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TABLE OF CONTENTS

Articles

Douglas Biber, PRAGMATIC ROLES IN CENTRAL SOMALI NARRATIVE DISCOURSE . . .	1
Beat Haller and John Watters, TOPIC IN ZULGO	27
Keith L. Snider, VOWEL HARMONY AND THE CONSONANT IN CHUMBURUNG	47
John Victor Singler, ON THE UNDERLYING REPRESENTATION OF CONTOUR TONES IN WOBE	59
Ben Ohi Elugbe, MORPHOLOGY OF THE GERUND IN DEĞEMA AND ITS RECONSTRUCTION IN PROTO-EDOID	77
FIFTEENTH CONFERENCE ON AFRICAN LINGUISTICS	91
PUBLICATIONS RECEIVED	97
Guidelines for Contributors	inside back cover

PRAGMATIC ROLES IN CENTRAL SOMALI NARRATIVE DISCOURSE¹

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This paper compares the marking of pragmatic roles in Central Somali oral narrative discourse and elicited question-answer pairs to illustrate the claim that information structure must be studied within the context of particular discourse genres. The study of pragmatic roles in Central Somali is especially interesting because clause-level focus is explicitly marked through the particle *yaa*. The functions of this particle in elicitation question-answer pairs and narrative discourse are compared, and it is shown that elicitation data exhibit only a few of the possible functions of *yaa*, viz. as a marker of assertive and contrastive focus. In contrast, narrative discourse provides examples of *yaa* as a marker of both event-clause focus and discourse topic. This result is discussed within the context of discourse coherence and is shown to be not as surprising as it first appears. In addition, narrative focus constructions (defined as the most salient section of new information in a narrative text) are shown to be formally well-defined and functionally important in giving coherence to a narrative, although no counterpart has been found in elicitation data. In conclusion, it is noted that pragmatic roles should be studied in a broad range of discourse genres in addition to elicited question-answer data, since each genre may illustrate different functions of the same constructions.

1. Introduction

By definition, pragmatic roles, e.g. focus and topic, must be studied within a discourse context, since they mark the status of information with respect to the preceding or following text. This necessity is acknowledged in descriptive linguistics through the use of elicited question-answer pairs in which the new information or the choice of topic in the answer is forced by the word-

¹I would like to thank Edward Finegan, Bernard Comrie, Dick Hayward, and Elinor Ochs for helpful discussions and comments on earlier versions of this paper, although none of them would agree with all of the suggested analyses in this version.

ing of the question [Comrie 1981:57]. Even within generative grammar, with its traditional emphasis on the sentence as the maximum syntactic unit of interest, the marking of focus has been discussed in terms of question-answer pairs, e.g. Jackendoff [1972:229ff]. Data of this type, however, exhibit only a small range of the possible functions of pragmatic roles in a given language, since many of these functions occur only within naturally occurring texts.

Some researchers, though, have discussed pragmatic roles within a larger context. For example, Grimes [1975:112-113] distinguishes among three different sets of information in discourse: "content" (the meaning structure—similar to the notion of coherence in other researchers' work), "cohesion" (which includes the marking of old and new information), and "staging" (which expresses the speaker's perspective). Grabe [1983] describes one of the major functions of pragmatic roles as organizing the assertions within a coherent discourse.² In this case, the information structure will directly relate to the discourse topic (or theme). The following discussion shows this particular relation to be made explicit in Central Somali narrative, in which discourse topic is marked by the same particle as new information at the clause level.

To this point, I have been using the terms "focus" and "topic" as if they were well defined. This is, in fact, not the case. In general, focus refers to the salience or prominence of information, while topic refers to the general framework of aboutness (see Grabe [1983] for an overview of the range of terminology used with respect to pragmatic roles in discourse). Comrie [1981: 56-59] defines focus as the essential piece of new information in a clause and topic as what the clause is about. He further distinguishes contrast from these two notions, noting that both focus and topic can serve contrastive functions.³ For example, in the following pairs of sentences, *Bill* functions as the focus of sentence (1b), but as the contrastive topic in sentence

²It is also possible for a discourse to be noncoherent, in the sense that it has no single discourse topic, and yet still have a well-defined information structure.

³Chafe [1976] also distinguishes contrastiveness from new/old information and from topic.

(2b).

- (1) a. Did John go to the store?
 b. No, *Bill* went to the store.
- (2) a. John went to the store.
 b. As for *Bill*, he went to the movie.

In this paper, I will maintain the three-way distinction of Comrie but will also distinguish between clause-level and discourse-level pragmatic roles as follows:

1. Aboutness:
 - a) topic - what the clause is about;
 - b) contrastive topic - what the clause is about, in explicit contrast to the topic of an earlier clause;
 - c) discourse topic (or theme) - the framework of aboutness of the discourse as a whole or of an episode within a discourse.
2. Prominence:
 - a) focus (assertion) - the essential new information in the clause;
 - b) contrastive focus (counter-assertion) - information which the speaker substitutes for previously asserted information;
 - c) discourse focus - the most salient section of new information in a discourse.

These six pragmatic roles are formally well-defined within, and important in giving coherence to, narrative discourse in Central Somali. Many of them can also be illustrated from elicited question-answer pairs, but it is not possible to elicit examples of either discourse topic or discourse focus. Rather, these constructions crucially depend on the larger framework of naturally occurring discourse. The following discussion will illustrate this point through a detailed analysis of the information structure of the oral narrative text "The woman and the thieves," although supplementary examples from other oral narratives are presented as well. All of the texts used in this paper⁴

⁴I am using the term "narrative discourse" in this paper to refer only to uninterrupted monologue which depicts a chronological series of events, i.e. "stories" as opposed to dialogic narrative or personal narrative. The texts

were narrated by Madowbi Maalim, from Mandera, Kenya.⁵

2. Pragmatic Roles in Elicited Question/Answer Pairs

Saeed [1981] has recently described the overall grammatical system of Central Somali. I will provide details of the information system here, but otherwise the reader is referred to Saeed's paper. Throughout the following discussion, all phonetic symbols have their usual value, except for *j*, which represents the affricate [dʒ]; *D*, *J*, and *G*, which are voiced implosive consonants; and the digraph *sh*, which is used for [ʃ] (in conformity with the standard Somali orthography).

Standard informant elicitation sessions are crucial for the initial linguistic description of an unknown language. The use of question-answer pairs in such sessions provides considerable insight into the marking of pragmatic roles. One of the more noteworthy features of Central Somali grammar resulting from this type of analysis is the fact that every independent clause contains a focus marker, *yaa*. This particle functions to mark the most salient noun phrase in the clause, i.e. normally the constituent which is either asserted as new information or counter-asserted in order to contradict a preceding statement.⁶

were narrated to Somalis present at the recording session (who were free to respond to the story telling), rather than to myself or to the tape recorder. The purpose of this methodology was to transfer the focus of the situation from the "collection" itself to the actual story-telling. The narratives recorded were all folk-tales well-known to the story-teller and were told smoothly without major hesitations or false starts. Texts of this type were chosen for analysis because they are known to have very clear structural characteristics. These characteristics evolve through repeated retellings, since oral folktales must respect memory limitations by conforming to an ideal "schema" (see Mandler and Johnson [1977], Grimes [1975:33-34], and de Beau-grande [1980:259]).

⁵Central Somali (also known as Rahaween) is closely related to Standard Somali, although the two are not mutually intelligible. It is spoken by approximately 12,000 people living in the northeast corner of Kenya, as well as by a larger population residing within Somalia. The two language assistants for this paper, Hasan Abdirahman and Mohamed Adan, were both from Mandera, Kenya.

⁶The following references contain descriptions of focus/topic in Standard Somali: Andrzejewski [1975], Gebert [1980], and Hetzron [1965].

ic, with the following comment describing what happened to them.

Finally, the conjunction *+na* must be discussed before moving on to the narrative discourse structures. There are three separate conjunctions in Central Somali: *iiye* which joins two noun phrases together, *oo* which joins two clauses together, and *+na*. This last conjunction also joins two clauses together, but it additionally functions to single out the constituent that it is attached to as a contrastive topic. For example, a section in the story "The man and the snake" discusses the probable intentions of the man and then switches to the snake with sentence (9):

(9) *maskiina sir aa ngali* 'and as for the snake, he de-
snake-the-and cheating FOC entered into decided to cheat'

In this sentence, *maskii* 'the snake' is not old or presupposed information, although it is the topic (marked as such by its sentential position and the particle *+na*). That is, *maskii* establishes the framework of aboutness for this sentence, and in addition it contrasts with the topic of the immediately preceding sentence (the man). This latter fact is signalled by the suffix *+na*.

Given this background, we can proceed to the analysis of pragmatic roles in narrative discourse. However, I will return to the discussion of pragmatic roles in elicited data later in the paper.

3. The Functions of *yaa* in Narrative Discourse

The following sections will give a detailed analysis of the overall episodic structure of, and prominence within, the narrative text "The woman and the thieves." The full text of this story can be found in Appendix I, and all line references will be to this appendix.

Throughout a narrative discourse, clauses can be divided into the two categories "events"⁸ and "nonevents" [Grimes 1975:35ff]. Events carry the story line of a narrative, while nonevents provide background or collateral information. In Central Somali, event and nonevent clauses are distinguished in two ways: (1) the verb is always in the past tense in event clauses, while non-

⁸My use of "event-clause" here seems quite similar to Labov's [1972] use of the term "narrative-clause".

event clauses, e.g. lines 12 and 25, utilize either past or present tenses, and (2) the particle *yaa* never occurs in nonevent clauses but must occur in each event clause containing a noun phrase. Thus, a minimal event clause will consist of either a verb with no nominal constituent and therefore no focus marker, e.g. line 16, or a verb together with one or more noun phrases, one of which must be in focus (marked by *yaa*), e.g. lines 13, 14, 22, 23, etc. Already the function of *yaa* is seen to be more complex than suggested by the elicitation data, since it crucially distinguishes between event and nonevent clauses as well as marking focus within a clause.

In addition, *yaa* functions to mark episode boundaries within a narrative. For example, "The woman and the thieves" is divided into two major episodes, both delimited by the construction *maddaas aa* 'then *yaa*' (lines 6 and 21, see Table 1). The first episode, starting in line 6, begins with the woman going back to her own village, then moves on to her meeting the thieves and the thieves' subsequent planning. Then in line 21, the second episode is begun when the thieves actually start to implement their plan, and this entire episode describes only the way in which they carry out the plan. The construction *maddaas aa* marks the beginning points of both episodes.

The initial boundaries of embedded episode units are marked by subordinate clause + *yaa* + event clause constructions. In "The woman and the thieves" (see Table 1 and the Appendix), the first example of this type is found in line 12, which begins the description of the woman's first meeting with the thieves (lines 12-16). The second example, in line 17, begins the description of the thieves' plotting and initial preparation (lines 17-20). The construction *maddaas aa* in line 21 initiates an embedded episode (lines 21-23) as well as the second major episode. This minor episode describes the first step in the execution of the thieves' plot. Finally, the subordinate clause-*yaa* construction in line 24 begins the last minor episode before the discourse focus, in which the thieves take the second step in executing their plan.

In these constructions there is no single nominal constituent given prominence by the *yaa*. Rather, the entire subordinate clause preceding the *yaa* is highlighted, and the construction as a whole functions to establish a new setting for the following episode. For example, the setting of episode 12-16

is the woman coming to the place where two thieves are sitting (line 12), while the setting for episode 17-20 is the two thieves together and the woman nearly out of sight (line 17). Thus, in this type of construction *yaa* functions to mark a new discourse topic (or setting).

Some other examples of this type of construction follow. In "The fox, the ticks and the elephant," the setting for the major story line is presented as:

- (10) *shilin oo meel Daraaran yaa too ku roogsidoi*
 ticks which place are together FOC one on let-him-stand
 '(when) the ticks are at a place where they are all together, *yaa*,
 he (the elephant) stood on one of them'

This incident initiates all of the following action in the narrative. In "The man who kept his promise," after a long introduction the main story line begins:

- (11) *...iddile hanka hoyidayan yaa lamankii lan ku mid eh yaa*
 village-the to they-come-home FOC men-the man of one being FOC
balaankii ku baihi
 promise-the from went-out
 '...as they are (every night) coming to sleep only at the village,
yaa, one of the two men *yaa* broke his promise'

The following plot centers around the consequences which result from this broken promise. Finally, in "The boy who did not cheat," we are told that the boy was sent to school, where he was learning various things, and then:

- (12) *...farte Gorooshe baradi yaa aawkii Dimidi*
 symbols-the writing he-learned FOC father-the died
 '...(when) he learned the symbols of writing, *yaa*, the father died'

This is the setting from which the boy sets out upon his subsequent adventures. In all of these examples, the event described provides the setting for one of the major episodes within the narrative.

Thus, the functions of the particle *yaa* in narrative discourse range from marking assertive focus within clauses to marking discourse topic. In an elicitation framework, this result would be unacceptable since focus and topic are normally considered separate notions. But within the framework of discourse coherence, this result is perhaps not as surprising, for *yaa* can be

considered as consistently marking salient information in the discourse. On the clause level, this consists of nominal constituents which provide new information in event clauses (since nonevent clauses provide background information and therefore are not salient with respect to the overall discourse structure). On a higher discourse level, this consists of episode settings, which provide salient information through establishing a new framework of aboutness for the following discourse.

4. Narrative Discourse Prominence

This section will discuss several methods of marking prominence within a narrative. Just as *yaa* functions to mark the most salient new information in event clauses, there are grammatical devices which mark parts of a narrative as more salient new information than other parts. These devices include event chains, repetition, and collateral statements. Finally, it will be shown that these devices often combine to mark the narrative focus, or most prominent section,⁹ of a narrative.

4.1. Event chains. I have described the form of event clauses above. Normally these clauses occur in a text mixed together with nonevent information (setting, background, etc.). At certain points, however, the event line of a narrative can be brought into prominence through an event chain, i.e. a chain of event clauses (without intervening nonevent clauses), each of which contains a minimum number of nominal constituents (as in lines 18-20). Longer chains are more marked structures and therefore result in greater prominence. For example, in "The fox, the ticks and the elephant," the ticks attacked the elephant while he was sleeping, and then:

- (18) kaheey, ka taanDowidi lugaagii yaa Dulke ka Dowi,
 he-woke-up, he-shook-self, legs-the FOC ground-the on he-beat,
 Degaagii yaa "geb geb geb" ku siiyi, "uuuuuu..." yaa erri,
 ears-the FOC out gave, FOC he said,
 (koraa fiiriyee ogtaa)
 up FOC he-was-looking know it
 'He (the elephant) woke up, he shook himself, he beat his legs on the

⁹This is perhaps similar to the climax in literary terms.

ground, he made his ears go "geb geb geb," he said "uuuu..." (he was looking up, do you know it?).'

This sequence is the focus of the entire narrative, and it is marked as such by length of the event chain.

At other times, there may be little explicit marking of the participants in an event chain. An example of this is in lines 36-44 of "The woman and the thieves." Here, the agent switches from the man (36) to the woman (37), back to the man (40), and back to the woman again (41), with no explicit marking of any of the switches. It is possible to understand the participant orientation through the verb morphology, but this is a marked construction in which all attention is focused on the event line.

4.2. Repetition. It is also possible to bring one particular event in the event line into prominence through repetition. For instance, in "The man who kept his promise," the man hid inside a hyena hole, and then:

- (14) lama waraabii ha gelen. lamadii waraaba yaa ha gelen.
two hyenas-FOC entered. two-the hyenas FOC entered
'Two hyenas entered. The two hyenas entered.'

In this case, the repeated clause is not even part of an event chain, but it is marked through repetition as a prominent event in the narrative (the man learned from the hyenas a secret which later helped him to become successful). A second example, from "The man and the snake," comes after a long introduction describing the good relationship which a man and a snake had established:

- (15) maskii iiye ariirkii lankii Dali iiye maskii yaa isgifen.
snake-the and boy-the man-the birthed and snake-the FOC fought.
wal isgifen.
they fought each other.

'the snake and the boy who the man gave birth to, (and the snake),
yaa , fought each other. They fought each other.'

Again, these clauses are not part of an event chain. Rather, in both of these examples, the event is focused upon through repetition because it has a crucial relation to later events in the narrative.

4.3. Collateral statements/rhetorical questions. Collateral statements also

function to focus on a particular event clause in the narrative. Grimes [1975:64-70] classifies all instances of telling what did *not* happen as collateral information. Collateral clauses are important in Central Somali narrative in that they bring into prominence the immediately following clause, which tells what *did* happen. For instance, line 19 notes that "they [the thieves] did not follow," but rather they passed a different way. Thus, the listener's attention is focused on the fact that the thieves circled around the woman by the explicit collateral statement that they did not follow her.

Rhetorical questions are a special case of collateral statements [Grimes 1975:68]. In Central Somali narrative, they often seem to bring a whole sequence of events into prominence, rather than one particular event clause. For instance, in "The man who kept his promise," we are told that a second man, who was dishonest, also went into the hyena hole, that he fought with the hyenas in the hole, and then:

(16) lankow iyye lama waraaba God Datiis eh, maay taawiiyaasa
man-one and two hyenas hole inside being, what do-you-think

'One man and two hyenas inside a hole, what do you think (will happen)?'

Then we are told that the man was mutilated by the hyenas. In this way, the event describing the final outcome of this character is emphasized.

There is a special type of rhetorical question used in Central Somali narratives, *ogtaa* 'do you know it?!', which has a separate function. It is used mainly to raise background information, i.e. explanations or comments about what has happened, to prominence. For instance, in line 25, when the narrator wants to emphasize that the two thieves are the ones that were previously introduced and that they know each other, he uses *ogtaa*. In other cases, this construction can mark background information which is a type of foreshadowing, i.e. a reference to new information in an event clause before it happens. For instance, in "The man and the snake," a boy was about to go down into a well when the narrator tells us that:

(17) malaksheeyaa ha galee ogtaa
angel-his-FOC is-entering, know it

'His angel of death is entering, do you know it?!'
(i.e. the boy is about to die)

Then later, when the boy's father is trying to negotiate with the snake, we are told that:

- (18) maskiina siraa ngali ogtaa
 snake-the-and cheating-FOC entered, know it

'and as for the snake, he decided to cheat; do you know it?!'

That is, we are to note beforehand that the snake did not intend to honor any agreement.

4.4. Narrative focus constructions. In Central Somali narrative discourse, the discourse focus (or climax) is marked as the section which combines the greatest number of prominence constructions, and therefore it might be defined as the point of greatest prominence (or focus) in the narrative. I will use the term "narrative focus" to refer to the discourse focus of any episode, and "climax" to refer to the most marked discourse focus in a narrative.

