feature we have an association with the ES t-prefixed verbs expressing both passive and reflexive, but originally reflexive (§2.12).

On present knowledge it is difficult to sense the extent to which the Afroasiatic features listed by Diakonoff, or others that have been mentioned here and may be exemplified, if less confidently in ES languages other than Amharic, are indeed best understood as characteristic of post-ergative or post-active states of language, rather than consistent with some other, perhaps equally unitary, explanation, or even not to need unitary explanation at all. Many of these features,
however, are also among those included in the discussions of Klimov (1973, 1974, 1979) as features of ancient and contemporary ergative and/or active (the latter, for him, pre-ergative) languages. Lipiński (2001) is noted here as one who accepts the hypothesis of a Semitic ergative stage of language, without recognizing this as potentially arising from an earlier active stage. Regarding the Semitic evidence for a history of stative vs. active verbs, see Müller (1995), and see Satzinger (2004) for the evidence of Afroasiatic pronouns for an ergative history.

4. Ergative as a stage of language evolution

Underlying the argument here is the hypothesis of Klimov, and the claim of Plank (1979: 29) that “relational typology ultimately has to be seen in a diachronic perspective, and in the context of an adequate theory of type change”. In Klimov’s hypothesis, which the ES facts here may be interpreted to support, the active type of language typically preceded the ergative type, which typically preceded the nominative type nowadays prevalent. As the result of this history, modern languages including ES may often present features of mixed relational type.

Tentative if reasonable interpretation of the evidence discussed by Klimov, Plank (1979), Schmidt (1979), and Bichakjian (2002); and some common-sense speculation may generally support the hypothesis diagrammed in (16), in which ergativity would have arisen as languages abandoned earlier contrasts between active and stative and began to make salient the more linguistic and strictly symbolic categories of subject and object, with subjecthood assigned first to the pre-eminently “active” subject of transitive, or ergative. Below, the role of the contrast of animate and inanimate, or agent and patient in ergative languages (Comrie 1978: 366), may sufficiently, if even more tentatively, motivate an earlier and necessarily less evidenced but more naturalistic contrast of animate and inanimate, as suggested by Klimov (1973: 318).

(16) Four contrasts as hypothetical stages of linguistic evolution

animate/inanimate, a natural perceptual dichotomy
↓
active/stative, a perceptual cognitive dichotomy
↓
ergative/absolute, a cognitive linguistic dichotomy
↓
nominative/accusative, a linguistic symbolic dichotomy
The hypothesis that ergativity is a generally common stage in linguistic evolution seems consistent with broad evidence of three sorts, as follows.

1. Reconstructed ergativity of ancient languages including Proto-Indo-European (Steiner 1979; Schmidt 1979; Beekes 1995:193) and Proto-Afroasiatic, and, consistent with this as an archaic type, the present-day ergativity of geographically dispersed languages and language families including Caucasian, Austronesian, Australian, and Inuit, and of isolates such as Basque, Sumerian, and Georgian; and more recently the reconstruction of Indo-European as an active language by Gamkrelidze and Ivanov (1995) and Lehmann (2002).

2. Absence of consistent grammatical treatment, morphological or syntactic, of the subject role in languages of world, which role appears to be, rather, a collection of properties only more or less gathered and recognizable in particular languages (Keenan 1976), and these having prominence according to their importance for the pragmatic role of topicality (Givón 1995:299), which Plank (1979:13–18) suggests is the usual historical source of subjects.

3. Traces of ergativity often subtly found in many modern languages including as “split-ergativity”, as discussed by Comrie (1978).

5. Against ethno-psychological speculation

Unfortunately, a hypothesis of traces of an ergative stage in languages is bound to be often controversial, because, in the words of Plank (1979:3), it “encourage[s] a revival of the ‘ethno-psychological speculation’” to which Sapir (1917) objected in his review of Uhlenbeck (1916). Such speculation tends to implicate, intentionally or not, a potentially racist dichotomy in which “the evolved” is contrasted with “the unevolved”, and in which languages which particularly evidence features of earlier stages are thought (whether the linguist who takes note of the correspondence of features and languages suggests so or not) to be more or less “primitive” as an interpretation of the evolutionary sequence.

Dixon (1994:185–186) proposes that there is an “ergative cycle” in which languages have, don’t have, and again have ergativity, but full cases of the cycle seem little unsupported as a common or even likely chain of events. Dixon richly documents the ergative to accusative change, but much less convincingly that of accusative to ergative. This is not to deny that the latter happens, but only to observe that the evidence for accusative to ergative seems insufficient to explain the number of ergative languages, and especially their seemingly greater prevalence in the past.
Newmeyer (2004: 3) asserts that the study of language evolution is “a long-discredited approach to language change”, and he says (2003: 593) “[t]here is no directionality to evolution, no inevitable progression to improvement or functionality”. In fact, linguists hypothesizing evolutionary paths of language needn’t assert that these are paths of “improvement or functionality”. All languages carry traces of their earlier states, and even more likely would carry traces of those universally earlier. Perhaps English suggests a survival of ergativity in having Noun-Verb+ing compounds of subjects of intransitives (*bird chirping) and objects of transitives (*Cheney shooting) (Comrie 1978: 337).

Relevant also may be the research of Goldin-Meadow (2003), which showed:

Deaf children of hearing parents who are inventing their own gesture systems tend to organize their gesture sentences around an ergative pattern. Equally striking, we found that when asked to describe a series of action vignettes using their hands rather than words, English-speaking adults invented an ergative structure identical to the one developed by the deaf children, rather than the accusative pattern found in their spoken language. (Goldin-Meadow 2003: 516)

Ethno-psychological speculation about the speakers and cultures of languages presenting contrasts of ergative-absolute, active-stative, and animate-inanimate is no more necessary than would be such speculation about wearers of coats with lapels in climates where lapels have no use for protection from the cold, or about builders of buildings with arched windows, as if they knew no other way to support the wall above.

Languages like Amharic and its ES kin might reasonably carry relatively prominent archaic traits not because of an archaic spirit or perspective, but because of (1) their having stayed close to home, northeast Africa, an early area of language dispersal and evolution, (2) having stayed in contact with other languages which similarly stayed close to home, particularly Cushitic and Omotic languages of Afroasiatic, with which they share and mutually reinforce archaic traits, and (3) having thereby had little contact with languages of other types. (It seems obvious to me although not demonstrable here that the twelve features discussed above cannot well be understood as borrowings, even as calques, from ES’s Cushitic and Omotic neighbors.)

The theory is pervasive that ancient languages are not different from modern languages. Thus in a review of Kiss (2005), Ulrich (2005) says: “Some of the languages examined in this volume were spoken as much as 5000 years [ago;] still their grammars do not differ in any relevant respect from the grammars of languages spoken today.” In fact the book under review was specifically intended to show the validity of hypotheses of Universal Grammar in ancient written as well as
modern spoken languages; and clearly any hypothetical rule of Universal Grammar must ordinarily be expected to apply to ancient as well as modern languages.

Modern linguistics has begun to accumulate evidence for universal paths of language evolution (e.g. Givón 1979: Ch. 7, and Bybee et al. 1994: §1.4), especially and recently of subordinate clauses, e.g. Frayzyngier (1996) for Chadic and Deutscher (2000) for Semitic. The hypothesis of such paths, and of languages being at different points on different paths, in no way implicates ethno-psychological speculation, but asserts the need for reasonable and thorough examination of the evidence for universals of language history and evolution.

References


Number as an exponent of gender in Cushitic

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Gender and number are intrinsically related in Cushitic. Agreement patterns within the noun phrase and subject agreement on the verb often distinguish three values for gender in Cushitic. The third value, after feminine and masculine, is called “plural” in most studies of Cushitic languages. The reason is that the agreement pattern of this third value corresponds to that of the third person plural. I defend this analysis of a peculiar mixing of categories on the basis of the properties of number in Cushitic. Number is a category that is realised by derivation of the noun. Various multiple and/or singular reference forms may be derived within a single lexeme, and the number derivations impose their value of gender to the noun. As a consequence, various number forms within one lexeme tend to have different values for gender. Agreement with number is far less established compared to agreement with gender, but it does occur in a number of languages in agreement on the adjective. The fact that there are two independent agreement systems, one of gender and one of number, makes it impossible to exclude the third category of gender (“plural”) from the gender system. None of the gender values feminine, masculine, or plural is really predictable on the basis of meaning (or form). The article provides an overview of the structural properties of both gender and number within Cushitic, which enables a full discussion of this intriguing mixing of the two primary nominal categories, those of gender and number.

1. Introduction

Gender in Cushitic is interesting because of its interrelatedness with number. I adhere to the Cushitic practice of recognizing “plural” as a value of gender for those languages that have this third value. After presenting the properties of gender and of number separately I return to the issue of gender’s interrelatedness with number. The Cushitic family includes more than thirty languages spoken in North-Eastern and Eastern Africa.
2. Cushitic gender systems

Gender is a property of nouns in terms of agreement. For Cushitic languages there are three main type of agreement systems in which nouns have to be divided into the same sets. These are (1) agreement with the subject on the verb, (2) agreement with the head noun for demonstratives and possessives including possessive nominals, and (3) agreement of adjectives with head nouns. In order to familiarize ourselves with Cushitic gender systems I present a short overview of gender in two divergent cases in the family: Iraqw and K’abeena.

A note on terminology: In order to minimalise the confusing use of “plural” as a value for gender, I will use the abbreviations (f), (m), and (p) when I refer to the values of gender, and I will use multiple reference (m.r.) and singular reference (s.r.) for the values of the feature number, following Hayward (1984). Number, as we will see, is a derivational category for which I use the terms singulative and plurative for the derivational processes.

Terminology:

Gender: f, m, p  
Number: m.r., s.r.  
Number morphology: base; singulative, plurative.

2.1 Iraqw gender system

Iraqw nouns fall into three gender classes on the basis of agreement of the subject on verbs within the clause, of modifiers with the head noun within the Noun Phrase, and of adjectives with the head noun. The third value for gender is “plural”. Agreement on the verb is purely with gender, not with number. Thus in (1a) the (masculine) word daaqay ‘boys’ triggers the verb form that expresses the third-person singular masculine; in (1b) the (feminine) word haysee ‘tails’ triggers the verb form that expresses the third-person singular feminine, and in (1c) hayso ‘tail’ triggers the verb form that expresses the third-person plural.

(1) Iraqw subject gender agreement on the verb (Mous 1993)

a. daaqay i harweeriir-in. i harweeriir-in
   boys 3 make:circles-DUR:3SG.M 3 make:circles-DUR:3SG.M
   ‘The boys is making circles.’ ‘He is making circles.’

b. haysee i harweeriir-iin. i harweeriir-iin
   tails 3 make:circles-DUR:3SG.F 3 make:circles-DUR:3SG.F
   ‘The tails are making circles.’ ‘She is making circles.’
2.2 K’abeena gender system

K’abeena subject agreement on the verb makes a two-way distinction in the third person: the ending \( y \) or zero is used for masculine words (and first person) and the ending \( t \) is used for feminine words (and also for second person and for the third-person plural pronoun; second-person plural is based on second-person singular and first-person plural has a distinct third form). The word \( \text{wuu} \) ‘water’ triggers the agreement of third-person masculine. A word like \( \text{faangoo} \) ‘thief’ can refer to either singular or multiple reference and can trigger either masculine or feminine gender. The interpretation is multiple reference to the exclusion of singular reference if the feminine verb form is used and either singular or multiple reference if the verb has the masculine ending. Words with multiple reference can require masculine gender, as is the case with \( \text{lalu} \) ‘cattle’ in (2d), examples from Crass (2005:273–275).

\[
\begin{align*}
(2) & \quad \text{K’abeena subject agreement.} \\
& \quad \text{a. wuu bokki 'aa\'azi \ 'a'yiyo} \\
& \quad \text{water:nom house:gen interior:acc enter:perf:3m} \\
& \quad \text{The water has entered the house.} \\
& \quad \text{b. faangoo lalu 'aa'iyo} \\
& \quad \text{thief:nom cow:acc take:perf:3m} \\
& \quad \text{A thief/Thieve(s) stole cattle.} \\
& \quad \text{c. faangoo lalu 'aa\’ito} \\
& \quad \text{thief:nom cow:acc take:perf:3f/p} \\
& \quad \text{Thieves stole cattle.} \\
& \quad \text{d. lalu \ faangaanl 'aa\'ammo} \\
& \quad \text{cow:nom thief:loc take:pass:perf:3m} \\
& \quad \text{Cattle was stolen by thieves.}
\end{align*}
\]

The following properties of Cushitic gender are already evident from the two languages:
1. Subject agreement is with gender only.
2. If there is a third value of gender, this is (p) and not neuter singular.
3. Gender is a property of the word; not of the lexeme.

Before we continue the discussion of Cushitic gender I need to explain the essentials of Cushitic number.

3. Properties of number

The feature “number” has a completely different status from the feature “gender” in Cushitic for a number of reasons. First, a feature “number” is often difficult to establish on the basis of agreement. Several Cushitic languages do show agreement with number. In those that do, number agreement is marginal, and when it occurs it is semantically based. Second, number is a feature that is not obligatorily expressed. I shall elaborate a bit on these two properties, starting with the second. One can use an ungendered basic form of the noun that is neutral for number in situations where the specification of number is considered irrelevant; this is reported, for example, by Savà (2005:61) for Tsamakko and by Crass (2005:63) for K’abeena. In Oromo most nouns do not have plural forms, and even if they do, it is most common not to use a plurative noun in connection with a higher numeral. When number is already expressed in the noun phrase, no plurative form of the nouns is used.

Within the noun phrase there may be number agreement on the adjective. Number agreement in adjectives is quite common in Cushitic; it occurs in Oromo, Somali, Dhaasanac, Alagwa, Burunge, Iraqw, Konso, Bilin, and K’abeena; Afar and the Dullay languages do not really have adjectives; there is no number agreement in Boni and Elmolo. Other modifiers such as demonstratives and possessives do not to show number agreement. When subject agreement on the verb is with gender rather than number, number agreement on adjectives is the only place where the category of number needs to be evoked for agreement as separate from gender. But number agreement on adjectives is not strictly obligatory. The nature of this agreement is semantic rather than morphological. For example, in Iraqw one can say notóo ʊ́r /paper.money (=notes) big/ ‘a lot of money’ or notóo ur-én /paper.money big-pl/ ‘large denomination notes’ with a distributive reading when the plural form of the adjective is used.

The morphological expression of number is a complex area of Cushitic derivational morphology. A full discussion of the properties is beyond the scope of this paper, but see Zaborski (1986) for such an account. Nominal number morphology has the following properties which are briefly illustrated below in the words for ‘gourds’ in Konso and in Iraqw.
1. The derivational patterns are complex: Lexemes may have one number form, which can be either of singular or of multiple reference. Many lexemes have two number forms, but often the multiple reference form is basic and the singular reference form(s) are derived. Lexemes with three or four number forms occur.

2. Languages have rich inventories of singulative and plurative derivations, with complex morphology.

3. Number derivations impose a gender value, and thus gender is a property of the word form, not of the lexeme.

4. There are correlations between the formal properties of the base and the choice of the plurative (“polarity of gender”).

The Tables 1 and 2 illustrate some of these properties, specifically properties 2 and 3, and, to some extent, 1.

Table 1. Gourds in Konso

<table>
<thead>
<tr>
<th>Plural Form</th>
<th>Singular Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>d’ahaan-aa (p) gourds’</td>
<td>d’ahaan-add’aa (p)</td>
</tr>
<tr>
<td>d’ahaan-ta (f)</td>
<td>d’ahaant-add’aa (p)</td>
</tr>
<tr>
<td>hulp-a (m) ‘large gourd for water’</td>
<td>hulp-allaa (p)</td>
</tr>
<tr>
<td>hupp-ayaa (p) ‘small gourd’</td>
<td>hupp-add’aa (p)</td>
</tr>
<tr>
<td>murraa-ta (f) ‘gourd for drinking’</td>
<td>murr-awwaa (p), murr-add’aa (p)</td>
</tr>
<tr>
<td>xott-aa (p) ‘large water gourd’</td>
<td>xott-ad’aa (p)</td>
</tr>
<tr>
<td>shaww-aa (p) ‘gourd with handle’</td>
<td>shaww-add’aa (p)</td>
</tr>
</tbody>
</table>

Table 2. Gourds in Iraqw

<table>
<thead>
<tr>
<th>Plural Form</th>
<th>Singular Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>daħ-aangw (m) ‘gourd’</td>
<td>dah-eeri (p) daheer-áy (m);</td>
</tr>
<tr>
<td>oona (f) ‘beer gourd’</td>
<td>onu (p)</td>
</tr>
<tr>
<td>seep-áy (m) ‘small milk gourd’</td>
<td>seep-i’i (p)</td>
</tr>
<tr>
<td>ga’awi (f) ‘gourd as churn’</td>
<td>ga’&lt;ee&gt;w-o (p)</td>
</tr>
<tr>
<td>isaangi (f) ‘gourd for veggies’</td>
<td>isang-aay (m);</td>
</tr>
<tr>
<td>baykwati (f) ‘long milk gourd’</td>
<td>baykwat-ay (m), baykwat-a (f)</td>
</tr>
<tr>
<td>PL: sambeh (m) ‘big serving’</td>
<td>sambeeh-áy (m)</td>
</tr>
<tr>
<td>qumi (f1) ‘with long neck’</td>
<td>qum-áy (m)</td>
</tr>
<tr>
<td>quruntlf (f) ‘for carrying water’</td>
<td>quruntl’-áy (m)</td>
</tr>
<tr>
<td>qwaree’-amoo (m) ‘for measure’</td>
<td>qwaree’-ama’ (p)</td>
</tr>
</tbody>
</table>
4. Agreement of gender: Domain is the noun phrase

Internal agreement for which the domain is the noun phrase is primarily noun-modifier agreement. This agreement shows two to three values for the feature gender in Cushitic languages. In Iraqw, the gender markers preceding the demonstratives in Table 3 show u, r and zero as the (m), (f) and (p) agreement markers, while the gender markers in demonstrative and possessive pronouns are ka for (m/p) and ta for (f). Thus various agreement systems require the same nouns to be divided into the same gender classes.

In Arbore, the common pattern is m/p versus f with a h element for (m) and (p) nouns and a t element for (f) nouns. Only two values for gender are distinguished in genitive noun constructions and demonstratives, but possessive pronouns and the modifying question word ‘which?’ distinguish three values for gender (see Hayward 1984: 184–200). Gender agreement on adjectives has a different neutralization and distinguishes (m)/(f) versus (p). See Table 4. Oromo agreement within the NP has two values, (m) and (f).

The forms of internal gender agreement markers often involve ku for masculine, ta for feminine, ka for (p) or forms developed out of those, with often only a k (m) and (p) versus t (f) distinction surviving (see Bryan 1959).

Some languages have noun phrase-internal agreement only for some modifiers. ‘Afar has no agreement in demonstratives (Bliese 1981); K’abeena has no agreement in possessives. There are also languages that have no noun phrase-internal agreement at all. This is the case in the geographical area that includes Konso, Dirayta, and Dhaasanac, where there is no noun phrase-internal gender

Table 3. raqw internal agreement patterns: Demonstratives

<table>
<thead>
<tr>
<th>DEM1</th>
<th>hiimuwi</th>
<th>hasamari</th>
<th>gi'iká</th>
<th>Ø</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEM2</td>
<td>hiimusig</td>
<td>hasamasing</td>
<td>gi'ising</td>
<td>Ø</td>
</tr>
<tr>
<td>DEM3</td>
<td>hiimuqá'</td>
<td>hasamarqá'</td>
<td>gi'iqá</td>
<td>Ø</td>
</tr>
<tr>
<td>DEM4</td>
<td>hiimudá'</td>
<td>hasamadá'</td>
<td>gi'idá'</td>
<td>Ø</td>
</tr>
</tbody>
</table>

Source: (Mous 1993).

Table 4. Internal agreement in Arbore

<table>
<thead>
<tr>
<th>Construct form</th>
<th>Possessive pronouns</th>
<th>Possessives and demonstrative -átto</th>
<th>Demonstratives -ló</th>
<th>Which?</th>
</tr>
</thead>
<tbody>
<tr>
<td>m -ha</td>
<td>ha-</td>
<td>-h-</td>
<td>Ø</td>
<td>bú-</td>
</tr>
<tr>
<td>f -tah</td>
<td>ta-</td>
<td>-t-</td>
<td>t</td>
<td>bitó-</td>
</tr>
<tr>
<td>p -ha</td>
<td>toha</td>
<td>h-</td>
<td>Ø</td>
<td>to-</td>
</tr>
</tbody>
</table>
agreement. These languages do have the feature gender but only on the basis of external or clausal agreement.

In K’abeena there is no agreement for possessive suffixes, but definite and demonstrative suffixes show two different agreement systems. Demonstratives distinguish two values, $k$ for (m) and $t$ for (f), while definites distinguish three genders $s^i$ (m), $s^o$ (f), $ss^o$ (m.r.). The definite suffixes are identical to third-person possessor suffixes which distinguish among male, female, and plural possessors but show no agreement with the gender of the head noun. Multiple reference words trigger masculine agreement in the demonstratives, m.r. agreement in the definite markers, but feminine agreement on the verb in external, clausal agreement.

The values for gender on the basis of internal NP agreement of possessives and demonstratives in Cushitic languages are summarised in Table 5.

Gender agreement in adjectives often takes different formal markers from other agreement on nominal modifiers. Here we have to distinguish between agreement on the head noun and agreement on the adjective itself. Agreement on the head noun, i.e. “construct form” or “antigenitive”, is similar in formal expression and characteristics to the agreement system discussed above. Gender agreement on the adjective itself takes different forms but is not very common among Cushitic languages for two reasons. First, the category of adjective is problematic in a number of languages; second, not all languages with adjectives show gender agreement. Dullay has no clear category of adjectives. The adjectives in Tsamakko are in fact a subcategory of nominals (Savà 2005). In Khamtanga, there are only two adjectives defined by such agreement. Somali has no gender agreement on adjectives, nor does Rendille. Among closely related languages such as Iraqw and Alagwa, one does (Iraqw, by tone), and the other does not (Alagwa). In Arbore the agreement only occurs in modifying adjectives but not when they are used predicatively. In Oromo adjectives agree in gender in the final vowel. In Dhaasanac adjectives agree in gender (and number). Recall that Dhaasanac has no NP-internal agreement for the other modifiers. An overview of Cushitic agreement markers for adjectives is presented in Table 6, and the values for gender on the basis of agreement on adjectives are given in Table 7.

In summary, for the domain of the noun phrase there are two types of agreement systems: those on adjectives and those on other nominal modifiers. Most

### Table 5. Possessive and demonstrative agreement

<table>
<thead>
<tr>
<th>m f p</th>
<th>m/p f</th>
<th>m f</th>
<th>none</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alagwa, Burunge, Iraqw, Arbore, Boni, Dullay, K’abeena definites</td>
<td>Alagwa pronouns, Burunge pronouns, Iraqw pronouns, Arbore genitive</td>
<td>Elmolo, Oromo, Somali, K’abeena demonstratives</td>
<td>Konso, Dhaasanac, Tsamakko, K’abeena possessives</td>
</tr>
</tbody>
</table>
Cushitic languages show gender agreement in the domain of the noun phrase and distinguish three values for gender, (m), (f) and (p). Those that consistently show only two values for gender are Oromo, Somali, Rendille and Dhaasanac.

5. Agreement of gender: Domain is the clause

A typical example of a language with gender agreement in the clausal domain is Arbore, where gender is marked on the subject clitic, (m/f) versus (p), and on the verb: $y$ for (m/p) and $t$ for the prefixing verb ‘come’ in (3a) and zero for (m/p) versus $t$ for (f) on the suffixing verb ‘to be present’ in (3b). Note that there is an additional tonal difference for the (p) form of this verb.