It seems proper to speak of both well-defined climaxes and more loosely defined climaxes. For instance, the event chain previously discussed in "The fox, the ticks, and the elephant" (see section 4.1) is an example of a moderately well-defined climax. It utilizes only the feature of longest event chain. But since it is the most marked sequence in the discourse, it constitutes the climax.

At other times a narrative will have a narrative focus for each episode in the story, with no overall climax. As shown earlier, episodes are demarcated through the use of either subordinate clause-yaa constructions, or maddaas aa constructions. For instance, "The man who kept his promise" has two narrative focuses, which correspond to the two episodes. The first episode begins with the subordinate clause-yaa construction describing how one man broke his promise (discussed in section 3). We are then told how (as a result of this broken promise) the honest man ended up in a hyena hole, where he learned from the hyenas how to cure a certain rich man who had been sick for many years; and subsequently how he did in fact cure that rich man and win a great reward. This episode ends with the following discourse focus construction:

- (19) shinniidiif yaa la haa gooyi, Gurbigii yaa la gowriyi,
 bees-the FOC were cut, m. camel-the FOC was slaughtered,

lankii meelli yaa liinke Daawi, fiyawaadi.
man-the place-the FOC was prayed for at, he became well.

'the bee hive was cut, the camel was slaughtered, the man was prayed for at that place, (and) he became well.'

This sequence is marked as a narrative focus construction through the feature of longest event chain.

The second episode begins with the following subordinate clause-yaa construction:

(20) hoobe ... gaalshee hortiis ko odini, gebertun mankii
when camels-his in front were fenced, girl-this house-the
nki jerti, walaagun baatirke eh, yaa, kii kala koiyi.
was there inside, this one beautiful being, FOC, the other came.

'When (the honest man was given 100 camels), his camels were fenced in front of his house, this girl was in the house for him, (and she) was very beautiful, yaa, the other one (i.e. the dishonest man) came.'

In this episode, then, the dishonest man learns how the first man became successful, and subsequently he also goes to the hyena hole in the hope of over-hearing an equally valuable secret, whereupon he is killed by the hyenas.

This episode ends with the following focus construction:

(21) meellii yaa liki harbiyi. lankow iiye lama waraaba God Datiis
place-the FOC was fought at. man-one and two hyenas hole inside
eh, maay taawiiyaasa? lankii meellii yaa liki JeJabsadi.
being, what do you think? man-the place-the FOC was broken to pieces
lankii meellii yaa liki JeJabsadi.
man-the place-the FOC was broken to pieces

'The place was fought at by them. One man and two hyenas inside a hole, what do you think will happen? The man was mutilated at that place. The man was mutilated at that place!'

The features of an event chain, a rhetorical question, and repetition are combined in this narrative focus.

It can be noted that the narrative focus constructions in both of these episodes occur in episode-final position. In fact, these constructions generally occur in the final position of the discourse unit they are serving as focus for, i.e. either an episode or entire narrative.

Finally, unlike most Central Somali narratives, there is no overall climax or point of focus in "The man who kept his promise." Rather, each of the two episodes has a discourse focus. In narratives of this type, the episodes are simply concatenated, i.e. they are not part of a larger structure which has its own focus. Thus, after the second episode in this story we are merely given an explanation and a moral concerning what happened. There are no further events to serve as a focus for the entire narrative.

In contrast, "The woman and the thieves" consists of two episodes, each of which contains a narrative focus construction, plus a discourse-final climax, which serves as the focus for the entire narrative. The overall structure of this text is outlined in Table 1.

The narrative focus of the first episode occurs when the one thief actually makes all of the necessary preparations for their plan (in lines 18-20). This focus is marked by an event chain and a collateral statement (line 19). The narrative focus of the second episode (lines 27-33) occurs when the second thief actually takes the sheep. It combines a collateral statement (line 27) and repetition (lines 28 and 29) with a well-developed event chain.

These narrative focus constructions occur episode-finally. The climax in lines 36-44 also occurs unit-finally, although the unit in this case is the entire narrative rather than an episode. This climax is the most marked focus construction in the entire discourse, describing the manner in which the first thief completes the execution of the plan. It combines the features of a long event chain, repetition (41-42, 43-44), and a rhetorical question (line 39).

There is one further focus marker in this construction: participant re-orientation. Grimes [1975:262-271] discusses the permutations which can occur between the different case roles assigned to the participants in a narrative. He ranks the case roles on a scale of relative involvement in the action and claims that whenever a permutation moves a participant over several case roles, "...there is a surprise, an interruption, or a point where things go wrong" [1975:266]. The shifts from lines 36 to 37, 38 to 40, and 40 to 41 are all of this type. In each of these permutations, a participant who is totally removed from the action is shifted to the agent case role, thus bringing this entire sequence into even greater prominence.

Table 1. Overall discourse structure of the narrative "The woman and the thieves," showing the episode and paragraph divisions, the location of the subordinate clause-*yaa* discourse topic constructions, and the marking of discourse focus and climax

Lines 1-5	Initial setting
Line 6	Episode 1: maddaas aa
Line 6	Paragraph 1: maddaas aa
Line 12	Paragraph 2: Subordinate clause- <i>yaa</i>
Line 17	Paragraph 3: Subordinate clause- <i>yaa</i>
Lines 18-20	Discourse focus construction: Event chain Collateral statement
Line 21	Episode 2: maddaas aa
Line 21	Paragraph 4: maddaas aa
Line 24	Paragraph 5: Subordinate clause- <i>yaa</i>
Lines 27-33	Discourse focus construction: Event chain Collateral statement Repetition
Lines 36-44	Climax: Most marked event chain Repetition Rhetorical question Participant reorientation
Lines 45-47	Moral

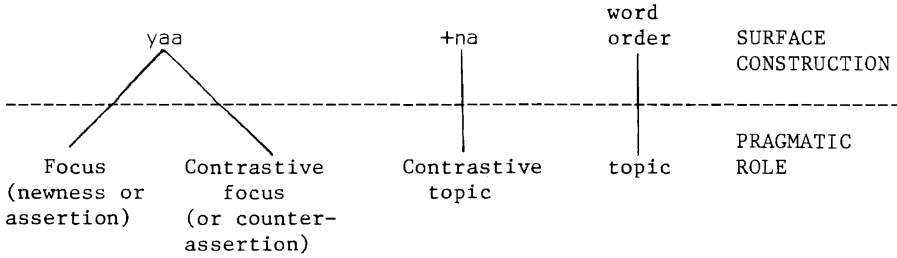
In summary, this narrative has provided an example of a discourse which is structured as a series of episodes embedded in a narrative with its own discourse focus. Conversely, "The man who kept his promise" illustrates a narrative which consists of a mere concatenation of episodes, with no embedding. There are probably other ways in which a Central Somali narrative can be structured. It seems that in all of them, however, the same prominence markers are employed, and combine together to provide discourse focus constructions.

5. Comparison of Pragmatic Roles in Elicitation Data and Narrative Discourse

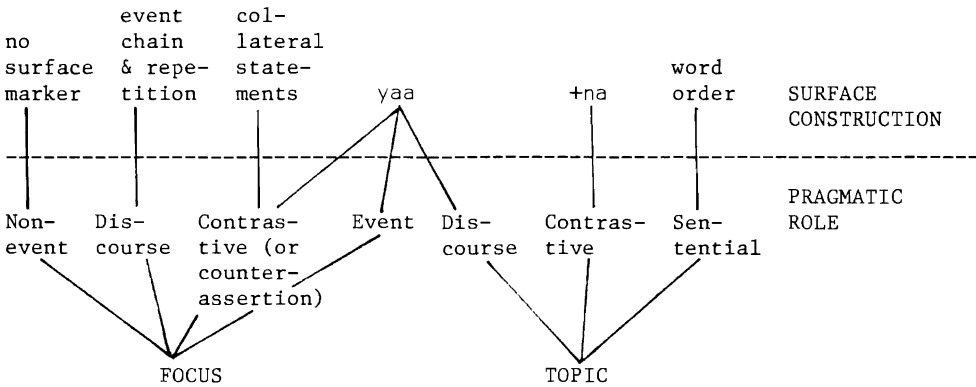
It is useful at this point to summarize the ways in which pragmatic roles are marked syntactically in Central Somali narrative discourse. Section 2 described the functions of *yaa*, word order, and *+na* in marking the corresponding pragmatic roles of focus (new information and counterassertion), top-

Figure 1: Comparison of surface form-pragmatic role pairs in question-response elicitation and narrative discourse

A. Question-response elicitation



B. Narrative discourse



ic, and contrastive topic. These generalizations, however, were shown to hold only for a question-response elicitation framework. Pragmatic roles are marked quite differently in narrative discourse (see Figure 1).

The function of *yaa* is particularly noteworthy. It continues to mark the most salient new information in the clause, with the restriction that it occurs only in event clauses (and is in fact one of the main markers distinguishing between event and nonevent clauses). In addition, subordinate clause-*yaa*-event clause constructions function as boundary markers for episodes within a narrative. In this position, these constructions establish a setting, or framework of aboutness, for the following episode. Thus *yaa*, which appears to be strictly a marker of focus in elicitation data, functions as a topic-marker in narrative discourse.

The other noteworthy difference is the existence of discourse focus constructions. By definition, these constructions could not be illustrated in question-response elicitation data, yet they have been shown to be formally well-defined and quite important in providing coherence to narrative discourses.

6. Conclusion

The elicitation method of data collection and analysis has a crucial place in both the initial identification and later analysis of syntactic constructions in previously unstudied languages. With respect to the analysis of pragmatic roles, which is by definition a discourse notion, elicitation data are still important in identifying the relevant constructions and indicating their functions. However, results obtained in an elicitation framework may not have a general applicability. I have shown in this paper that results obtained from elicitation data are not representative of pragmatic roles in naturally occurring narrative discourse. Similarly, it is possible, perhaps likely, that the pragmatic roles identified in Central Somali narrative discourse will not be valid for other genres in the same language. Future research should document pragmatic roles in a broad range of discourse genres in order to provide a fuller picture of their function in Central Somali.

APPENDIX

"The Woman and the Thieves"

<u>Line #</u>	<u>Nonevent</u>	<u>Event</u>
1.		inti ku hor maay Diideey the time before what happened (was) inni islaanto iddiye roogdi that woman-one village-her stayed at
2.		hartishe maay ke terrey husband-her what to she said (was)
	["iddi reer aawkey yaa mbahee"] village-the people father-my FOC to-I-go	
3.	marki ruusGe siiyi yaa when permission he gave FOC	bati she went
4.	haddii bati when whe went	maay inseeteey iddi where to-she got (was) village-the reer aawshe family father-her
5.	marki iddi aawshe when village-the father-her hoobe seeti when she got there	iddi yaa roogdi mudde village-the FOC she stayed a period (of) lama bilood ama sedde bilood Don two months or three months altogether
6.	maddaas aa le erri then FOC -A was said	
	["maddun wal ki sigootiye now -A IN you will be escorted. iddaa ngalbidaasa "] village-your to-you will be taken home.	

7. ha bati
B she went
8. maddun iddiye waa haan nagati
time-this village-her FOC B-to-returned
9. maay lahaa siiyeey eleenka iye
what -A/B given (was) ram-one and
teneg Daise eh
tin ghee being
10. wal ha ka sigootiyi
-A B IN she was escorted
11. marki sii haan dareeraasi jid aa
while like that B she was walking, road FOC
haa haitey sii haan dareeraasi
B she had, like that B she was walking
12. lama lan tuugo oo talaadayan meel faDiyan yaa
two men thieves who are plotting (and) a place sitting FOC
nkoiti
to-she came
13. nimankii yaa salaanti
men-the FOC she greeted
14. id aa warsiti
village FOC she asked about
15. ["ariadun see li nki jera" yaa terri
land-this how -A in are there? FOC she said
"meel fulan wal ki jera"
place certain -A at there are.
"ooke ki hooyidi koree" "haa"]
tonight to-go home can-I? yes.
16. mooddi
she passed
17. hoobe mooddi islaantiba bartiye maaddi yaa
when she passed woman-the image-her almost gone FOC
lamadii lamba erren
two-the men said
["wariya hibilow" "hoo" "islaantun hoolashe wedita
hey you. yeah. woman-this animal-her leading,
sife iyeena wal nki diirna adina hoola ku ke Da?ada
way she-& -A NEG/IN reached you-& property M IN you rob,
weele kortee" "haa weele kora" "see weelaasa" "ku hor
do can-you? yes do I can. how you do it? in front

koiyee islaante garrunaa madegii Datiisaa Dowee" erri
 I come woman-the cane FOC head-the its middle I hit. said
 kow "tan iyeede eh ma jertoo" erri "sife ya?ani
 one this one being NEG there is. he said way that is
 iyeena kii-n-ke kasna hoolana unu kuke Gaadana ani
 she-& you-NEG-IN knows property-& we M IN take I
 weelee" waa erri "see weelaasoow" "hiinDoole iske
 will do. FOC he said how you do it? blind R to-
 weelee" waa erri "ul Deeraa Gaadadee jidke
 I make. FOC he said stick long-FOC I will take, road-the
 Datiisaa an faDeedee adina oo hor koy" yaa erri]
 middle-FOC I will sit you-& in front come. FOC he said

18. talaaden ogtaa
 they planned, know it!

19. islaantiba ma dabakanna
 woman-the NEG they follow-&

inte Gaadenna
 here they took-&

hor goobenna
 in front they circled-&

kow aa jidke Datis nfaDeedi
 one FOC road-the middle in-he sat

20. ullo Deer yaa Gaadadi
 stick-one long FOC he took

21. maddaas aa
 then FOC

erri lanke
 he said man-the

["shangarte weeraasa eeyu" "anuwu" "adina" "ana hibilee hibileeyuu
 sound-the calling who? it's me. you-&? I so and so
 so?oti ahaa iddeey yaa njeedi" "anina lan hinDoole eh ahaa
 traveller I am village-my FOC to-going. I-& man blind I am,
 id geedde eh ku Dumeey islaanle ahaa ini i kalmeeto
 village shifting M I am lost, Muslim-only I am, that me you help
 meel islaan faDeeye i jeeto fadee" "walaalow ana waana
 place Muslim are settled me to reach I want. brother-oh I also
 ulusaa tenegona wedeey neef idi enna wedee
 am heavy, tin-one-& I'm carrying, animal sheep also I'm leading,

see ke weelee" "neefkii ida eh ani kiinjiidee" waa erri
 how do I do it? animal-the sheep I for you will lead. FOC he said
 "hinDoo aa beellina maayyee galnya hoogaa ku lahaa
 eyes FOC I have lost-& maybe hands strength-FOC in I have.
 ada ulle inGoboi" "hayeh"]
 you stick-the me-for-grab. OK.

22. neefkii yaa nDiibti
 animal-the FOC to-she handed
23. ullii yaa nGobati
 stick-the FOC of-she took hold
24. waali la dareeroob dareeroob iridii yaa Data
 as they were walking and walking, sun-the FOC middle
 nke gaabati maana nDiina yaa
 for-at became short, NEG-& did it set (yet), FOC
 lankii kala ku hor koiyi
 man-the other from front came

25. ["nebede" "nebed allaa"]
 peace. peace (of) God.
 iskasaayana ogtaa lamade lan
 R-they are knowing, know it!, two-the men
 lakiin iyeede ma kasaasa
 but she NEG is knowing

26. maay terreey
 what she said (was)

["aaboow meelotun meel ooke unne ke hoiyenna
 father-oh places-these place tonight we at spend the night
 ama jerti oo id eh islaan meel ku Dowya" "haa" "intee"
 is there which village Muslim place to close? yes. where?
 "meel fulaan aa la faDiyi" yaa erri]
 place certain FOC -A they are settled. FOC he said

lamada lanna is ogyina ogaw
 two-the men-& R know, know it!,
 iridina Diidi maddun
 sun-the-& fell now

27. kun aleenkii hadegge ma goiynee
 this one ram-the rope-the NEG cut
28. siibi
 he removed it
29. madasheey aa ku siibi
 head-his FOC M he removed (from the rope)

30. erretaa saaradeey
back-the-FOC he put it on
31. la baihi
with (it) he went
32. ["hayeh ni kihee aay"]
ok, us let's make go, mother
33. israihen
R they went
34. sidi ndareereyen ndareereyen maay erreey
like that they were walking and walking, what he said was
["abbay galanteey fududdaa eleenkii inni siibidi yaa
elder sister hand-my is light ram-the that it escaped FOC
taawiyee fiiri" yaa erri]
I think, look! FOC he said
35. hoobe riid ha deeshi eleenkii maleh
when behind she looked, ram-the there was not
["eleenkii meellun Dowaa ha deereey geedun reedsheey
ram-the place-this close-FOC B he reached, tree-this behind
inte eh ha deereey fiiri" yaa erri "tenegona wededee"
there B he reached, look! FOC he said tin-a-& I'm carrying.
"haa tenegge inti Dig" yaa erri "ani hayee sheen teneg
yes, tin-the here put. FOC he said I will have it, bring tin,
galanteey ha ka siin" yaa erri]
hand-my B in put. FOC he said
36. teneggii yaa kor faDeedi
tin-the FOC on top he sat
37. ha roorteey
B she ran
38. eleenkii yaa ha weeddidi
ram-the FOC B she looked for
39. eleen aman Deer erretii le saaradi
a ram time long back-the -A kept on,
intee le ke aragee
where -A at will be seen?
40. baihi
he went
41. ha nagateey
B she came
42. teneggii me yaalaa
tin-the NEG is there

43. ha nagateey
 B she came
44. lankii hanDoolage haayi iiye teneggii me yaalan
 man-the blind he was and tin-the NEG are there
45. [maay terreey "insheffi?adoi shar ma ke daaraaso"]
 what she said was do not help people, evil NEG at will touch.
46. ya?ani lankun hoo iyee inin kaalmeena
 that is, man-this if she had not helped,

 shar ma aragfanne ogtaa
 evil NEG see-would, know it!
47. taas aa saas hatoi
 that one FOC like that let it be

List of Abbreviations:

-A	agentless passive	IN	instrumental
B	movement towards the speaker	NEG	negative
		QUES	question
M	movement away from the speaker	R	reciprocal action

English translation of "The Woman and the Thieves"

1. Long ago there was a woman, and she was living at her own village. 2. (One day) she said to her husband, "I will go to visit my father's family." 3. So when he had given her permission, she went. 4. When she went, eventually she arrived at her father's village. 5. When she got there, she stayed for a period of two or three months. 6. Then, someone said, "You will be sent home now." 7. So she went back. 8. At this time, she went back to her own village. 9. What she was given was a ram and a tin of ghee. 10. She was escorted back home with these things [i.e. they were her going-away presents]. 11. While she was walking (she was taking a road back), [and] while she was walking, 12. she came to two men who were thieves, who were sitting at a place and plotting together. 13. She greeted the men. 14. She asked about [her] village. 15. "How are the people settled in this area?"

she asked. "They are at a certain place." "Can I get home tonight?" "Yes." 16. She passed by them. 17. When she had gone, so that her image was almost out of sight, the two men said to each other, "Hey you." "Yeah." "This woman who is leading her animal, do you know any way you can steal her belongings without harming her?" "Yes, I can do it." "How will you do it?" "I will come from in front of the woman and will club her over the head" said the one. "That method is not acceptable" said (the other one). "I will show you a way with which I will steal her property while she doesn't even know who I am" he said. "How will you do that?" "I will make myself to be blind" he said. "I will take a long stick and I'll sit in the middle of the road; and you will (then) come from in front" he said. 18. So they planned—do you know it?! 19. They did *not* follow the woman. Rather they took another route, and circled around in front of her, and the one sat in the middle of the road. 20. He had taken a long stick. 21. *Then* the man said, "Who is making that sound?" "Me." "And who are you?" "I am so and so, a traveller going to my own village." "And I am a blind man, and am lost because my village has shifted away. I am a Muslim. What I want is for you to help me get to a place where Muslims are settled." "But brother, I am also burdened, I am carrying a tin and leading a sheep, so what will I do?" "The sheep I will lead for you" he said. "I may have lost my eyes, but my arms are still strong. You grab this stick for me." "ok." 22. She gave the animal to him. 23. She took hold of the stick. 24. As they walked on and on, and the sun was almost to go down (but it had not set yet), the other man came from in front of them. 25. "Peace." "God's peace." The two men know each other, do you know it?! But she is not aware. 26. She said "Oh father, is there a place around here where we can sleep tonight, which is a Muslim village and nearby." "Yes." "Where?" "They have settled at such and such a place" he said. And the two men are knowing each other (know it!), and the sun fell right then. 27. This one (thief) did not cut the ram's rope. 28. Rather he removed it. 29. He removed the ram's head out from [the rope]. 30. He put it [the ram] on his back. 31. He went with it. 32. "Ok, let's go mother." 33. So they went together. 34. After they had been walking and walking, what he said was, "Elder sister, my hand has become light, I think that the ram has slipped out of the rope.