(3) External agreement in Arbore (Hayward 1984)

a. néek ‘íy yeece ‘A lion came’
   lion $m/f$ past $m/p$:came

komaytè ‘íy teecce ‘A tortoise came’
tortoise $m/f$ past $f$:came

’úmmo ‘iso yeece ‘The children came’
children $p$:past $m/p$:came

b. daac ‘ay gíra ‘There is a rat’
   rat $m/f$ be:$m$

’ingiré ‘ay gírta ‘There is a louse’
louse $m/f$ be:$f$

bíce ‘asó gíra ‘There is water’
water $p$ be:$p$

Other languages with this pattern of gender agreement for the subject of the verb with three agreement classes and the third one being (p) are the Southern Cushit-
ic languages Iraqw, Alagwa and Burunge, and the Southern Lowland languages Bayso, Konso, Dirayta, Tsamakko, Rendille, and Boni. I follow the classification of Cushitic presented in Tosco (2000).

There are also three-gender systems where all (p) nouns are multiple reference, in other words, (p) gender is semantically predictable. This is the case for the Agaw languages Awngi, Bilin, Kemant, and Khamtanga; and for the Dullay languages.

A third kind of Cushitic gender system is one in which there are two values of gender, (m) and (f). Nevertheless, such a system is very different from the familiar European system due to the fact that gender in Cushitic languages is a property of the word and not of the lexeme. Thus we have systems like that of ‘Afar where all nouns, singular and multiple reference nouns, are either (m) or (f) but not necessarily the same gender in singular and multiple reference. There are, however, three third-person forms of the verb, but only the pronoun ‘they’ and the nouns ‘people’, ‘women’ and ‘children’ require a third-person plural agreement. Thus ‘Afar is a three-gender language with a very limited set of (p) words that have all multiple reference.

In Oromo, nouns have one of two values for gender, (m) or (f). Verbs have three third-person values, 3m, 3f, 3pl. Agreement with multiple reference words is either 3pl or 3f; the choice is semantically based, with 3f agreement conveying collective meaning for the subject.

The situation is similar in Somali, where m.r. nouns take 3pl agreement on the verb, and only s.r. nouns are distinguished in 3m and 3f agreement values. NP-internal agreement is different in that there are only two agreement forms and m.r. nouns are either (m) or (f), e.g. dúmar-kii wày tegeen ‘the-woman they left’. Subject number agreement on the verb is to some extent lexically determined in Somali: mass nouns have either singular or plural agreement on the verb depending on the lexeme; those that require plural agreement end in ó which is a plural suffix (Saeed 1999: 57).

There is small group of Somali nouns that has a choice for agreement in the verb for a multiple reference controller. These nouns do not have a recognizable multiple reference morpheme (they have a change of tone which is otherwise characteristic of (m) to (f) gender shift, or they constitute Arabic plural forms, or contain an archaic non-productive m.r. suffix -an). Their preferred agreement is (f), but optionally they have agreement with 3pl. In order to understand these exceptions we have to realize that the subject pronoun way is ambiguous between (f) and (p). These m.r. subject nouns that do not look like other m.r. nouns are followed by a subject pronoun which can be interpreted as (f); consequently the verb also shows (f) agreement. It is a surface phenomenon that is linked to these m.r. word forms, not to the lexeme, since other m.r. forms in the same lexeme
will have regular semantic agreement. The phenomenon is described by Hetzron (1972: 259–261) from which the following example is taken.

(4) External agreement in Somali

\begin{align*}
\text{babùur-kìì} & \quad \text{wùùu} \quad \text{tegay} \quad \text{‘the truck he left’} \\
\text{trucks-def:m:nom} & \quad \text{foc:m} \quad \text{leave:m:past} \\
\text{babuurrà-dìì} & \quad \text{wày} \quad \text{tegeen} \quad \text{‘the trucks they left’} \\
\text{trucks-def:f:nom} & \quad \text{foc:f/pl} \quad \text{leave:pl:past} \\
\text{nàag-tìì} & \quad \text{wày} \quad \text{tegtay} \quad \text{‘the woman she left’} \\
\text{women-def:f:nom} & \quad \text{foc:f/pl} \quad \text{leave:pl:past} \\
\text{naagì-hìì} & \quad \text{wày} \quad \text{tegeen} \quad \text{‘the women they left’} \\
\text{women-def:m:nom} & \quad \text{foc:f/pl} \quad \text{leave:pl:past} \\
\text{dìbì-gìì} & \quad \text{wùùu} \quad \text{tegay} \quad \text{‘the ox he left’} \\
\text{ox-def:m:nom} & \quad \text{foc:m} \quad \text{leave:m:past} \\
\text{dìbì-dìì} & \quad \text{wày} \quad \text{tegtay/tegeen} \quad \text{‘the oxen she/left’} \\
\text{oxen-def:f:nom} & \quad \text{foc:f/pl} \quad \text{leave:pl:past} \\
\text{dìbidiyà-dìì} & \quad \text{wày} \quad \text{tegeen} \quad \text{‘the [few] oxen they left’} \\
\text{oxen-def:f:nom} & \quad \text{foc:f/pl} \quad \text{leave:pl:past} \\
\text{nìjaar-kìì} & \quad \text{wùùu} \quad \text{tegay} \quad \text{‘the carpenter he left’} \\
\text{carpenter-def:m:nom} & \quad \text{foc:m} \quad \text{leave:m:past} \\
\text{nìjaarììn-tìì} & \quad \text{wày} \quad \text{tegtay/tegeen} \quad \text{‘the carpenters she/left’} \\
\text{carpenters-def:f:nom} & \quad \text{foc:f/pl} \quad \text{leave:pl:past} \end{align*}

More radical two-gender languages are those that have only two verb forms for third-person subject. Such languages are K’abeena, Elmolo, and Dhaasanac. In K’abeena (Crass 2005) all multiple reference words are (f) on the verb, and there are only two exponents of gender: the third person of the verb has only two forms, (m) and (f). Recall, however, that K’abeena has three values for gender in definites. In Dhaasanac (Tosco 2001) agreement with m.r. words is (m); some m.r. words are (f) due to a historical process in those lexemes of reinterpretation of the base form as plural and singulative as singular. Closely related Elmolo is similar in that all m.r. words are (m); the only exceptions that Heine (1976) recorded are ôho (m) ‘mouth’, pl: (f), and sóono (m) ‘nose’, pl: (f).

The definite agreement markers of possessive origin in K’abeena are related to the dependent pronouns in the verb in the closely related Kambaata language. Kambaata does not distinguish between m and f/p on the verb itself but in the pronouns see (Treis 2005).

Dhaasanac (Tosco 2001) has simplified marking of person on verbs to two forms, (m) and (f), for all persons. The third-person plural pronoun and multiple
reference words take the (m) agreement. Dhaasanac has also lost all gender agreement in the noun phrase dependent forms, except for adjectives which show optional gender agreement. In Table 8 the number of gender values and their distribution on the basis of (external) subject agreement on the verb are summarized.

The differences between the Cushitic languages are not so much in the number of values for the feature gender that is defined by agreement, be it on the verb or on the nominal modifiers. The number of values defined by these are nearly always three. The major differences are in the number of genders that have to be recognized in multiple reference words. For example, the number is 3 for Iraqw, 2 for Somali, 1 for Agaw.

As we saw in the case of 'Afar, where only three nouns required 3pl agreement, the difference between the two first columns is not so rigid if we take into account the number of nouns that require being lexically marked for (p) gender. In the next section we look into these issues.

6. Distribution of feature values; underived and derived; across number

The lexicon is usually unevenly distributed over the values for gender. If we look at m.r. nouns only, there is a range of values that these words take in the individual languages. Let us first look at the domain of the Noun Phrase. Some languages have the full three-way distinction of (m), (f) and (p) in m.r. nouns and a reduced (m/p) versus (f) distinction in certain phonologically reduced agreement contexts. In other languages the value for gender is predictable for m.r. nouns, but this need not be (p): in some languages it is (m) and in others (f). The variation is presented in Table 9.
Table 10. Gender of m.r. words in verb agreement

<table>
<thead>
<tr>
<th>m f p</th>
<th>f p</th>
<th>m p</th>
<th>m</th>
<th>f</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iraqw, Alagwa, Burunge, Arbore; few m, f: Tsamakko, Konso</td>
<td>Somali</td>
<td>–</td>
<td>Dhaasanac, Elmolo (but some (f))</td>
<td>‘Afar, Kabeena Agaw languages, Dirayta, Dullay, Oromo (plus (f) semantic agreement)</td>
<td></td>
</tr>
</tbody>
</table>

Table 11. Gender in singular and plural reference in underived and derived nouns in Alagwa

<table>
<thead>
<tr>
<th>Underived</th>
<th>Derived</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singular ref</td>
<td>f</td>
</tr>
<tr>
<td>Multiple ref</td>
<td>f</td>
</tr>
</tbody>
</table>

Table 12. Gender in singular and plural reference in derived and derived nouns in Iraqw

<table>
<thead>
<tr>
<th>Underived</th>
<th>Derived</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singular ref</td>
<td>f</td>
</tr>
<tr>
<td>Multiple ref</td>
<td>f</td>
</tr>
</tbody>
</table>

Table 13. Gender in singular and plural reference in derived and derived nouns in Rendille

<table>
<thead>
<tr>
<th>Underived</th>
<th>Derived</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singular ref</td>
<td>f</td>
</tr>
<tr>
<td>Multiple ref</td>
<td>f</td>
</tr>
</tbody>
</table>

Table 14. Gender in singular and plural reference in derived and derived nouns in Konso

<table>
<thead>
<tr>
<th>Underived</th>
<th>Derived</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singular ref</td>
<td>f</td>
</tr>
<tr>
<td>Multiple ref</td>
<td></td>
</tr>
</tbody>
</table>

Table 15. Gender in singular and multiple reference in derived and derived nouns in Bayso

<table>
<thead>
<tr>
<th>Underived</th>
<th>Derived</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singular ref</td>
<td>f</td>
</tr>
<tr>
<td>Multiple ref</td>
<td>f</td>
</tr>
</tbody>
</table>


If we look at the domain of verb agreement, we see a similar pattern (see Table 10).

Since number formation is derivational and the number derivations impose gender, it is worthwhile to examine whether the situation is different when we limit ourselves to underived nouns. Thus we distinguish between nouns that are underived for number and those that are derived (plurative or singulative). The distinction is not always easy to make. Tables 11–15 present the distinctions in gender for derived and underived nouns and for singular and multiple reference in several languages; the values between brackets represent a relatively small set of nouns.

It is clear from the examination of these tables that the general picture of gender in m.r. is that derived singulars are never (p), derived plurals tend to be (p), but often some of the m.r. derivations are (m) or (f).

In order to get a fuller picture, we should look not only at the distinctions that are made in gender for m.r. words but also into the number of words that have (m) or (f) gender in m.r. and (p) gender in s.r. In Tables 16 and 17 we can see that there is a clear numerical tendency in Iraqw for underived s.r. words to be (m) or (f) but not for underived m.r. words to be (p). The vast majority of (p) words in Iraqw are derived and have m.r. In Iraqw the number of underived s.r. (p) words is limited; (p) is semantically motivated in words such as ‘cattle’, in liquids such as ‘water’ and ‘milk’, and possibly also in semantic fields such as time indications (parts of the day), geographical hyperonyms such as ‘sky’ and ‘earth’; in addition, body parts are recognizable as a semantic field with (p) words for items such as nose, back, chest, waist, and buttocks. In Konso there is a considerable higher number (130) of underived s.r. words that are (p), and a semantic motivation for why these words are (p) is more difficult to find. On the other hand, m.r. words in Konso tend to be derived and (p).

### Table 16. Rough estimate of underived members for gender values in Iraqw

<table>
<thead>
<tr>
<th>Underived</th>
<th>m.r.</th>
<th>s.r.</th>
</tr>
</thead>
<tbody>
<tr>
<td>f</td>
<td>25</td>
<td>800</td>
</tr>
<tr>
<td>m</td>
<td>58</td>
<td>570</td>
</tr>
<tr>
<td>p</td>
<td>8</td>
<td>61</td>
</tr>
</tbody>
</table>

### Table 17. Rough estimate of underived s.r. members for gender exponents in Konso

<table>
<thead>
<tr>
<th>Underived in a</th>
<th>Underived in aa</th>
<th>Underived in e(e)ta or o(o)ta</th>
</tr>
</thead>
<tbody>
<tr>
<td>f</td>
<td>30</td>
<td>1</td>
</tr>
<tr>
<td>m</td>
<td>200</td>
<td>20</td>
</tr>
<tr>
<td>p</td>
<td>3</td>
<td>130</td>
</tr>
</tbody>
</table>

If we look at the domain of verb agreement, we see a similar pattern (see Table 10).

IRAQW underived m.r. (p) words are afi ‘scrapings of stiff porridge at the sides of the pot’, haywa ‘term to address children’, kumbeeri ‘women accompanying the bride’s mother during the wedding ceremony’, kuungă ‘you (plural), kwahu ‘beads’, laqaya ‘thorns’, makay ‘animals’, maraay ‘houses’, war‘ee ‘boys and girls escorting the bride’, yakwaa ~ hikwaa ‘cattle’.

7. Motivation of gender assignment

Gender is not predictable on the basis of the meaning of a word. Words with male connotations can be feminine and the other way around. For most words the choice of gender has no semantic base at all, as is clear from the words for gourds (Tables 1 and 2). We will come back to the association of (p) with multiple reference.

There are parts of the lexicon where gender clearly has a semantic base in all languages: (1) agentives distinguish male and female sex which correlates with the gender of the derivational suffix; (2) derived singulars for animates are often sex specified in the gender.

There is some evidence for semantic associations with gender in terms of size and endearment/pejoration, as is common in the Omotic and Semitic languages.
of Ethiopia. Gender denotes the semantic notion of social significance (masculine) versus social insignificance (feminine) (Tucker and Bryan 1966: 511; Castellino 1975: 352ff.; Sasse 1984: 117). This is the case in the Western Oromo dialects in which the gender system has developed into one with masculine as basic gender and the use of the feminine gender is restricted to females and to express diminutives and pejoratives (Clamons 1999: 392). Western Oromo is in this respect similar to neighbouring Agaw (Hetzron 1976: 14). Clamons (1992: 69) established the following rules for gender assignment in the other Oromo dialects: (1) a small number of lexically specified words have invariant gender (m) or (f); (2) the rest of the words are variable in gender; if the referent is sexed, its sex will determine its gender; (3) if the referent is not sexed, unmarked gender is partly determined by the quality of the final vowel: nouns ending in non-low vowels are (f), those ending in low vowels or a consonant are (m), but the other gender may be used expressively along the lines explained above; (4) a number of the nouns in the remaining category have an unmarked gender that is not predictable on the basis of formal properties and have to be lexically specified; still these too may shift in gender for expressive purposes.

Gender assignment on the basis of formal properties of nouns is rarely completely predictable in Cushitic, but for most Cushitic languages there are clear correlations between noun form and gender value, i.e., gender is never really covert, and rarely completely overt. Overtness is due to the following factors: (1) number derivations impose gender; (2) terminal vowels strongly or weakly correlate with gender values for some languages; (3) tone patterns correlate with gender values for some languages. Gender is never fully predictable from form. For example, regarding the gender imposed by number derivation, nouns ending in what seems to be one of the number suffixes may have a different gender, and some homophonous number suffixes differ only in gender. There are also homonyms that differ in gender only, e.g. Arbore ʾelló (m) ‘cowrie shell’ vs. ʾelló (f) ‘fear’.

Typical correlations between word form and gender are those in Afar and Somali: ‘Afar stressed vowel-final nouns are (f); consonant-final and nonstressed vowel-final nouns are (m); other nouns with final ʾe and ʾa are (f) (Hayward 1983). In Somali, nouns ending in ʾe are masculine; those ending in ʾa are feminine; polysyllabic masculine words ending in a consonant have the accent/high tone on the penultimate vowel; those that are feminine, on the ultimate (Saeed 1999). Final high tone for feminine is also reported for Rendille (except for those feminine nouns that end in a vowel), while masculine nouns have penultimate accent (see Oomen 1981: 39–43); she proposes that the contrastive pitch is caused by the loss of a feminine suffix in feminine nouns. The difference in tone/accsent placement is related to word-final reduction processes: In Borana Oromo feminine nouns mostly have long final vowels and masculine, short final vowels (Stroomer 1987: 70).
In Cushitic an analysis of gender-related final vowels can be argued for; however, in many languages such an analysis is just one of several possible options. Arguments for a special status of the final vowel include the following: (1) The number derivations usually erase the final vowel of the noun. (2) For several languages not all vowels occur word-finally; for example, in Konso nouns end in a with the exception of names which may end in i, o or e. (3) For several languages there is a correlation between the quality of the final vowel and its gender. For example, in K’abeena nouns that have a short final vowel -e are feminine and those that have -a, -aa, -o, -oo, -i, -u or -ee are masculine, unless they contain an addition formative -tə (Crass 2005:61–62); in Tsamakko nouns that end in -o are masculine, those that end in -a are feminine and those that end in -e are feminine or plural in gender; no nouns end in u or i (Savà 2005:52). Hayward (1983) distinguishes between terminal and non-terminal ultimate vowels in Saho-‘Afar on the basis of phonological properties.

8. Number and gender interplay

The interplay between gender and number is in the (p) exponent of gender. This class has to be set up because of words that require 3pl agreement. Underived (p) words comprise a relatively small set of words, 133 in Konso, 70 in Iraqw, 24 in Alagwa, 4 in Afar. Many but not all of these words have some connotation with multiple reference, for example, ‘people’, ‘children’, ‘women’ in Afar (Hayward and Corbett 1988:265). In Section 6 above these words are given for Iraqw; those for Alagwa are given below in Example (6). Other kinds of words that often appear in this group are words for part of the day. But also clearly singular words appear in this class, e.g. ‘tail’ in Iraqw. For many languages a large number of the derived multiple reference words are (p). In Bayso all paucal words are (p) (Hayward 1978). However, all relevant languages have derived multiple reference words that are (f) (Alagwa) or masculine (Arbore), seldom both. For example, Iraqw has (p), (f) and (m) derived multiple reference words, but the (m) derived nouns are ambivalent in terms of number and the derived noun (in -a(a)y or -angw) refers to either a collection or it can have multiple reference. Derivation for singular reference is never (p) and always restricted to (m) and (f).

(5) Alagwa underived (p) words:
   Plural words
   daaqaay (p) ‘children’
   tikay (p) ‘women, wives’
   yawa (p) ‘cattle’
aaraa (p) ‘goats’
baaluu (p) ‘days’

Liquids and collectives
ilba (p) ‘milk’
mintsartú (p) ‘fresh (of milk)’
ma’ay (p) ‘water’
qubu (p) ‘hair’

Time
xwa’i (p) ‘evening’
amasi (p) ‘night’
aansi (p) ‘former times’
piray (p) ‘night till dawn’
matlatexe (p) ‘morning’

Geographical concepts
tsindo (p) ‘west’
alauu (p) ‘behind’
pahaa (p) ‘valley’
rawa (p) ‘top, sky’
tsee/aa (p) ‘savanna, grassland’

The rest
fayee (p) ‘marriage settlement, bride price’
kwa/u (p) ‘house of many poles (?)’
neetla (p) ‘devil’
tse/era (p) ‘healed wound’
umpumáy (p) ‘small-pox’

There are additional connotations of (p) and multiple reference in the external agreement phenomena. Many languages show an alternative of semantic multiple reference agreement to morphological gender agreement for the subject of the verb. In particular this is the case of plurative nouns that are (f) in gender. In Alagwa multiple reference words that are (f) can be combined with either a 3sg. f ending verb or a 3pl ending of the verb. In the second case the agreement is on a semantic base.

(6) Alagwa semantic external verb agreement in number (Mous forthcoming)
gooruwaa ningi looh-ir, hara gooruwa, hara galapo.
n.pr.pop.f cs:3 move-3pl to n.pr.loci to n.pr.loci
alagwa šee ninga há’ut, ninga há’ut-ir hara isaabee
n.pr.pop.f also cs:3-abl leave::f cs:3-abl leave-3pl to n.pr.loci
‘The Gorwa (Fiome) moved to Gorwa, to Galapo. The Alagwa too left from it, they left to Isabe.’
In Oromo “[a] few words allow either singular or plural agreement, though most take only singular agreement, even if they have a plural referent” (Owens 1985: 223); see Example (7). Collective words ending in -äaní have (m) or (pl) agreement, while in Boraana Oromo they have (pl) agreement, (Owens 1985: 224).

(7) joolléen sîréé-rrá c’iis-t-e / c’iis-an
children bed-on rest-f-past rest-pl:past
‘The children rested on the bed.’ (Owens 1985: 223)

Another connotation of multiple reference and (p) agreement is that the same semantic agreement of a 3pl verb is observed in the resolution of gender conflict for a structure of coordinated nouns with mixed gender. In Oromo (Clamons 1992; Owens 1985) and Iraqw (Mous 2004) such coordinated nouns trigger (p) agreement, as in Example (9) where the coordinated noun phrase combining an (m) and (f) word requires plural agreement on the verb.

(8) Oromo gender resolution
angáfâa-f obboléettîi-n tiyya ni d’uf-an
elder.m-and sister.f-nom my focus come-pl
‘My elder brother and my sister are coming.’ (Owens 1985: 212)

Gender resolution with coordinated structures does not always trigger (p) agreement. In ‘Afar (f) agreement is equally possible; Example (9) shows that both (f) and (p) agreement are possible with a coordinated structure, here of two (m) nouns.

(9) ‘Afar gender resolution
yì qammii-kee kây baxa temeete / yemeeten
my uncle.m-and his son.m f:came pl:came
‘My uncle and his son came.’ (Corbett and Hayward 1987: 270)

9. The Cushitic gender and number system and alternative analyses

The variation within languages and language groups suggests that there are unstable elements within a general picture of a three-way gender system and an independent number system in which gender is a property of the word, not of the lexeme; partly overt (varying per language); with semantic associations of those languages that are in contact with Omotic and/or Semitic. Agreement with gender is maximally in the verb, in the Noun Phrase and on adjectives. Semantic external agreement occurs in various forms.

Number is derivational and agreement is in adjectives, but semantic in nature. There are two exponents of number for agreement. Various derivational patterns
have to be distinguished: base → plural(s), base → singular(s), base → singular
and plural derived, derived singular → plural derived, two derived singulars, two
derived plurals. The expression of number is seldom obligatory, and there are
varying ways in which this phenomenon is realized. M.r. derivation correlates in
a number of ways with properties of the base; s.r. derivation does not and is more
semantically motivated.

Although I have applied the framework and principles set up by the typologi-
cal expert on gender and number, Corbett (1991, 2000, 2006), Greville Corbett
has a different view on Cushitic “plural” as exponent of gender, as is evident from
the Cushitic languages Iraqw and Alagwa two values for gender in his article on
his view Cushitic gender has two exponents, (m) and (f). The difference between
that and my analysis is due to his application of a more fundamental principle of
approach in typological research, namely, that one should not mix independent
categories. For example, if we have a language in which first person is marked by
high tone, second person by vowel shortening and third person by low tone but
only in the past tense, we could claim that past tense is the third value of person.
However, this would complicate the analysis. Mixing number and gender equally
complicates the analysis. The difference between our approaches is ultimately also
linked to scope of the typological exercise. Looking at one language or one group
of related languages, as I do, one tends to be reluctant to introduce distinctions
that make sense only from a wider typological perspective and not from within
the language. I adhere to plural as an exponent of gender for Cushitic for the
following reasons: (1) it allows for a clearer total picture of the peculiarity of the
Cushitic system; (2) it simplifies analyses of individual languages; (3) it highlights
the interrelatedness of gender and number as two categorization principles of
nouns similar to that of tense and aspect in verbs.

I first argue why I think that an analysis that does not acknowledge (p) as a
category of gender results in analyses that are too complex in a number of individ-
ual languages. According to Corbett there are only two values for gender, which
means that the agreement with the nouns that I consider (p) is number agree-
ment. Nouns which are semantically of singular reference but take (p) agreement
are marked in the lexicon as such. Nouns that are semantically of multiple refer-
ence but take (m) or (f) agreement follow gender agreement, not a semantically
motivated (p) agreement. This in itself does not complicate the overall analysis
very much. A relatively small number of nouns has to be marked as exceptional;
for some of those nouns a semantic explanation can be provided that motivates
the exceptional behaviour. The alternative analysis of excluding (p) as value for
gender would also capture naturally the behaviour of some (f) nouns of multiple reference in a language such as Alagwa which can optionally take (p) external agreement on the verb, but not the (f) agreement of some multiple reference nouns in Somali in Example (5) above.