Look!" he said. 35. When she looked behind, there was no ram. "The ram has reached to only that close place, just behind that tree. Go look!" he said. "But I am carrying this tin." "Oh yes, put the tin here" he said. "Bring it, I will keep it by putting my hand on it" he said. 36. So he sat on top of the tin. 37. She ran back. 38. She looked for the ram. 39. A ram which has been carried on somebody's back for a long time, how can it be found? 40. He went. 41. She came back. 42. The tin is not there. 43. She came back. 44. The blind man and the tin are not there. 45. She said, "If you do not help people, no harm will come to you." 46. That is, if she had not helped this man, she would not have been tricked, do you know it?! 47. That one [i.e. this story] let it be like that.

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TOPIC IN ZULGO

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The particle *ká* in Zulgo is anomalous in terms of the traditional notions which would distinguish topicalization from subordination. Topicalization typically concerns phrasal categories while subordination typically concerns clausal categories. However, in Zulgo the particle *ká*, which is clearly used to mark a topicalized phrasal element, can also be used to mark clausal elements which at first glance appear to be cases of subordination. Close consideration of these clausal cases suggests that in fact these are also cases of topicalization. This conclusion is based on the notion of what constitutes a "reasonable topic". Zulgo has extended the notion of topicalization across the syntactic categorial boundaries to include constructions which would in other languages be marked by subordinating markers. In fact, Zulgo is extremely free in the types of structures which it permits to serve as topics.

1. Introduction

The aim of this paper is to present the function of the particle *ká* in Zulgo¹ syntax and discourse, and to demonstrate that *ká* is best treated as a unitary lexical item with a single generalized use, namely, that of a topic marker. The alternative is to treat *ká* as two lexical items with two distinct uses, one as a topic marker and the other as a marker of subordination.

In every case where *ká* is used, it marks a separate block of informa-

¹Zulgo is a Matakam language of the Central or Biu-Mandara Group of Chadic languages. It is spoken by approximately 18,000 speakers and is located north and west of Meri in the Department of Margui-Wandalá in the Northern Province of Cameroon. The research for this study was made possible by permission from the General Delegation for Scientific and Technical Research, Cameroon. We would also like to thank Ayouba Lawarum who provided his intuition as to the proper use of *ká*. We would also like to thank Russell Schuh for his helpful comments on an earlier draft of this paper. He pointed out to us that in Schuh [1972] he came to the same conclusions arrived at in this study with regard to a similar particle in the Chadic language Ngizim. In Ngizim this particular particle was used with both topicalized NP's and "backgrounding" clauses.

tion from that which follows. It is phonologically invariant and is always followed by pause. The pause will be indicated in the examples with a comma.

The problem with determining whether *ká* is one or two lexical items derives from the fact that the block of information set off by *ká* is not always the same in terms of its syntactic category, and its function as a syntactic particle seems to vary, at least superficially, according to the category. Consider the following two sentences.²

(1) *màkés áahá ká, ká-sàs tsalaká*
 woman this TOP, she-cut firewood

'as for this woman, she cut firewood'

(2) *a-vel-á à kəra-yá ká, a-zlé-á kálá ngár àà húd*
 he-runs-GEM away dog-EGR SUB, he-takes-GEM child his on belly

'as he runs away from the dog, he carries his child on his belly'

In (1), the NP 'this woman' has been set off by *ká* from the remainder of the sentence. The NP functions as the topic³ and *ká* functions as the "topic marker" (TOP). By contrast, in (2) the full clause 'he runs away from the dog' is set off by *ká*. In this case the clause seems to function as a subordinate clause, with *ká* functioning as the marker of subordination (SUB). The question which arises is whether these two uses of *ká* actually represent two separate *ká*'s, or whether the clause in the second case is actually functioning as a topic, consequently giving *ká* a unitary function as a topic marker.

The presentation in this study consists of two sections. Section 2 concerns the syntax of *ká* as a topic marker in simple sentences. Section 3 concerns the syntax of *ká* as a topic marker in complex sentences. In this latter case, the possibility of treating *ká* in complex sentences as a marker

²The following abbreviations are used in this paper: TOP "topic", GEM "general event mood", EGR "egressive action", SUB "subordinator", FOC "focus", PL "plural", and DER "derivational morpheme for deriving human agentive nouns". Tone is marked as follows: ' for high tone, ` for low tone, with mid tone left unmarked.

³Note that we use "topic" instead of Dik's terms "theme" because of its general use in the literature (cf. Li and Thompson [1976] and Hoskinson [1975], for example).

of subordination, either in terms of backgrounded new information or temporal subordination, is discussed. The conclusion is that rather than having a dual function, *ká* has the single function of a topic marker. This conclusion is arrived at by appealing to the notion of what constitutes a "reasonable topic" in a given discourse genre.

2. *ká* and the Simple Sentence: Marker of Topic

The function of *ká* in relation to a simple sentence is to mark "topic". The category "topic" is here taken as one of the universal pragmatic functions. It can be defined along lines proposed by Dik [1978:19] even though he uses the term "theme" instead of "topic":

- (3) Topic: The Topic specifies the universe of discourse with respect to which the subsequent predication is presented as relevant.

De Groot [1980] argues that the structural term "subsequent" should be deleted, at least in the case of Hungarian, thus making the definition a strictly pragmatic one. But whether one defines it purely pragmatically, or both pragmatically and syntactically, is not crucial to Zulgo.

Note that the notion of "topic" is distinct from that of "focus", which can be defined as follows (cf. Dik [1978]):

- (4) Focus: The Focus presents what is relatively the most important or salient information in the given setting.

Sentence (1) cannot be formally confused with an example of focus in Zulgo, since the focus marker is distinct from the topic marker. The basic focus marker is *ná...ya*. This formal distinction can be seen first in interrogative word questions, where the interrogative word can be considered the marked focus of the sentence. In such questions, the interrogative word co-occurs with *ná...ya* as in (5a) but cannot co-occur with *ká* as shown by the ungrammatical (5b):

- (5) a. *weké ná á-zlá síngwè ya*
 who FOC he-took money FOC
 'who took the money?' = 'who is the one who took the money?'
- b. **weké ká, á-zlá síngwè ya*

Furthermore, in answers to a question like that in (5a), *ná...ya* is required as shown in (6a) while *ká* is prohibited as shown by (6b).

- (6) a. *mékele ná á-zlá síngwè ya*
 Mekele FOC he-took money FOC
 'it was Mekele who took the money'
- b. **mékele ká a-zlá síngwè ya*

Even though sentence (6b) is ungrammatical as a focus construction, it is acceptable as a topical construction. As such, it would be translated as 'as for Mekele, he took it'. On the other hand, (5b) would not be acceptable in any context, whether as a focused or topicalized constituent.

Since topic and focus have different pragmatic functions within discourse, they are used independently of each other. In fact, topic and focus may optionally co-occur. Consider the example in (7).

- (7) *mékélé ká, ngát ná á-zlá síngwè ya*
 Mekele TOP, he FOC he-took money FOC
 'as for Mekele, it is he who took the money'

'As for Mekele' serves as the topic, and 'he' as the focus in (7), but both have the same referent.

Turning to the question of how a sentence with a topic is derived, it is assumed that Dik [1978:133] is right when he argues that the "topic" (his "theme") cannot be analyzed as an extracted constituent from the predication. Instead, any sentence which has a topic reflects the following schema (as proposed by Dik):

- (8) (x_i) Topic, Predication

This schema suggests that the presence of a "topic" constituent does not obligatorily have an effect on the following "predication" as would be suggested in an analysis involving extraction. The expected effect in an extraction process would be either the absence of the topicalized constituent in the predication, or the presence of a special anaphoric pronoun to refer to the extracted, topicalized constituent. Neither of these effects are obligatorily found in Zulgo topicalization although they are commonly found in certain topical construction types.

Dik [1978:133] argues that an extraction analysis is especially untenable in cases involving sentences like that in (9) where the topic 'Paris' cannot in any way be said to have been extracted from the following predication.

(9) As for Paris, the Eiffel Tower is really spectacular.

Even though the topical constructions discussed in sections 2.1 and 2.2 lend themselves to an extraction analysis, those in sections 2.3 and 2.4 do not. Since all topical constructions are pragmatically equivalent, it is assumed that they should share a common syntactic derivation if at all possible. For this reason, the non-extraction analysis given in (8) will be assumed to hold in this study although some comments will be made along the way concerning the transformational, extraction analysis.

Note that according to (8) Dik specifies the topic (or "theme") as a term (x_1) and the following constituent as a "Predication". However, during the course of this paper Dik's "Predication" will more commonly be referred to as the "comment". It will be seen in sections 2.1, 2.2 and 2.3 that this schema holds in general for Zulgo. However, in Zulgo the topic may also be a partial predication, with the remaining part of the predication serving as the comment. In addition, the predication or comment which follows the topic may be a simple "term", a fact which can be taken as a parallelism to certain stative sentences in Zulgo. This variation in the topic and following predication will be discussed in section 2.4.

2.1. ká with a single, non-verbal constituent. The basic, unmarked word order in Zulgo is given in (10).

(10) S V O $\left\{ \begin{array}{l} \text{IO} \\ \text{LOC} \end{array} \right\}$

The grammatical relations in (10) are nuclear terms and may be followed by non-nuclear obliques, such as Time, Instrument, Comitative, and so on. For non-verbal clauses, the constituents, at least for this presentation, include the Subject, Predicate nominal, and Location.⁴

⁴Functional Grammar claims that three functions in stative clauses are actually "zero" semantic functions. Since it is difficult to refer to zero func-

In the following examples, pairs of sentences are given. The first sentence is a simple sentence, the second is the sentence with the topic. The purpose in having such pairs is to show the way in which a given grammatical relation in the simple sentence may also serve as the topic in the other sentence.

SUBJECT

- (11) a. *màkés áahá á-sàs tsalaká*
 woman this she-cut firewood
 'this woman cut firewood'
- b. *màkés áahá ká, ká-sàs tsalaká*
 woman this TOP, she-cut firewood
 'as for this woman, she cut firewood'

In (11b) the subject of (11a) serves as the topic. The fact that the topic 'this woman' is also the subject of the following predication is indicated by the subject prefix on the verb which must agree with the subject NP if there is one. (The change from *á-* to *ká-* as the verb prefix is not relevant to the point being made.)

DIRECT OBJECT

- (12) a. *wélè áahá á-gàzì kálá gà*
 man this he-hit child my
 'this man hit my child'
- b. *kélá gà ká, wélè áahá á-gàzì ngát*
 child my TOP, man this he-hit him
 'as for my child, this hit him'

In (12b) the DO of (12a) has been made the topic, and the position of the topic in the predication is indicated by the independent pronoun *ngát* 'him, her'. However, if the direct object is not human, then there is zero anaphora as in (13b).

- (13) a. *mékele á-zlá síngwè*
 Mekele he-took money
 'Mekele took the money'

tions, the terms "subject", "predicate nominal", and "location" are used.

- b. síngwè ká, mékele á-zlá
 money TOP, Mekele he-took
 'as for the money, Mekele took it'

Turning to indirect objects, we find the following:

INDIRECT OBJECT

- (14) a. hanáwà á-vól síngwè á èbay áta
 Hanawa he-gave money to chief that
 'Hanawa gave money to that chief'
- b. èbay áta ká, hanáwà á-vól-ár síngwè
 chief that TOP, Hanawa he-gave-to:him money
 'as for that chief, Hanawa gave him money'
- c. *á èbay áta ká, hanáwà á-vól-ár síngwè
 'as for to the chief, Hanawa gave him money'

In (14b) the object of the preposition á 'to' of (14a) has been made the topic. In (14a) this NP is the indirect object, and the fact that it would have the same relation in the predication which follows the topic in (14b) is indicated by the beneficiary verbal suffix -ár 'to him' as seen in (14b). Note that according to (14c) it is not possible to have the preposition as part of the topic.

LOCATION

- (15) a. gà awák áta té-dá á dídwìn gà
 PL goat that they-went to stable my
 'those goats went into my stable'
- b. dídwìn gà ká, gà awák áta tàá-dá-ádəm
 stable my TOP, PL goat that they-went into:it
 'as for my stable, those goats went into it'
- c. *á dídwìn gà ká, gà awák áta tàá-dá-ádəm
 'as for in my stable, those goats went into it'

As with the indirect object, the NP in the locative prepositional phrase in (15a) can be made the topic as in (15b), but the preposition cannot be made part of the topic as indicated by (15c). When this NP is the topic, its locative relation in the following predication is indicated by the verbal suffix

-áǎm 'into it' as seen in (15b).

TIME

- (16) a. hanáwà á-mà-ra ndávaná
Hanawa he-went:back-EGR yesterday
'hanawa came back yesterday'
- b. ndávaná ká, hanáwà á-mà-ra
yesterday TOP, hanawa he-went:back-EGR
'as for yesterday, Hanawa came back'

Note that there is no anaphoric pronoun or pronominal affix in (16b) in the place of the time phrase 'yesterday'.

INSTRUMENT

- (17) a. hanáwà á-dá ndá mútà áta
Hanawa he-went with car that
'Hanawa went with that car'
- b. mútà áta ká, hanáwà ká-dá dər
car that TOP, Hanawa he-went with:it
'as for that car, Hanawa went with it'
- c. ndá mútà áta ká, hanáwà ká-dá dər
with car that TOP, Hanawa he-went with:it
'as for with that car, Hanawa went with it'

In the case of an oblique functioning as an instrument, not only may the NP object of the preposition ndá 'with' serve as the topic as in (17b), but also the entire prepositional phrase as in (17c). Note that the anaphoric pronoun dər 'with it' is used in the position of the instrumental phrase in both (17b) and (17c).

COMITATIVE

- (18) a. mékele á-val ndá gà kəra áta
Mekele he-ran with PL dog that
'Mekele ran carrying that dog' (or 'those dogs')
- b. kəra áta ká, mékele ká-val dər
dog that TOP, Mekele he-ran with:it
'as for that dog, Mekele ran carrying it' (or 'dogs/them')

- c. *ndá gà kàra áta ká, mékele ká-val dár
 with PL dog that TOP, Mekele he-ran with:it
 'as for with the dog, Mekele ran with it'

By contrast, to the instrumental oblique in (18), the comitative oblique can only have the NP object of *ndá* 'with' as the topic, as seen in (18b). The preposition cannot be part of the topic, as indicated by the ungrammatical (18c). Note that as with the instrumental, the anaphoric pronoun in (18b) is *dér* 'with it'.

Turning to equational sentences with two terms, the following correspondences are found.

SUBJECT

- (19) a. ngát àbay 'he is chief'
 he chief
 b. ngát ká, àbay 'as for him, he is chief'
 he TOP, chief

PREDICATE NOMINAL

- (20) a. wélè áahá malá akél 'this man is a thief'
 man this DER theft
 b. malá akél ká, wélè áahá 'as for the thief, it is this man'
 DER thief TOP, man this

As demonstrated in (19) and (20), either the subject or the predicate nominal of an equational sentence can serve as the topic, with the other term serving as the comment. In both cases, the topic and comment are terms, thus requiring a further specification in the schema in (8). This further specification is given in the schema in (21).

- (21) (x_i)Topic, { Predication }
 { (x_i) }

LOCATION

- (22) a. yam áà péték 'the dress is wet'
 water at dress
 b. péték ká, yam ihár 'as for the dress, it is wet'
 dress TOP, water at:it
 c. *áà péték ká, yam ihár 'as for on the dress, it is wet'

In the case of equational sentences in which there is both a subject and a location, not only can the subject serve as the topic, but also as the location as in (22b). In this case, the following predication has the anaphoric pronoun *ihér* 'at it' specifying the location. However, the preposition cannot serve as part of the topic, as indicated by the ungrammatical (22c).

The examples of topical constructions in this section, with their left-dislocated topics and anaphoric pronouns and pronominal affixes lend themselves to an analysis involving simple extraction in the same way that one might conceive of the head NP of a relative clause as being extracted from the relative clause. However, the examples in section 2.2 provide evidence that such a simple extraction analysis would be untenable in the case of Zulgo.