Problems arise when the number system, specifically number agreement in adjectives which is separate from the gender agreement system, is taken into account. These problems do not arise in Bayso or Afar, the two Cushitic languages that were analysed by Corbett and Hayward in detail, because these two languages do not have such an agreement system. A word in Iraqw that is of multiple reference and (p) has two different agreement markers on the adjective. In Corbett’s type of analysis these would be two different kind of number agreements. The nature of the agreement would also be different; the (p) agreement is automatic or morphological, while the m.r. kind of number agreement is semantically motivated. Adjectives agreeing with nouns have in principle six different forms. In Table 18, I schematize the agreement values on adjectives under the two analyses.

This system is valid for a language like Iraqw. Concrete examples and their glosses under the two analyses are given in Table 19. One agreement system (gender) has low tone on the final syllable for (f) and (p) head nouns and high tone for (m) head nouns irrespective of number; the second agreement system has a different form of the adjective for multiple reference nouns; in this example the marking is t and vowel shortening; the default value for singular reference is the basic form of the adjective; hence the singular reference gloss is between brackets. On the right hand side is the gloss as it would be under an analysis in which (p) is the plural value of the feature number.

In a language such as Iraqw there is fusion of the agreement forms for the values (f) and (p) in gender agreement in adjectives. However, under an analysis that has two values of gender, this fusion is between the agreement of feminine (in gender) and plural (in number) nouns, but at the same time these nouns agree differently in the number agreement in adjectives. Thus in one slot in the adjec-

| Table 18. Values for double agreement features on adjectives |

<table>
<thead>
<tr>
<th>Values for adjectives when (p) value of gender (my analysis)</th>
<th>Values for adjectives when (p) value of number (my version of Corbett's analysis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Number</td>
</tr>
<tr>
<td>p</td>
<td>s.r.</td>
</tr>
<tr>
<td>f</td>
<td>s.r.</td>
</tr>
<tr>
<td>m</td>
<td>s.r.</td>
</tr>
<tr>
<td>p</td>
<td>m.r.</td>
</tr>
<tr>
<td>f</td>
<td>m.r.</td>
</tr>
<tr>
<td>m</td>
<td>m.r.</td>
</tr>
</tbody>
</table>
Number as an exponent of gender in Cushitic

For those Cushitic languages that have a three-value gender agreement system and that have a number agreement system in adjectives, an analysis that takes the third gender value as number becomes exceedingly complicated in the treatment of agreement in adjectives. The complex double agreement system is in fact...

Table 19. Iraqw examples of double adjectival agreement in both analyses

<table>
<thead>
<tr>
<th>(p) as value of gender (my analysis)</th>
<th>(p) = pl value of number (my version of Corbett’s analysis)</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>hayso</em> <em>ki</em> <em>ququmaar</em></td>
<td><em>tail.pl is.pl short:pl:</em>&lt;sub&gt;SG&lt;/sub&gt;</td>
</tr>
<tr>
<td>tail.<em>p</em> is.<em>p</em> short:<em>p:</em>&lt;sub&gt;S.R.&lt;/sub&gt;</td>
<td>‘The tail is short.’</td>
</tr>
<tr>
<td><em>fa’a</em> <em>ka</em> <em>heer</em></td>
<td><em>food.f is.f insufficient:</em>&lt;sub&gt;F:S.R.&lt;/sub&gt;</td>
</tr>
<tr>
<td><em>food.f is.f insufficient:</em>&lt;sub&gt;F:S.R.&lt;/sub&gt;</td>
<td>‘The food is insufficient.’</td>
</tr>
<tr>
<td><em>thuway</em> <em>ku</em> <em>heer</em></td>
<td><em>rain.m is.m insufficient:</em>&lt;sub&gt;M:S.R.&lt;/sub&gt;</td>
</tr>
<tr>
<td><em>rain.m is.m insufficient:</em>&lt;sub&gt;M:S.R.&lt;/sub&gt;</td>
<td>‘The rain is insufficient.’</td>
</tr>
<tr>
<td><em>na’ii</em> <em>ki</em> <em>ququmat</em></td>
<td>*children.p is.<em>p short:</em>&lt;sub&gt;P:M.R.&lt;/sub&gt;</td>
</tr>
<tr>
<td>*children.p is.<em>p short:</em>&lt;sub&gt;P:M.R.&lt;/sub&gt;</td>
<td>‘The children’s tail is short.’</td>
</tr>
<tr>
<td><em>haysee</em> <em>ka</em> <em>ququmat</em></td>
<td>*tails.f is.<em>f short:</em>&lt;sub&gt;F:M.R.&lt;/sub&gt;</td>
</tr>
<tr>
<td>*tails.f is.<em>f short:</em>&lt;sub&gt;F:M.R.&lt;/sub&gt;</td>
<td>‘The tails are short.’</td>
</tr>
<tr>
<td><em>daaqay</em> <em>ku</em> <em>ququmat</em></td>
<td>*boys.m is.<em>m short:</em>&lt;sub&gt;M:M.R.&lt;/sub&gt;</td>
</tr>
<tr>
<td>*boys.m is.<em>m short:</em>&lt;sub&gt;M:M.R.&lt;/sub&gt;</td>
<td>‘The boys’ tails are short.’</td>
</tr>
</tbody>
</table>


Table 20. Iraqw fusioned values for double agreement features on adjectives

<table>
<thead>
<tr>
<th>Values for adjectives</th>
<th>When (p) value of gender (my analysis)</th>
<th>Values for adjectives</th>
<th>When (p) value of number (my version of Corbett’s analysis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>p/f</td>
<td>s.r.</td>
<td>pl/f</td>
<td>sg</td>
</tr>
<tr>
<td>m</td>
<td>s.r.</td>
<td>m</td>
<td>sg</td>
</tr>
<tr>
<td>(p/f s.r pl/f s.g)</td>
<td>p/f m.r.</td>
<td>pl/f</td>
<td>pl</td>
</tr>
<tr>
<td>p/f m.r.</td>
<td>pl/f</td>
<td>m</td>
<td>pl</td>
</tr>
<tr>
<td>(p/f m.r. pl/f m.r.</td>
<td>pl/f</td>
<td>pl</td>
<td>pl</td>
</tr>
</tbody>
</table>

The maximal system as represented in Table 18 above is the one reconstructed for proto West-Rift South Cushitic (Kießling 2002: 406).
unstable. The other West Rift Cushitic languages, Alagwa and Burunge, no longer have it. Alagwa lost the tonal gender agreement which is represented by a vowel difference in Burunge (-u for m and -i for f/p). Burunge has only gender agreement but (p) nouns have two markers of (p) agreement on the adjective: the final vowel i and the equivalent of the m.r. form in Iraqw; e.g. *qunqumaad* short: f, *qunqumaad* short: m, *qunqumaad* short: p: p (Kießling 1994: 183–184).

Now I want to substantiate my claim that the recognition of (p) as a value of gender rather than number does better justice to the Cushitic situation. Again we have to look at both gender and number. An analysis that has (p) as value of number rather than gender obscures that typical Cushitic feature that gender is property of the word rather than the lexeme. Under such an analysis we have two different kind of noun lexemes: those that are gender specified in the singular but not in the multiple reference where they are (p) and have no gender, and those that are specified for gender in the singular and again specified for gender in the multiple reference, since the gender value need not be the same. As I hope to have shown, the so-called polarity of gender does not resolve this problem, because the idea that the gender in the multiple reference form is simply polar to that in singular reference is untenable for those languages that have the third gender and also fails for the languages for which it is proposed. The two typically Cushitic characteristics of the number system, namely that number is strongly derivational in nature and that, as a consequence, gender is unstable across various number forms of a single lexeme, become less apparent, because they are only valid for half of the lexicon, and unexplainably so.

Finally, gender and number are both categories of nouns. Typologically, there is considerable evidence that both exist independently and that they often interact. This in itself does not exclude the Cushitic situation, namely that there is a categorization in which the values mix. Likewise, tense and aspect can be recognized as two different categories that often interact in individual languages. The Bantu noun class system is an example of a categorization system that disregards number. Although we are used to speaking about singular and plural classes, there is no place in Bantu grammar where plural classes as opposed to singular classes form a group. The noun class of a word is relevant for rule application but never its value for semantic number (see Schadeberg 2001). Also in Bantu it is the individual noun, not the lexeme, that has a value for gender.
References


Relativization in Kambaata (Cushitic)*

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Kambaata (Highland East Cushitic) marks relative clauses in the affirmative supra-segmentally. In the negative, a morpheme -umb is used, which is not attested in related Cushitic languages. Whereas affirmative relative verbs are shown to share features with genitive nouns, negative relative verbs are adjectival in nature. Relative clauses are characterized by the absence of a relative pronoun or particle and, therefore, any indicator of the function of the head noun in the relative clause. Nevertheless, all arguments and adjuncts can be relativized upon. Adverbial and complement clauses are parasitic on the relative construction.

Kambaata is spoken by several hundred thousand speakers in the Ethiopian highlands around the Hambarrichcho massif, about 300 kilometers southwest of the capital, Addis Ababa. The language is classified as a Highland East Cushitic language (Hudson 1981) and until now has been poorly documented. Sketchy phonological and morphological information is provided by Leslau (1952, 1956), Hudson (1976), and Korhonen et al. (1986). Previous works concentrate on verbal morphology and on morphophonological processes (M. G. Sim 1985, 1988), case marking (Treis 2006), and ethno-linguistic aspects (Treis 2005a, b). Lexical data is available in Hudson (1989). Virtually nothing is known about the syntax

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of the language. Therefore, the present article is intended to deal with a hitherto unexplored domain of Kambaata grammar.

Kambaata is a language which makes abundant use of relative clauses (RC). Its complex, often paragraph-like, sentences usually contain at least one RC. Once the mechanisms of relativization are understood, RCs are found almost everywhere in oral and written texts. They do not only modify nouns, but they are also the base of many adverbial clauses. Besides this, they are used in cleft sentences to encode the non-focused background information. Based on data collected during recent fieldwork, this paper discusses the morphological and syntactic aspects of relativization and sheds light on the function and use of RCs. The features of relativization in Kambaata are compared with those in the most closely related Highland East Cushitic languages, Qabeena (Crass 2005) and Alaaba (Schneider-Blum 2007).

1. Typological profile

Kambaata has four open word classes: nouns, attributes, verbs, and ideophones, and at least one closed word class of pronouns. The language possesses hardly any conjunctions, only very few adverbs, and no adpositions. In this section, important inflectional categories of the major word classes (except for ideophones) and the word order rules are discussed briefly.

Kambaata is a suffixing language. Its case system, a marked nominative system (König 2006), is elaborate and distinguishes not fewer than eight case forms (Table 1) in various nominal declensions (Treis 2006). The accusative case form serves as citation form.1

Table 1. Case inflection: boos-ú (m) ‘water pot’

<table>
<thead>
<tr>
<th>Accusative</th>
<th>Nominative</th>
<th>Genitive</th>
<th>Dative</th>
<th>Ablative</th>
<th>ICP</th>
<th>Locative</th>
<th>Oblique</th>
</tr>
</thead>
<tbody>
<tr>
<td>boos-ú</td>
<td>bóos-u</td>
<td>boos-i</td>
<td>boos-ii(ha)</td>
<td>boos-iichch</td>
<td>boos-iín</td>
<td>boos-óon</td>
<td>bóos-o</td>
</tr>
</tbody>
</table>

1. The Kambaata data in this paper are written in the official orthography (Maatewoos 1992). The following graphemes are not in accordance with the IPA conventions: ph = p’, x = t’, q = k’, c = tʃ, ch = tʃ, sh = j, y = j and ’ = ɬ. Length is indicated by double letters, e.g. aː = aa, bː = bb, and jː = shsh. Due to an idiosyncratic convention, the second consonant of a glottal stop–sonorant cluster is generally written as double, although the cluster only consists of two phonemes, e.g. ’mm = ɬm. Word-final unaccented i does not occur orthographically, irrespective of its phonological status.
Nouns, attributes, and pronouns are obligatorily marked for case. Case and gender (masculine vs. feminine) are jointly encoded by portmanteau suffixes. Nouns of certain noun classes additionally encode case and gender through the morphemes -ha (m) / -ta (f) (1).

(1) masculine nouns: adab-áa(-ha) ‘boy’, faashsh-ú ‘horse; stallion’,
     hagas-ô ‘type of bird’, boos-ú ‘water pot’

     xorb-ô ‘ball’, zaal-i-ta ‘largest clay pot’

The word class of attributes encompasses adjectives, cardinal numerals, and demonstratives, i.e. elements that are prototypically used as modifiers of a head noun. Attributes such as maa’n-á(-ta) ‘younger’ in (2) agree with their head noun in case and gender.

(2) maa’n-á (m.acc) hiz-óo (m.acc) ‘younger brother’
    maa’n-á-ta (f.acc) hiz-óo-ta (f.acc) ‘younger sister’
    máa’n-n-u (m.nom) hiz-óo (m.nom) ‘younger brother’
    máa’n-n-t (f.nom) hiz-óo-t (f.nom) ‘younger sister’

Verbal inflection in Kambaata serves to encode aspect, modality, subordination, and subject agreement. Tense is expressed analytically. The verb forms may be grouped into main verb forms (final verbs) and subordinate verb forms (non-final verbs); see Table 2. Main verb forms are the only verb forms that may complete a sentence. Non-main verb forms always require a superordinate main verb or a copula (with the exception of converbs, which may be used as final verbs in questions; see, for instance, (85)). The subordinate verbs are further subdivided into those that are based on relative verbs and those which are not. The latter are converbs and purposive verbs as well as the infinitive.

Kambaata is a rigid head-final language. In the noun phrase all modifiers precede the nominal head, i.e. adjectives, numerals, demonstrative, genitive nouns, and RCs are found consistently in front of the head noun. Verbs are situated at the rightmost end of the clause. The unmarked word order is (S) (O) V. A finite verb alone may constitute a complete sentence. Subordinate clauses precede superordinate clauses or are located inside of them. A sentence can have one or several subordinate verbs, whereas it hardly ever contains more than one main verb form. Several main verb forms may only occur in a single sentence if they are coordinated (which is rarely attested in the corpus) or if one of them is part of an embedded chunk of direct speech.
2. **Morphology of relative verbs**

Indicative main verbs can be relativized. This statement implies, first, that non-indicative verb forms such as jussive, imperative, and preventive verbs cannot be turned into relative verbs (RVs), second, that subordinate verbs (e.g. converses) cannot be relativized, and third, that non-verbal copulas do not have relative forms.

Before turning to the morphological mechanism of relativization, the structure of indicative main verbs is to be introduced. A verbal stem in Kambaata consists of a root which may be extended by derivational morphemes. As shown in Table 3, each affirmative indicative main verb has two subject agreement markers. Aspect morphemes are placed in the slot between these markers. In some persons, the discontinuous subject agreement morphemes and the inserted aspect markers have merged, so that the boundaries between them are blurred. From a synchronic point of view, it is, therefore, often more appropriate to analyze the three components as constituting one complex portmanteau morpheme of person, gender, number, and aspect. Pronominal object suffixes may be added to the right of the inflectional morphemes. The enclitic *kke* characterizes an event as situated in the past and no longer relevant for the present situation or as unreal (hypothetical).

---
2. Most forms of the -e perfective and -o perfective paradigms are characterized by the occurrence of a vowel -e or -o, respectively. The functional difference between the -o and -e forms is not yet clear. There is a functional as well as a paradigmatic overlap. Both forms serve to encode that an event or a change of state is completed. The -o perfective paradigm is defective for some verbs.
Two segmented indicative main verbs are given in (3).

\[(3) \quad \text{daguddóont} \quad \text{‘you ran’} \]
\[< \text{dagud}_{\text{[stem]}} \quad \text{\text{-t}_{\text{[sbj.agr, 2sg]}}} \quad \text{-oo}_{\text{[asp, pvo]}} \quad \text{-nt}_{\text{[sbl.agr, 2sg]}} \]
\[\text{sazános íkke} \quad \text{‘he used to advise him’} \]
\[< \text{saz}_{\text{[stem]}} \quad \text{-Ø}_{\text{[sbl.agr, 3m]}} \quad \text{-a}_{\text{[asp, ipv]}} \quad \text{-no}_{\text{[sbl.agr, 3m]}} \quad \text{-s}_{\text{[obj, 3m]}} \quad \text{ikke}_{\text{[pst]}} \]

### 2.1 Affirmative relative verbs

Kambaata does not have relative pronouns or particles. Affirmative RVs are primarily marked by a final accent, as illustrated in Table 4. In the main verb column, the accent is always located in a non-final position, whereas in the RV column the accent is consistently found at the rightmost end of the verb (see the boldfaced vowels). The accent shift from a non-final to a final position triggers voicing of formerly unaccented and devoiced verb-final vowels; see \text{xuundáamm/i/ ‘we will see’} and \text{xuundaammí ‘which we will see’}. Unaccented and devoiced final /i/ is generally not written in the Kambaata orthography. The reader should keep in mind that all Kambaata words ending in a consonant orthographically do actually end in an unaccented and devoiced /i/, which is voiced as soon as another morpheme is added or as soon as an accent settles on it.

Apart from the accentual differences between main verbs and RVs there are also minor segmental dissimilarities. The main verb forms of the first persons are either realized with a simplex or with a geminate final consonant; see, for instance, the verb forms \text{kul-áamm ~ kul-dám} 1sg.ipv ‘I will tell’, which are in free variation. Their corresponding RVs, however, are always pronounced with a geminate consonant, \text{kul-aammi} (‘kul-aami) 1sg.ipv.rel ‘which I will tell’. Furthermore, some main verb forms, e.g. \text{kul-táá’u} 3f.ipv ‘she will tell’, have sub-morphemic glottal appendices which only occur in careful speech and when the verb has no
Table 4. Main verb forms and their respective relative verb forms

<table>
<thead>
<tr>
<th></th>
<th>MAIN VERB</th>
<th>RELATIVE VERB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1SG</td>
<td>IPV</td>
<td>-áam(m)</td>
</tr>
<tr>
<td></td>
<td>PVO</td>
<td>-óm(m)</td>
</tr>
<tr>
<td></td>
<td>PROG</td>
<td>-áyyoom(m)</td>
</tr>
<tr>
<td>2SG</td>
<td>IPV</td>
<td>-téenta</td>
</tr>
<tr>
<td></td>
<td>PVO</td>
<td>-tóont</td>
</tr>
<tr>
<td></td>
<td>PROG</td>
<td>-táyyoont</td>
</tr>
<tr>
<td>3M</td>
<td>IPV</td>
<td>-áno</td>
</tr>
<tr>
<td></td>
<td>PVO</td>
<td>-ó</td>
</tr>
<tr>
<td></td>
<td>PROG</td>
<td>-áyyoo'ú</td>
</tr>
<tr>
<td>3F/PL</td>
<td>IPV</td>
<td>-tá'a' ~ -tá'u ~ -tá'a'</td>
</tr>
<tr>
<td></td>
<td>PVO</td>
<td>-tóō'ú ~ -tóó'</td>
</tr>
<tr>
<td></td>
<td>PROG</td>
<td>-táyyoo'ú</td>
</tr>
<tr>
<td>3HON</td>
<td>IPV</td>
<td>-éenno</td>
</tr>
<tr>
<td></td>
<td>PVO</td>
<td>-éemma(a'ú ~ a'ú ~ a')</td>
</tr>
<tr>
<td></td>
<td>PROG</td>
<td>-eenáyyoomma</td>
</tr>
<tr>
<td>1PL</td>
<td>IPV</td>
<td>-náam(m)</td>
</tr>
<tr>
<td></td>
<td>PVO</td>
<td>-nóom(m)</td>
</tr>
<tr>
<td></td>
<td>PROG</td>
<td>-náyyoom(m)</td>
</tr>
<tr>
<td>2PL/HON</td>
<td>IPV</td>
<td>-teénta</td>
</tr>
<tr>
<td></td>
<td>PVO</td>
<td>-téenta(a’ú ~ a’ú ~ a')</td>
</tr>
<tr>
<td></td>
<td>PROG</td>
<td>-teenáyyoonta</td>
</tr>
</tbody>
</table>

† The relative form must be realized with a geminate mm.
‡ The glottal appendix ‘v is deleted before relativization.

Further suffixes after the inflectional morphemes. These appendices are dropped before a verb undergoes relativization; see kul-táa (*kul-taa’ú) 3f.IPV.REL ‘which she will tell’.

In order to generate the relative form of a main verb such as the perfective main verb of (4), the accent is moved to the rightmost syllable, which is the aspect vowel in this particular example. The supra-segmentally marked RV is then placed in front of the noun that it modifies. An RC and a head noun constitute a complex NP.

(4) adab-óo dagújj-o → [[dagújj-ó] adab-áa]
    boy-M.NOM       run-3M.PVO       run-3M.PVO.REL   boy-M.ACC
    ‘The boy ran.’
    ‘the boy who ran’

3. In Table 4 only the -o perfective forms are given. The paradigm of the -e perfective forms was left out, because the accentuation of its 1sg and 3m forms is not safely known for all verbs and requires further investigation.
The accent of an affirmative RV is always placed on the rightmost syllable, irrespective of the number of syllables the verb consists of. Therefore, the accent is found on the pronominal object suffix in (5).

(5) adab-óo xuujj-o-se → [xuujj-o-sé] adab-áa
boy-M.NOM see-3M.PVO-3F.OBJ see-3M.PVO-3F.OBJ.REL boy-M.ACC
‘The boy saw her.’
‘the boy who saw her’

The supra-segmental relative marker even moves to the tense enclitic ikke (6).

(6) hánno [[hittigáam-u háww-u yóo-s ikké]
please such-M.NOM problem-3M.NOM COP1.3-M.OBJ PST.REL
mát-o manch-i]-tann-ée xuundáamm
one-M.OBL person.SG-M.GEN-NOMIN-F.DAT see.1PL.IPV
‘Please, we will look at a man who had such a problem before.’ (K4: 44)4

Affirmative RVs share two important features with genitive nouns, another pre-nominal modifier. They show the same accentual behavior. The accent on a genitive noun is always found on the rightmost syllable, irrespective of the number of syllables the noun consists of. The accent moves across possessive and pluralive morphemes (7). Likewise, the relative accent traverses all morphemes of a verb.

(7) N-M.GEN N-M.ACC ann-i hiz-óo ‘father’s brother’
N-M.GEN-POSS N-M.ACC ann-i-sé hiz-óo ‘her father’s brother’
N-PL-F.GEN-POSS N-M.ACC ann-aakk-a-sé hiz-óo ‘her fathers’ brother’

In contrast to other modifiers (adjectives (2), cardinal numerals and demonstratives), affirmative RVs and genitive modifiers cannot show agreement with their head noun. The forms of the RVs and genitive nouns in (8)–(10) are not influenced by the gender or case of the head noun. Note that the head noun in (8) is feminine, in (9) masculine. The head noun of example (9) is encoded in the accusative case, that of example (10) in the ablative case.

Notes on cited data: Data from Kambaata tissata (1989) were segmented, glossed, and translated; accents were added. Qabeena data from Crass (2005) were translated from German to English. The interlinear morphemic translation was adjusted to the conventions of this paper. In order to enable a better comparison of the Qabeena, Alaaba, and Kambaata data, all accents on the Qabeena examples were marked orthographically. According to Crass’s orthographic conventions (Crass 2005: 30), the word-final accent is not marked overtly. In the Qabeena data, small raised characters mark devoiced vowels. The glosses of the data cited from Schneider-Blum (2007) were adjusted to the conventions of this paper. In the Alaaba data, devoiced vowels are indicated by brackets. Kambaata data from Berhanu (1986) were segmented, glossed, and converted to the official orthography. Xambaaro data cited from Korhonen et al. (1986) were segmented and glossed.
### 2.2 Negative relative verbs

The formation of negative RVs is more complex than the formation of affirmative ones. Negative RVs are not simply generated by an accent shift. They are not formally related to negative imperfective and perfective main verb forms.

#### 2.2.1 The negative relative morpheme -umb

Before proceeding to the negation of RVs, it is necessary to demonstrate how main verb forms are negated. Negative imperfective main verbs (12) are merely marked by the addition of a morpheme -ba’a to the affirmative form (11). The accentual structure of the imperfective verb is not altered by the additional negative morpheme.