2.2. ká with a compound, non-verbal constituent. In section 2.1 examples were given of only one NP co-occurring with the topic marker *ká*. However, it is possible to have two or more NP's as part of the topic. Consider the following set of sentences:

- (23) a. *hanáwà á-vál síngwè á èbay áta*
Hanawa he-gave money to chief that
'Hanawa gave money to that chief'
- b. *gà hanáwà nda èbay áta ká, hanáwà (k)á-vál-ár síngwe*
PL Hanawa with chief that TOP, Hanawa he-gave-to:him money
'as for Hanawa and that chief, Hanawa gave him money'
- c. *hanáwà nda gà síngwè ká, á-vál á èbay áta*
Hanawa with PL money TOP, he-gave to chief that
'as for Hanawa and the money, he gave it to the chief'
- d. **hanáwà nda síngwè nda èbay áta ká, (hanáwà) á-vál-ár*
Hanawa with money with chief that TOP, Hanawa he-gave-to:him
'as for Hanawa, the money and the chief, (Hanawa) gave it to him'
- e. *iká màgàr gà hanáwà ndá gà mékele ndá gà èbay áta ká,*
on middle PL Hanawa with PL Mekele with PL chief that TOP,
hanáwà á-vál-ár mékele
Hanawa he-gave-to:him Mekele
'as for among Hanawa, Mekele and that chief, Hanawa gave Mekele to him'

Note that at this point, the NP's of a topic differ from those which function as the head of a relative clause. With a relative clause, the two or three NP's of a coordinate NP could only function within the relative clause as a coordinate NP with one grammatical relation within that clause. However, in the case of a topic, the coordinate NP's in (23b), (23c), (23d), and (23e) each serve as a different grammatical relation within the following predication. For example, in (23b), *hanáwà* serves as the subject and *èbay áta* 'that chief' serves as the indirect object. As the head of a relative clause, both of these NP's would have to serve as a coordinate subject, or indirect object, or so on. This lack of parallelism with relative clauses and the fact that multiple NP's may occur as part of the topic make a simple extraction analysis untenable since there would be no way to guarantee a different identification of grammatical relations from that involved in the extraction of an NP from a relative clause.

Note that (23e) is given to demonstrate that it is possible to have three NP's topicalized, each with a different grammatical function in the following predication. Sentence (23d) is given since it forms part of the paradigm of (23a) through (23c), but it is unacceptable as a topical construction for reasons not yet clear.

2.3. ká with a single, verbal constituent. In sections 2.1 and 2.2 non-verbal constituents were given as the topical constituents. In this section, it will be shown that the verb of the following predication can also serve as the topic. Consider the examples in (24).

- (24) a. *géné a-dé-á tsà*
Gene he-go-GEM not
'Gene is not going'
- b. *mé-dé áta ká, géné a-dé-á tsà*
NOM-go that TOP, Gene he-go-GEM not
'as for that going, Gene is not going'
- c. **a-dé-á ká, géné a-dé-á tsà*
'as for he is going, Gene is not going'
- d. **mé-dé áta ká, géné tsà*
'as for that going, Gene did not'

In the examples in (24), (24a) is the simple sentence to which the topical construction in (24b) corresponds. In (24b), the topic actually consists of an NP in the form of the nominalized verb root *mé-dé* 'going' and the demonstrative *áta* 'that'. As an NP, this topic does not differ from the examples in section 2.1 and 2.2. However, as a nominalized verb it does differ. Whereas it was possible to conceive of NP's in the constructions in 2.1 as being simply extracted from the following predication, and the examples in 2.2 as being extracted by a complex process of co-indexing, it is not possible in the case of (24b). First, the process would not be simple in that the verb would not only have to be extracted, but also nominalized. (24c) demonstrates that this verb root cannot optionally occur as an inflected form in the topic. However, secondly, the verb shows no evidence of having been extracted. In fact, the following predication must have the identical verb root to that used to form the nominalized verb in the topic. There cannot be a pro-verb or a zero anaphoric form, as indicated by the ungrammatical (24d). This fact indicates that the topic cannot be conceived of simply as an extracted constituent from the preceding clause since nothing has been extracted. Instead, in this case the topicalized verb could only be accounted for by a copying rule which states that if the topic is a verb, then the verb root must be identical to the root in the predication. Thus, it is seen that in contrast to a simple analysis of topicalization in Zulgo along the lines proposed by Dik's schema in (8) in which the topic is generated independently of the following predication, a transformational analysis requires at least a complex extraction rule plus a copying rule to account for all of the constructions seen in 2.1 and 2.2.

2.4. *ká* with a predication, the comment as a term. In sections 2.1, 2.2, and 2.3 the topic was an NP and the construction which followed the topic was either a full predication, an NP, or PP. In this section, it will be seen that the topic can also be a predication, even though a partial one, and the following construction an NP or PP. In this case, the schema in (21) might be further specified as follows:

$$(25) \left\{ \begin{array}{c} (x_1) \\ \text{Predication} \end{array} \right\} \text{Topic,} \left\{ \begin{array}{c} (x_1) \\ \text{Predication} \end{array} \right\}$$

The schema in (25) formalizes the possibilities of $(x_i)_{\text{Topic}}$, Predication and $(x_i)_{\text{Topic}}$, (x_i) as topic-comment constructions as seen in 2.1 through 2.3, and also for the Predication_{Topic}, (x_i) topic-comment construction seen in the present section. In addition, this formula predicts a topical construction of the following form: Predication_{Topic}, Predication. In fact, the topical constructions presented in this section act as a transitional construction between the original formulation in (8) and the full formulation in (25), which predicts the construction type Predication_{Topic}, Predication. The presence of such a construction type will be discussed in section 3.0.

It should be repeated that the predication which does occur as the topic in the construction Predication_{Topic}, (x_i) presented in this section is incomplete in that an argument of the verb occurs as the comment but without a cataphoric pronoun to replace it in the topical predication. This incompleteness is different from the Predication_{Topic}, Predication of section 3.0.

In order to demonstrate this type of topical structure, examples will be given for each grammatical relation as in 2.1, but this time the NP will serve as the comment rather than as the topic. The exemplary sentences used here are generally those also used in section 2.1.

SUBJECT

- (26) a. *màkés áahá á-sàs tsalaká*
 woman this she-cut firewood
 'this woman cut firewood'
- b. *ná á-sàs tsalaká ká, màkés áahá*
 the:one she-cut firewood TOP, woman this
 'as for the one (who) cut firewood, (it was) this woman'

DIRECT OBJECT

- (27) a. *wélè áahá á-gèzì kélá gà*
 man this he-hit child my
 'this man hit my child'
- b. *wélè áahá á-gèzì ká, kélá gà*
 man this he-hit TOP, child my
 'as for (who) this man hit, (it was) my child'

INDIRECT OBJECT

- (28) a. hanáwà á-vá| síngwè á àbay áta
 Hanawa he-gave money to chief that
 'Hanawa gave money to that chief'
- b. hanáwà á-vá| síngwè ká, á àbay áta
 Hanawa he-gave money TOP, to chief that
 'as for (who) Hanawa gave the money (to), (it was) that chief'

In (26) through (28), the subject, direct object, and indirect object have been shown as the comment. In the case of the subject in (26b), there is a cataphoric subject pronoun ná in the topic. However, in the case of the objects in (27b) and (28b) there is no cataphoric pronoun in the topic. In each case, the topic seems to be formed on the surface by the insertion of the ká topic marker in the simple sentence after the verb. This also is the case with the obliques as seen in the following examples.

LOCATION

- (29) a. gà awák áta t́é-dá á d̀ìdwìn ga
 PL goat that they-went into stable my
 'those goats went into my stable'
- b. gà awák áta t́é-dá ká, á d̀ìdwìn ga
 PL goat that they-went TOP, into stable my
 'as for (where) those goats went, (it was) into my stable'

TIME

- (30) a. hanáwà á-mà-ra ndáyaná
 Hanawa he-went:back-EGR yesterday
 'Hanawa came back yesterday'
- b. hanáwà á-mà-ra ká, ndáyaná
 Hanawa he-went:back-EGR TOP, yesterday
 'as for (when) Hanawa went back, (it was) yesterday'

INSTRUMENT

- (31) a. hanáwà á-dá ndá mútà áta
 Hanawa he-went with car that
 'Hanawa went with that car'
- b. hanáwà á-dá ká, ndá mútà áta
 Hanawa he-went TOP, with car that

'as for (what) Hanawa went (with), (it was) with that car'

COMITATIVE

- (32) a. mékele á-vál ndá gà kəra áta
 Mekele he-ran with PL dog that
 'Mekele ran with that dog'
- b. mékele á-vál ká, ndá gà kəra áta
 Mekele he-ran TOP, with PL dog that
 'as for (with whom) Mekele ran, (it was) with that dog'

In the examples in (26) through (32) one of the arguments of the predication in the topic occurs as the comment. However, it is possible to have more than one argument of the predication in the comment. Consider the examples in (33).

- (33) a. mékele á-səkám awák í kwàskwà
 Mekele he-bought goat in market
 'Mekele bought a goat in the market'
- b. mékele á-səkám awák ká, í kwàskwà
 'as for (where) Mekele bought a goat, (it was) in the market'
- c. mékele á-səkám ká, awák í kwàskwà
 'as for (what and where) Mekele bought (something), (it was) a goat in the market'

In (33c), both the direct object and locative oblique are in the comment. Thus, the comment can actually have two (or more) terms, but these terms as a comment form neither a coordinate construction nor a predication. They are simply a string of terms. At this point, it appears that an extraction analysis would be overwhelmed by the complexity and variety of constructions which may serve as the topic of a sentence.

2.5. Summary of the topical ká construction in Zulgo. On the basis of the examples given in sections 2.1 through 2.4, the following syntactic generalizations of the topical ká can be made.

a. The surface coding of topic in Zulgo always involves sentence-initial position, giving a construction TOPIC-COMMENT. The topic is set off from the comment by the particle ká plus a pause. This TOPIC-COMMENT structure con-

forms to what Li and Thompson [1976:465] claim is a language universal, namely, that topics must occur in sentence-initial position because it is inherent in the serialization of information within a discourse that what is being talked about (the "topic") must be introduced before something can be said about it (the "comment").

b. Prepositional phrases cannot serve as topical material, but the NP object of the preposition may. The only exception is in the case of the instrumental where the preposition may optionally occur.

c. When the topic is an NP and it has a grammatical relation in the following predication, that relation is indicated by either an anaphoric pronoun or pronominal affix (except in the case of a non-human direct object and temporal NP's in which case there is zero anaphora).

d. When the topic is a predication, only the subject as comment is marked by a cataphoric pronoun in the topic.

e. When the verb occurs as the only element in the topic, the verb is nominalized, and the same verb root obligatorily appears in the comment as the main, inflected verb.

f. It is unlikely that a transformational account can be given for all of the constructions in 2.1 through 2.4. However, the TOPIC-COMMENT structure can be derived straightforwardly from the schema in (25). This schema provides for the co-occurrence of a predication in both the topic and the comment. Such a construction with *ká* will be presented in the next section 3.0. *Structurally* speaking, the forms in section 3.0 will be in complementary distribution with those in section 2.0, even though *functionally* the possibility of a different use remains to be discussed.

g. It should be noted that in all the examples in section 2.0 there are collocational restrictions on what occurs in the topic and the comment. The topical NP's in sections 2.1 and 2.2 collocated with the verb in the predication, and the nominalized verbs in 2.3 were the same as the verb in the following predication. Finally, the NP's which served as the comment in 2.4 collocated with the verb in the topic. However, a collocation restriction is not obligatory for a TOPIC-COMMENT construction in Zulgo as can be seen in the following (34). The general restriction is not a syntactic or semantic one, but

a pragmatic one in that the topic must bear some relationship to the following comment in the real world which the speaker and addressee share in common. In the real world of the Zulgo, the brewing of beer and millet have an obvious relationship to each other.

- (34) mé-dè gùzum ká, kí-ndzìk-éra-á daw-á
 NOM-cook beer TOP, you-bring-EGR-GEM millet-EGR
 'as for brewing beer, you bring along millet'

3. ká as an Interclausal Marker of Topical Information

In section 2, examples were given of *ká* topical constructions which followed the schema in (25). The possible combinations specified by that schema are given in (35).

- (35) a. (x_i) *ká* , Predication
 b. (x_i) *ká* , (x_i)
 c. Predication *ká* , (x_i)
 d. *Predication *ká* , Predication

Of these combinations, only (35d) was not exemplified in section 2.

However, it is possible to have a *ká* construction of the form in (35d) which, being in complementary distribution with patterns (35a-c), fills out the incomplete paradigm of section 2. Structurally, the predication preceding *ká* in a construction with the form of (35d) is always sentence initial as was the case in the topical constructions in 2, but functionally the role of this predication is not, at least at first glance, transparently topical. Consider the following examples:

- (36) a. á-yáhá i gá, (amá) á-ngát tsà
 he-looked:for in house, (but) he-found not
 'he was looking for (it) in the house, (but) he did not find (it)'
 b. á-yáhá i gá ká, (amá) á-ngát tsà
 he-looked:for in house TOP, (but) he-found not
 'when he had looked for (it) in the house, he did not find (it)'

In (36a) two clauses are juxtaposed which have an implied concessive-counterspective relationship to each other. However, this relationship may be made explicit with the conjunction *amá* 'but'. The first clause may also be

marked by *ká* as in (36b). In this case, the relationship between the two clauses does not appear to be paratactic. Instead, the first clause seems to take on a temporal, subordinate role to the second. In addition, the sentence (36b) was taken from a text in which the first clause states new information, along the lines of (37).

(37) Hanawa went to get the goat for the chief. When he looked in the house *ká*, he did not find it.

So one might ask, does *ká* serve as a subordinate marker for temporal relations or as a subordinate marker for backgrounding new information, or is it neither, serving instead as a topic marker?

ká is clearly not a marker for backgrounding new information when it occurs in constructions like (34d). Such constructions are frequent in narrative and procedural discourse⁵ where they commonly are used as links between sentences. Consider the following examples in (38) and (39).

(38) *á-dá á dala á máyàhà wìdze*
he-went to field to looking:for handle

'he went to the field to look for some handles'

á-dá á dala kìnèhe ká, aká-lé àà mánàhà gùrùv
he-went to field now TOP, he-come:across at ripe wild:figs

'as he was going to the field *ká*, he came across some ripe wild figs'

(39) ...*kí-lívé-á tèv gá. kàá-lívé ká, kí-dzeh-á gá.*
...you-measure:out-GEM place house. you-measure:out TOP, you-start house.

'...you measure out the house plan. When you measured it out *ká*, you start building the house'

In (38), the *ká* clause reiterates part of the previous sentence, namely that 'the man went to the field', thus linking the second sentence to the first.

In (39), the *ká* clause reiterates the fact that 'you measure out the house plan', again linking the second sentence to the first. In both cases, the information in the *ká* clause is not new.

Having shown that the *ká* clause is not sensitive to either new or old

⁵For a discussion of the typology of discourse genres used here, see Longacre [1976:199-206].

information, it is still possible to think of these clauses as marking a temporal relation as indicated by the use of 'as' and 'when' in the English translations. However, this temporal relation seems to be an artifact of the inherent nature of narrative and procedural discourse: namely, that in such discourse genres each specified non-backgrounded situation is in a temporal, sequential order with regard to any preceding or following situation. The logic of such discourse genres is chronological. Thus, the translation of such sequences will reflect this inherent temporal order. However, such an inherent temporal order is not found in expository discourse, where the logic is thematic or topical rather than chronological. Consider the following examples of the use of *ká* in expository discourse.

- (40) ...amá aká-ngát á kera *ká*, a-vel-á hínne....
 ...but he-sees to dog TOP, he-running:off-GEM much
 '...but as for it seeing a dog, he runs off fast...'
- (41) ì-zla *ká*, áfábà á-tsehín àà ìye
 I-took TOP, because she-appealed at me
 'as for (why) I took (her), (it is) because I liked her'

In (40) the speaker is discussing the various behavior patterns of a monkey. The invited translation of (40) does not primarily involve a temporal relation between the two clauses although one could translate it as 'when he sees a dog, he runs off fast'. Instead, the relation is a causal one, explaining the monkey's reaction to seeing a dog. One could just as well translate as 'he sees a dog, so he runs off'. The sentence in (41) is an even clearer example. Here there is no possibility for the first clause to be in a subordinate temporal relation to the second one. One could not translate this sentence in the expository discourse from which it is taken as 'when I took her, she appealed to me'. Instead, the true sequence of events is the other way around. What is of concern here is again the causal relation between the two clauses. Thus, it can be concluded that *ká* does not behave as a subordinating temporal marker either.

So what is *ká* in these constructions? The answer is that it is a topic marker just as it was in sections 2.1 through 2.4. Every instance of a *ká* clause in these constructions satisfies the notion of "topic" given in (3),

namely, that the topic specifies the universe of discourse with respect to which the rest of the sentence is presented as relevant. The notion of "relevant" here means that the topic shares something in common with the comment within the real world of the speaker and addressee. Thus, any two items which share something in common in such a world may reasonably serve in a TOPIC-COMMENT structure.

It may be concluded that *ká* is a single lexical unit with a single syntactic use and a single pragmatic function. Syntactically, the *ká* phrase or clause is always sentence-initial, with the *ká* morpheme at the end of the phrase or clause. Functionally, it always marks the topic.

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VOWEL HARMONY AND THE CONSONANT | IN CHUMBURUNG

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This paper presents a synchronic description of the realization of /|/ in Chumburung, a Kwa language of Ghana. In this description I attempt to demonstrate that the influence of the feature *advanced tongue root* is not restricted to the vowel harmony system, but also spreads to influence the realization of the consonant |. Following from this synchronic description is evidence suggesting that native speakers of Chumburung require more than phonetic information in order to choose the appropriate allophone of /|/.

1. Introduction

The phonetic realization of /|/ in Chumburung¹ has been the subject of some discussion. The purpose of this paper² is basically two-fold. A synchronic analysis of /|/ is presented in which I attempt to demonstrate that the influence of the feature *advanced tongue root* (ATR) is not restricted to the vowel harmony system, but also spreads to influence the realization of the consonant |. Then following from this, some implications which these data involve for phonological theory are discussed.

¹Chumburung is a language of the North Guang subgroup of Volta-Comoe languages, part of the Kwa branch of Niger-Congo. Although previous references to the name of this language have included Nchimburu and Chumburu, I am referring to it as Chumburung as this is closer to the speakers' own name for their language, i.e. ɔ̃mbɔrɔŋ.

²I wish to acknowledge the contributions of the following people. Tony Naden has most kindly discussed various drafts of this paper with me. An anonymous reviewer for this journal has given pertinent bibliographic suggestions and comments as to the precise phonetic mechanisms involved, and my colleague, Keir Hansford, has provided language specific criticism. Hansford has also expressed gratitude for the opportunity of reading an earlier version of this paper and acknowledges his agreement with its conclusions. I am most grateful for this help but must claim responsibility for any shortcomings.

2. Background

In an early and tentative phonological analysis of Chumburung, Price [1975:22] establishes one phoneme /l/ with allophones, according to the principle of complementary distribution, [l] occurring word and noun-stem-initial, and [r] (a lightly-retroflexed alveolar flap) occurring elsewhere. In a later unpublished paper, Hansford [1977] argues for the existence of a separate phoneme /r/ based on examples in which [l] occurs word-medial, contrasting in analogous environments with [r]. This may be seen in the following data:³

l ^á aalê	'cattle egret'	l ^à arí	'waist'
l ^ó olí	'deep'	k ^ò orí	'to collect'

The Price analysis, while noting generally that [l] does not occur word-medial, fails to account for the instances, albeit relatively few, where [l] does in fact occur in this position. Hansford is quite correct in pointing out this medial contrast, but due to the tentative nature of his paper also, he overlooks two important facts.

The first is that all occurrences of medial [l] follow syllables which similarly begin with [l].⁴ This argues strongly in favor of the probability that occurrences of medial [l] are conditioned by the preceding [l]. The second fact overlooked is that not all speakers pronounce these words in the same way:

- (a) some speakers follow Prices's generalization precisely, having [r] in all non-initial environments;
- (b) some speakers have [l] in all non-initial environments when the preceding syllable begins with [l];

³The phonetic symbols for vowels adopted here are those used by Stewart and van Leynseele [1979]. The underlined vowels represent those which are in the unadvanced vowel harmony set (the vowel harmony is discussed in section 3.1.1). These correspond roughly to IPA symbols as follows: $\underset{\sim}{i} \sim \underset{\sim}{\iota}$, $\underset{\sim}{e} \sim \underset{\sim}{\epsilon}$, $\underset{\sim}{u} \sim \underset{\sim}{\omega}$, $\underset{\sim}{o} \sim \underset{\sim}{\circ}$. The symbols used for tones are: high $\acute{}$, low $\grave{}$, lowered high (downstepped) $\bar{}$, falling $\hat{}$, and rising $\check{}$.

⁴Hansford [1977] provides one example [b^àaal^á] 'bushcat' in which medial [l] occurs in an environment other than that stated here. I have never, however, heard anyone (including the speaker consulted by Hansford) say anything other than [b^àar^á].

(c) still other speakers have both [ɿ] and [r] in medial syllables when the preceding syllable begins with [ɿ].

So, it may be seen that medial [ɿ] and [r] are in some state of dialectal or idiolectal variation.⁵

3. Conditioning of Allophones

3.1. Stem-medial environment. Although occurrences of medial [ɿ] appear to be in variation with [r], there is some regularity worthy of attention which involves the Chumburung vowel harmony system.

3.1.1. Cross-height vowel harmony. According to recent thinking summarized in Stewart and van Leynseele [1979:32-33], cross-height vowel harmony (CHVH) is a phenomenon based on a feature referred to as *advanced tongue root* in which the classic system has ten vowels: a [+ATR] set /i, e, ə, o, u/ and a [-ATR] set /ị, ẹ, ạ, ọ, ụ/. More recent study suggests that 'retracted tongue root' or 'expanded pharynx' may be more precise phonetic terms (see discussion of section 3.1.2. below). Essentially CHVH involves the harmonization of vowels within a phonological word to one set or the other, regardless of the height of the respective vowels.

Chumburung follows the classic definition of a CHVH system with the exception that the contrast between the two vowel harmony sets is neutralized with respect to low (central) a as in Akan (cf. Stewart and van Leynseele, loc. cit.). Consequently, there is now a nine-vowel system with a realized in either set, all nine being also subject to a contrast in length.

Consider the following data which was elicited from speakers who manifest a medial contrast between [ɿ] and [r].

+ATR		-ATR	
l̀àl̀àkẁì?	'type of tuber'	k̀ìl̀àrámb̀ô	'thing which frightens'
l̀áal̀é	'cattle egret'	l̀àar̀í	'waist'
l̀óol̀í	'deep'	l̀òor̀í	'to remove seeds'
àl̀úul̀á?	'red dye'	l̀àar̀ó	'to lie across'

It is apparent that [ɿ] is realized medially where the preceding syllable be-

⁵Although a thorough sociolinguistic analysis has not been carried out, patterns of variation generally seem to follow clan lines.

gins with [l] and the word belongs to the [+ATR] set while [r] correlates with the [-ATR] set.

Statistics reveal that approximately 80% of the words in the language belong to the [-ATR] set. This results in a shortage of examples which fit the [lVl-] pattern in the [+ATR] set. Further support for the analysis may, however, be drawn from the following informal test.

After some basic orientation as to what was expected of her, a native speaker was asked to repeat spoken nonsense syllables the way she thought they would be said in Chumburung if the language had such words. These were purposely devoid of meaning so as to minimize any interpretation which might otherwise occur. A representation of the results appears below.

[+ATR]		[-ATR]	
Stilumus	Response	Stimulus	Response
tili	tiri	t <u>l</u> il <u>i</u>	t <u>r</u> il <u>i</u>
bili	biri	b <u>l</u> il <u>i</u>	b <u>r</u> il <u>i</u>
lolo	lolo	l <u>l</u> ol <u>l</u>	l <u>r</u> ol <u>r</u>
lili	liri	l <u>l</u> il <u>i</u>	l <u>r</u> il <u>i</u>

As was expected, l was realized as r word-medial except when the onset of the preceding syllable was l and the vowels were in the [+ATR] set.

3.1.2. Relationship of ATR to vowel harmony and l/r. The possibility that a language could reveal a correlation between a consonant and CHVH is not without previous recognition. In an article showing the explanatory potential of voice-register phonology, Pittman [1978:201] points out that many languages use two and sometimes three "resonance placements as fundamental parts of their lexical and grammatical contrast apparatus". In his discussion, he assigns the phonetic feature *retracted tongue root* to his first register and *advanced tongue root* to his second register citing Akan vowel harmony as an example and making reference to Stewart [1967]. He notes that "a very common effect of retracting the tongue root is to decrease the tongue bulk in the mouth, giving a generally lowered vowel height" [ibid., 203]. He also equates the two registers with the emphatic and plain articulations of Classical Arabic which affect "all the consonants and vowels of spoken Cairo Arabic" and cites

Lehn's description [1963] of *emphasis* in Arabic which states that one of the characteristic articulatory features of emphasis is "lateral spreading" [ibid., 204]. In the light of these parallels the Chumburung correlation between /l/ and the vowel harmony feature ATR is seen as not unprecedented.

Insofar as relates to Chumburung, the most pertinent discussions of the phonetics of CHVH and of [l] and [r] are Ladefoged [1964], Pike [1967], and Stewart [1967, 1970]. Stewart [1970:350] describes the tongue for unadvanced vowels as "pushed backwards" with the dorsum low. Conversely, for advanced vowels, the tongue is "pulled forwards" with the dorsum high. In an auditory-instrumental phonetic study of West African languages, Ladefoged [1964:29] describes [l] as articulated with a "raising of the back of the tongue". He then contrasts this with a "one tap alveolar r" which is without the "hollowing or raising of the back of the tongue". His conclusions are supported by palatographic evidence. From these phonetic studies there appears to be a correlation between [l] and the vowel harmony feature [+ATR] in that the back of the tongue is raised for both as opposed to its being lowered for both [r] and the [-ATR] set.

A further correlation is noted between the feature [-ATR] and r. Painter refines Stewart's [1967] thesis of tongue root fronting, i.e. ATR, to "one of two types of oppositions: root fronted ≠ normal or normal ≠ root backed" [Painter 1971:239]. There is substantial radiographic evidence for recognizing the [-ATR] vowel harmony set of Niger Congo languages as characterized by a retracted tongue root and contracted pharyngeal cavity, as opposed to its being characterized by a non-advanced tongue root (cf. Ladefoged [1964], Painter [1973], and Lindau [1979]). Painter [1971] also describes the 'close' set, i.e. [+ATR], of Anum, a Guang language related to Chumburung, as having a "normal" pharyngeal cross-sectional area, and the "open" set, i.e. [-ATR], as having a "thrusting back of the tongue root" [p. 243]. Phonetic research on articulatory details of, especially, English r, suggests that r's in general are characterized by a retraction of the tongue root towards the back pharyngeal wall (cf. Delattre and Freeman [1968] and Lindau [1978]). Although radiographic research on the nature of the retroflexed alveolar flap r of Chumburung has not been carried out, the data would be consistent with the statement that

the [-ATR] vowel harmony set and *r* have a feature of retracted tongue root as a common denominator.

3.2. Stem-initial environment. [l] occurs to the exclusion of [r] initially, but the initial environment is defined by the stem, not by the phonological word. This statement is necessary, particularly in view of the existence of prefixation in the noun-class system.

3.2.1. Chumburung noun-class system. The noun-class system of Chumburung, although more elaborate than the eroded southern Guang systems, e.g. Awutu and Cherepong, is still fairly simple compared with some Niger-Congo languages. In Chumburung, the noun-stems are prefixed by singular and plural noun-class markers. Concord with these classes exists between a noun and an adjective, although this is restricted mostly to quantifying numerals.

Chumburung has seven noun-class prefixes:⁶

Singular Classes	Plural Classes
1 ɔ-	2 a-
3 ka-	4 N-
5 Ø-	6 i-
7 kɪ-	

These form the singular/plural for five groups of noun-stems as follows:

Group A (people)	1/2
Group B	3/4
Group C	5/6
Group D	7/2
Group E (liquids)	4
Group F (mass nouns)	6

3.2.2. Stem-initial /l/. Apart from the medial [lVl-] occurrences discussed above, [l] only occurs stem-initial. This may be seen in the word-

⁶N is a syllabic nasal which is homorganic with a following consonant in point of articulation. All prefix vowels assimilate the [+ATR] feature of a [+ATR] noun-stem and in addition front vowels assimilate the back and round features from a back, round vowel of a following syllable. This latter assimilation, however, is blocked by an intervening labial consonant.

initial occurrences of (a) and the noun-stem-initial occurrences of (b).

(a)	lòʔ	'to remove from a pot	lósé	'difficult'
	lěeʔ	'to remove'	lûŋ	'to curse'
(b)	Singular		Plural	
	kì + lîmpó		à + lîmpó	'shea nut'
	ká + ló		ń + ló	'cooking pot'
	∅ + lówí		ì + lówí	'death'
	∅ + lòojí		ì + lòojí	'scythe'

On the other hand, [r] does not appear either word-initial or noun-stem-initial.

3.2.3. Compound words. [l] may also occur in the initial position of non-initial component parts of a grammatical word.

là|à|úwî 'the last thing' (cf. lúwî 'to finish')

In addition to obvious compound words, the language has a number of reduplicative words which may also be considered a type of compound.

í|é|éʔ 'lightning' lín|lín|nsê 'hard' lípò|lípò 'lipstick'

To conclude this section on the conditioning of allophones of /l/, /r/ is realized as [l] stem-initial for all speakers. Elsewhere /l/ is realized as [r]

- (a) (for some speakers) in all cases;
- (b) (for other speakers) in all cases except where the preceding syllable begins with [l];
- (c) (for still other speakers) in all cases except as in (b), but only if the vowels are in the [+ATR] vowel harmony set.⁷

⁷I have noted one unexplained exception. /lòolí/ 'deep' is realized as [lòorí] in the speech of some speakers who manifest a contrast between [l] and [r] in medial environments. This may indicate the breaking down of the system and thus a contribution to the more general tendency for l to change to r in Volta-Comoe languages.

4. The Suffix /-lo/

Further indications which support the analysis proposed come from the behaviour of the suffix /-lo/ . Grammatically, /-lo/ is a locative marker which most usually translates as 'in'. Phonologically, it is a clitic which assimilates the ATR feature of the word it attaches, and thus may be considered part of the greater phonological word. As such, the realization of /l/ in this morpheme is therefore subject to the constraints discussed in section 3. Thus, for speakers who manifest a medial contrast between [l] and [r] , where /-lo/ is preceded by a syllable which begins with [l] and where the word is of the [+ATR] vowel harmony set, /l/ is realized as [l] .

/laale-lo/ → [laalelo] 'in (the) cattle egret'
cattle egret-in

Where /-lo/ is not preceded by a syllable which begins with [l] or is preceded by a syllable which begins with [l] but the word is of the [-ATR] vowel harmony set, the first segment is realized as [r] .

/jono-lo/ → [jonoro] 'in (the) dog'
dog-in
/kano-lo/ → [kanoro] 'in (the) mouth'
mouth-in
/lo-lo/ → [loro] 'in (the) sore'
sore-in

Where /-lo/ is preceded by a nasal consonant, its first segment is realized as [n] and the preceding nasal consonant is also realized as [n] since it assimilates the alveolar articulation point.⁸

/loŋ-lo/ → [lonno] 'in (the) house'
house-in
/tintaŋ-lo/ → [tintanno] 'in (the) earthworm'
earthworm-in

5. Implications For Phonological Theory

Recognizing a need to constrain the power of phonological theory, linguists

⁸/l/ does not otherwise undergo nasal assimilation across morpheme boundaries.

have proposed a number of rules to limit abstractness. Notable among these are the strong claims of the Natural Generative Phonology (NGP) theory. In an effort to give a "realistic representation of linguistic competence" [Hooper 1976:5], the theory of NGP places strong constraints on abstractness in underlying forms. One way in which this is accomplished is through the True Generalization Condition which states that all rules must make true generalizations about *surface* representations. One result of this is that a phonological rule (P-rule) must be sensitive to only a *phonetic* environment.

The data discussed above provide evidence that Chumburung speakers not only rely on the phonetic environment to determine their realization of /l/, but also on the grammatical information of a morpheme boundary. In order to adequately represent the linguistic competence of a native Chumburung speaker, the rules written to account for /l/ would need to consider a native speaker's consistent pronunciation of a medial [r] in a loan word like *kárāndà* 'calendar'⁹ while yet pronouncing a medial [l] in *kàlādá* (*kà* + *lādá*) 'libation'. They would also have to account for the native speakers' ability to distinguish words like *kìrìsì* 'to tie around' from words like *kìlìbò?* (*kì* + *lìbò?*) 'bunch of bananas' to determine the appropriate choice of allophone. Speakers who always pronounce medial /l/ as [r] in [lVl-] occurrences also rely on non-phonetic information for the correct pronunciation of words like *ì|è|è?* 'lightning'.

Since the rules which determine the proper choice of allophone for /l/ in the speech of speakers who manifest a medial contrast between [l] and [r] are obviously allophonic and relate surface forms to surface forms, it seems inappropriate to classify these as "morphophonemic" just because they contain grammatical information.

6. Summary

In the second section, previous analyses of /l/ in Chumburung are pre-

⁹Since the immediate source of loan words is not always clear, examples such as this provide only weak evidence because, while the original source may be obvious, i.e. English, the immediate source may be Twi, which lacks a phoneme /l/.

sented and their inadequacies discussed. In the third section, I attempt to demonstrate that the feature ATR is not restricted to the vowel harmony system, but also influences the realization of the consonant /l/. I conclude that /l/ is realized as [l] stem-initial and is elsewhere realized as [r]

- (a) (for some speakers) in all cases;
- (b) (for other speakers) in all cases except where the preceding syllable begins with [l];
- (c) (for still other speakers) in all cases except as in (b), but only if the vowels are in the [+ATR] vowel harmony set.

Support for this conclusion comes from radiographic evidence that the tongue root is clearly retracted in the articulation of the [-ATR] vowel harmony set and r. Consequently, the realization of /l/ as [r] in [-ATR] environments is seen as a natural assimilatory process.

Since the environment for the realization of /l/ includes grammatical information, I have suggested that the Chumburung data support the conclusion that a theory which does not allow for the sensitivity of a P-rule to non-phonetic information is overly restrictive.

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ON THE UNDERLYING REPRESENTATION OF
CONTOUR TONES IN WOBE

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In a 1980 article entitled "The tone puzzle of Wobe," Thomas Bearth and Christa Link argue that only by positing phonemic contour tones can one account satisfactorily for the tone facts of Wobe, a western Kru language spoken in the Ivory Coast. In their analysis, they posit the features [Rise], [Fall], and [Concave] in addition to [High], [Low], and [Extreme]. In that their analysis abandons the assertion that surface glides can always be "de-composed" into sequences of underlying level tones, it represents an enrichment of phonological theory. The present account calls into question that enrichment, arguing not only that Bearth and Link's analysis obscures more insights than it captures but also that an analysis that uses only level tones at the phonemic level succeeds where Bearth and Link's account fails.

1. Introduction

Wobe is a western Kru language spoken in the western Ivory Coast.¹ It is part of what Marchese [1979] terms "le conglomerat krahn-guééré-wobé, ... une série de dialectes qui appartiennent en fait à une seule langue." (p. 13) In their 1980 account of Wobe tone, Bearth and Link (henceforth B&L) argue for the existence of underlying contours. They use the features [Concave], [Fall], and [Rise] in addition to [High], [Low], and [Extreme], and they posit fourteen tonemes.

The following is B&L's feature chart (p. 182):²

¹Will Leben's contributions are central to this paper. Independently, he and I had arrived at similar analyses of the Wobe data. What appears here is fundamentally a synthesis of those analyses. I am very grateful to him for all his help. At the same time, the responsibility for any errors is mine. I am also grateful to Bruce Hayes and Ian Maddieson for their suggestions.

²With six features, sixty-four tone combinations ought to be possible: B&L only posit fourteen. One might expect that the compensation (and justifi-

	High	Extreme	Low	Concave	Fall	Rise
1	+	+	-	-	-	+
2	+	-	-	-	-	-
3	-	-	-	-	-	-
4	-	-	+	+	-	-
31	+	+	-	+	-	+
32	+	-	-	+	-	+
41	+	+	+	-	-	+
42	+	-	+	-	-	+
43	-	-	+	-	-	+
15	+	+	-	-	+	-
25	+	-	-	-	+	-
35	-	-	-	-	+	-
45	-	+	+	-	+	-
435	-	-	+	-	+	+

Their system has several curious features. Tone /4/ , for example, is [+ Concave] yet is both [- Rise] and [- Fall] . The only [+ Extreme] tones are ones with a "1" constituent (/1, 31, 41, 15/) and /45/ . Some of the tones (/41/ and /42/) are [+ High] and [+ Low] . Implicit in an acceptance of the possibility that tonemes can be simultaneously [+ High] and [+ Low] is the abandonment of the universal definition of [High] and [Low] . That is, [High] and [Low] in Wobe (at least in B&L's analysis of Wobe) do not mean what they mean elsewhere. This is underlined by the fact that the feature value [+ High] can refer to either endpoint of a contour, but [+ Low] refers only to the beginning. Moreover, it appears to be the case that in B&L's analysis a toneme extends across a morpheme unless the toneme is [+ High] or /43/ .

This paper will argue that a straightforward four-level-tone analysis of Wobe obviates the *ad hoc* devices of B&L's account. This is not to say that the tone system of Wobe is free of idiosyncrasies. There are aspects of the Wobe

cation) for an inefficient system like this would be its ability to make neat descriptive statements. In fact, that is not what obtains.

tone picture that appear to defy neat characterization. Nonetheless, overall, the Wobe system is one that lends itself nicely to a relatively "traditional" account.