#### (11) Imperfective affirmative

<table>
<thead>
<tr>
<th>Stem</th>
<th>Subject agreement</th>
<th>Aspect</th>
<th>Subject agreement</th>
<th>(Object suffix)</th>
</tr>
</thead>
<tbody>
<tr>
<td>e.g.</td>
<td>xuud-deenánta-s</td>
<td>see-2pl.ipv-3m.obj</td>
<td>&lt; xuud-teen-á-nta-s</td>
<td></td>
</tr>
<tr>
<td></td>
<td>see-2pl.ipv-3m.obj</td>
<td>'you (pl) see him'</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### (12) Imperfective negative

<table>
<thead>
<tr>
<th>Stem</th>
<th>Subject agreement</th>
<th>Aspect</th>
<th>Subject agreement</th>
<th>(Object suffix)</th>
<th>-ba’a</th>
</tr>
</thead>
<tbody>
<tr>
<td>e.g.</td>
<td>xuud-deenánta-s</td>
<td>see-2pl.ipv-3m.obj</td>
<td>&lt; xuud-teen-á-nta-s-ba’a</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>see-2pl.ipv-3m.obj</td>
<td>'you (pl) do not see him'</td>
<td></td>
<td>-ba’a</td>
<td></td>
</tr>
</tbody>
</table>

Perfective and progressive main verbs (13) share one negative paradigm (14), which is characterized by a morpheme -im (a marker for non-imperfective aspect) after the first subject agreement morpheme and by a subsequent negative
The negative morpheme attracts the accent. The negative perfective lacks the second subject agreement marker. Object suffixes occur after the negative morpheme and trigger the loss of the “glottal appendix”, i.e., before an object suffix the negative morpheme is realized as -ba (14).

(13) Perfective affirmative

<table>
<thead>
<tr>
<th>Stem</th>
<th>Subject agreement</th>
<th>Aspect</th>
<th>Subject agreement</th>
<th>(Object suffix)</th>
</tr>
</thead>
<tbody>
<tr>
<td>xuud-déenta-s</td>
<td>xuud-teen-nta-s</td>
<td>see-2PL.PVE-3M.OBJ</td>
<td>‘you (PL) saw him’</td>
<td></td>
</tr>
</tbody>
</table>

Progressive affirmative

<table>
<thead>
<tr>
<th>Stem</th>
<th>Subject agreement</th>
<th>Aspect</th>
<th>Subject agreement</th>
<th>(Object suffix)</th>
</tr>
</thead>
<tbody>
<tr>
<td>xuud-deenáyyoonta-s</td>
<td>xuud-teen-áyyoo-nta-s</td>
<td>see-2PL.PROG-3M.OBJ</td>
<td>‘you (PL) are seeing him’</td>
<td></td>
</tr>
</tbody>
</table>

(14) Perfective [“non-imperfective”] negative

<table>
<thead>
<tr>
<th>Stem</th>
<th>Subject agreement</th>
<th>-im</th>
<th>-bá(’a)</th>
<th>(Object suffix)</th>
</tr>
</thead>
<tbody>
<tr>
<td>xuud-deenim-bá-s</td>
<td>xuud-teen-im-ba-s</td>
<td>see-2PL.NIPV-NEG-3M.OBJ</td>
<td>‘you (PL) did not see him, you (PL) are not seeing him’</td>
<td></td>
</tr>
</tbody>
</table>

Kambaata has several unrelated negation morphemes. Apart from the morpheme -ba(’a), whose use for the negation of indicative main verbs was exemplified in (12) and (14), the morpheme -ú’nna serves to negate converbs, the morpheme -ka is applied to negative jussive verbs, and the morpheme -oot signals negative imperative verbs.

Relative verbs are marked as negative by the morpheme -umb, which does not seem to be related to the aforementioned negative morphemes. The negative RVs, whose paradigm is presented in Table 5, are not derived from negative main verb forms. The morphemes preceding -umb are the first subject agreement markers (cf. Table 3). Some person oppositions are neutralized, because the second

Table 5. Paradigm of negative relative verb forms

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1SG and 3M</td>
<td>-Ø-umb-ú</td>
</tr>
<tr>
<td>2SG and 3F/PL</td>
<td>-t-umb-ú</td>
</tr>
<tr>
<td>3HON</td>
<td>-een-umb-ú</td>
</tr>
<tr>
<td>1PL</td>
<td>-n-umb-ú</td>
</tr>
<tr>
<td>2PL/HON</td>
<td>-teen-umb-ú</td>
</tr>
</tbody>
</table>
subject agreement morphemes are missing (as in the paradigms of negative perfective verbs (14), converbs, and purposive verbs). The function of the final -ú is explained in the next section.

Example (15) contains two coordinate negative RVs.

(15) [[móos-u ul-umb-ú té abbishsh
disease-M.NOM touch-3M.NREL-M.ACC or exceed.3M.PCO
harm-3M.NREL-M.ACC enset-F.GEN type-M.ACC plant-M.NOM
danáam-u-a
good-M.PRED-M.COP2
‘It is good to plant enset species that the disease does not touch or harm very much.’ (K8: 33)

2.2.2 Double agreement

Not only is the unique morpheme -umb in negative RVs noteworthy, but the clear adjectival features of negative RVs are equally remarkable. We will, therefore, turn to the function of the element -ú which is situated after the negative relativemorpheme (Table 7).

Attributive adjectives distinguish three case forms (nominative, accusative, and oblique) and two genders (masculine and feminine) (Table 6). The nominative is used in front of nominative nouns, the accusative in front of accusative nouns (2). The oblique form signals agreement with all non-nominative, non-accusative nouns.

In contrast to affirmative RVs (recall the examples (8)–(10) above), negative RVs indicate case and gender agreement with their head noun. Negative RVs have the same case and gender markers and the same accent pattern as adjectives; com-

<table>
<thead>
<tr>
<th></th>
<th>ACC</th>
<th>NOM</th>
<th>OBL</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>muccur-ú</td>
<td>muccúr-u</td>
<td>muccúr-o ~ muccúr-ua</td>
</tr>
<tr>
<td>F</td>
<td>muccur-úta</td>
<td>muccúr-ut</td>
<td>muccúr-o ~ muccúr-uta</td>
</tr>
</tbody>
</table>

Table 7. Case and gender paradigm of negative relative verbs: the example of it-umb-ú 3M.NREL ‘which he does not eat’

<table>
<thead>
<tr>
<th></th>
<th>ACC</th>
<th>NOM</th>
<th>OBL</th>
</tr>
</thead>
<tbody>
<tr>
<td>3M.NREL</td>
<td>M</td>
<td>it-umb-ú</td>
<td>it-úmb-u</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>it-umb-úta</td>
<td>it-úmb-ut</td>
</tr>
</tbody>
</table>
pare Table 6 and Table 7. Table 7 exemplifies the inflection of *it-umb-ú 3M.NREL* ‘which he does not eat’.

In Table 5, only the negative RV forms that modify a masculine accusative head noun have been given. However, each negative RV form distinguishes an accusative, nominative, and oblique form in two genders, as was demonstrated with the 3M.NREL form in Table 7.

In spite of the gender and case agreement with the head noun, agreement with the subject in person, number, and gender is not lost. Negative RVs may, therefore, be said to combine features of two word classes, of verbs and adjectives. Example (16) illustrates how a non-relative verb agrees with its subject in person, gender, and number.

(16)  cíil-at ichch-átá it-táa-bá’a / it-tim-bá’a

baby.girl-F.NOM food-F.ACC eat-3F.IPV-NEG / eat-3F.NIPV-NEG

person/gender/number agreement with the subject

‘The baby girl does / did not eat the food.’

Negative RVs demonstrate double agreement: they agree with the subject of the RC, *cíilat*, and with the head noun, *ichcháta*, (17).

(17)  [[cíil-at it-tumb-úta] ichch-átá]

baby.girl-F.NOM eat-3F.NREL-F.ACC food-F.ACC

person/gender/number agreement with the subject

‘the food that the baby girl does not eat’

In example (18), the negative RV *aassitúmbut* agrees with the head noun *óosut* in case and gender. In addition, the RV displays subject agreement with *óosut*, because the head noun is also the subject of the RC.

(18)  [[xabbeen-áta fanqashsh-úta aass-itúmb-ut] óos-ut]

correct-F.ACC answer-F.ACC give-3F.NREL-F.NOM children-F.NOM

ir-á áass-itun-ke

land-M.ACC give-3F.IUS-2SG.OBJ

person/gender/number agreement with the subject

‘The children who are unable to give the right answer must give you land.’

In sentence (19), the indirect object *qoqéeha* and the subject *sánut* are modified by RCs. While the affirmative RV *itanó* has no sign of case and gender agreement with its head, such agreement is present on the negative RV *ittúmbut*.
eat-3M.IPV.REL throat-M.DAT eat-3F.NREL-F.NOM nose-F.NOM
kan-táa‘u
refuse. to.give-3F.IPV
‘The nose which does not eat refuses to give (food) to the eating throat.’
(Proverb)

Note, finally, that Kambaata negative RVs also retain their adjectival accent pattern (Table 7) if a pronominal object suffix (-ʻe in (20) and -se in (21) is attached to them.

(20) [[esáa aag-úmb-ő5-ʻe] xáw-u] yóo’u
1SG.DAT enter-3M.NREL-M.NOM-1SG.OBJ issue-M.NOM COP1.3
‘There is something that I did not understand.’ (K4: 78)

(21) [[béet-u-se reh-úmb-u-se-na reh-ée’u
son-M.NOM-3F.PSS die-3M.NREL-F.NOM-3F.OBJ-CRD2 die-3M.PVE
y-am-an-táa] máńch-ut]
say-PS-PS-3F.IPV.REL person.SG-F.NOM
‘the woman whose son had not died (but) who was told “he died”

2.2.3 Reduction of aspectual distinctions
Affirmative RVs distinguish between imperfective, perfective, and progressive aspect (22). These aspectual distinctions are neutralized in the negative relative paradigm. Imperfective, perfective, and progressive RVs are collapsed into a single negative relative paradigm. The most usual interpretation of a negative RV is that it refers to a constant, habitual, or repeated ‘not V-ing’, though the interpretation as a single instance of ‘not V-ing’ is also possible (23).

(22) [[mogga’-óo] / [mogga’-áa] / [mogga’-ayyóo] óos-ut]
steal-3F.PVO.REL steal-3F.IPV.REL steal-3F.PROG.REL children-F.NOM
‘children who have stolen / who steal / who are stealing’

(23) [[mogga’-úmb-ut] óos-ut]
steal-3F.NREL-F.NOM children-F.NOM
‘children who don’t steal’; other possible interpretations:
‘children who have not stolen,’ ‘children who are not stealing’

If a single instance of ‘not V-ing’ is to be expressed explicitly, the RV has to be negated periphrastically. For this purpose, a negative converb is made dependent on

5. The vowel o is probably a typing error. The expected case/gender suffix is -u M.NOM.
a relative form of the verb fa’- ‘remain’ (24). Note that such periphrases are rare in my corpus and that the use of the potentially ambiguous negative RV even in the context of a single instance of ‘not V-ing’ is more common.

(24) \[[gizz-á mogga'-ú’nna fá'-óo] óos-ut\]
    money-M.ACC steal-3F.NCO remain-3F.PVO.REL children-F.NOM
    hiir-án-tee’u
    release-ps-3F.PVE
    ‘The children who had not stolen (lit.: “remained non-stealing”) money were released.’

2.2.4 Negative relative verbs in related languages

A look at the grammars of Kambaata’s closest relatives reveals that they apply mechanisms different from those of Kambaata for the relativization of negative verbs. A morpheme -umb is not attested in these languages, neither for the negation of RVs nor in another function. Nevertheless, the comparison of Qabeena and Alaaba with Kambaata is profitable, as it points to other interesting facets of relativization in Kambaata.

As in Kambaata, affirmative RVs in Qabeena are marked through a final accent (25). Negative verbs in Qabeena are relativized by the suffixation of the element -’i to the negation morpheme -ba (cf. Kambaata -ba’ a neg) (26). The accent moves from the negation morpheme onto the suffix. The addition of -’i elements is also observed on affirmative RVs ending in a certain vowel (Crass 2005:287); i.e., it is not a unique feature of negative RVs. One may, therefore, state that Qabeena (unlike Kambaata) relativizes affirmative and negative verbs largely in the same way.

Qabeena

(25) \[[ná’u-ni nass-inoon-sí] c’úul-ú\] (…)
    1PL.NOM-N raise-1PL.PVO-3M.OBJ.REL child-M.NOM
    ‘the child whom we raised ourselves (…)’ (Crass 2005:287)

(26) \[[t’é-ane-ë-ba-’i] kallab-á\]
    be.tasty-3M.IPV-1SG.OBJ-NEG.REL food-M.ACC
    ‘food which I don’t like’ (lit.: “food which is not tasty for me”)
    (Crass 2005:287)

Interestingly, there is also one negative main verb which can undergo direct relativization in Kambaata, namely, the locative copula yoo- ‘be (located)’, a defective verb which inflects in the perfective aspect only. The negative relative forms of yoo- do not contain the -umb morpheme; see the last column of Table 8. Instead,
they are marked by a final accent (cf. affirmative RVs). Furthermore, the negation marker -ba’ā changes its final vowel from a to i. The locative copula in Kambaata thus carries a negative relative marker which is identical to the general negative relative marker of Qabeena, namely, -ba’ī. The use of the negative relative copula is demonstrated in (27).

(27) [ci’-at yoo-ba’ī] haqq-á
    birds-f.nom cop1.3-neg.rel tree-m.acc
    ‘a tree on which there are no birds’

Neither the Qabeena negative RVs nor the Kambaata negative relative copula yoo- show case and gender agreement with their head nouns. They lack this adjectival feature which characterizes the regular negative RVs of Kambaata. Irrespective of the head noun’s gender and case, the invariant negative relative marker -ba’ī occurs with the locative copula; see the asterisked hypothetical feminine accusative form in (28).

(28) mat-íta [[ann-uhúu am-atíi yoo-ba’í
    one-f.acc father-m.nom.crd1 mother-f.nom.crd1 cop1.3-neg.rel
    (*yoo-ba'-íta)] wotar-ch-úta] aass-íi
    (*cop1.3-neg.rel-f.acc) donkey.foal-sg-f.acc give-m.dat
    iitt-an-tóo’ú decide-ps-3f.pvo
    ‘It was decided to give (them) a donkey foal which had no father and mother.’
    (K4: 34)

In Alaaba, there are two possible mechanisms for the relativization of negative verbs. The first mechanism corresponds to the one of Qabeena and also leads to negative RVs ending in -ba’ī (Schneider-Blum 2007: 252) (29). The negative morpheme of non-relative main verbs is -bāa. Alternatively, negative convers verbs may be used as heads of RCs (30). Affirmative RVs, however, cannot be replaced by affirmative convers verbs.
Alaaba

(29) [’ameec-co-ba’i mánc-(u)] t’ízzh(o) come-3m.pvo-NEG.REL person.sg-m.nom become.sick.3m.pvo ‘The man who has not come is sick.’ (Schneider-Blum 2007: 252)

(30) [[táww-(u) dag-ibba] t’ul-oo-húu] (...) fly-m.nom know-3m.nco wound-m.nom-crd1 ‘(…) wound without the knowledge of the fly (…)’ (lit.: “wound which a fly does not know”, Y.T.) (Schneider-Blum 2007: 252)

In Kambaata, negative converbs may only occur as medial verbs in an RC; they always require a superordinate relativized main verb; see, for instance, mogga’ú’ína in (24).

3. Syntax

3.1 Word order

While the right boundary of a Kambaata RC is supra-segmentally marked, the left boundary is not formally indicated. All the above given examples have shown that RCs are prenominal. However, they need not precede their head nouns directly; other modifiers may be located between an RC and a head noun. In (31) and (32), genitive nouns and adjectives separate the RCs from their head nouns.

(31) [[min-íichch ful-án aff-ó] gabbán-ch-ua house-m.abl go.out-3m.ico seize-3m.pvo.rel short-sg-m.obl weer-ch-í qudd-íin] [[onxákq yoo-sí] type.of.tree-sg-m.gen club-m.icp come.close.3m.pco cop1.3-3m.obj.rel samaag-íichch-í qutt-áta] náqq áff-o leopards-sg-m.gen nape-f.acc beat.3m.pco seize-3m.pvo ‘With the short weer-club, which he had taken (with him) when leaving the house, he beat the leopard's nape, which was close to him.’ (K8: 23)

(32) [[abbíss lall-itée] alas-i-na gardaam-í exceed.3f.pco become.known-3f.pve.rel wheat-m.gen-crd2 oat-m.gen daabb-ó] tam-éechch bread-f.gen use-f.abl ‘from the use of wheat and oat bread, which is very well known’ (K5: 28)

RVs can govern other subordinate verbs; see, for instance, the imperfective converb fulán and the perfective converb onxákq in (31) and the RC in an RC in (33).
Thus more or less complex subordinate clauses may be embedded into RCs. Like other modifiers, RCs are coordinated by the suffixation of the morpheme -na CRD2 'and' to the first conjunct (34). In (32), two genitive nouns are coordinated by the same coordination morpheme -na. In case of disjunction, the free morpheme té ‘or’ is used (15).

3.2 NP accessibility and relativization strategies

The function of the head noun in the matrix clause (MC) and its function in the RC is not necessarily the same. In example (34), for instance, the modified noun odáata ‘pot(s); kitchen utensil(s)’ functions as the direct object of aansh- ‘wash’. The co-referent of the head noun in the RC is the instrumental object odáan of inkiil- ‘draw’ (and ag- ‘drink’), as demonstrated by the non-relative counterpart of the bracketed complex noun phrase (35).

(34) [[wo’-á inkiil-eennó-na ag-eennó] od-áata] 
water-M.ACC draw-3HON.IPV.REL-CRD2 drink-3HON.IPV.REL utensil-F.ACC áansh-u moos-i xinxileenn-áta k’mm-am-ii 
wash-M.NOM disease-M.GEN germs-F.ACC remove.MID-PS-M.DAT 
dandees-âno enable-3M.IPV 
‘Washing the pots with which one draws and drinks water can remove germs.’

(35) wo’-á od-áan inkiil-éenno 
water-M.ACC utensil-F.ICP draw-3HON.IPV 
‘Water is drawn with the pot(s).’

As Kambaata deletes the co-referent noun (relativized noun) in the RC without a trace, the problem arises as to how the hearer is able to identify its function. The problem is referred to as the “case recoverability problem” in the literature (Keenan 1985). The case marking on the remaining arguments in the RC and the agreement morphemes on the RV support the hearer in recovering the function to a large extent. Furthermore, what Comrie says about case recoverability
in Japanese, a typologically related language, is also true for Kambaata: “[…] for the construction to make sense the speaker of Japanese has to be able to infer a plausible relation between the head noun and the modifying clause. […] we can say that the speaker of Japanese will look for a relation by trying to interpret the head of the relative clause as one of the missing elements from the scene” (Comrie 1998:68). With his/her knowledge of the text context and the speech situation as well as encyclopedic knowledge, the hearer sets up a link between the head noun and a missing (but possible) element of the RC.

In the following, the position (syntactic function or semantic role) of the relativized noun, the missing co-referent of the head noun in the RC, may have to be examined. Furthermore, the mode of expression of the missing co-referent is to be investigated. There is no overt marking of the semantic role of the head noun with respect to the predicate in the RC in example (34). However, Kambaata does not apply this “gap strategy” in all RCs.

Kambaata covers all positions on the Keenan and Comrie (1977) NP accessibility hierarchy (36). Nouns of any position or function in the RC are relativized.

(36) subject > direct object > indirect object > oblique > possessor

The head noun of example (37) functions as subject not only in the MC but also in the RC. The RV agrees with the missing subject of the RC and, therefore, also with the co-referential head noun in person, gender, and number.

(37) [[kohis-amm-ó] máńch-u] áyee-ti-ndo dug-iin invite-ps-3m.pvo person.sg-m.nom who.m.nom.vv-cop3-q brow-m.icp kúl-e-ñe! tell-2sg.imp-1sg.obj ‘Tell me in signs who the guest (lit. “the man who was invited”) is!’

The head noun of (38) is the subject of the MC and the direct object of xa’mm-‘ask’ in the RC.

(38) [[Loodáam xa’mm-ée] meent-ichch-ut] fanqashsh-itim-bā’a L.m.nom ask-3m.pve.rel women-sg-f.nom answer-3f.nipv-neg ‘The woman whom Loodaamo had asked did not answer.’

It is justified to ask whether there is a real syntactic gap in the Kambaata RCs. Is there language-internal evidence for the former existence and subsequent deletion of the relativized noun? Or is the gap only a convenient assumption for the linguistic analysis? As in Japanese (Comrie 1998; Matsumoto 1997), NPs in Kambaata can be omitted if they are recoverable from the context; Kambaata is a pro-drop language. Although the RV in (37) has no an overt subject and the RV in (38) no
overt direct object, one does not necessarily have to assume that these arguments were deleted, because finite verbs alone, e.g. *kohisámmo* ‘he is invited’ and *xa’mmée* ‘he asked’, are complete, though simple sentences. The RCs in (37) and (38) differ from such simple sentences only with regard to the accent pattern. Admittedly, there is thus no language-internal evidence for a syntactic gap. There is not necessarily a missing argument that is syntactically linked with the head noun.

While there is no trace of the relativized direct object in (38), sentence (39) seems to be, at first sight, an example of the strategy of pronoun retention, another common relativization strategy in the languages of the world. The head noun *óosut* ‘children’ is the direct object of the RC. A pronominal object suffix *-ssa* 3pl. obj on both RVs refers to the missing direct object. But is *-ssa* a trace of the relativized noun?

\[
(39) \begin{array}{l}
[\text{ann-uhúu am-atii hegeeg-i mann-uhúu} \\
\text{father-M NOM CRD1 mother-F NOM CRD1 area-M GEN} \\
\text{people-M NOM CRD1 gib-baa-ssá-na xeleel-taa-ssá}] \\
\text{reject-3F IPV 3PL OBJ REL CRD2 tell-off-3F IPV 3PL OBJ REL} \\
\text{children-F NOM hattigáam-it máan-at yóo-ssa-a-rr-a?} \\
\text{what kind-F NOM character-F NOM cop1.3-3PL OBJ REL M cop2-ra-M pred} \\
\text{What kind of character do the children have whom the father, the mother, and the neighbors reject and tell off?} \quad \text{(K4: 49)}
\end{array}
\]

Admittedly, the conditioning factors for the occurrence of pronominal object suffixes on verbs are not yet sufficiently investigated. As pronouns, the object suffixes substitute for aforementioned overt NPs that refer to human or personified beings (40). Object NPs precede the verb, whereas dependent object pronouns are suffixed to the verb.

\[
(40) \begin{array}{l}
\text{kichche’-ışsh-o-ssa} \\
\text{feel.pity-cs1-3M PVO 3PL OBJ}
\end{array}
\]

(An old man (hon) and a pitiful situation were introduced in the discourse before.) ‘It made him (lit.: “them”) feel sorry.’ (K4: 76)

Furthermore, it is not uncommon to find in texts that an object is referred to twice in the same clause, by both a full NP and a pronominal suffix (41) or by an independent pronoun and a pronominal suffix (42). This double reference is definitely pragmatically conditioned, though it is not yet known exactly which pragmatic factors trigger it.
(41) \[\begin{align*}
& ku & hugaaxáann-u & samaag-ichch-ú-s \\
& DDEM1.M.NOM & hunters-M.NOM & leopards-SG-M.ACC-3M.POSS \\
& sh-itosíta & bagaz-z-áta & áff \\
& kill-3F.PURP<3M.OBJ> & spear-PL-F.ACC & seize-3F.PCO \\
& sharr-ítán-iyán-s & hun-án(…) & iill-ée’u \\
& chase-3F.PCO-DS-3M.OBJ & flee-3M.PVE & reach-3M.PVE
\end{align*}\]

In order to kill the leopard (lit.: “to kill him the leopard”), the hunters took their spears and chased him; fleeing he got to (a place where …).’ (K4: 76)

(42) \[\begin{align*}
& esáa & mexxurr-úu & yoo-’è-báí-tannée(…) \\
& 1SG.DAT & nothing-M.NOM.CRD1 & cop1.3-1SG.OBJ-neg.rel-bec1 \\
& ‘Because I don’t have anything, (…)’ (lit.: “to me there is nothing to me”) \\
& (K4: 77)
\end{align*}\]

Considering the existence of perfectly grammatical examples in which the relativized direct object is deleted without a trace (see (38)) and the observance that objects can be referred to twice in the same clause under certain pragmatic conditions (see (41) and (42)), it does not seem necessary, or even reasonable, to assume that the object pronoun -ssá in (39) is a trace of the deleted direct object. The occurrence of the object pronoun is not the result of the relativization of a direct object.