The analysis proposed here uses an autosegmental framework, but the analytical framework is secondary. What is crucial is that contour tones are held to be underlyingly decomposable into sequences of level tones.³ (Because the single most important aspect of this analysis is the claim that surface glides are underlyingly sequences of level tones, the analysis will be referred to as the "compositional" analysis.)

The discussion is divided into three sections: the first discusses and re-analyzes falling tones and B&L's /4/ and /42/ tonemes; the second discusses rising tones; the third presents an alternative account to what B&L call compound-lowering. A four-level tone system is used, the features [High] and [Extreme] being employed in the following way:⁴

³Another Kru language, Klao, has also been analyzed as having underlying contour tones. Elimelech [1974] argues that Klao (which he calls "Kru") has two contour tones and two level tones underlyingly. However, acoustical measurement of the speech of Elimelech's informant failed to confirm the phonetic data on which his analysis is based [Jean-Marie Hombert, p.c.]. Lightfoot [1974] is able to account for the facts of Klao without positing underlying contour tones; rather, she posits three underlying level tones. According to Lightfoot (who also calls the language "Kru"), there is frequently a disparity between the underlying and surface tonal representations of forms, but she motivates melody-simplification and tone-spreading rules to account for this.

⁴While the term [Extreme] comes from Maddieson [1970], neither this use of the feature nor B&L's conforms to Maddieson's use of it. Using the term as Maddieson intended it would yield, in the Wobe case, the following system:

	[High]	[Low]	[Extreme]
1	+	-	-
2	-	-	-
3	-	+	-
4	-	+	+

In the compound-lowering discussed in section 4, there is something of a tendency for tones /1, 2, 3/ to group together to the exclusion of /4/. Thus, a case could be made for a system that uses the feature values proposed by Maddieson, particularly in light of [Maddieson 1971], where he discusses his tone features (including [Extreme]) from the perspective of markedness. Yip [1980] argues for the following feature system for Chinese:

	High	Extreme
1	+	+
2	+	-
3	-	-
4	-	+

2. Falling Tones and /4/

In this first section, the focus will be on morphemes of the form CV , but the conclusions drawn will extend to morphemes of all shapes.

The only time that B&L use "5" is as the endpoint of a falling tone. They observe that a contrast exists in their system between /45/ and /4/ . Converting 5's to 4's in their formalism would obscure the contrast between these two. What B&L label /4/ is level prepausally but ends in a rise elsewhere; also, what they label as /45/ falls prepausally but is level elsewhere. B&L describe these tones, i.e. assign underlying pitch designations to them, on the basis of their behavior prepausally. It will be argued here that it is their non-prepausal behavior that provides the key to their phonological identity. Thus, B&L's /4/ is /42/ in the compositional analysis, i.e. not one toneme but two; their /45/ is here /4/ (and all other 5's are converted to 4's).

Evidence for this re-analysis comes from many sources. To begin with, it is common for a final L to fall. Lavelle [1974], for example, describes its

Register	Tone
+ Upper	+ High
	- High
- Upper	+ High
	- High

Yip's treatment of tone is autosegmental, and she places Register and Tone on separate tiers. She marshals diachronic and synchronic evidence for her system. Wobe differs both in its history and in its present state from Chinese in ways that seem to preclude adaptation of Yip's system to Wobe. For example, one of the advantages of Yip's system for Chinese is that it captures limitations on possible contours. However, B&L report six rising contours in Wobe; that is, all the rising contours that can occur in Wobe do occur.

occurrence in certain situations in Yoruba. The other falls (B&L's /15, 25, 35, and 435/) have an endpoint that is "lower than 4" but, again, only in prepausal position.⁵ What this suggests is that the low-level phonetic rule that causes 4 to be realized as a low fall prepausally applies to every 4, not just to cases where 4 is the only tone for the morpheme.

The compositional analysis claims that all of B&L's final 5's are actually 4's, i.e. $\begin{bmatrix} -HI \\ +EXT \end{bmatrix}$. This may seem to create a sort of musical chairs effect, but it will be shown that this is not a true problem. That is, if, as proposed, B&L's /45/ is rewritten as /4/ and their /4/ is rewritten as /42/, what happens to their /42/? In fact, in their extensive list of tone contrasts on short monosyllabic morphemes, B&L are unable to provide a monomorphemic example of the toneme they identify as /42/. Their examples of it are always morphologically complex. This is, it is argued, not accidental; it is, instead, a consequence of the fact that what B&L call /4/ is actually /42/; thus, the /42/ slot is already taken. (The compositional analysis's /42/, i.e. B&L's /4/, is realized with a rise non-prepausally. Application of a rule of rise truncation prevents the /2/ in the /42/ from being realized prepausally.⁶)

Evidence from Wobe verbs and verb suffixes provides further support for the analysis offered here. To begin with, a verb paradigm provides evidence specifically for the "de-composability" of what is here called the /42/ melody. There are seven possible tonal melodies for verb roots:

⁵"In non-final position, the falling glide disappears, except for tone 25" (B&L, p. 166).

⁶B&L present fifty mingograms as an appendix to their article. It is not clear from them whether a rule of prepausal rise-truncation would have greater generality than /42/ melodies. There is, to be sure, a case to be made for similar rules of truncation in other western Kru languages, e.g. Kroumen (cf. Thalman [1980]). As noted, B&L present no monomorphemic examples of their proposed /42/. The forms that they present with this melody are most often verbs to which the intransitivity suffix has been added. B&L do not provide enough information to make it possible to determine what changes in the tonal melody occur when this suffix is added. They also do not illustrate by mingograms or discuss the phonetic differences between $p\tilde{5}^4$ (compositional analysis's $p\tilde{5}^{42}$) 'to look for' and $p\tilde{5}^{42}$ 'to look (intransitive)'. (Perhaps rise truncation applies only to morphologically non-complex /42/ forms.)

point") of the root, forms like this one are exceptional for them, but not for the compositional analysis.

Assuming the regularity of the copying rule, the compositional analysis predicts that when a verb root has the melody /42/, the suffixed form will be realized with a [42-2] melody. Inasmuch as in the B&L analysis the same root is posited as being /4/, the prediction that their analysis makes is that the suffixed form would have the melody [4-4]. In fact, they report that the copied tone is a [3]. The evidence in this case, then, supports neither the compositional analysis nor B&L's.⁸

Compound-lowering, presented fully in §4, poses a problem for the compositional analysis. This process in part requires that, if the final constituent is a short monosyllabic morpheme that begins with a /4/, the balance of that constituent's melody is lost, e.g.

pɪɾ ⁴ 1	'porcupine'	kwɪa ²	pɪɾ ⁴	'bush porcupine'
gbe ⁴ 3	'dog'	kwɪɔ ⁴	gbe ⁴	'village dog'

This rule should therefore apply to /42/. B&L present only one example of

⁸Comparative evidence also offers some support for the compositional analysis. Consider, for example, the following forms from Wobe and the closely related dialect of Guere (all data from B&L; see §3 for the consonant changes):

	Guere	Wobe (compositional)	Wobe (B&L)
'year'	zõ ⁴	sõ ⁴	sõ ⁴ 5
'mortar'	do ⁴ o ⁴	to ⁴ o ⁴	to ⁴ o ⁴ 5
'cat'	ju ⁴ e ⁴	cu ⁴ u ⁴ e ⁴	cu ⁴ u ⁴ e ⁴ 5
'thunder'	dẽ ⁴	tẽ ⁴	tẽ ⁴ 5
'cola'	yɛ ⁴	jɛ ⁴	jɛ ⁴ 5
'below'	zõ ⁴ 2	sõ ⁴ 2	sõ ⁴
'chimp'	gwe ⁴ 2	kwe ⁴ 2	kwe ⁴
'fork'	gba ⁴ 2	gba ⁴ 2	gba ⁴
'buffalo'	di ⁴ ɿ ²	tɿ ⁴ 2	tɿ ⁴

Note that the tone patterns posited for Wobe in the compositional analysis are, in every case, identical to those found in Guere. Tone melodies of individual pairs are often identical for the two languages (or dialects). It is hardly surprising that they are identical here as well.

this, and it fails to undergo the rule:

Compositional	B&L	
sro ⁴²	sro ⁴	'pile'
kwẽ ¹ ẽ ³⁴ sro ⁴²	kwẽ ¹ ẽ ³⁵ sro ⁴	'pile of peanuts'
[*kwẽ ¹ ẽ ³⁴ sro ⁴]		

In B&L's account, this form provides neither evidence nor counterevidence, but it is counterevidence to the compositional claim that /42/ parallels /41/ and /43/.⁹ In longer words, on the other hand, there is no evidence of exceptional behavior for /42/ forms.

The compound-lowering process has other exceptions to it. In the compositional analysis, the failure of short monosyllabic /42/ forms to undergo it counts as an added exception. While this fact may be adduced as evidence against the compositional analysis proposed here, the force of all the evidence, when taken together, remains clear: there is no justification for invoking a fifth tone that is "extra-low". Falling tones can be characterized as being decomposable with /4/ as their final constituent. B&L's /45/ can be rewritten as /4/ , their /4/ , which they acknowledge as being rising everywhere except prepausally, as /42/ .

3. Rising Tones

The only difference between B&L's analysis and the one proposed here in the assignment of underlying melodies involves those discussed above. Melodies cited subsequently will be those of the compositional analysis except where noted. Thus, for example, when /4/ is referred to, it is the compositional /4/ , not the B&L /4/ .

In a four-tone system, six rises are possible: 21, 31, 32, 41, 42, 43 . The /21/ melody is associated with CV₂ forms but not with CV forms. Apart from that, there are no restrictions on distribution.

⁹That /42/ here behaves differently from /41/ and /43/ and that a non-prepausal /24/ behaves differently from /14/ and /34/ when they occur in the same position (cf. fn. 5) would provide a bit of support for a feature system along the lines proposed by Yip in that such a system would group together 1 and 3 to the exclusion of 2.

In CV₂ forms the relationship of vowel to tone follows from the Well-Formedness Condition as set out in Goldsmith [1976] and from a straightforward mapping, starting from the left, of one tone to one vowel in all cases when the first tone is a /2/ or a /3/ and in some—but not all—cases when it is a /4/, e.g.

/bai/	[bai]	'shirt'		/poo/	[poo]	'open shed'
/ 21/	21			/ 31/	31	
/paa/	[paa]	'manioc'	but	/poo/	[poo]	'owl'
/ 41/	41			/ 43/	43	

The following discussion presents a historical account (drawn from B&L) of how exceptional forms entered the language and then proposes a language-specific adjustment of the mapping principles.

In Krahn and Guere, parts of "le conglomerat krahn-guéré-wobé", and in the related languages Bassa and Dewoin, links have been noted between consonant type and tone (see Tisher [1979] for Krahn, B&L for Guere, Hobley [1964] for Bassa, and Welmers [1975] for Dewoin). In general, the consonant inventories can be divided into voiceless, voiced, and implosive. Note that while the implosive consonants are voiced as well, the term "voiced consonant" here refers to non-implosive consonants only. Though there are exceptions, the usual pattern is that a voiced consonant in these languages lowers the onset of the following tone. In the case of Wobe, this is no longer true. B&L make a strong case for a scenario in which the following has happened in Wobe:

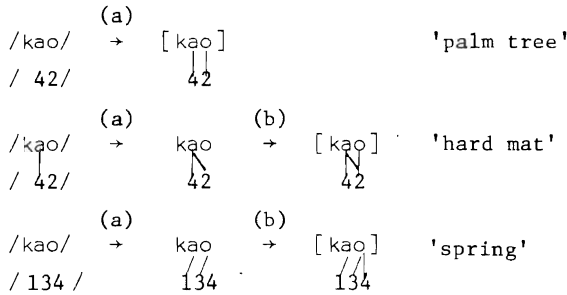
- a. the phonetic process that lowers the onset of a tone following a voiced consonant became phonologized;
- b. voiced consonants became voiceless, e.g., Proto Guere-Wobe /*dV^T/ became /tV^{4T}/ (where T represents any tone) as a consequence of the steps outlined in (a) and (b);
- c. implosive consonants became voiced (non-implosive) consonants.

As B&L note, there are some exceptions to their generalization: /gb/, for example, seems not to have become /kp/ (there are no /kpV^{4(T)}/ words in contemporary Wobe).

Given this scenario, it is those forms that have undergone the shifts de-

- a. Associate the first unassociated tone with the first syllable, the second with the second, and so on, until all tones or syllables are exhausted.
- b. Tones or syllables not associated as a result of (a) are subject to the Well-Formedness Condition.

Some illustrations of the mapping principles are the following:



4. Compound-Lowering

One of B&L's claims is that the feature system they devised is better able to account for compound-lowering in Wobe. It will be a fair test of the analysis proposed here to see if it can succeed in capturing the basis of compound-lowering more directly and more succinctly, even though B&L apparently created theirs to address this particular set of facts. In Wobe compound-lowering, a single underlying tendency effects various changes in surface forms, although the surface manifestations of compound-lowering defy simple characterization. Still, it is a compositional analysis that seems best able to capture the available generalizations.

"Compound-lowering" is the set of phonological operations by which the tone melody of part or all of the final constituent of a compound is lowered. There are two types of lowering: one affects only the tones of the first vowel of the constituent (assuming that the mapping of tones to vowels has already occurred before compound-lowering applies).

With regard to the first vowel, compound-lowering accomplishes the following:

- a. It lowers the level tone or the first part of a falling tone to a 3 , e.g.

[pau]	'pigeon'	[sraa pau]	'pigeon for sacrifice'
21		23 31	
[sbe]	'paper'	[klaɪ sbe]	'school book'
24		31 34	

- b. A tone that undergoes the lowering described in (a) is lowered still further when a 4 is the tone of the final vowel of the previous constituent, e.g.

[dei]	'friend'	[kwɔ dei]	'village friend'
21		4 41	

- c. When the first vowel of the final constituent has the tone pattern [4T], the pattern is changed to [4], e.g.

[pɪɪ]	'porcupine'	[kwɪa pɪɪ]	'bush porcupine'
41		2 4	

The rules that bring about these changes are RULES 1a-c below respectively. In every case, the V in question is the first vowel of the final constituent of a compound.

RULE 1a

$$\left\{ \begin{array}{l} +HI \\ -EXT \end{array} \right\} \rightarrow \left[\begin{array}{l} -HI \\ -EXT \end{array} \right] / \left(\left[\begin{array}{l} -HI \\ +EXT \end{array} \right] \right) \underline{\quad} \left(\left[\begin{array}{l} -HI \\ +EXT \end{array} \right] \right)$$

RULE 1b

$$\left[\begin{array}{l} -HI \\ +EXT \end{array} \right] \rightarrow \left[\begin{array}{l} +EXT \end{array} \right] / \left[\begin{array}{l} V \\ \left[\begin{array}{l} -HI \\ +EXT \end{array} \right] \end{array} \right] \underline{\quad} \left(\left[\begin{array}{l} -HI \\ +EXT \end{array} \right] \right)$$

A

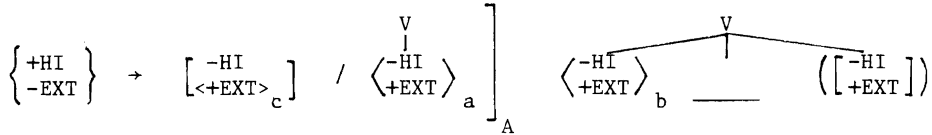
RULE 1c

$$\left[\begin{array}{l} -HI \\ +EXT \end{array} \right] \rightarrow \left[\begin{array}{l} +EXT \end{array} \right] / \left[\begin{array}{l} -HI \\ +EXT \end{array} \right] \underline{\quad} \left(\left[\begin{array}{l} -HI \\ +EXT \end{array} \right] \right)$$

The A in the structural description of RULE 1b refers to the preceding constituent of the compound.

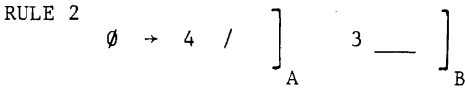
Because the three rules are all manifestations of a single phenomenon and because their structural descriptions largely overlap, it is appropriate to collapse them into a single rule.

RULE 1¹²



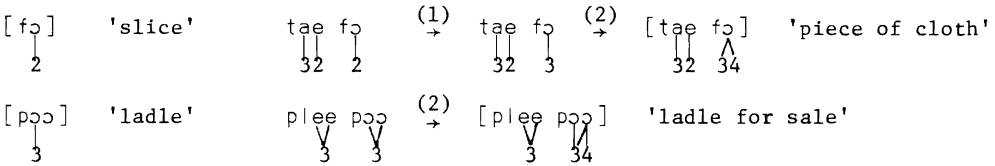
Condition: if a or b, then c.

As has been noted, the changes accomplished by this rule affect only the initial vowel of the final constituent of a compound. In addition, two very simple rules affect the melody of the entire constituent. These must be ordered to follow RULE 1. The first changes a level 3 melody to a fall:



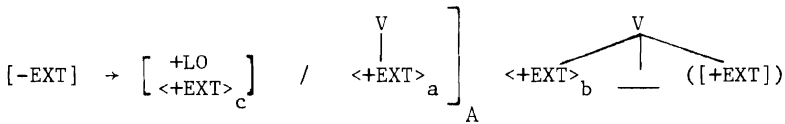
(A and B refer to elements of a compound.)

The following examples illustrate the operation of these rules:



The second rule that affects the entire melody of the final constituent flattens out contours, removing all non-4 tones when the first and last tones are 4's:

¹²Using the feature values proposed by Maddieson [1970, 1971] and discussed in fn. 4 would simplify the rule somewhat. That is, when /4/ is the sole [+Extreme] segment, RULE 1 can be restated thus:



Condition: If a or b, then c.

Apart from these exceptions, the fact that CV₃₁ and CV₃₂ and CVV₃₁ forms do not undergo any of the compound-lowering rules but CVV₃₂ forms do illustrates the quirky distribution of compound-lowering. That is not, however, a fact about any particular analysis, but rather a fact about compound-lowering.