Apart from subjects and direct objects, indirect and oblique objects can be relativized; see the relativized beneficiary in (43) and the relativized source or “maleficiary” in (44). A pronominal suffix may be attached to the RV if a human indirect or oblique object is relativized.

(43) \[\begin{align*}
& [[\text{harruuchch-ú-}’ & \text{argishsh-oon-sí}] & \text{mánch-u}] \\
& \text{donkey-SG-M.ACC-1SG.OBJ.REL} & \text{lend-1SG.PVO-3M.OBJ.REL} & \text{person-SG-M.NOM} \\
& \text{jáww} & \text{a’-ée-s} \\
& \text{mistreat do-3M.PVE-3M.OBJ} \\
& ‘The man (to) whom I had lent my donkey did not treat it well.’
\end{align*}\]

(44) \[\begin{align*}
& [[\text{gizz-u} & \text{mogga’-amm-o-sé}] & \text{mesel-éeta}] \\
& \text{money-M.NOM} & \text{steal-ps-3M.PVO-3F.OBJ.REL} & \text{girl-F.ACC} \\
& \text{qaars-éen-se} \\
& \text{encourage-1SG.PVE-3F.OBJ} \\
& ‘I encouraged the girl from whom money had been stolen.’
\end{align*}\]

There are analogous examples in (45)–(46) in which there is no pronominal object suffix on the RV, i.e., the object suffixes on the RVs in (43)–(44) are not traces of the deleted NPs. The relativized NPs is a source in (45), a location in (46), and a beneficiary in (28).
(45) [[gizz-á leéecce-emmi] meent-ichch-ut] wál-t money-M.ACC borrow.MID-1SG.PVE.REL women-SG.F.NOM come-3F.PCO
gizz-á-se fanqáshsh-unta xámm-itó-é money-M.ACC-3F.Poss return-1SG.UNTA ask-3F.PVO-1SG.OBJ
‘The woman from whom I had borrowed money came and asked for her money back.’

(46) [[á t dikka’-aantí] máńch-u] ísoo-t 2SG.NOM rely-2SG.IPV.REL man-SG.NOM 3M.NOM.VV-COP3
‘He is a man you (can) rely on.’

Apart from subjects and objects, adjuncts (adverbial of place (47), time (48), and manner (49)) can be relativized.

(47) [[cíi’-at gassim-á gassim-á wod-dáá] birds-F.NOM morning-M.ACC morning-M.ACC chirp-3F.IPV.REL
háqq-u] urr-óon-ta-ée-t. tree-M.NOM front.yard-F.LOC-L-1SG.Poss.VV-COP3
‘The tree on which the birds chirp every morning is in my front yard.’

ba’-ááa disappear-3F.IPV
‘On the day on which a poor man has some food to eat his spoon cannot be found.’ (Berhanu 1986: 49)

(49) (…) [[dandee-toontí] woqq-éen] sarb-ít íill be.able-2SG.PVO.REL way-M.ICP hurry-2SG.PCO arrive.2SG.IMP
‘(…) come here quickly in a way that is possible for you.’ (K8: 22)

Furthermore, Kambaata allows the relativization of possessor NPs. Close to the place where the co-referent of the head noun, the possessor, is removed, a possessive suffix is retained in the RC. Kambaata has two possessive constructions. The possessor is marked either by a genitive (pro)noun (50) or by a possessive suffix (51). The possessor may not be marked by both a genitive noun and a possessive suffix at the same time (52).

(50) Genitive (pro)noun + Noun, e.g. lalí qegú ‘the blood of the cattle’

(51) Noun-Possessive Suffix, e.g. qegú-s ‘its blood’
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(52) *Genitive (pro)noun + Noun-Possessive Suffix,
e.g. *lalí qegú-s ‘the blood of the cattle’

In example (53), the head noun is co-referential with the possessor in the RC. The possessive suffix -s on the possessed is the obligatory trace of the non-occurring possessor. As possessive suffixes always substitute for but never co-occur with possessor NPs (52), one has to speak about pronoun retention in the case of possessor relativization.

(53) [[chár-it ḡal-ī qeg-ū-s ag-góo]
type.of.bird-f.nom cattle-m.gen blood-m.acc-3m.poss drink-3f.pvo.rel
lál-u] fanqashsh-aqq-ánó-báá
cattle-m.nom return-mid-3m.ipv-NEG
‘Cattle whose blood was drunk by charé-birds cannot be saved.’ (K1: 83)

Sentence (54) is a remarkable example insofar as the possessor of the possessor is relativized therein. The possessive suffix -se replaces the co-referent of the feminine head noun.

(54) [[meent-íchch-ó min-i- sé ánn-u bagá reh-ée]
women-sg.f.gen house-m.gen-3f.poss father-m.nom recently die-3m.pve
meent-íchch-ut] oos-û-se méxxin le'-ís-u
women-sg.f.nom children-f.acc-3f.poss alone grow-cs1-m.nom
hasis-ánó-se be.necessary-3m.ipv-3f.obj
‘The woman whose “house father” (i.e. husband) has died recently must raise her children alone.’

Kambaata’s closest relatives, Alaaba (Schneider-Blum 2007: 365ff.) and Qabeena (Crass 2006: 288f.), allow relativization of subjects, direct, indirect and oblique objects as well as circumstantial NPs. For the relativization of possessors only examples from Alaaba can be cited; no such examples are found in the Qabeena grammar. In (55), the head noun tarappéezu is co-referential with the possessive suffix of the relational noun aléen ‘on top’. There are no postpositions in Alaaba (and Kambaata), but spatial relations are expressed with relational nouns. The noun ‘top’, for instance, governs genitive modifiers, i.e., ‘on the table’ is literally expressed as “on the top of the table”.

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Kambaata does not seem to differentiate between RCs and other modifying clauses. The noun *tassóo* 'hope' in (56) is modified by a clause which contains the content of hope. While the use of a gerund in the English translation is necessary, Kambaata expresses the content of hope in an RC. This means that Kambaata extends the relative construction beyond translation equivalents of English RCs.

Unlike in the relative constructions discussed so far, there is no argument or adjunct position of the predicate of the modifying clause to which the head noun *tassóo* could correspond. In other words, the complex NP cannot be converted into a non-relative construction by assigning a case marker to the head noun and inserting it into the clause (which was done, for instance, in (35) with the head noun of (34)). As soon as more data on modifying but non-relative clauses are available, it can be investigated in detail whether Kambaata is a language with a unified noun-modifying construction like that found in various Asian languages (Comrie 1997), in Japanese in particular (Matsumoto 1997).

3.3 Headless relative clauses

3.3.1 *Affirmative headless relative clauses*

If the head noun of an RC is non-specific or if it can be deduced from the context, it may be deleted. Thus the RC becomes headless, or put differently, the RC itself becomes the head of the NP. Nominalizing the RC compensates for the absence of the head noun and allows the RC to be case-marked. Two nominalizing
operations have to be distinguished here. The first operation (NMZ 1) is applied when an accusative or nominative head noun is missing: The final vowel of the RV is lengthened (…v → …vv-) and a case/gender marker is attached to the RV. Depending on the gender and case of the deleted head, the suffix -ha m.acc (57), -hu m.nom, -ta f.acc (58), or -t f.nom is added. If the final vowel of the RV is already long (58), a glottal element ’ı, whose vowel can be lengthened, is attached to the RV (…vv → …vv’ı-).

(57) [[laall-ó] \ bun-á]  
become.ripe-3m.pvo.rel coffee-m.acc  
‘coffee which is ripe’  
→ [[laall-óo(-ha)]  
become.ripe-3m.pvo.rel vv-m.acc  
‘the one (m) which is ripe’

(58) [[laal-tó] \ mang-úta]  
become.ripe-3f.pvo.rel mango-f.acc  
‘the mango which is ripe’  
→ [[laal-too’íi-ta]  
become.ripe-3f.pvo.rel vv-f.acc  
‘the one (f) which is ripe’

If the RV carries a final object suffix (-sé in (59)), it is the vowel of this suffix which is lengthened when the head noun is deleted.

(59) [[qaqíchch-u béll-u yoo-sé] \ tiny-m.nom Y.shaped.end-m.nom cop1.3-3f.obj.rel  
sirim-íta]  
type.of.stirring.stick-f.acc  
‘the sirime-stirring stick which has a tiny Y-shaped end’  
→ [qaqíchch-u béll-u yoo-sée-ta]  
tiny-m.nom Y.shaped.end-m.nom cop1.3-3f.obj.rel vv-f.acc  
‘the one (f) which has a tiny Y-shaped end at one end’

Headless and nominalized RCs can refer to the same entities as nouns, namely, to animate and inanimate referents as well as actions and events. They can fulfill the same syntactic functions as nouns. Furthermore, head nouns of all possible functions in the RC may be deleted. The missing head nouns function as subjects of the RC in (57) and (58), as beneficiary/possessor of the RC in (59) and as direct object of the RC in (60).
The one (= the enset corm) which one boiled like potatoes and ate is easily digestible.

The complete case and gender paradigm of headless RV forms is given in Table 9. Table 9 is divided into two major parts. Nominalization operation 1 does not apply to the non-accusative/non-nominative cases. If a head noun encoded in such a case is deleted, nominalization operation 2 is activated: the head noun is replaced by a gender-sensitive morpheme -hann / -tann (61). The nominalizing morpheme -hann / -tann is historically related to the independent proximate demonstrative pronouns (‘this’); see, for instance, gen kann-í (m) / tann-é (f) ‘of this (m/f)’, Dat kann-íi(ha) (m) / tann-ée(ha) (f) ‘for this (m/f)’. From a diachronic point of view, headless RCs are governed by a pronoun. The nominalizer -hann / -tann is probably best considered to be an enclitic element; the constituent [RV plus -hann / -tann] seems to carry two accents.

(61) [laall-ó] bun-íichch
become.ripe-3M.PVO.REL.coffee-M.ABL
‘from the coffee which is ripe’

→ [laall-ó]-hann-íichch
become.ripe-3M.PVO.REL-NOMIN-M.ABL
‘from the one (m) which is ripe’

The use of oblique headless RCs in sentential contexts is further illustrated in (62) and (63).

(62) [kabár ros-is-soonte-’é]-hann-íi]
 today learn-C51-2SG.PVO-1SG.OBJ.REL-NOMIN-M.DAT exceed.1SG.PCO
galaxx-áan-ke
thank-1SG.IPV-2SG.OBJ
‘I thank you very much for what you taught me today.’
Table 10. Affirmative and negative headless RCs: an excerpt of the case paradigm

<table>
<thead>
<tr>
<th>Headed RC</th>
<th>Headless RC</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>M laall-ó N₃m 3M.PVO.REL</td>
<td>laall-óó(-ha) laall-óó(-hu) laall-ó-hann-i</td>
<td>‘the one (m) which is ripe’</td>
</tr>
<tr>
<td>F laal-tóo N₃f 3f.PVO.REL</td>
<td>laal-too’íi-ta laal-too’íi-t laal-too-tann-é</td>
<td>‘the one (f) which is ripe’</td>
</tr>
<tr>
<td>M it-umb-ú N₃m 3M.NREL</td>
<td>it-umb-ú / it-umb-úu(-ha) it-úmb-u it-úmb-o-hann-i</td>
<td>‘the one (m) who does not eat’</td>
</tr>
<tr>
<td>F it-tumb-úta N₃f 3f.NREL</td>
<td>it-tumb-ú-ta / t-tumb-úu-ta it-túmb-ut it-túmb-o-tann-é</td>
<td>‘the one (f) who does not eat’</td>
</tr>
</tbody>
</table>

‘The clothes that are in Addis Ababa are sold cheaper than the ones in Duuraame.’

3.3.2 Negative headless relative clauses

The nominalization procedures discussed with respect to affirmative RCs are also applicable to negative RCs (Table 10). That is especially evident in the oblique case forms. If a head noun in a non-accusative/non-nominative case is deleted, nominalization operation 2 is applied, irrespective of whether the RV is affirmative or negative; see, for instance, the genitive form in Table 10. The negative RV to which the nominalizing -hann / -tann morpheme is encliticized ends in -úmb-o. Recall from Table 7 that -o is the oblique case suffix of the negative RVs. Negative RVs agree with their heads in gender and case; -o signals here agreement with the oblique case-marked nominalizer -hann / -tann.

The headless nominative and accusative forms are discussed in more detail in §3.3.3.

6. Only one possible translation is given here: the deleted head noun is assumed to be the subject of the RC.
The headless negative RC \( \text{xxuud-deenúmb-o-hann-í} \) ‘of what you did not see’ in
(64) precedes the similitative morpheme \(-g\text{-a} \) ‘like, as’. The oblique case suffix \(-o\) of
the negative RV agrees with the genitive-marked nominalizer \(-hann-í\).

(64) \[ \text{[xxuud-deentáa-n-ka]} \]
\[ \text{see-2PL.PVE.REL.VV-N-M.ACC} \]
\[ \text{[xxuud-deenúmb-o]-hann-í]-g-a} \]
\[ \text{ass-itéen (…)} \]
\[ \text{[xxuud-deenúmb-o]-hann-í]-g-a} \]
\[ \text{see-2PL.NREL-M.OBL-NOMIN-M.GEN-GA-M.OBL do-2PL.PCO} \]
\[ \text{‘You do as if you did not see what you saw and (…).’ (K4: 46)} \]
\[ \text{(lit. “you make what you saw like what you did not see”)} \]

3.3.3 Headless relative clauses and other headless modifiers compared

Considering the morphological differences between modifying affirmative and
negative RCs, it is noteworthy that both types of RCs are often subject to the same
operations when deprived of their heads. Recall that modifying negative RVs,
in contrast to modifying affirmative RVs, are inflected like adjectives (see Table
6 and Table 7). However, when the head noun is deleted, negative RVs behave
partly like affirmative RVs, partly like adjectives.

Adjectives (and cardinal numerals) may function as phrasal heads without
being subjected to further operations, i.e., they do not need to be nominalized. As
heads, they are simply inflected like a noun (compare Table 1 and Table 11) and
may be marked by one of eight case forms (Treis 2006). The accusative-marked
adjective \( \text{fayy-á} \) and the ablative-marked numeral \( \text{tordum-íichch} \) are used as
phrasal heads in (65) and (66), respectively.

(65) \[ \text{reh-ée-bíi íí fayy-á aaqq-itéent} \]
\[ \text{die-3M.PVE-BEC2 1SG.GEN healthy-M.ACC take-2SG.PVE} \]
\[ \text{‘Because he (= your baby-boy) had died, you took my healthy one.’} \]

(66) \[ \text{tordum-íichchi-nne-n án qoxár-a-ta} \]
\[ \text{ten-M.ABL-1PL.Poss-N 1SG.NOM clever-F.PRED-F.COP2} \]
\[ \text{‘From the ten of us I am the cleverest.’} \]

Let us now have a look at the accusative and nominative columns of Table 10.
There are two contexts in which negative RVs do not have to undergo nominal-
ization in order to be used as phrasal heads, i.e., there are two contexts in which

Table 11. Adjectives as heads of an NP: the example of \( \text{qall-ú(ta)} \) ‘stupid’

<table>
<thead>
<tr>
<th>ACC</th>
<th>NOM</th>
<th>GEN</th>
<th>DAT</th>
<th>ABL</th>
<th>ICP</th>
<th>LOC</th>
<th>OBL</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>qall-ú</td>
<td>qáll-u</td>
<td>qall-i</td>
<td>qall-ii(ha)</td>
<td>qall-íichch</td>
<td>qall-íin</td>
<td>qall-óon</td>
</tr>
<tr>
<td>F</td>
<td>qall-úta</td>
<td>qáll-ut</td>
<td>qall-ó</td>
<td>qall-óo(ha)</td>
<td>qall-óochch</td>
<td>qall-óon</td>
<td>qall-óon</td>
</tr>
</tbody>
</table>
they behave like adjectives. If a nominative head noun is missing, the negative RV is not nominalized; see the nominative forms of the negative RV, *it-úmb-u* and *it-úmb-ut*, in Table 10 and example (67).

(67) [hujat-úmb-u] it-ú ígg-a-a
    work-3M.NREL-M.NOM eat-M.ACC daring-M.PRED-M.COP2
    ‘The one (m) who does not work is bold in eating.’ (Proverb)
    (Berhanu 1986:43)

In the accusative cell of the negative RVs, two forms occur: a non-nominalized and a nominalized form. Mostly, the first form is used when an accusative head noun is deleted (68).

(68) mánn-u gizz-á [mogga’-umb-úta] kassáshsh-o
    people-M.NOM money-M.ACC steal-3F.NREL-F.ACC accuse-3M.PVO
    ‘The people accused the one (f) who had not stolen the money.’

For unknown reasons, however, the nominalized negative RV with the lengthened vowel is required for accusative complements of the verb *ih* - ‘become’ (69)–(70), which replaces ascriptive and identifying copulas in subordinate clauses (Treis forthcoming).

(69) úull-a-s [bobír-u qoh-umbúu-ta
    land-F.NOM-3M.Poss wind-M.NOM damage-3M.NREL.VV-F.ACC
    (*qoh-umb-úta)] ih-u hasis-áno-se
    (*damage-3M.NREL-F.ACC) become-M.NOM be.necessary-3F.IPV-3M.OBJ
    ‘The land must be one (= a plot) that the wind does not damage.’ (K8: 6)

(70) Sabír-u [huj-íta iitt-umbúu]
    S-M.NOM work-F.ACC like-3M.NREL.VV.M.ACC
    ikk-ó-tann-ée hor-ánta j-áata
    become-3M.PVO.REL-NOMIN-F.DAT all-F.ACC<N> time-F.ACC
    alachch-áanee-t game-F.ICP.VV-COP3
    ‘Sabiro is playing all the time because he is someone who doesn’t like to work.’
    (K8: 25)

After having compared headless RCs to adjectives, we must look at the similarities and differences between headless RCs and headless genitive nouns. The latter also have to undergo nominalization before they may be used as heads of NPs; see the starred form in (71).
Table 12. Case and gender paradigm of headless genitive nouns

<table>
<thead>
<tr>
<th></th>
<th>ACC</th>
<th>NOM</th>
<th>GEN</th>
<th>DAT</th>
<th>ABL</th>
<th>ICP</th>
<th>LOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>m</td>
<td>-bíi(-ha)</td>
<td>-bíi(-hu)</td>
<td>-hann-i</td>
<td>-hann-ii(ha)</td>
<td>-hann-íichch</td>
<td>-hann-iin</td>
<td>-hann-éen</td>
</tr>
<tr>
<td>f</td>
<td>-bíi-ta</td>
<td>-bíi-t</td>
<td>-tann-é</td>
<td>-tann-é(ha)</td>
<td>-tann-éechch</td>
<td>-tann-éen</td>
<td>-tann-éen</td>
</tr>
</tbody>
</table>

Table 13. Case paradigm of the nominalizer -ra

<table>
<thead>
<tr>
<th></th>
<th>ACC</th>
<th>NOM</th>
<th>GEN</th>
<th>DAT</th>
<th>ABL</th>
<th>ICP</th>
<th>LOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>-r-a</td>
<td>-r-u</td>
<td>-r-ii</td>
<td>-r-ii(ha)</td>
<td>-r-íichch</td>
<td>-r-iin</td>
<td>-r-áan</td>
<td></td>
</tr>
</tbody>
</table>

(71) meent-ichch-ó ar-óo *meent-ichch-ó Ø
women-sg-f.gen husband-m.acc women-sg-m.gen
‘the woman’s husband’ ‘the one of the woman’

(72) meent-ichch-ó-tann-ée manch-í-bíi-ta
women-sg-f.gen-nomin-f.dat person.sg-m.gen-nomin-f.acc
‘for the one (f) of the woman’ ‘the one (f) of the man’

3.3.4 The morpheme -ra on headless relative clauses

If a headless RC refers to more than one animate or inanimate referent or to an undetermined number of inanimate referents, it receives a dummy head -ra. The morpheme -ra is probably of nominal origin, because it inflects in seven case forms. Note that the stem is -r and that -a is the accusative case marker. The complete paradigm of -ra is given in Table 13.

The -ra morpheme may be preceded by any modifier, i.e., apart from affirmative (73)–(74) or negative RVs (75), adjectives, numerals, demonstratives as well as genitive nouns (76) may be combined with -ra. Note that negative RVs agree in case and gender with the -ra morpheme (75). The morpheme -ra is inherently masculine.

(73) [fuuc-cayyóo-r-u] iill-ít(…)
pant-3f.prog.rel-ra-m.nom arrive-3f.pco
‘The panting ones arrived and (…)’ (K4: 76)
4. The ubiquitous relative clause

It is common to find about one RC per sentence on average in Kambaata narratives. This vast number of RCs can be attributed neither to the text type nor to the individual style of an author or speaker. The ubiquity of RCs has other reasons: Apart from using RCs as attributes of nouns, Kambaata draws on RCs for the formation of various adverbial and complement clause types; i.e., the traditional triptych of subordination (adverbial clauses – complement clauses – relative clauses)\(^7\) is covered largely by one single strategy. Furthermore, relativization is an essential ingredient of focus marking in Kambaata, which is also known in other Ethiopian languages (see, for instance, Appleyard 1989). Focus constructions are cleft sentences in which the focused constituent is made the complement of a copula and in which the non-focused background information is turned into a headless RC. Focus constructions are not dealt with in this paper, but they are the subject of a future publication (Treis forthcoming).

It is demonstrated in this section that most adverbial and complement clauses in Kambaata are parasitic on RCs. Not only are many locative and temporal adverbial clauses historically derived from RCs plus a head noun ‘place’ or ‘time’ (which is a common grammaticalization chain discussed in the literature), but also reason, purpose, and conditional clauses have the same diachronic source.

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\(^7\) Note, for instance, the tripartite division of the subordination domain in Shopen (1985) into complementation (Noonan 1985), relative clauses (Keenan 1985), and adverbial clauses (Thompson and Longacre 1985).
Moreover, Kambaata does not make a formal distinction between adverbial and complement clauses. The potential to relativize all positions in an RC (36) is the prerequisite for the formation of subordinate clauses on the base of relative constructions.

4.1 Locative clauses

Locative clauses (77) are RCs headed by a dependent morpheme -b-a, which derives historically from a reconstructed masculine noun ‘b-áa ‘place’. Due its nominal origin, the place morpheme can be case-inflected. The place morpheme can be attached to any modifier (genitive nouns, adjective, numerals, demonstratives, or RCs). In (78), an affirmative and a negative locative clause are coordinated. The negative RV agrees with the place morpheme in case and gender.

(77) \[
\text{[ti maxáaf-f-at afuu'íl-itáa]-b-a]}
\text{dDEM1.f.NOM book-pl.f.NOM sit-3f.IPV.REL-PLACE-M.ACC}
\text{kúl-e-ë}
\text{tell-2SG.IMP-1SG.OBJ}
\text{‘Tell me where these books are kept!’}
\]

(78) \[
\text{[i-h-ë ta:mm-eenno]-b-áa]}
\text{i-M.ACC use-3HON.IPV.REL-PLACE-M.ACC.CRD1}
\text{[ta:mm-eenumb-u]-bb-áa}
\text{use-3HON.NREL-M.ACC-PLACE-M.ACC.CRD1}
\text{‘where (the epenthetic vowel) i is used and where it is not used’}
\text{(Maatewoos 1992: 16)}
\]

4.2 Temporal clauses

Kambaata has several means of indicating temporal relations between two clauses. Most often a sequence of one or more converbs and a superordinate verb are used; see example (41) above, in which three converbs occur in a sequence. Kambaata distinguishes among perfective (pco), imperfective (ico), and negative converbs (nco). Converbs receive a suffix -iyan (ds) if there is a subject change between converb and superordinate clause. Besides converb clauses, the language makes use of relative-based constructions to encode various temporal relations (named according to Kortmann 1997) between subordinate and superordinate clause (Table 14). Depending on the type of temporal clause, headed or headless (nominalized) RCs occur.
A temporal clause expressing an event that is subsequent to the event encoded in the superordinate clause is governed by the relational noun *biríta* ‘front’. The relational noun occurs in the accusative case, which is, among others, the case form of adverbial constituents in Kambaata. Given that complements of *biríta* are encoded in the ablative case (see *soozim-éechch* abl *biríta* ’before dawn’), the RC governed by *biríta* is nominalized (nmz2) and the ablative case is assigned to it (79). The RV is marked for imperfective aspect.