At any rate, the analysis presented here displays a simplicity lacking in B&L's analysis, a fact immediately evident from comparison of their rules for compound-lowering with RULES 1-3 above. The feature values referred to are those in the chart given at the beginning of this article:

B&L's P₁:

$$\left[\begin{array}{l} -\text{Concave} \\ \alpha\text{Low} \end{array} \right] \rightarrow \left[\begin{array}{l} -\text{High} \\ \alpha\text{Low} \\ +\text{Fall} \\ -\text{Rise} \end{array} \right] / \left[\begin{array}{l} \text{A} \\ \text{B} \end{array} \right] + C \text{ ______ (V) (V) } \left[\begin{array}{l} \text{A} \\ \text{B} \end{array} \right]$$

B&L's P₂:

$$\left[\begin{array}{l} -\text{High} \\ -\text{Low} \\ +\text{Fall} \\ -\text{Rise} \end{array} \right] \rightarrow [+Low] / \left[\begin{array}{l} +\text{Low} \\ +\text{Fall} \\ -\text{Rise} \end{array} \right] \text{A} + C \text{ ______ (V) (V) } \left[\begin{array}{l} \text{A} \\ \text{B} \end{array} \right]$$

B&L's P₃:

$$\left\{ \begin{array}{l} \text{a) } [+Fall] \\ \text{b) } [-High] \\ \text{c) } <+High> \end{array} \right\} \rightarrow \left[\begin{array}{l} -\text{High} \\ \alpha\text{Low} \\ +\text{Fall} \\ -\text{Rise} \end{array} \right] / + C \left[\begin{array}{l} -\text{High} \\ \alpha\text{Low} \\ +\text{Fall} \\ -\text{Rise} \end{array} \right] \text{ ______ } \left(\begin{array}{c} V \\ <+Fall> \end{array} \right) \left[\begin{array}{l} \text{A} \\ \text{B} \end{array} \right]$$

5. Conclusions

Despite B&L's claim that the complexities of Wobe tone require the introduction of underlying contour tones and the positing of fourteen tonemes, a compositional analysis can express the same facts—and can express them with greater simplicity and greater insight. In the compositional analysis presented here, non-prepausal (rather than prepausal) representations of tone patterns were held to be better indications of their underlying character.

Though there is no reason to select the forms as they appear in one environment over the way they appear in another *a priori*, evidence from verbs, particularly verb roots, provided confirmation of the preferability of the compositional analysis.

Once the adjustment of these tone patterns was made, the particulars of a compositional account of Wobe were set out. Because of the historical effect of some "depressor" consonants, it was necessary to posit lexical associations for a particular type of form and to make a related adjustment in the mapping principle of first tone to first vowel (or, alternatively, to employ a diacritic rather than lexical associations). Once that was done, the only things needed to solve the tone puzzle of Wobe were four level tones, the Well-Formedness Condition, tone-mapping principles, and some unremarkable tone-spreading rules.

The compositional treatment of the morphophonemic process of "compound-lowering" provides an indication of the ability of such an analysis to account for the facts of Wobe. Thus, B&L's arguments to the contrary, while the possibility remains that there are languages for which underlying contour tones must be posited, Wobe is not such a language.

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MORPHOLOGY OF THE GERUND IN DEĞEMA
AND ITS RECONSTRUCTION IN PROTO-EDOID

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The gerund in Değema (Delta Edoid) is derived by affixing a discontinuous morpheme to the verb stem. Verb stems ending in a vowel take a shorter form of this morpheme while stems ending in a consonant (even if such a consonant is derived from an underlying close vowel by glide formation) have the longer allomorph affixed to them. Cognates of this morpheme are identified in the three other branches of Edoid, and an attempt is therefore made to reconstruct the segmental shape of the gerund morpheme in Proto-Edoid; it comes out as *U...AmhI with vowel harmony rules determining the alternants. Although the tones of the morphemes are not reconstructed, various issues involved in the reconstruction of its segmental shape are discussed.

1. Introduction*

A brief sketch of the internal classification and geographic spread of the Edoid languages is given in Elugbe [1980]. The Edoid languages fall into four co-ordinate branches: Delta Edoid (DE); South-western Edoid (SWE); North-central Edoid (NCE); and North-western Edoid (NWE). DE languages are spoken in the Rivers State of Nigeria on the eastern side of the Niger Delta. SWE languages are spoken in the western Niger Delta in Bendel State. NCE languages are spoken in the central parts of Bendel State north of the Delta and west of the so-called "western Igbo" area. NWE languages are spoken in the northern fringes of Bendel State and across the border in the Akoko and Owo parts of Ondo State.

Değema is closely related to the other DE languages Egeṅe (Engenni) and

*A brief sketch of this paper was first given at the 2nd Annual Conference of the Linguistic Association of Nigeria (LAN) held at Bayero University, Kano, July 26-29, 1981. The present version is much revised, especially in the light of evidence from South-western Edoid.

Epie(-Atisa). Dɛgɛma is the most southerly Edoid language and is well-known for having retained some of the more interesting morphological aspects of Proto-Edoid (PE), such as noun classes defined to a large extent by semantic characteristics [Elugbe 1976; in press]. Dɛgɛma also has CVC stems (derived from earlier CVCV) in which the second consonant is not necessarily a nasal. The morphology of the gerund in Dɛgɛma is by itself quite interesting and will be briefly presented below (section 2.1). However, our main interest will be in the reconstruction of the gerund in Proto-Edoid. In order to do that, we shall examine some languages from other branches of Edoid: Uvbię and Isoko from SWE; Ẹdo (Bini) and two Yẹkhee dialects (Ẹkphẹli and Auchi) from NCE; and Emhalhẹ (Somorika) from NWE.

2. The Gerund in the Edoid Languages

A typical PE verb stem was of the shape CV((C)V). It is still not clear if PE classified its verb stems tonally: most studies of individual Edoid languages so far analyze the verb as being inherently toneless, acquiring its tone only from the (syntactic) context in which it occurs. Elugbe [1973] made this a general Edoid observation which has been confirmed in some cases. Welmers [1973:119] states clearly that "Urhobo ... has no lexical tone in verbs ..." Amayo [1976:230] tells us that "... Ẹdo (Bini) verb stems exhibit exclusively grammatical tone ..." Although Thomas [1969] (for Eḡeḡe) and Elimelech [1976] (for Yẹkhee) do not discuss this problem, it is clear from their examples that verb stems differ only segmentally. Thomas does not mark tone in underlying verb forms while Elimelech postulates high tones for all verb stems. To my knowledge, no Edoid language in which data are available makes a lexical use of tone in verbs.

Hence, in the following discussion, I will cite verb stems without any tone. In an earlier version of this paper where I sought to derive the gerund from the imperative, I cited verb stems in their imperative form which, although it has no overt segmental markers, certainly has its own tonal shape in the different Edoid languages. Since the tone of the imperative is itself derived, and there is no proof that the tonal shape of the gerund in any of the Edoid languages is derived from that of the imperative or any other derived form, it seems unnecessary and potentially misleading, in our analysis,

to derive the gerund form from the imperative. Individual Edoid languages have their own (derived) tone pattern for the gerund just as they do for nouns, for example. And just as we can reconstruct the segmental shape of a noun without necessarily being able to reconstruct its tones at the same time, so we shall attempt to reconstruct the segmental shape of the gerund morpheme in PE by comparing its reflexes in the Edoid languages. Problems of tonal reconstruction will therefore not occupy us unduly.

What we are here calling the "gerund" is a kind of verbal noun which also translates the infinitive in English. We shall stick to the term gerund throughout our discussion.

2.1. The gerund in Dɛgɛma (DE). Dɛgɛma operates a ten-vowel harmony system based on pharynx width, expanded or otherwise.

(1)	EXPANDED ¹		NON-EXPANDED	
	i	u	ɪ	ɔ
	e	o	ɛ	ɔ
	ə		a	

This fact should be borne in mind in examining the Dɛgɛma data in the following discussion.

The gerund in Dɛgɛma is a discontinuous morpheme $\bar{U} \dots (\bar{A})_m$,² where U summarizes the vowel harmony-determined alternation between u and ɔ and A, whose presence is contextually determined, summarizes the alternation between ə and a. These facts are exemplified in (2), with the data arranged according to the final segment of the stem: (2a) end in a non-close vowel; (2b) in a consonant; (2c) in a closing vowel sequence, i.e., one in which the second vowel is the closer; and (2d) end simply in a close vowel.

¹All through the paper, phonetic symbols carry IPA values.

²The tone system of Dɛgɛma has not been fully worked out. My own preliminary investigation agrees with Thomas and Williamson [1967] who see it as an orthodox two tone system plus downstep. In all Dɛgɛma examples, though, the downstep will be represented phonetically with a macron. High is marked ' , Low ` . High-Downstep falling is ´ . In examples from Edo, downstep is indicated with a raised exclamation mark, ! .

(2)	verb stem	plus gerund	surface	
a.	tatane	U-tatane-Am	ò-tátánē-m	'answering'
	fofo	U-fofo-Am	ù-fófō-m	'blowing (with mouth)'
	ḍa	U-ḍa-Am	ò-ḍā-m	'drinking'
b.	hir	U-hir-Am	ù-hír-ēm	'surrounding'
	sol	U-sol-Am	ò-sól-ām	'jumping'
	tev	U-tev-Am	ò-téV-ām	'descending'
	mim	U-mim-Am	ù-mím-ēm	'wringing'
	son	U-son-Am	ò-són-ām	'choosing'
c.	voi	U-voi-Am	ù-vóy-ēm	'fetching'
	koɩ	U-koɩ-Am	ò-kóy-ām	'being heavy'
	suu	U-suu-Am	ù-súw-ēm	'ironing'
	koɩɔ	U-koɩɔ-Am	ò-kótów-ām	'getting'
d.	fi	U-fi-Am	ù-fy-ám	'germinating'
	kureri	U-kureri-Am	ù-kúréry-ēm	'ending'
	kreru	U-kreru-Am	ò-kréry-ām	'hanging'
	ku	U-ku-Am	ù-kw-ám	'closing'
	bɔ	U-bɔ-Am	ò-bw-ám	'being big'

As the examples in (2) show, there are two basic alternants of the gerund in Dɛgɛma, each with two possible variants as in (3):

(3) Alternants of the gerund morpheme in Dɛgɛma:

- a. full form (U...Am): realized as u...əm if the vowels of the verb stem are expanded and as ɔ...am with non-expanded vowels
- b. short form (U...m): realized as u...m with expanded vowels and as ɔ...m with non-expanded vowels

The form in (3a) is used with verb stems ending in a consonant (or in a close vowel—see below), as in (2b-d). The short form in (3b) occurs with stems ending in a non-close vowel, as in (2a).

It should be noted at once that the tone pattern is the same for all the examples: a low tone on the prefix and a downstepped high on the suffix. In monosyllabic verb stems, a high tone on the verb stem combines with the downstepped high on the suffix to form a high-downstep glide (see surface realiz-

ations in the third column of (2)).

We have next to determine which of the forms of this morpheme is the base: the longer form in (3a) or the shorter one in (3b). Whichever of the two we postulate as the base, it must be the one which allows us to explain the other and derive all surface forms in a natural way. My suggestion is therefore that the full form is the base form in (4a) and that the derivation of the gerund follows the set of ordered rules in (4b-d):

- (4) a. For every verb stem, affix U...Am ,
 b. let all pre-vocalic close vowels become non-syllabic (glide formation);
 c. delete ...A- after (non-close) vowels;
 d. let affix vowels agree in pharynx width with stem vowels (vowel harmony).

The base form in (4a) gives us column 2 in example (2) above while (4b-d) together give us the surface forms in the third column in (2).

As can be seen from comparing columns 2 and 3 in (2) above, the determining factor in the choice of the full form as opposed to the short form is the phonological question whether or not a verb stem ends in a consonant, irrespective of whether or not the consonant is underlying or derived (perhaps we should say "derivable"?). Therefore, any phonological process which is likely to create verb stem-final consonants must apply before the general rule (4c) applies to give the shorter form.

One process which can create stem-final consonants in Dəgəma is glide formation. The glide formation rule is very productive in Dəgəma. It converts any close vowel (expanded or otherwise) into its approximant (glide) counterpart if that close vowel is immediately followed by a non-close vowel or a close vowel from which it differs in respect of the roundness feature. As seen from (5), this rule applies across morpheme boundaries as well as within morphemes:

- (5) /kɪɛ/ → [kʏé] 'give!'
 /təɛsɛ/ → [tʷɛsɛ] 'warm!'
 /óswō/ → [óswō] 'God'
 /úkɪē/ → [úkʏē] 'egg'

/ò nó ènì/ → [ò nwânì] 'he beat us'
 he beat us

We can now see that the examples in (2c,d) meet the conditions for the application of the glide rule (4b), so that rule (4c) can only apply in the case of examples (2a). Rule (4d), the vowel harmony rule which makes all affix vowels agree in pharynx width with the vowels of any stem to which they are affixed, applies last and in all cases.

As will be shown below, cognate forms of the Dëgëma gerund morpheme are identified in all the other branches of Edoid.

2.2. The gerund in Uvbië and Isoko (SWE). In SWE, only Uvbië (Uvwië) has cases which enable us to directly link the gerund forms in other SWE languages with the Dëgëma example. In Uvbië, the gerund is derived as follows:

(6) UVBIË

mi	'wring'	→	èmjômú	'wringing'
ri	'eat'	→	èrjômó	'eating'
ru	'do'	→	èrwômú	'doing'
so	'sing'	→	èswômó	'singing'
dɛ	'buy'	→	èdɛ̀̀mó	'buying'
da	'drink'	→	èdáàmó	'drinking'
co	'steal'	→	ècòòmú	'stealing'

The gerund morpheme is thus È...òmú, the actual realization being determined by vowel harmony rules to give the two forms è...òmú and è...ômó. When this gerund morpheme in Uvbië is used with stems involving the close vowels I (for i and ɪ) and U (for u and ɔ) the close vowel becomes non-syllabic by glide formation, leaving the suffixal part of the gerund morpheme intact. On the other hand, if the vowel of the stem is not close, it assimilates that vowel of the gerund with which it is contiguous—i.e., ...O... The examples in (6) are thus derived as in (7):

(7)	E-mi-OmU	>	E-my-OmU	→	èmyômú	'wringing'
	E-ri-OmU	>	E-ry-OmU	→	èryômó	'eating'
	E-ru-OmU	>	E-rw-OmU	→	èrwômú	'doing'
	E-so-OmU	>	E-sw-OmU	→	èswômó	'singing'

E-dɛ-OmU	>	E-dɛ-OmU	→	èdɛ̀émó	'buying'
E-da-OmU	>	E-da-OmU	→	èdáàmó	'drinking'
E-co-OmU	>	E-co-OmU	→	ècòómú	'stealing'

See Omamor [1973] for a discussion of verbal nouns and vowel harmony in Uvbię.

In other SWE languages, shorter forms of this morpheme are attested. In Isoko, for example, the final syllable has dropped out altogether leaving us with the form E...O with stems having the close vowels I or U :

(8) ISOKO

si	'pull'	E-si-O	→	èsyó	'pulling'
si	'refuse'	E-si-O	→	èsyó	'refusing'
fu	'swell'	E-fu-O	→	èfwó	'swelling'
so	'sing'	E-so-O	→	èswó	'singing'

If a stem ends in a non-close vowel, though, the suffixal part of the gerund morpheme is absent altogether:

(9) dɛ	'buy'	E-dɛ	→	èdɛ̀	'buying'
ra	'fly'	E-ra	→	èrá	'flying'
gbe	'dance'	E-gbe	→	ègbé	'dancing'
ko	'sew'	E-ko	→	èkó	'sewing'

It is quite easy to prove that Isoko has generally reduced second syllables and that Uvbię ...OmU and Isoko ...O are cognate. Elugbe [1982] presents such evidence, and we will not repeat it here.

2.3. The gerund in Èdo and Yèkhee (NCE). In North-central Edoid, we have evidence from Èdo, the language of Benin City and its environs:

(10) ÈDO

bi	'open'	ùbí!βè	'opening'
de	'fall'	ùdé!βè	'falling'
dɛ	'buy'	ùdɛ̀!βè	'buying'
da	'drink (alcohol)'	ùdá!βè	'drinking'
do	'weave'	ùdó!βè	'weaving'
mu	'carry'	ùmú!βè	'carrying'

In this language, there is no vowel harmony and both high and low tones may be downstepped after high. A lost low tone is assumed to be the historical (often recoverable) cause of downstep [Amayo 1976]. The gerund appears to be formed by affixing the morpheme $\acute{u}\dots\beta\acute{\epsilon}$ to a high-tone form of the verb stem.

Data on various dialects of the Yekhee (Etsakø) language in Elimelech [1976] show that the gerund is formed typically by affixing the discontinuous morpheme $\acute{u}\dots\text{mh}\grave{\text{i}}$ to the verb stem.

(11) EKPHELI (Yekhee)

le	'eat'	$\acute{u}l\acute{\epsilon}\text{mh}\grave{\text{i}}$	'eating'
de	'fall'	$\acute{u}d\acute{\epsilon}\text{mh}\grave{\text{i}}$	'falling'
dε	'buy'	$\acute{u}d\acute{\epsilon}\text{mh}\grave{\text{i}}$	'buying'
da	'drink (alcohol)'	$\acute{u}d\acute{\alpha}\text{mh}\grave{\text{i}}$	'drinking'
pi	'shoot'	$\acute{u}p\acute{\text{i}}\text{mh}\grave{\text{i}}$	'shooting'
du	'carry'	$\acute{u}d\acute{u}\text{mh}\grave{\text{i}}$	'carrying'
lumhi	'pound'	$\acute{u}l\acute{u}\text{mh}\acute{\text{i}}\text{mh}\grave{\text{i}}$	'pounding'

As can be seen from (11), there is no vowel harmony and the occurrence of a second syllable in the last item does not affect the derivation of the gerund form. On the other hand, in Auchi (the central Yekhee dialect spoken in Auchi, the Etsakø Local Government headquarters), only the low tone of the second part of this morpheme remains so that the morpheme is $\acute{u}\dots\grave{\text{ '}}$:

(12) AUCHI (Yekhee)

le	'eat'	$\acute{u}l\grave{\text{ '}}$	'eating'
dε	'buy'	$\acute{u}d\grave{\text{ '}}$	'buying'
da	'drink'	$\acute{u}d\grave{\alpha}$	'drinking'
pi	'shoot'	$\acute{u}p\grave{\text{ '}}$	'shooting'
du	'carry'	$\acute{u}d\grave{u}$	'carrying'
lumhi	'pound'	$\acute{u}l\acute{u}\text{mh}\grave{\text{ '}}$	'pounding'

The discrepancy between the suffixal part of this morpheme in Ekpheleli as opposed to Auchi can be explained in terms of the tendency for Auchi and some other Yekhee dialects to reduce second syllables if they were later additions to the stem. An example of this is in Elugbe [in press] where it is shown

that although Auchi retains -IV as a second stem syllable, it reduces the syllable if it was a later addition by suffixation. Thus we have (13) (from Elimelech [1976]):

(13)	ẸKPHẼLI	AUCHI	
	úkwìlì	úkùlì	'bundle'
	éywìlì	éywìlì	'death'

By contrast, Auchi reduces the -li syllable in the following:

(14)	ẸKPHẼLI	AUCHI	
	ékèlì	ékèè	'egg'
	èkòlì	èkòò	'tooth'

Elugbe [in press] proves (convincingly, I think) that this -li suffix in (14), which is reduced in Auchi and some other dialects (ẹkẹlì > ẹkẹi > ẹkẹè), is a class-marking suffix acquired at a post-PE stage. Similarly, -mhV as a suffix is reduced in Auchi, but second syllable -mhV's which are part of the stem are not similarly reduced. In this respect, compare the last items in (11) and (12).