(79) gó'r-u         bún-u      [[[biishsh y-aanó]-hann-íichch]
  green.berry-M.NOM coffee-M.NOM red      say-3M.IPV.REL-NOMIN-M.ABL
  bir-íta]   haqq-i-sí        zu'r-áan  dag-am-áno-a
  front-F.ACC tree-M.GEN-3M.POSS ear-M.LOC find-PS-3M.IPV.REL-M.COP2
  gambáll-ata láal-o-a   hagár-a
  black-F.OBL fruit-F.GEN-M.COP2 kind-M.PRED
  ‘Gör’a are black (coffee) berries (i.e. unripe, green berries) which are found on the ears of the tree before the coffee becomes red.’

Anteriority is expressed if a perfective RCs is nominalized, encoded in the ablative case, and made dependent on the ICp case form (*zakkíin*) of the relational noun *zakkú* ‘rear, back’. The final verb of the *zakkíin*-clause in (80) governs two converb clauses, which indicate a sequence of events within the *zakkíin*-clause.

(80) [[[baad-i-sí     wog-i-g-a   qáw-ut
  country-M.GEN-3M.POSS custom-M.GEN-GA-M.OBL small-F.NOM
  óos-ut      xaacc-ít]   [dul-i       sakki bar-i
  children-F.NOM gather-3F.PCO slaughter-M.GEN third day-M.ACC
  oll-ée   mann-iiha     zaraar-úta  mass-it]
  neighborhood-F.GEN people-M.DAT flower-F.ACC bring-3F.PCO

<table>
<thead>
<tr>
<th>Table 14. RC-based temporal clauses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominalized imperfective RC in the ABL (V-hann-íichch) + biríta (ACC) ‘front’</td>
</tr>
<tr>
<td>Nominalized perfective RC in the ABL (V-hann-íichch) + zakkíin (ICP) ‘back, rear’</td>
</tr>
<tr>
<td>Perfective RC + jáata (ACC) ‘time’</td>
</tr>
<tr>
<td>Perfective RC + jáata (ACC) ‘time’</td>
</tr>
<tr>
<td>Imperfective RC + jáata (ACC) ‘time’</td>
</tr>
<tr>
<td>Nominalized perfective or progressive RC in the locative case (V-hann-éen)</td>
</tr>
<tr>
<td>Perfective RC + -gánka (ACC)</td>
</tr>
</tbody>
</table>
After small children have gathered, brought flowers to the people of the neighborhood on the third day of the slaughtering (i.e. on the third day of the masalaala-festival) and made (the people) kiss (the flowers) according to the traditions of the country, one offers food to them (= the children).’ (K5: 9)

The occurrence of the -hann morpheme (for the purpose of nominalization) is not obligatory in zakkiin-clauses. As (81) illustrates, the ablative case marker -vvchch can also be directly attached to the RV. Moreover, the relational noun can be omitted, so that nothing but an ablative-marked finite verb governs the temporal clause (82).

(81) [[hiirat-úta aass-itoontíichch] zakk-iin] (...) (<aassitoontí + ABL) translation-f.acc give-2SG.PVO.REL.ABL back-M.ICP ‘After/when you have provided a translation (…).’ (K9: 26)

(82) [ichch-óochch] m-á háshsh-ee-la? eat-3M.PVO.REL.ABL what-M.ACC want-3M.PVE-INDIGNATION ‘What (else) does he want after he has eaten!’ (with indignation)

An RC headed by the underived noun jáata ‘time’ (ACC) or jáan (LOC), the singulative noun jeechchúta ‘time’ (ACC), or the loanword saatá ‘time’ (ACC) (< Amharic sä’at) indicates that the events of the subordinate and superordinate clause are overlapping (83) or in a sequence (84). If the RV is in the imperfective aspect, a contingency relation (Kortmann 1997: 85) between subordinate and superordinate clauses is expressed (‘whenever’) (85).

(83) [[án waall-oommi] j-áata] (>waallóon-jaata) 1SG.NOM come-1SG.PVO.REL time-F.ACC íse hooshsh-ú shol-táyyoo íkke 3F.NOM lunch-M.ACC prepare-3F.PROG PST ‘When I came she was preparing lunch.’

(84) [[sú’r-u ciil-l-at il-an-tóo] umbilical.cord-M.NOM child-PL-F.NOM give.birth-PS-3F.PVO.REL j-áata] am-áachch mur-éen annann-á ass-éenno time-F.ACC mother-F.ABL cut-3HON.PCO separate-M.ACC do-3HON.IPV ‘When/after children have been born the umbilical cord is cut off from the mother.’
In most examples, the head noun *jáata* can be considered an independent word. However, optional assimilation and contraction at the boundary between the RC and the head noun are also observed (83). *Jáata* may develop into a dependent morpheme in the future.

From a cross-linguistic point of view, it is common that RCs modifying a noun ‘time’ develop into temporal adverbial clauses (see, for instance, Lehmann 1984 and Thompson and Longacre 1985). Also Kambaata’s closest relatives make use of this construction: however, instead of *jáata*, the noun *woktí* (Schneider-Blum 2007: 375) / *wak’ti* (Crass 2005: 309) is the head of the temporal clause. In Hadiyya, temporal adverbial clauses are also relative-based; the head word is *am-mane* ‘time’ in the accusative or locative case (Sim 1989: 308).

Nominalized RCs in the locative case may function as temporal clauses too. The event of the subordinate clause constitutes the temporal setting against which the event of the superordinate clause takes place. The subordinate clause expresses a continuous, the superordinate a punctiliar, event.

Subordinate clauses expressing immediate anteriority consist of an RC and a dependent, internally complex formative -gá-n(ka); see (87) and (91). The formative is probably of nominal origin and can be segmented further into the stem -g, the (primary) case/gender morpheme -a, the focus morpheme -n, and the (secondary) case/gender morpheme -ka, the latter being optional in this context.
The morpheme -g (or -g-a in its accusative and oblique case form) is poly-functional. It occurs not only in temporal clauses but also in manner (§4.6), purpose (§4.7), and complement clauses (§4.8).

4.3 Concomitance clauses

Concomitance clauses (Kortmann 1997:89), or “absolutive clauses” in the terminology of Thompson and Longacre (1985), encode accompanying circumstances. Formally, concomitance clauses are headless and nominalized (NMZ1) RCs in the accusative case. The semantic relation between the subordinate and the superordinate clause is not overtly specified but has to be inferred from the context. The events encoded in the concomitance clause and in the MC are usually interpreted as temporally and/or spatially close to each other. The event verbalized in the subordinate clause headed by yitoo’ii ‘(they) saying’ in (88) immediately precedes the event of the MC (relation of anteriority).

(88) [hoga’áann-u (…) “waayy-íi qophphan-á farmers-m.nom probably.not.be-3m.pco.crd1 lie-m.acc ih-áno” y-itoo’íi] má’n-e-n dagúd-d become-3m.ipv say-3f.pvo.rel.vv.m.acc place-f.obl-n run-3f.pco iill-itóo’u arrive-3f.pvo ‘(…) the farmers (…) said “it might not be a false alarm again” and ran to (him) immediately.’ (K4: 135)

In negative concomitance clauses, the nominalized negative RV form with the lengthened final vowel is used (Table 10).

(89) [ag-gumbúu] it-tee’u. drink-3f.nrel.vv.m.acc eat-3f.pve ‘Without drinking (anything), she ate the food.’

The concomitance clause of (90) is in focus. It is, therefore, combined with a copula, while the MC, which contains the non-focused background information, is turned into a headless nominative-marked RC (NMZ1). Note that the semantic relation between the negative concomitance clause and the MC in (90) is a relation of posteriority.

(90) [bere’-ée anka’rr-útá hiz-óo’] yesterday-f.gen last.evening-f.acc brother-m.nom-1sg.poss
In Qabeena, there is probably a similar, relative-based subordinate clause type. According to Crass (2005:309), temporal clauses may be generated by shifting the accent of a finite verb form to the rightmost syllable. As RCs are also marked by a final accent in Qabeena, one may assume that the temporal (concomitance?) clauses with final accent are actually headless RCs.

4.4 Reason clauses

Kambaata has three synonymous reason clauses, all of which are relative-based (Table 15).

(91) \[
\begin{array}{ll}
[\text{makíin-u} & \text{abbísh} \quad \text{qocc-ee-sí]-tannée}] \\
\text{car-M.NOM} & \text{exceed.3M.PCO} \\
\text{hit-3M.PVE-3M.OBJ.REL-BEC1} & \text{doctor-M.GEN} \\
\text{do.quickly-3M.PCO} & \\
\text{die-3M.PVE} & \\
\end{array}
\]

‘Because the car had hit him severely, he died immediately after he had been brought to the hospital.’

(92) \[
\begin{array}{ll}
[\text{ciil-í} & \text{iiib-u} \quad \text{bata'-ó]-bíi}] \\
\text{infant-M.GEN} & \text{fever-M.NOM} \\
\text{become.much-3M.PVO.REL-BEC2} & \\
\text{doctor-ch-ú} & \text{waashsh-isiishsh-60mm} \\
\text{come.cs1-cs2-1sg.pvo} & \\
\end{array}
\]

‘I sent someone to bring the doctor quickly, because the child’s fever had risen.’

(93) \[
\begin{array}{ll}
[\text{ku} & \text{wáas-u} \quad \text{háss-a-s}] \\
\text{ddem1.m.nom} & \text{waasa-m.nom} \\
\text{harvest.site-f.nom-3m.poss} & \\
\text{qorab-an-tumbúu-ta} & \\
\text{good-m.obl-ga-m.obl} & \text{keep-ps-3f.nrel.vv-f.acc} \\
\end{array}
\]

‘Because the harvest site was good, he kept it.’

Table 15. RC-based reason clauses

| RC headed by the nominalizer -tann-ée(ha) (DAT) | Reason clause 1 | Example (91) |
| RC headed by the formative -bíi(ha) (ACC [?]) | Reason clause 2 | Example (92) |
| RC headed by the formative -bikk-ii(ha) (DAT) | Reason clause 3 | Example (93) |
ikk-ó]-bikkii] hafúrr
become-3M.PVO.REL-BEC3 be.exposed.to.sun.and.air.and.spoil.3M.PCO
bá’-ee’u
spoil-3M.PVE

‘This waasa (product from enset pulp) was exposed to sun and air and spoiled, because the harvest (and fermentation) site was not kept well.’

The diachronic origin of the first reason clause is transparent. It consists of an RC that is governed by the feminine dative form of the nominalizer, -tann-ée (Table 9). The second formative -bíi(ha) is probably related to the nominalizer of headless genitive nouns; it is not known how -bíi(ha) came to be attached to verbs. Schneider-Blum (2007:375) interprets -bíi(ha) as the dative case form of the place nominalizer -ba in Alaaba. This interpretation does not fit in Kambaata, where the dative form of -ba is -bée(ha). The third formative -bikkii(ha) is the dative case form of the noun bikká ’size, extent, amount; capability, ability’, which encliticized to the preceding RC.

The negation test proves that the reason clauses are indeed relative-based. In negative reason clauses the morpheme -umb occurs (94).

(94) [[oonn-áta mar-úmb-o]-tannée] min-í mánn-u
mourning-F.ACC go-1SG.NREL-F.OBL-BEC1 house-M.GEN people-M.NOM
amu’rr-ée’-è
become.angry-3M.PVE-1SG.OBJ

‘My family is angry with me, because I do not go to funerals.’

While the imperfective reason clause of (94) says that the speaker habitually avoids funerals, the periphrastically negated reason clause of (95) states that the anger of the relatives is grounded in a single refusal of the speaker to attend a funeral. The use of the inherently negative hoog- ‘not do’ allows the subordinate clause to be marked for the perfective aspect.

(95) [[oonn-áta mar-ú hoogg-oomm]-tannée] min-í
mourning-F.ACC go-M.ACC not.do-1SG.PVO.REL-BEC1 house-M.GEN
mánn-u amu’rr-ée’-è
people-M.NOM become.angry-3M.PVE-1SG.OBJ

‘My family is angry because I did not go to the funeral.’

Reason clauses of a similar structure, though not with cognate markers, are found in the dialects and languages that are closely related to Kambaata. Reason clauses in Xambaaro, a dialect of Kambaata, are headed by an element daafiha (possibly daaftiha, Y.T.) (96), which seems to be the dative form of the noun daaft-á ’reason.’
Xambaaro

(96) [(mač'ooč'-u hoogg-oømmi] daaf-ìha] …
    hear-M.ACC  not.do-1SG.PVO.REL reason-M.DAT
   ‘As I didn’t hear (…).’ (Korhonen et al. 1986:104)

Reason clauses in Alaaba are marked by a formative -beecc-ìih(a), historically the
dative form of the noun beeccú ‘place’, or by a formative -b-ìih(a) (Schneider-
Blum 2007:373ff.; Korhonen et al. 1986:104), which is also the regular reason
clause marker in Qabeena (Crass 2005:312). The negation test gives a clear in-
dication that reason clauses are relative-based in Alaaba. Recall from (29) above
that negative RVs are characterized by a negative morpheme with a final vowel i,
-ba’i, whereas main verbs are negated with -bàá (see the main verb of (97)). The
typical “relative” vowel i is also found in the negative morpheme of the verb form
preceding the RC marker (97). Furthermore, the reason clause marker may be
preceded by a negative converb (98), which indicates that the reason clause is rela-
tive-based if one recalls from (30) above that RCs in Alaaba may also be negated
with a negative converb.

Alaaba

(97) [(wokt-ìin(i) ’ameec-coom-ba’i]-beecciiih(a)] ’icc-åt(i) yóó-ba’(a)
    time-M.ICP come-1SG.PVO-NEG.REL-BEC food-F.NOM cop1.3-NEG
   ‘There was no food because I did not come home in time.’
   (Schneider-Blum 2007:352)

(98) [(hayi y-eenibba]-beecciiih(a)] c’ì-út(i) bok’óll-ú finc’-ítóo
    INTJ say-3HON.NCO-BEC bird-F.NOM maize-M.ACC spread-3F.PVO
   ‘Because nobody said hayi, the birds spread the maize.’
   (Schneider-Blum 2007:353)

In Hadiyya, reason clauses are headed by a noun bikkina, the dative form of ‘side’
(cf. bikk-ìi in Kambaata). The clause preceding bikkina is said to be “structurally
similar to the relative clause” (Sim 1989:315).

4.5 Conditional clauses

Conditional clauses in Kambaata are relative-based (Table 16).

8. Note, however, that Schneider-Blum glosses -ba’i only as NEG (not as NEG.REL) in adverbial
clauses.
Although a hypothesis about the origin of the conditional marker -da cannot be proposed here, it is possible to show that the verb to which this marker is added has features of a RV. Firstly, the verb forms preceding the conditional marker show the typical accentual behavior of RVs. They are accented on the syllable preceding -da, which is the inflectional portmanteau morpheme in (99). If an object pronoun is suffixed to the right of the inflectional morpheme, the accent moves onto the last syllable of the rightmost suffix (100).

(99) \[[\text{ku } \text{bóor-u} \text{ reh-ée]-da}] \text{ wol-ú} \]
\text{ddem1.m.nom bull-m.nom die-3m.pve.rel-cond other-m.acc}
\text{hir-íi} \text{ gízz-u} \text{ yöo-nne-ba’a}
\text{buy-m.dat money-m.nom cop1-1pl.obj.neg}
\text{‘If this bull dies, we don’t have money to buy another one.’}

(100) \[[\text{ís } \text{ga”-ee-ë]-da}] \text{ án \text{da’ll-i}} \]
\text{3m.nom call-3m.pve-1sg.obj.rel-cond} \text{ 1sg.nom do.fast-1sg.pco}
\text{mar-áamm}
\text{go-1sg.ipv}
\text{‘If he calls me, I will go (to him) immediately.’}

The occurrence of the negative relative morpheme -umb is the second indication of the relative origin of the conditional verb (101). It is unknown why the initial consonant of the conditional morpheme is realized geminate after negative verbs. The initial consonant of the place morpheme -b-a (78) and the poly-functional -g-a morpheme (111) is geminated in the same context.

(101) \[[\text{ta } \text{ichch-áta xoopenh-phúmb-o]-dda}] \text{ zákk-o} \]
\text{ddem1.f.acc food-f.acc finish.mid-1sg.nrel-m.obl-cond back-m.obl}
\text{górr-u} \text{ af-áno-ë}
\text{hunger-m.nom seize-3m.ipv-1sg.obj}
\text{‘If I don’t finish this food, I will be hungry later.’}

Although Alaaba marks conditional clauses with a different morpheme, -gór(e), the occurrence of the vowel i in the negation morpheme of conditional verbs substantiates my claim that most adverbial clauses in Alaaba are of the same structure as in Kambaata (102). Conditional verbs may be negated by negative converses as well (103).
4.6 Manner clauses

Manner clauses are often headed by converses (e.g. *da'll-éen* 3HON.PCO mar- ‘go quickly’) or instrumental infinitives (e.g. *fanqalaans-éen* 3HON.PCO akeek-in ICP woyyis- ‘improve (something) by trying again and again’). However, RCs headed by a dependent, case-inflecting morpheme -g-a may also encode the manner in which an action is conducted; see (104)–(105).

(104) ku wosh-íchch-u [[cíi'-at búrr y-itáa]-g-a] ddem1.m.nom dogs-sg.m.nom birds-f.nom fly say-3f.IPV.REL-GA-M.OBL dagud-áno-a. run-3m.IPV.REL-M.COP2
‘This dog runs like birds fly (i.e., his feet hardly touch the ground when he is running).’

(105) [[y-éé]-g-a-n] ass-éemma-s say-3m.PVE.REL-GA-M.OBL-N dö-3HON.PVE-3M.OBJ
‘S/he (HON) did (it) as he said.’

The morpheme -g-a marks various subordinate clauses. In §4.2 it occurs as a marker of temporal clauses expressing a relation of immediate anteriority to the main clause. In the following sections, it is shown to mark purpose and complement clauses. Besides this, -g-a is a simulative and accord marker on nouns (‘like, such as, according to’; see, for instance, *denekk-á-g-a* ‘like potatoes’ in (60) and *wog-i-g-a* ‘according to the tradition’ in (80)) and an adverbializer on adjectives (*danaam-ú* ‘good’ → *danáam-o-g-a* ‘well’ in (93)). All these functions are related, but a detailed historical explanation for this poly-functionality has to be relegated to future studies. We are left here with the problem of interlinearization. In order not to obscure the poly-functionality of the morpheme, all instances of -g-a are glossed herein as GA.

The -g-a morpheme inflects for case. It distinguishes all the case forms of a Kambaata noun (see, for instance, the dative case form -g-ú in purpose clauses.
(§4.7)) and may, therefore, be assumed to be of nominal origin. A possible diachronic source noun of the -g-a morpheme (hypothetically *g-a) could not yet be determined.

4.7 Purpose clauses

Purpose clauses in the affirmative are rarely relative-based (106) but usually have a dative-marked infinitive head (e.g. alaphph-íi *(in order to) play*) or a purposive verb form (e.g. alaphph-óta *so that he (ss) plays*, aláphph-unta *so that he (ds) plays*). In contrast to a dative-marked infinitive or a purposive verb, a purpose clause based on an RC allows the encoding of different verbal aspects. The RC is governed by the dative case form of the morpheme -g-a, which is -g-ii(ha).

(106) [[alaphph-anó]-g-ii] (~alaphph-íi) oos-úta hegeeg-íichch play-3.M.IPV.REL-GA-M.DAT (play-M.DAT) children-F.ACC area-M.ABL ga'-éé'u
call-3.M.PVE

‘He called the children of the neighborhood to play.’

In the negation, the -umb morpheme occurs (107).

(107) [[farr-áta roshsh-átá áf-f le'-úmb-ua]-gg-ii]
kabar-éechchi-n ke'-ís-s qoràphph-u
today-M.ABL-N get.up-CS1-2.SG.PCO take.care-M.NOM
hasis-áno-kke
be.necessary-3.M.IPV-2.SG.OBJ

‘You have to start from today on to take care not to develop bad habits.’

(K4: 19)

Likewise, negative purpose clauses are based on negative RCs in Alaaba (108).

---

9. The distinction between accusative and oblique is neutralized in the case paradigm of -g-a (this syncretism is also attested in some nominal declensions). Accusative and oblique are both encoded by the vowel -a. Therefore, it is often unclear which case gloss should be assigned to this morpheme in the examples. Sometimes, the case of -g-a can inferred from its modifiers; see example (111), in which the oblique-marked negative RV gives a clear indication that the head -g-a is encoded in a non-nominative/non-accusative case. In contrast, the occurrence of the secondary case/gender morpheme -ha (realized as ka after n) on the subordinate clause with -g-a in (91) is a sign of the accusative case. Wherever this latter indicator is missing -g-a is glossed as obl.
Alaaba

(108) zoob-eecc-i 'am-át(i), (…) [[fook'-áan(i) lion-sg-m.gen mother-f.nom bottom-f.icp
ful-anó-ba'í]-g(a)] (…) fook'-á-s(i) gob-bóo leave-3m.ipv-neg.rel-ga bottom-f.acc-3m.poss sew-3f.pvo
‘The mother of the lion (…) sewed his anus so that he (the rat) cannot pass through the anus.’ (Schneider-Blum 2007:383)

4.8 Complement clauses

Kambaata has three types of complement clauses, two of which are relative-based. In the most common type of complement clause, the non-relative based complement clause is headed by an infinitive verb in the accusative case (109).

(109) beré Duuraam-ítawaal-ú-s maccoocc-éemm yesterday D.-f.acc come-m.acc-3m.poss hear-1sg.pve
‘I heard that he came to Duuraame yesterday (lit. “I heard his coming.”).’

Attaching the morpheme -g-a to an RC is the second most common way to generate complement clauses. Moreover, nominalized and accusative-marked headless RCs may serve as complements.

In (110), an affirmative complement clause is dependent on the matrix verb dag-áamm. The clause headed by -g-a contains a converb clause (headed by xúudd) and a chunk of direct speech.

(110) [[daddaabb-ée al-éen su'mm-á-’ letter-f.gen top-m.loc name-m.acc-1sg.poss look-2sg.pco
y-itaante-[é]-g-a] dag-áamm say-2sg.ipv-1sg.obj.rel-ga-m.obl know-1sg.ipv
‘I know that you will see my name on the letter and then say to me, “Who is this Bajigo?”’ (K8: 21)

Negative complement clauses are based on negative RVs with the morpheme -umb (111).

Table 17. RC-based complement clauses

<table>
<thead>
<tr>
<th>RC headed by the morpheme -g-a</th>
<th>Complement clause</th>
<th>Example (110)–(111)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominalized (nmz1) RC in the accusative case</td>
<td>Complement clause</td>
<td>Example (112)–(113)</td>
</tr>
</tbody>
</table>
(111) [[oonn-áta mar-eenúmb-o]-gg-a] kul-éemma-è mourning-F.ACC go-3HON.NREL-M.OBL-GA-M.OBL tell-3HON.PVE-1SG.OBJ ‘S/he (HON) told me that s/he (HON) would not go to the funeral.’

As the third type of complement clause is nothing but a headless RC in the accusative case, Kambaata does not formally distinguish, for instance, between ‘I heard what he said’ and ‘I heard that he said (something).’ The headless RC can be interpreted as referring to the content of saying or to the act of saying. In example (112), the content of telling should be believed; in example (113) the act of being happy should be thought about.

(112) (...) [[án kul-aan-ki’nnée] ammánn-u 1SG.NOM tell-1SG.IPV-2PL.OBJ.REL.VV.M.ACC believe-M.NOM

hasis-áno-’nne be.necessary-3M.IPV-2PL.OBJ

‘(...) you should believe what I tell to you.’ (K4: 45)

(113) [[Makkis-ó ann-uhúu am-atii Makkis-u M.-M.GEN father-M.NOM.CRD1 mother-F.NOM.CRD1 M.-M.NOM
dist-íta wez-íin-ta-s bajig-gaa’íi] pot-F.ACC produce-M.ICP-L-3M.Poss become.happy-3F.IPV.REL.VV.M.ACC

agud-áno-he-ndo?

seem-3M.IPV-2SG.OBJ-Q

‘Do you think that Makkiso’s father and mother were happy about the production of the pot?’ (K4: 61)

5. Conclusion

This paper gives an overview of relativization in Kambaata. Noteworthy features will be highlighted in this final section.

The morphology and morpho-syntax of RVs and other modifiers (especially adjectives and genitive nouns) were compared in Section 2. The major difference between affirmative RVs and non-relative main verbs is suprasegmental in nature: while main verbs carry an accent on a non-final syllable, affirmative RVs are accented on the rightmost syllable. Negative RVs are marked by a morpheme -umb, which is a unique morpheme of Kambaata (including its dialect Xambaaro), because it is not attested in Alaaba and Qabeena, the languages most closely related to Kambaata. Affirmative RVs have been shown to share features with genitive nouns, namely, the accent pattern and the inability to agree with the head noun. In contrast, negative RVs are adjective-like and able to agree in case and gen-
der with their head noun. Their case and gender suffixes are identical to those of adjectives. All RCs have to be nominalized before they may be used as phrasal heads, apart from negative RCs in the accusative and nominative case, which may function as heads without being subjected to further operations. This means that as phrasal heads, negative RCs also behave to some extent like adjectives.

As shown in Section 3, all positions of the Comrie and Keenan accessibility hierarchy may be relativized in Kambaata although the language has no relative pronouns. The co-referent of the head noun in the RC is not overtly expressed (gap strategy), unless it is the possessor, in which case a pronoun is retained on the possessed NP (pronoun retention strategy).

It is the preponderance of relative clauses which makes Kambaata a language that deserves closer scrutiny. If the term “conjunction” is understood in the traditional sense as referring to a free-standing, morphologically invariant connector of words, phrases, and sentences, then Kambaata has only two coordinating conjunctions, namely, the disjunctive word, phrase, and sentence connector té ‘or’ and the adversative sentence connector bagáan ‘but’. There is no conjunction ‘and’. Instead, phrasal heads are marked as coordinate through accentual change and final vowel lengthening; see, for instance, am-áta ‘mother, beet-úta ‘daughter’ > am-atáa beet-utáa ‘mother and daughter’ and the coordinate SS-purposive daqq-am-óta ‘(in order) to meet you’ and xuud-óta ‘(in order to) see you’ in (114). Modifiers of various types are conjoined with -na (see (32) and (34)).

(114) daqq-am-óhetáa xuud-óhetáa
   find,mid-PS-1SG.PURP<2SG.OBJ>.CRD1 see-1SG.PURP<2SG.OBJ>.CRD1
   Aayichch-é xa’am-ú’nn fa’a-ammi j-áat yóo-ba’a Mum-f.ACC ask-1SG.NCO remain-1SG.IPV.REL time-F.NOM COP1.3-NEG
   ‘I always asked Mum to meet and see you.’ (K8: 22)

Subordinate conjunctions are entirely absent. Subordinate clauses are instead marked by special subordinate verb forms (converbs, purposive verbs, and infinitives) or they are based on relative clauses governed by a (historically) (pro)nominal and case-inflecting formative or on headless relative clauses that are nominalized. Given the small number of true conjunctions, they constitute an entirely insignificant word class in Kambaata.

The relative accent pattern and the occurrence of the morpheme -umb in the negation prove which subordinate clauses are relative-based. Examples (115) and (116) provide evidence that the clause-final accent in the constructions discussed in Section 4 is indeed a sign of relativization and not just a sign of a non-final (medial) clause in a complex sentence. The boundary of non-relative clauses is not marked by a final accent. The conjunction bagáan ‘but’ follows clauses headed by a non-relativized main verb (115). Embedded interrogative clauses are marked
by a suffix -ndo, which attaches to non-relativized main verb forms. Take note of the starred forms with final accents.

(115) Aayíchch “daqq-an-teenánta” y-itáa-’é
   Mum.f.nom find.mid-2sg.pvo say-3f.pvo-1sg.obj
   (*y-itaa-’é) bagáan kú’n daqq-am-mu’nnáan kabar-éé
   say-3f.pvo-1sg.obj.rel but intj find.mid-ps-1pl.nco today-m.acc
   iill-inéemm
   reach-1pl.pve
   ‘Aayicce used to say to me “you will meet [one day]”, but, see! we have not yet met.’ (K8: 22)

(116) m-íi waal-ú hoog-góonti-ndo (*hoog-goonti-ndo)
   what-m.dat come-m.acc not.do-2sg.pvo-q not.do-2sg.pvo-rel-q
   dag-im-bá’a
   know-1sg.nipv-NEG
   I don’t know why you didn’t come.

The lack of differentiation between adverbial and complement clauses characterizes Kambaata’s syntax. In the same way as direct objects and (part of the) adverbiaal NPs lack formal differentiation (they are encoded in the accusative case; Treis 2006), complement and adverbial clauses may be formally completely identical, namely, based on an RV headed by -g-a, a case-inflecting formative. The separate treatment of relative, adverbial, and complement clauses follows the organization of syntax books, but is, admittedly, not a reasonable division of sections for a paper on Kambaata syntax.

Abbreviations

<table>
<thead>
<tr>
<th></th>
<th>first person</th>
<th>COP1 locative copula</th>
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<tbody>
<tr>
<td>2</td>
<td>second person</td>
<td>COP2 -ha / -ta-copula</td>
</tr>
<tr>
<td>3</td>
<td>third person</td>
<td>COP3 -t-copula</td>
</tr>
<tr>
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<td>ablative</td>
<td>CRD1 coordination with vv</td>
</tr>
<tr>
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<td>accusative</td>
<td>CRD2 coordination with -na</td>
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<td>aspect</td>
<td>CS2 double causative</td>
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<td>reason clause with -bi(ha)</td>
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<td>BEC3</td>
<td>reason clause with -bikkíi(ha)</td>
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</tr>
<tr>
<td>COND</td>
<td>conditional clause</td>
<td>F feminine</td>
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<tr>
<td>GA</td>
<td>poly-functional marker of subordinate clauses; adverbalizer on adjectives; simulative and accord morpheme on nouns</td>
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<td>nominative</td>
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<td>negative relative</td>
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<td>GEN</td>
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<tr>
<td>HON</td>
<td>honorific; impersonal</td>
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<td>ICO</td>
<td>imperfective converb</td>
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<tr>
<td>OBL</td>
<td>oblique case</td>
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<tr>
<td>PCO</td>
<td>perfective converb</td>
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</tr>
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<td>plural/plurative</td>
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<tr>
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<td>past tense and irrealis marker</td>
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<td>purposive (ss)</td>
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<td>PVE</td>
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<td>PVO</td>
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<td>Q</td>
<td>question marker</td>
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</tr>
<tr>
<td>RA</td>
<td>plural nominalizer</td>
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<td>REL</td>
<td>relativization</td>
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<tr>
<td>SBJ</td>
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<td></td>
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<tr>
<td>SG</td>
<td>singular/singulative</td>
<td></td>
</tr>
<tr>
<td>SS</td>
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<td></td>
</tr>
<tr>
<td>UNTA</td>
<td>purposive (ds)</td>
<td></td>
</tr>
<tr>
<td>VV</td>
<td>vowel lengthening</td>
<td></td>
</tr>
</tbody>
</table>

References


Between coordination and subordination in Gawwada

Mauro Tosco
University of Naples “L’Orientale”

Gawwada, an East Cushitic language of the Dullay group spoken in Southwest Ethiopia, is a rather typical Cushitic language as far as the sentence and phrasal word order are concerned: SOV and Head-Modifier orders are followed. It is however radically different from the neighboring languages in its clause-linking strategies: for one thing, relative clauses are rather sparingly used; moreover, clefting is unknown, and there are no specific subordinate verbal paradigms. Gawwada makes extensive use of a general coordinator =pa in order to link nominals, phrases and clauses, as well as a subset of the adpositions which are used in nominal phrases. Moreover, a specific inflectional form of the verb, the Consecutive, is used in certain circumstances in the non-initial clauses. It turns out to be quite difficult to decide whether the clause-linking mechanisms of Gawwada are instances of coordination, subordination, or yet something else.

1. The language and its speakers

Gawwada (/kawwada/, [gaw:áːda]) is a dialect of the Dullay cluster (East Cushitic) and is spoken in Southwest Ethiopia. According to current classification, Dullay is

1. The Gawwada data were collected in Arba Minch and in Gawwada town in various periods of fieldwork starting in 2000. I gratefully acknowledge the financial support of the Università di Napoli “L’Orientale” for funding my research, and the assistance of the Institute of Ethiopian Studies at Addis Ababa University for permission to carry on fieldwork in Ethiopia. A preliminary version of this paper was presented at the 2nd Conference on the Syntax of the World’s Languages (SWL 2), Lancaster University, Lancaster (United Kingdom), 14–17 September 2006.

2. Voice opposition is not phonological for plain stops, and voiceless /p, t, k/ are used throughout in the transcription. This is an areal feature encompassing Dullay, Konso and possibly other varieties, as shown by Sasse (1986). The transcription is phonological and follows the I.P.A. conventions, except for /s/ = IPA /ʃ/, and /y/ = IPA /j/.
a direct offspring of East Cushitic, although Hayward (1978) has substantiated a proposal originally made by Ehret (1974, 1976), according to which, within East Cushitic, Dullay forms a genetic subgrouping with the isolated (and nowadays extinct or nearly so) Yaaku language of the Mount Kenya area. In Tosco (2000) I generally accepted Hayward’s arguments and proposed to call the group made up by Dullay and Yaaku “Transversal Southern Lowland East Cushitic”.

The Dullay-speaking peoples have no common ethnonym or a common name for their language. The denomination “Dullay” (introduced by Amborn, Minker and Sasse 1980) – actually the local name of the river known in Amharic as Weyt’o – has replaced other terms, such as “Werizoid” (Bender 1971; Black 1976) and “Qawko” (Hayward 1978) in scientific literature. None of these denominations bears any meaning as an ethnonym to the speakers themselves.

“Gawwada” has recently been introduced in Ethiopia as a cover term for all the Dullay-speaking groups except the Ts’amakko (who live on the western bank of the Weyt’o river); in this article “Gawwada” will be used instead for the dialect spoken in and around the village of Gawwada, approximately 40 km (one hour’s drive) westwards of Konso and to the North of the road leading to Jinka and the Omo valley.

Within Dullay one may easily distinguish a Western and an Eastern group of dialects; the former is basically made up of Ts’amakko and Gawwada and, geographically, spans the two banks of the Weyt’o river; the Eastern dialects occupy the highlands to the East and North of Gawwada; Harso, Dobaze, and the other dialects studied in Amborn, Minker, and Sasse (1980) are representative of the Eastern group. Mutual intelligibility between the Eastern and Western group is high, and Dullay may probably be regarded as a dialect chain; Gawwada speakers have no trouble speaking with Ts’amakko speakers, while they claim to have some problems understanding the Eastern varieties.

According to the 1994 Ethiopian Census there were approximately 42,000 speakers of Dullay varieties.

The Dullay varieties are not endangered. Bilingualism and multilingualism involve Konso and other Konsoid varieties, Amharic, and possibly Oromo. The Dullay dialects are not written.

2. Basics on word order and adpositions in Gawwada

As elsewhere in East Cushitic, the sentential word order of Gawwada is SOV; in contrast to other languages, where nominals can sometimes be found in postverbal position and cleft structures are common, in Gawwada the ultimate position
of the verb is strictly adhered to. In the basic syntactic configuration the subject is
represented before the verbal form by a subject clitic:

(1) \[ \text{[pu\(\text{da}\)]_Subject \ [uruure]_Object \ [i=erak-\(i\)]_Verb} \]
\hspace{1em} \begin{array}{ll}
\text{hyena.man} & \text{wind} \\
\text{3.SUBJ=send-PF.3M} \\
\end{array}
\hspace{1em} \text{‘the hyena man sent onwards the wind’ (from the folktale “The Hyena Man”)}

As typical in many East Cushitic languages, the phrasal word order is basically
Head-Modifier: a nominal head may be followed by an “adjective”\(5\) (2); a numeral
(3); a possessive (4); another noun in a genitival construction (5); an apposition
(6); or a relative clause (7):

(2) \begin{array}{ll}
aake & \text{hiib-}\text{a} \\
animals & \text{other-M} \\
\end{array}
\hspace{1em} \text{‘the other animals’}

(3) \begin{array}{ll}
talte & \text{to?otte} \\
goat & \text{one.F} \\
\end{array}
\hspace{1em} \text{‘one goat’}

(4) \begin{array}{ll}
talte & \text{t-ayyu} \\
goat & \text{f-my} \\
\end{array}
\hspace{1em} \text{‘my goat’}

---

3. Gawwada is a pitch-accent language. The position of the accent is often phonological on the
verbal forms and on the adjectives (probably a subclass of the former; cf. Note 5), where it will
be marked by an acute accent, but not on nominals, where it will be left unmarked.

4. The following abbreviations are used in the glosses:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAUS</td>
<td>Causative</td>
</tr>
<tr>
<td>IMPV</td>
<td>Imperative</td>
</tr>
<tr>
<td>PF</td>
<td>Perfective</td>
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<td>Connector</td>
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<td>JUSS</td>
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<td>PASS</td>
<td>Passive</td>
</tr>
<tr>
<td>3</td>
<td>Third person</td>
</tr>
</tbody>
</table>

5. Very possibly a subgroup of verbs, although displaying a partially different morphology
and syntax.
(5) *karo minn-ete*
direction house-LOC.P
‘the direction of home’

(6) *k’awe kilaaša*
gun AK-47
‘a Kalashnikov AK-47 gun’

(7) *kere appa=pa yaayo ye=teeh-eni*
headrest father=LINK mother me=give-PF.3P
‘the headrest father and mother gave me’ (from a riddle)

Adpositions may follow an NP as postpositions:

(8) *piye=ma i=pu-3-i*
ground=sit 3.SUBJ=fall-PF.3M
‘he fell to the ground’ (from the folktale “The Elephant and the Frog”)

More commonly, adpositions are separated from the noun phrase and inserted immediately before the verbal form. If subject and/or object clitics are present, the adposition(s) are located between the pronominal clitics and the verbal form, forming what we shall call the “verbal group”. There is no object clitic of the third person; adpositional phrases with a third-person pronominal object are represented before the verbal form by a bare adposition:

(9) *salawho i=nu=ma-l-i=pa*
elder.brother 3.SUBJ=DIR=trick-PF.3M=LINK
‘the elder brother played a trick on him and...’ (from the folktale “The Hyena Man”)

Sequences of two adpositions are not uncommon within the verbal group:

(10) *karatt-akko kawwatto i=na=ma=dōs-os-i*
squirrel-sing.m stone wall 3.SUBJ=PART=sit=fall-CAUS-PF.3M
‘the Squirrel made a stone wall fall upon him (: the Dove)’ (from the folktale “The Francolin and the Squirrel”)

3. The adpositions in their phrasal context

3.1 The Locative case

Gawwada has one affixal Locative case (**LOC**), expressing both state and movement, also having genitive value (in Tosco 2006 and 2007 a I have assumed that the genitive value is a derived one, following a well-known grammaticalization
path; cf. Heine 1997). As with other affixes, nouns lose their final vowel in the affixation of the case, which has the following gender-sensitive case forms:

- *ito* with Masculine nouns; e.g.: *karmo* ‘lion’, *karm-ito* ‘lion-LOC.M’
- *atte* with Feminine nouns; e.g.: *kolle* ‘river’, *koll-atte* ‘river-LOC.F’
- *ete* with Plural Nouns; e.g.: *aake* ‘animals’, *aak-ete* ‘animals-LOC.P’
- *y* with a subset of proper names and the numerals; e.g.: *naʔo* (a male name), *naʔo-ʔy* ‘N.-LOC’

The locational and genitive value respectively (the latter already seen in (5) above) of LOC may be seen in (11) and (12):

(11) *minn-ete* i=sor-ti  
    house-LOC.P 3.SUBJ=run-pf.3F  
    ‘she ran to the house’ (*minne* ‘house’ is morphologically plural)

(12) *pako*  karm-ito  
    mouth  lion-LOC.M  
    ‘the lion’s mouth’

### 3.2 The Situative adposition =*ma*

Apart from the Locative case, other adpositional relations are expressed through clitic adpositions or “relational nouns”. The latter are nouns expressing such meanings as, e.g., “side”, “top”, “external location”, and the like, which act as heads of genitival constructions with nouns in the locative case. In what follows two adpositions only will be detailed.

The adposition =*ma* (glossed SIT for “Situative”) is used in expressions of movement (13) as well as for states (14):

(13) *ano moore=*ma  an=ášš-i  
    I  market=SIT 1.SUBJ=go-pf.1s  
    ‘I went to the market’

(14) *šeette  t-ayyu piye=*ma  šakkat-ti-ti  
    girl  F-my  ground=SIT  sit-MID-pf.3F  
    ‘my girl sits on the ground’ (from a riddle)

---

As shown in Tosco (2007), the difference between LOC and SIT can be analyzed in terms of “closed” vs. “open” location, or of “point” vs. “area”. With an open space (like the ground in (8) and (14) or the market in (13) as state or direction, the adposition =ma is the only possibility. The same holds true with an ethnic group:

(15)  ano  ṭ'amakko=ma  an=āšš-i
     I   Ts.=sIT  1.subj=go-pF.1s
     ‘I went to the ṭsamakko country/to the ṭsamakkos’

In contrast, where contact with a point is implied, the LOC case will be found; e.g.:

(16)  koll-atte  ṣande  an=meeq-i
      river-LOC.F  water  1.subj=fetch-pF.1s
      ‘I fetched water at the river’

vs. the ungrammatical:

(16’)*kolle=ma  ṣande  an=meeq-i
       river=sIT  water  1.subj=fetch-pF.1s

(16’) is impossible because one must be at the river (not in the general direction or in the area of the river) in order to fetch water.

In still other cases both LOC and SIT are possible, with slightly different meanings; let us consider (11), repeated here below, and (17):

(11)  minn-ete  i=sor-ti
      house-LOC.P  3.subj=run-pF.3f
      ‘she ran to the house’

(17)  minne=ma  i=sor-ti
      house=sIT  3.subj=run-pF.3f
      ‘she ran to the house’

Again, in (11) the house is a point, a specific destination towards which one runs; in (17) it is an area, and the sentence is probably better translated as ‘she ran home’.

3.3 The Partitive adposition =na

The adposition =na (PART) is basically partitive:

(18)  leʔe  xayyu=na  toʔokko  i=far-i
      cows  P.my=PART  one.M  3.subj=die-pF.3M
      ‘one of my cows died’
(19) *lokko an=na=lik-n-i*
   slowly 1.SUBJ=PART=come.out-FUT-PF.1S=LINK
   ‘I’ll slowly come out (of it)’ (from the folktale “The Elephant and the Frog”)

(20) *na=súk*
   PART=drink.IMPV.S
   ‘drink (a part, some) of it!’

4. From the phrase to the clause

As previously stated, the clause is verb-final in Gawwada, and this order is quite strictly adhered to. Gawwada does not use clefts (Tosco forthcoming), in contrast to languages of the area (cf. Appleyard 1989 for clefts as an Ethiopian areal feature); nor does Gawwada have converbs, which are again quite common in Ethiopia.

Moreover, and different from most Cushitic languages, Gawwada does not have any Dependent or Relative paradigm: the “Subordinativ” described by Amborn, Minker and Sasse (1980) for the Eastern varieties of Dullay is unknown in Gawwada (as well as in Ts’amakko; Savà 2005). In Gawwada relative clauses make use of the same paradigms found in main clauses; if the head of the relative clause is the same as that of the main clause, no subject clitic is found on the verb of the relative (21). An object relative clause may be marked as such by a clitic determinative (22):

(21) *kere appa=pa yaaye ye=teeh-eni i=pu^±-e*
   headrest father=LINK mother me=give-PF.3P 3.SUBJ=fall-PF.3P
   ‘the headrest father and mother gave me fell ...’ (from a riddle; *kere* ‘headrest’ is morphologically plural; cf. (7) above)

(22) *haydo ato ar-tí=sa ap=pu^±-tí*
   place you.s know-IMPF.NEG.2S=DEF 2.SUBJ=fall-PF-2S
   ‘The place you do not know you are bound to fall into’ (a proverb)

In order to link clauses together, Gawwada makes extensive use of phrasal elements, such as a coordinator and various adpositions. Moreover, a specific paradigm, the Consecutive, is found, although this is very different in nature from a typical “dependent”. The following sections will explore these various clause-linking mechanisms.
4.1 Juxtaposition

The simplest clause-linking mechanism is asyndesis, i.e., juxtaposition. With “a” and “b” standing for the first and second clause respectively, this strategy may be represented as

\[ a_{\text{Ø}} b_{\text{Ø}} \]

This strategy has a low frequency textually, and it is generally restricted to short clauses (minimally, bare verbal forms), in which juxtaposition iconically represents the temporal sequence of actions which follow each other:

(23) \[ \text{gap-i / piye 'ákkad-i / gap-i /} \]
\[ \text{fall.down-PF.3M / ground sit-PF.3M / fall.down-PF.3M} \]
\[ \text{i=qişad-a / i=koror-a} \]
\[ \text{3.SUBJ=sneeze-IMPF.3M / 3.SUBJ=bellow-IMPF.3M} \]

‘(the Elephant) falls down, lies on the ground, falls down; he sneezes, he bel lows’ (from the folktale “The Elephant and the Frog”)

4.2 Bare coordination: \( a_{\text{pa}}, b_{\text{Ø}} \)

Apart from juxtaposition, all the other linking strategies involve some kind of marking, which is always realized clause finally, i.e., on the verbal form.

Next to juxtaposition, the simplest marking is represented by the use of the coordinating element =pa (link) on the first clause and no marking on the second one:

(24) \[ \text{ášša=pa hól} \]
\[ \text{go.IMPV.S=LINK return.IMPV.S} \]

‘go and come back!’ (i.e., ‘go, reach your goal, come back’)

(25) \[ \text{šand-ete kitta-tte an=šak-i=pa lokko} \]
\[ \text{water-LOC.P within-LOC.F 1.SUBJ=be.there-PF.1S=LINK slowly} \]
\[ \text{an=na=lik-n-i} \]
\[ \text{1.SUBJ=PART=come.out-FUT-PF.1S=LINK} \]

‘I stay in the water and I’ll slowly come out (of it)’ (from the folktale “The Elephant and the Frog”)

With this strategy the clauses are not logically related: they follow each other temporally, but remain otherwise disjoined. The strategy may be represented as

\[ a_{\text{pa}}, b_{\text{Ø}} \]
and is a simple extension to clauses of the use of =pa as a phrase-linking element, as seen in (7) above and in (26) below:

(26) pako to?okko=pa qaame lakki=kka an=šeek-i
    mouth one.m=LINK ears two=EMPH 1.SUBJ=get-PF.1s
    ‘I got a mouth and two ears’ (from a riddle)

In other words, using Haspelmath’s (2004) terminology, =pa is a monosyndetic coordinator – i.e., it is affixed to only one of the two coordinated phrases (or coordinands). It is also a postpositive coordinator, i.e., it follows the coordinand. Moreover, and contrary to a widespread tendency in Africa to use different elements in nominal and verbal coordination (Haspelmath 2004:10), the same element is used in Gawwada for both.

### 4.3 Introducing the Consecutive paradigm

In Gawwada, there is only one inflectional form of the verb which is limited to non-main clauses. For reasons which will become evident below, I call it Consecutive (cons). Table 1 shows two typical Consecutive paradigms alongside a Perfective paradigm.

Not only is the Consecutive inflected for the person of the subject, but also in one of the two verbal classes of Gawwada the paradigm of the Consecutive is maximally different, i.e., each of the seven possible forms is represented by a different affix. The Perfective and most other paradigms (the Consecutive of the verbs of Class 2 included) follow the typical Cushitic “interlocking pattern”, whereby the persons of the Singular are paired two by two, the first Singular and the third Singular Masculine being expressed by one and the same affix, and the second Singular and the third Singular Feminine by another.

<table>
<thead>
<tr>
<th>Perfective, Class 1</th>
<th>Consecutive, Class 1</th>
<th>Consecutive, Class 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘to drink’</td>
<td>‘to run’</td>
<td>‘to go’</td>
</tr>
<tr>
<td>1s 5uk-i</td>
<td>sor-á</td>
<td>ašš-ó</td>
</tr>
<tr>
<td>2s 5uk-ti</td>
<td>sor-áy</td>
<td>ašš-áy</td>
</tr>
<tr>
<td>3m 5uk-i</td>
<td>sor-á</td>
<td>ašš-ó</td>
</tr>
<tr>
<td>3f 5uk-ti</td>
<td>sor-í</td>
<td>ašš-óy</td>
</tr>
<tr>
<td>1p 5uk-ne</td>
<td>sor-áni</td>
<td>ašš-inóni</td>
</tr>
<tr>
<td>2p 5uk-te</td>
<td>sor-ánku</td>
<td>ašš-itónku</td>
</tr>
<tr>
<td>3p 5uk-e</td>
<td>sor-áńki</td>
<td>ašš-ónki</td>
</tr>
</tbody>
</table>
The Consecutive never appears in a sentence consisting of a single clause:

\*a_{cons}

Moreover, the Consecutive is restricted to non-initial clauses: in a sequence of clauses it may only be found in the second and in any following clause; as to the verbal form of the first clause, it can be unmarked \((a_0)\) or marked \((a_x)\):

\[ a_{(0, x)} ; b_{cons(,...n_{cons})} \]

Marking on the “a” clause is obtained either with the coordinator \(=pa\) or one of the nominal adpositions discussed in Section 3 above, and which are cliticized to the last element of the “a” clause, i.e., the verbal form. Although the analysis will be restricted to the Partitive \(=na\) and the Situative \(=ma\), the clausal use of the postposition is possible with other adpositions too, such as the Directive \(=nu\) (cf. (9), (19), (29)) and the Instrumental \(=tta\).

We arrive here at an apparent paradox: which, if any, is the main and which is the dependent clause? The presence of an adposition in “a” seems to exclude its status as the main clause and to require an analysis in terms of being dependent upon another, following, clause; but if the verb of “b” is in the Consecutive, then “b” is a dependent clause, because the Consecutive is excluded from main, independent, clauses. Moreover, the use of an adposition after “a” follows syntactically (and even morphophonologically; cf. Note 7) the same pattern of the coordinator \(=pa\). But again, if \(=pa\) is a coordinator, how could the following clause be marked by a special paradigm, the Consecutive?

However, it will soon become apparent that the Consecutive is not a dependent paradigm, and that it adds specific semantic values to the whole sentence. To discover the semantics of the Consecutive and of the adpositions in their clausal use (with the accompanying, at times unexpected, semantic shifts) will be the task of the following sections.

### 4.4 Almost a juxtaposition: \(a_0, b_{cons}\)

The use of the Consecutive after an unmarked clause is, as was the case for the bare juxtaposition \((a_{pa}, b_0)\), textually rare:

(27) \(\text{ášša} \quad šooh-\text{ḍy} \quad \text{go.impvs} \quad \text{piss-cons.2s} \quad '\text{go (S) to piss!}'\)
It is evident that the Consecutive paradigm takes on the illocutionary value of the verb of the preceding clause: in (27) the Consecutive-marked clause is imperative, in (28) it is declarative and future, and in (29) declarative and perfective. We can also discern here the semantic value imparted by the Consecutive: the completion of “a”, the first clause, is necessary in order for “b”, the Consecutive-marked clause, to be true: (27) means ‘go to piss!’ not ‘go and piss!’; (28) and (29) are better translated ‘I’ll go to drink water’, and ‘they went to tell the Elephant’, respectively, and so on.

4.5 Coordination with a twist: \( a_{pa} , b_{cons} \)

As anticipated, the main problem upon deciding whether we are dealing in Gawwada with a coordinating or a subordinating strategy comes from the use of the Consecutive paradigm after the coordinating element \( =pa \) or an adposition. The use of the Consecutive after a \( =pa \)-marked clause, i.e.

\[
  a_{pa} b_{cons} (, \ldots n_{cons})
\]

is the most common structure textually. A few examples are seen in:

(30) \( wÅddÅi=pa \) yela isqaye pok-k-ad-óy
    come.over.IMPV.S=LINK me.LOC lice kill-SEM-MID-CONS.2s
    ‘come here (S) and kill my lice!’ (from the folktale “The Donkey and the Oxpecker”)

(31) \( okaayâ=ppa \) haayu=sa bad-å-am-ånku
    come.IMPV.P=LINK m.miy=DEF hide-SEM-PASS-CONS.2P
    ‘come (P) and hide by me!’ (from the folktale “The Francolin and the Squirrel”)

(32) \( kaarko saappe=ma i=hadd-i=pa \) yela ixxe=ma
    tree above=SIT 3.SUBJ=climb-PF.3M=LINK me.LOC eyes=sit
ye sor-as-ú
shit-cons.3M=\text{LINK} \text{ me } run-caus-cons.3M
‘(the Monkey) climbed upon a tree, shat me in the eyes and made me run away’ (from the folktale “The Lion and the Monkey”)

Confirming again that the Consecutive-marked clause has the same illocutionary value as the preceding clause, we find in (30) and (31) that the second clause is semantically imperative, while in (32) it is declarative and perfective. Likewise, the second clause in (33) is semantically negative:

\begin{equation}
(33) \quad \text{ato } ha^c-ú=\text{ppa } ašš-óy
\end{equation}
\begin{itemize}
\item you.s get.up-Pf.neg.s=\text{LINK} go-cons.2s
\end{itemize}
‘you did not get up and (you did not) go’ (elicited sentence)

It is apparent again that the semantic contribution of the Consecutive to the whole sentence is the framing of the clause as the logical consequence, or the goal, of the preceding one. In (34) the Frog swims close to the Elephant in order to enter and kill him “from within”:

\begin{equation}
(34) \quad \text{muku}^c-\text{itte lokko } šändë iťëñh i=na=taaĥ-ti=\text{pa} \quad \text{sinde}
ofrog-sing.f slowly water near 3.subj=part=swim-pf.3f=\text{LINK} nose
\end{equation}
\begin{itemize}
\item īla=na \text{ hul-i}=\text{ppa} \quad ašš-ú \quad \text{kutah } n \text{ oon-ito}
\end{itemize}
‘the Frog slowly swam close to him (: the Elephant), went up into him, and made it deep up into his brain’ (from the folktale “The Elephant and the Frog”)

The opposition between two logically independent clauses, both marked by main verbal forms (cf. 4.2), and a clause which is dependent for its actualization upon a former clause is apparent in (24) above, repeated here below, vs. (35):

\begin{equation}
(24) \quad \text{āšša}=\text{pa} \quad \text{höl}
\end{equation}
\begin{itemize}
\item go.impv.s=\text{LINK} return.impv.s
\end{itemize}
‘go (S) and come back!’ (i.e., ‘go, reach your goal, make a U-turn’)

7. The alternation \(=pa/=\text{ppa}\) is paralleled by \(=na/=\text{nna}, =ma/=\text{mma}\), etc. The geminated form is found in the following contexts:

\begin{itemize}
\item a. after a final accented vowel: cf. (32) yoqom-ú + \(=pa\) > yoqom-ú=\text{ppa}; (33) hul-i + \(=pa\) > hul-i=\text{ppa};
\item b. as the result of the assimilation of a final glide: cf. (37) paay-ay + \(=na\) > paay-a=\text{nna}
\end{itemize}
Finally, neither condition “a” nor “b” can apparently account for the presence of gemination after a plural verbal form; e.g. (38) an=saqne + \(=na\) > an=saqne=\text{nna}, ay=yiine + \(=pa\) > ay=yiine=\text{ppa}. 
5. The postclausal use of the adpositions

5.1 =na: from Partitive to concomitant/immediate action

When used clause finally =na often takes on a clear concomitant value: the clause to which =na is affixed takes place within the time frame of the following clause:

(36) keeray konso=sa an=ašš-a=na karmo an=hi?-i
    yesterday K.=def 1.subj=go-impf.1s=part lion 1.subj=see-pf.1s
    ‘yesterday, while going to Konso, I saw a lion’ (elicited sentence)

Such a concomitant value of =na does not conflict with its phrasal partitive meaning; in (36) a part of the time frame during which the action of going to Konso takes place is “sliced out” and selected. Example (36) can be contrasted in form and meaning with (37), in which the coordinator =pa is used:

(37) keeray konso=sa an=ašš-i=pa karmo an=hi?-á
    yesterday K.=def 1.subj=go-pf.1s=link lion 1.subj=see-cons.1s
    ‘yesterday I went to Konso and saw a lion’ (elicited sentence)

But apart from the clitic attached to the “a” clause (=na vs. =pa), there are other differences between (36) and (37): the verbal form of the “a” clause (Imperfective an=ašša in (36) vs. Perfective an=ašši in (37)), as well as the verbal form of the “b” clause (Perfective an=hi?-i in (36) vs. Consecutive an=hi?-á in (37)). The pattern

\[ a_{\text{Impf.}}=na \; b_{\text{Pf}} \]

i.e., the use of the Imperfective in a =na-marked “a” clause followed in its turn by a Perfective in the “b” clause is a rather common structure:

(38) xasaarr-itte=kka i=xapáp paay-a=mma karítto
    francolin-sing.f=emph 3.subj=ideoph say-impf.3f=part stomach
    na=booy-i
    part=explode-pf.3m
    ‘as the Francolin flapped her wings her stomach exploded’ (‘the stomach exploded to her’; from the folktale “The Squirrel and the Francolin”)
In other cases the “a” clause appears in the Perfective, followed in the “b” clause by another Perfective:

(39) \[ an=saq-ne=nna \quad sakaanko=s-i \quad hattay \]
1.subj=slaughter-PF.1P=PART meat=DEF SPEC quickly
\[ an=yii-ne=ppa \]
1.subj=eat-PF.1P=LINK
‘we slaughtered it, quickly ate the meat, and ...’ (from the text “A Hunting Party”)

It will be noted that if the verb of the “a” clause is Perfective (as in (39)), the use of =na does not signal concomitant action: the action of “a” (‘to slaughter an animal’) precedes, both logically and temporally, the action in “b” (‘to eat its meat’). It seems that the concomitant value of =na is rather a consequence of the use of the Imperfective in the “a” clause: the Imperfective itself is rather sparingly used in the language, and it generally signals an action in progress (and therefore unfinished). No such notion is by necessity found with a Perfective, as in (39), where the use of =pa is possible:

(39') \[ an=saq-ne=ppa \quad sakaanko=s-i \quad hattay \]
1.subj=slaughter-PF.1P=LINK meat=DEF SPEC quickly
\[ an=yii-ne=ppa \]
1.subj=eat-PF.1P=LINK
‘we slaughtered it, quickly ate the meat, and ...’ (from the text “A Hunting Party”)

It seems that the use of =na in (39) imparts a value of immediacy to the whole sentence: ‘we went from (=na) slaughtering to eat the meat’, or ‘as soon as we had slaughtered the animal we ate it’ (against a plain sequence of events in (39’): ‘we slaughtered and ate the meat’).

As was the case after =pa in the first clause, either a main or a Consecutive verbal form may appear in the “b” clause after a =na-marked “a” clause:

\[ a=na^0 \quad b_{[0,\ cons]} \]

The use of the Consecutive in “b”, actually a rarer choice, is shown in (40), in which the verbal form of the “a” clause is again Perfective:

(40) \[ \dot{s}eette=s-i \quad f\acute{a}rti=s-i \quad i=\acute{a}\ddot{a}\acute{s}-i=na \]
girl=DEF SPEC die-PE.3F=DEF SPEC 3.subj=go-PF.3M=PART
\[ m\acute{a}ay=\acute{u}=nna \quad pu\acute{a}da=s-i \quad p\acute{u}nkuse \quad i=na \]
bury-CONS.3M=PART hyena.man=DEF SPEC P 3.subj=PART
BetweencoordinationandsubordinationinGawwada

\[ \text{kalah } \text{ášš}-i=\text{pa}^8 \]
behind go-PF.3M=LINK
‘he went to the girl who had died, buried her, and further went after Punguse, the hyena man .’ (from the folktale “The Hyena Man”)

Again, it is difficult to determine what exactly makes the first part of (40) different in meaning from a possible variant with \( =\text{pa} \): it will be noted that not only the verb in “a”, but also the one in “b” is followed by \( =\text{na} \). Again, a sense of immediacy of the actions seems to be implied. As to the use of the Consecutive, going to the dead girl is a logical prerequisite to bury her (whence the Consecutive in “b”: \( \text{maayú 'he buried'} \)), while the latter is not a logical necessity in order to trace down the hyena man: consequently, the verb of the “c” clause is in the Perfective (\( \text{ášši 'he went'} \)).

5.2  \( =\text{ma} \): from Situative to adversative

When used clausally after a verbal form, the adposition \( =\text{ma} \) shows a rather remarkable semantic shift. The use of the Consecutive paradigm is excluded, and the “a” and “b” clauses have different illocutionary values:

\[
\begin{align*}
a &= \text{ma}, \\
b &= \text{b}_0, \\
a &= \text{ma}, \\
b &= \text{b}_{\text{CONS}}
\end{align*}
\]

In the following sentences the clause ended by \( =\text{ma} \) is the condition whereby the following clause does not become true (“do “a”, otherwise “b””):

(41) \[ \text{innu } \text{ášš-u } \text{šande } \text{šuk-a=\text{mma} / muku}^{*}\text{-itte} \]
juss go-JUSS.NEG.2S water drink-IMPF.2S=SIT frog-SING.F
i=ho=pok-n-ay
3.SUBJ=2.OBJ.S.M=kill-FUT-IMPF.3F
‘do not not go and drink water, lest the Frog kill you!’ (from the folktale “The Elephant and the Frog”)

(42) \[ \text{a=}\text{ille=tišan-n-a=\text{mma} } \]
2.SUBJ=REC=look.around-FUT-IMPF.2S=SIT
a=ho=pok-n-a=ye
IMP=2.OBJ.S.M=kill-FUT-IMPF.3M=CONTR
‘you’ll look around [: take care], lest you not be killed!’ (from the folktale “The Two Mice”)

8. The verb of the last clause in (40) contains the incorporated adverb \( \text{kalah 'behind'} \); the subject clitic \( =i \) precedes it, followed in its turn by the adposition \( =\text{na} \).
On the other hand, such a negative implication is not found in the following:

(43) \[ ye=t\text{-}e\text{e}l-\text{ad}=\text{ma} \quad \text{nahaye} \quad t-\text{aahu} \]
\[ \text{me}=\text{sew-\text{-}mid.\text{-}IMPV.2S}=\text{sit} \quad \text{F}-\text{your.s.m} \]
\[ \text{an}=\text{ho}=\text{kod-d-in-a}=\text{ye} \]
\[ 1.\text{SUBJ}=2.\text{OBJ.s.m}=\text{do-\text{-}SEM-\text{-}FUT-\text{-}IMPF.1S}=\text{CONTR} \]
'sew me, and I'll be your wife!' (from the folktale “The Francolin and the Squirrel!”)

(44) \[ ye \quad \text{kale} \quad k\ddot{o}\d=\text{ma} \quad an=a\tilde{a}\tilde{s}-\text{in-a} \quad \text{pa\d{s}=} \]
\[ \text{me provisions make.IMPV.}\text{s}=\text{sit} \quad 1.\text{SUBJ}=\text{go-\text{-}FUT-\text{-}IMPF.1s field} \]
\[ \text{poh-d}=\text{ye} \]
\[ \text{harvest-cons.1s}=\text{CONTR} \]
'prepare me some provisions, and I'll go and harvest the field!' (from the folktale “The Francolin and the Squirrel!”)

In (42), (43), and (44) a special Contrastive clitic \(=\text{ye}\) is found: \(=\text{ye}\) is used when two or more clauses differ in illocutionary value (as in (43) and (44)), or semantically contrast with each other, as in (42). Its closest parallel is the Somali coördinator \(c(e)\), which takes the form \(\text{ye}\) when affixed to a vowel-ending verbal form, and which is likewise used with different sentence types 'when there is an element of contrast between the clauses’ and ‘[W]hen the clauses differ in polarity or in sentence type' (Saeed 1999:121).

Semantically, in (43) and (44) the \(=\text{ma}\)-ended clause is the condition whereby the following clause may become true: 'if you sew me, I'll become your wife,' or 'prepare me some provisions, so that I can go...'.

Finally, in still other cases there is an evident counterexpectational value to \(=\text{ma}\) (“although “a”, “b” is true”):

(45) \[ \text{minnadd-ete} \quad \text{olho} \quad \text{ho} \quad a=y\tilde{ii}-\text{n-i} \quad \text{hoqqa\d{s}=} \text{ma}/ \]
\[ \text{houses-LOC.P thing} \quad \text{M.CONN} \quad \text{IMP=eat-\text{-}FUT-\text{-}PF.3M plenty=\text{sit}} \]
\[ \text{olokko} \quad \text{ho} \quad \text{koro} \quad \text{pok-k-a}=\text{kk-i} \]
\[ \text{something} \quad \text{M.CONN people kill-\text{-}SEM-\text{-}IMPF.3M=CONTR-3.SUBJ} \]
\[ \text{\'ak-a} \]
\[ \text{be.there-IMPF.3M} \]
'in the houses there is plenty of things people can eat, but there is also something which kills the people’ (from the folktale “The Two Mice”)

(46) \[ \text{\'eemte} \quad t\text{-}a\tilde{a}yu \quad \text{an}=\text{gee}\tilde{s}=\text{i}=\text{ma} \quad i=\text{dap-at-ti} \]
\[ \text{sheep} \quad \text{F-my} \quad 1.\text{SUBJ}=\text{look.for-\text{-}PF.1s}=\text{sit} \quad 3.\text{SUBJ}=\text{lose-\text{-}MID-\text{-}PF.3F} \]
'I looked for my sheep but it went lost’ (‘although I looked...’; elicited sentence)
(47) konso=sa an=mooruy-i=ma ano olo
K.=_DEF 1.SUBJ=go.to.market-PF.1s=sit I thing
an=pitam-ú
1.SUBJ=buy-PF.NEG.s
'I went to the market in Konso but did not buy anything' (elicited sentence)

What links together these apparently divergent values of postclausal =ma? In 3.2, =ma was defined as an adposition of state and movement implying an open, unbounded, non-punctual space as its target. When used post-clausally, =ma may be understood as setting the general frame of reference in respect to which the “b” clause holds true: in (43) and (44) the “b” clauses are subject to the conditions set up by the =ma-ending “a” clauses (they happen if the sewing and the preparing of the provisions, respectively, are done); in (45) something killing the people is found within the context of houses otherwise full of good things to eat; in (46) the sheep got lost with me looking for it, and in (47) I did not bring back anything from my visit to the market. But how to account for the negative implication in (41) and (42), whereby the “b” clauses become true if what is predicated in the “a” clauses is not fulfilled? In (41) tragedy strikes if the elephant does go and drink water at the river (i.e., if it does not do the action of not going), and in (42) if the addressee of the warning does not take enough care.

First, it must be noted that the “otherwise” condition is implicit, and (41) and (42) could equally well be rendered: ‘do not go and drink water, as the frog will kill you’, and ‘take care, as something is going to kill you’. What binds (41) and (42) to the other sentences is the logical contrast between “a” and “b”: in (45) the use of =ma underlines the logical opposition between the good things that can be found in the houses and the dangers lurking there. In the absence of such an opposition, =pa would be used in the “a” clause: the implication is that a danger should not be found amidst plenty of good things. Likewise, in (46) the logical expectation of looking for something is to find it, and in (47) going to the market “presupposes” coming back home having bought something. Were these logical expectations realized, =pa would again be used in the “a” clause. In (43) and (44), “b” is true if just the condition set up in “a” is realized: (43) is equivalent to: ‘if you just sew me I’ll be your wife’ (the francolin, whose stomach has been cut open, is asking the squirrel for help). And in (44) the francolin again tells the squirrel: ‘just get me some provisions, and I’ll go ...’. Again, there is a contrast, a logical structure, between “a” and “b”. The same contrast appears in (41) and (42), except that in (45)–(47) both “a” and “b” are true states of affairs (because they happened), whereas in (41)–(42) – as well as in (43)–(44) – they are possible.
6. Summary and conclusions

Different (and not all of them mutually exclusive) strategies are used in clause linking in Gawwada:

a. juxtaposition;
b. the use of the coordinator \(=pa\);
c. the use of a (nominal, phrasal) adposition;
d. on the non-initial clause, the use of a special paradigm: the Consecutive. The Consecutive is not a nonfinite form: it shows full subject-verbal agreement, although it does not show tense/aspect/mood/diathesis variation and takes on the illocutionary value of the preceding clause.

When linking clauses, human languages may choose between two basic strategies: one is balancing, defined as a “strategy whereby two (or more) SoAs [: States of Affairs; Mauro Tosco] are coded by means of structurally equivalent verb forms, such that each could occur in an independent clause” (Cristofaro 2003: 54); in de-ranking, on the contrary, one of the linked SoAs is “expressed by means of a verb form that cannot be used in independent clauses” (Cristofaro 2003: 55).

Among the strategies defined in a–d above, two are quite straightforward from a syntactic point of view: in juxtaposition as well as in the use of the coordinator \(=pa\), provided that the verb of the following clause is not in the Consecutive paradigm, one may easily speak of a balancing strategy and of coordination; both clauses are coded by structurally equivalent verbal forms, and (except of course for the use of \(=pa\) on the first clause) each of them may in principle occur in isolation.

The real troubles come from the presence of an adposition in the first (rather: any non-final) clause, and of the Consecutive paradigm in the second (rather: any non-initial) clause. The main problem lies in identifying the main clause: were the Consecutive considered a dependent paradigm (on the basis of the fact that it cannot occur in an isolated clause), then by necessity the preceding clause would become the main one. But a clause which comes to be followed by an adposition cannot be given the coveted status of main clause. In this case, neither the initial clause nor the Consecutive-marked clause may occur in isolation.

Gawwada can be characterized as a verb-final clause-chaining language. In a way, the Consecutive of Gawwada is similar to the Medial verbs of Papuan languages and, in a certain sense, to many converbial constructions across the world. All these have one thing in common: they do not fulfill the usual criteria for subordination; e.g., they cannot be used in independent sentences; they tend to depend on another verb for the expression of modality, tense, aspect; and they often depend on another verb also for the reference of their subject. For the Papuan
Medial verbs, one may speak of cosubordination (Haspelmath 1995:23); however, cosubordination implies the presence of an independent; main clause and of a controlling verb. In Papuan languages, as in other canonical verb-final languages, the main clause and the controlling verb are found in final position. In Gawwada, however, the problem lies exactly in the status of the final verb.

At this point, the semantics of the Consecutive may come to our rescue. We have seen that the Consecutive is far from being semantically neutral: it expresses the goal of, or the logical dependency from, the action expressed in the preceding clause(s). We can now understand why, although the Consecutive implies logical dependency on the preceding clause, its presence is definitely not a function of the presence of either a coordinator (=pa) or an adposition (=na): first, a “main” paradigm may well occur in its place; second, the Consecutive itself may be found after an “unmarked” verbal form in the structure aØ, bCONS (cf. Section 4.4). One can therefore take the label Consecutive quite literally as implying not only a paradigm restricted in its occurrence to a non-initial clause, but also a paradigm depending, but at the semantic level only, on a preceding clause.

All things considered, a conservative solution (one which does not require the establishment of separate, language- or family-specific categories) may still lie in recognizing for Gawwada the usual categories of coordination and subordination, albeit with a twist: the Consecutive of Gawwada is an inflectional form of the verb restricted to non-initial clauses; it may appear either in coordination or in subordination, and its presence is not per se diagnostic of any of the two.

The advantages of such a solution are obvious: it allows a unified analysis of the various clause-linking structures of the language. Juxtaposition and the presence of the coordinator =pa may be taken to instantiate balancing, coordinated strategies, while the use of an adposition will signal a deranked, dependent clause, with the following clause as the main one and its verb as the controller.

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