2.4. The gerund in Ẹmhalhẹ (NWE). In North-western Edoid, there is evidence of this morpheme in Ẹmhalhẹ (Somorika) and Ọlọma. The following examples are from Ẹmhalhẹ.

(15)	ẸMHALHẸ (Somorika)	
	ri 'do'	úrîmhì 'doing'
	ku 'pour'	úkûmhù 'pouring'
	so 'sing'	ósômhò 'singing'
	ze 'fall'	úzêmhì 'falling'
	zo 'weave'	úzômhì 'weaving'
	re 'eat'	órêmhì 'eating'
	ko 'plant'	ókômhì 'planting'

Here, again, the morpheme is easily identified as Ú...mhÌ,³ the actual form

³Or, possibly, Ú...`mhÌ: unlike in the Ẹdo case, it is not clear what is responsible for the fall here—a floating low or some tonal process as yet unidentified.

depending on vowel harmony. We note here, too, that stems with U (for u or o) have the final vowel of the morpheme completely assimilated to that of the verb stem as we have in the case of 'pouring' and 'singing'.

The preceding examples show that the Dëgëma gerund has cognates in every other branch of Edoid.

3. Reconstructing the Gerund in Proto-Edoid

There is, therefore, no doubt that the gerund, which is identified in all four coordinate branches of Edoid, should be reconstructed for PE. However, even leaving out tonal aspects of this morpheme, we still have to resolve one or two issues in reconstructing its segmental shape.

First of all the prefix has two general shapes in the Edoid languages. It is U- (for u and o) in DE, NCE, and NWE. On the other hand, it is E- (for e and ε) in SWE. So we must decide what the shape of the prefix was. The languages showing an U- reflex for this part of the morpheme come from three of the four Edoid branches and are geographically far apart: from Dëgëma in the eastern Delta to Èmhalhë in the hills of northern Bendel. One would be justified, therefore, in suggesting that the original shape of this part of the gerund morpheme in PE was *U-. In that case, we assume the innovation PE *U- > Proto-SWE *E-. The problem is that it is not easy to explain this, and we return to it below.

We should, perhaps, tackle the question of the suffix before returning to that of the prefix. This part of the morpheme was obviously of the shape vowel-nasal-vowel. The nasal was a lenis bilabial nasal *mh which normally has a non-lenis m- reflex in Dëgëma (DE) and in Isoko and Uvbië (SWE) but has lenis reflexes in North-central and North-western Edoid (see Elugbe [1980]).

The final vowel (the one after the nasal) was *I. In Dëgëma, it is already lost. In Èdo and Yèkhee (NCE) and in Èmhalhë (NWE), the evidence points to PE *I. In Uvbië, it points to U. However, we can easily explain the Uvbië case by assuming that the close *I became rounded and back after the suffixal *mh. We may compare this with the partial case in Èmhalhë where the same process is observed in verb stems with u or o.

We are now left with the vowel before the nasal. There seems little doubt

that there was a vowel between the verb stem and the nasal. Dëgëma has a vowel there in environments after a stem-final consonant; Uvbië has it all the time; and Èdo has some tonal evidence of it. The question of its shape, though, is less straightforward.

In Dëgëma, it is A, realized as ə or a (see (3) above). In Uvbië and other SWE languages, it is o or ɔ. I suggest that the vowel before the nasal was A (for ə or a) and that it became O in SWE. This position is supported by the fact that PE *ə has a varied set of reflexes all over Edoid and these reflexes include o and ɔ (see Elugbe [1982]). In this case, the shift from A to O may have been encouraged by the presence of a following bilabial nasal.

We thus come to the conclusion that the suffixal part of the gerund morpheme in PE was *...AmhI. If the prefixal part were *U- as I suggested above, the full morpheme was *U...AmhI in PE. It was realized as u...əmhi with expanded vowels and as ɔ...amhu with non-expanded vowels.

Our postulation of U as the first vowel of this morpheme receives some support from a study of noun prefixes in PE. There is a small class of abstract nouns with an unpaired prefix U-. It includes nouns such as 'fear' and 'sleep'. There are also singular ghU- and U- prefixes which pair with A- plural (Elugbe [in press]). Since the effect of affixing the morpheme U...AmhI to a verb stem was to change it into a verbal noun, U- is a more likely vowel prefix for it than I- (which in PE generally marked the plural form of some given classes of nouns) or E- (which had nothing to do with abstract nouns). Another point in favour of U- is that, according to Elugbe [in press], PE *ghU- and *U- are cognate with PB 15 *ku which includes infinitives.

Since PE is assumed to have employed only prefixes to mark noun classes [Elugbe, in press], the possibility that the class-marking U- prefix was originally different from the suffix ...AmhI cannot be discarded. In that case, the function of AmhI would probably have been to derive noun stems from verb stems. Thus while AmhI was used after the verb stem to de-verbalize it, U- was prefixed to the same stem to mark it for a particular class. One might go further and say that, perhaps, the actual morpheme was mhI

while A- was a concord element attached to it. For example, most Edoid languages still use concord elements (mostly for the number category) with qualifiers such as demonstratives (see Elugbe [in press]).

Within the scope of the data available on the Edoid languages, it is difficult to be very definite about this last point. What seems obvious is that throughout Edoid and, therefore, in PE, both the suffixal -AmhI and the prefixal U- were added to a verb stem to form the gerund.

The question of the motivation for PE *U- > PSWE *E- remains unanswered, and it appears we cannot answer it satisfactorily here. In any case, it has no direct bearing on our main argument. However, one possible explanation would be that U > E when the A of the suffixal part of the gerund became O in SWE. It is probable that the shift to E was via I, so that the whole process was U > I > E. Shifts like u > e or ε are well-attested in the Edoid languages. The effect of the prefix becoming E- in SWE was to make it and the first vowel of the suffixal part agree in terms of tongue height.

If in fact this was not the case, i.e. the change PE *U- > PSWE *E- is not to be explained in terms of sound change, there is still the possibility that some kind of class shifting has taken place such that PSWE moved gerunds from the U- class to the E- class. Donwa [forthcoming] actually treats Isoko gerunds under an unpaired E- class. The implication of the class shifting hypothesis would be that PSWE *E- in the gerund is not a reflex of PE *U- in the same morpheme.

5. Conclusion

I have given a brief account of the phonological aspects of the gerund in Dɛgɛma. In addition, I have shown that the Dɛgɛma gerund has cognates all over Edoid, enabling us to compare and reconstruct the gerund for PE.

Although the actual reconstruction of the morpheme raises a number of questions, we are relatively sure that it was something like *U...AmhI. The SWE form contains vowels that have to be explained in the light of our reconstruction and an attempt is made to account for them; but even if our explanation has not been absolutely convincing, it at least allows us to account for the form of this morpheme in the three other branches of Edoid.

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FIFTEENTH CONFERENCE ON AFRICAN LINGUISTICS

University of California - Los Angeles

March 29-31, 1984

Thursday, March 29

Morning

PLENARY ADDRESS

Larry M. Hyman (USC), "The mysterious case of the empty determiner in Aghem"

Session 1. SYNTACTIC THEORY

Hagit Borer (UCI) & Laurice Tuller (UCLA), "Nominative Agreement Complementarity and VSO order in Standard Arabic"

Wafaa Wahba (Illinois), "LF movement in two Arabic dialects"

Ian Roberts (USC), "Serial verbs and government binding theory (Gokana)"

Janice Jake (Illinois), "Raising in Fur"

Marshall Lewis (Indiana), "Relative clause formation in Ewe"

Session 2. LANGUAGE CLASSIFICATION AND DEVELOPMENT

Mohamed Nuuh Ali & Linda Arvanites (UCLA), "The place of Jiiddu in Proto-Soomaali"

John A. Distefano (UCLA), "A revised linguistic classification for Kalenjin and its historical implications"

Katherine Demuth, Nicholas Faraclas (UCB) & Lynell Marchese (SJSU), "Noun classes and concordial agreement systems: evidence from language acquisition and implications for comparative/historical research"

Herman M. Batibo (Dar es Salaam), "A diachronic perspective on tonal 'displacement' in Kisukuma"

Gerard M. Dalgish (CUNY), "Microcomputers and African Research"

Afternoon

Session 3. THEORETICAL TONOLOGY

David Dwyer (MSU), "A segmental autmelodic tonology of Mende"

Elizabeth Cowper & Keren Rice (Toronto), "The destruction of tonal structure in Mende"

Brian D. McHugh (UCLA), "Postlexical tone rules in Kirua Vunjo Chaga"

Gary Gilligan (USC), "An autosegmental analysis of Babanki tone"

Farida Cassimjee & Charles W. Kisseberth (Illinois), "Downstep in Venda"

David Odden (Yale), "Problems in the metrical representation of tone"

Donald G. Churma (OSU), "Semisegmental phonology"

Session 4. LANGUAGES IN CONTACT

Atteya Y. El-Noory (Illinois), "Egyptian Arabic and English: nativization processes"

Eluzai M. Yokwe (Illinois), "The diversity of Juba Arabic"

Benji Wald (NCBR), "The influence of Arabic on the syntax of Swahili discourse"

Dianne C. Bowcock (Wisconsin), "African language usage in the classroom - reported and observed"

John Edward Philips (UCLA), "The history of the Hausa language"

Jennifer J. Yanco (Indiana/Boston), "Language contact and grammatical interference: Hausa & Zarma in Niamey, Niger"

Chet A. Creider (W. Ontario), "One father or two? Polysemy in kinship terms"

Eyamba G. Bokamba (Illinois), "The French colonial language policies and their implications on education and language development in francophone Africa"

Friday, March 30

Morning

Session 5. THEORETICAL PHONOLOGY

Bello Ahmad Salim (Bayero University, Kano), "Simplex nominal pluralisation in Hausa and the Lexicon in N.G.P."

Monik Charette (McGill), "The appendix in parametric phonology"

Jean Lowenstamm & Jean-Francois Prunet (McGill), "Tigrinya consonants and the obligatory contour principle"

Michael Kenstowicz (Illinois), "On core syllables in Arabic"

Ghassan F. Haddad (Illinois), "Sonority and epenthesis in Lebanese Arabic"

Hafedh Halila (USC), "Some syllable structure based rules of Tunisian Arabic"

Ernest Rugwa Byarushengo (USC), "The representation of pre-consonantal nasals in Haya"

Session 6. SYNTAX IN RELATION TO REFERENCE, PHONOLOGY, AND OTHER MATTERS

Zygmunt Frajzyngier (Colorado), "Two types of logophoric systems in Chadic"

J Ronayne Cowan (Illinois), "Evidence for the AUX cliticization hypothesis in Nuer"

Noel Rude (Oregon), "Ergativity and the active-stative typology in Loma"

Annie Rialland (CNRS), "Tons et affirmations/interrogations en Moba (langue voltaïque) ou le fini/l'infini"

- Nora C. England & William Ladusaw (Iowa), "Question formation in Kusaal: the interaction of syntax and phonology"
- Robert Carlson (Oregon/SIL), "The function of the conjunctions *ka* and *ma* in Supyire narrative"
- Lynell Marchese (SJSU), "On the function of conditionals in Godie discourse"

Working Session

- Eyamba G. Bokamba (Illinois), convenor, "Computer-aided instruction in African languages"

Afternoon

Session 7. TONE AND INTONATION

- William R. Leben (Stanford), "Intonation in Chadic languages"
- Shirley Donwa-Ifode (Port Harcourt), "The intonation system of Isoko"
- Deborah Schindwein (USC), "A look at downstep in the Kipare verbal complex"
- Nicholas Faraclas (UCB), "Rivers Pidgin English: tone, stress or pitch-accent language?"
- Paul Newman (Indiana), "Tone splitting and Gwandara ethnohistory"

Session 8. HISTORICAL LINGUISTICS

- Patrick R. Bennett (Wisconsin), "Dhaagicw life-stages: a study in paradigmatic reconstruction"
- M. Lionel Bender (SIU), "Gumuz, Koman, Mao & Omotic"
- Karen Lahaie (Stanford), "Origins of the *ma-* prefix in Hausa"
- John Goldsmith (Indiana), "Bantu tonal prehistory: the far past in the far past"
- P. Mumo Maundu (Nairobi), "Some aspects of consonantal sound change in Kikamba"

Session 9. BANTU SYNTAX

- Carolyn H. Perez (Wisconsin), "Raising and control in Bantu"
- Will Reilly (Indiana), "On locatives"
- Andrea Tyler (Iowa), "Swahili relative clauses: a generalized phrase structure grammar analysis"
- Thilo C. Schadeberg (Leiden), "The development of case and focus in Umbundu"
- Firmard Sabimana (Indiana), "The syntactic role of pre-prefixes in Kirundi"
- C.T.D. Marivate (Unisa), "The ideophone as a syntactic category in the southern Bantu languages"

Saturday, March 31Morning

Session 10. SWAHILI

Elena Bertoncini (Naples), "Quantitative analysis of Swahili vocabulary"

Derek Nurse (UBC), "The (mainly African) sources of Swahili vocabulary"

Carol Myers Scotton (MSU), "Language universals and syntactic changes in Swahili as a second language"

Magdalena Hauner (Wisconsin), "Kerewe interference in Swahili?"

Carol M. Eastman (Washington) & Sheik Yahya Ali Omar (SOAS), "Swahili gestures: comments (*vielezi*) and exclamations (*viingizi*)"

Gilbert Puech & Jean-Marie Hombert (Lyon 2), "Individual variation in the production and perception of Swahili vowels"

Session 11. VOWELS

George N. Clements (Cornell), "Disharmonic vowel sequences in Akan: a reply to Stewart"

Bruce Martin (Illinois), "Vowel harmony in Kipsigis"

Ian Maddieson (UCLA), "Investigating the voice quality dimension in Western Nilotic vowel harmony"

Mona Lindau (UCLA/Lund), "Vowels and diphthongs in Hausa"

Kjell Norlin (Lund), "Acoustic analysis of fricatives and vowels in Cairo Arabic"

Oladele Awobuluyi (Ilorin), "On the reality of vowel coalescence in Yoruba"

Mairo Kidda (Illinois), "Morpheme alternation in Tangale: a syllable structure approach"

Session 12. SYNTAX

Anthony R. Davis (Stanford), "Binding and relative aspect markers in Hausa"

H.F. Hailu (Howard), "Cleft constructions"

Ore Yusuf (UCLA), "A functional explanation for the *ní*- NP in Yoruba"

David Perlmutter (UCSD), "A theory of double object constructions"

Lioba Moshi & Laurice Tuller (UCLA), "Double object constructions in Bantu and Hausa"

M.A. Mohammad (USC), "Stylistic rules in Arabic and the levels of Grammar"

Donna Wagner (USC), "Objects in Gokana"

Afternoon

Session 13. MORE SYNTAX

Hany Amin Azer (Cairo), "Negation in Egyptian Colloquial Arabic"

Russell G. Schuh (UCLA), "The syntax of generic constructions in West Chadic languages"

John P. Hutchison (Boston), "WH-movement and relativization in two Creole languages (Cape Verdean and Haitian)"

Vicki Carstens (UCLA), "WH-movement in Yoruba"

Session 14. MORPHOLOGY AND PHONOLOGY

Grover Hudson (MSU), "The Arabic doubled verb conspiracy and morpheme invariance"

Paul Sauvageau (McGill), "The metrico-syllabic approach: evidence from Kinyarwanda"

Camillia N. Keach (Temple), "O epenthesis: a positional treatment of O-final pronouns in Swahili"

Aleksandra Steinbergs (Newfoundland), "Loanwords and MSC's in Oshikwanyama"

Session 15. LANGUAGE POLICY, SEMANTICS AND OTHER TOPICS

F. Niyi Akinnaso (Ife), "Some theoretical issues in borrowing and code-switching"

Girgis Zakaria Messiha ('Ain-Shams), "Some phonological problems that face Arab learners of English"

Alexandre Kimenyi (CSUS), "Doublets in Kinyarwanda: an inquiry into the process of sign production"

Douglas L. Sampson (SIL), "The phonology of Banda-Tangbago"

Proceedings of the conference will be published as Supplement 9 of *Studies in African Linguistics*, entitled *Précis from the Fifteenth Conference on African Linguistics*, to appear in late 1984.

PUBLICATIONS RECEIVED

The following publications and publication notices have been received during 1982-84.

Nigel Barley. *Symbolic Structures: an Exploration of the Culture of the Dowayos*. London and Paris: Cambridge University Press and Editions de la Maison des Sciences de l'Homme, 1983. \$27.50.

Ethnographic study of the Dawayo of northern Cameroon, an Adamawa speaking people. Contains no linguistic information.

Paul Boakye. *Syntaxe de l'achanti*. Berne, Frankfurt: Publications Universitaires Européennes: série 21, Linguistique, Vol. 19, 1982. br.sFr. 64.- (Verlag Peter Lang AG, Postfach 277, CH-3000 BERN 15, Switzerland)

[From the publication notice]: "La phrase segmentée est très probablement la plus complexe des structures syntaxiques. La théorie énoncée par Bally pour le français est appliquée dans cet ouvrage à une langue non indo-européenne, l'achanti, prépondérant au Ghana avec les dialectes du groupe twi. L'étude des procédés syntaxiques fait ressortir la relativité de l'arbitraire. Par l'analogie entre les facteurs prosodiques de l'intonation syntaxique du français et du schéma tonal de l'achanti, on retrouve un fait central: la prosodie comme marque du rapport syntaxique et de la délimitation des termes de la segmentation. Au delà des états tonaux caractérisant les noyaux et les satellites des syntagmes nominaux, les schémas tonaux des propositions peuvent signifier soit la subordination ou la coordination, soit la subordination avec ou sans segmentation. Une comparaison des segmentées française et achanti ouvre des perspectives intéressantes de recherches dans un domaine peu exploré: les suprasegmentaux."

Denis Creissels. *Eléments de grammaire de la langue mandinka*. Grenoble: Publications de l'Université des Langues et Lettres, 1983. FF40.

Descriptive study of the syntax of Mandinka. Chapter titles are as follows: Schèmes de prédication et systèmes de marques prédicatives, Le système nominal, Compléments sur les prédicatifs verbaux, La proposition à prédicat verbal, La prédication de situation, La prédication d'identification, Le prédicatif ko, La relativisation.

Gerard M. Dalgish. *A Dictionary of Africanisms: Contributions of Sub-Saharan Africa to the English Language*. Westport, CT: Greenwood Press, 1982. \$35.00.

[From the publication notice]: "Gerard Dalgish's *Dictionary of Africanisms* presents those terms from African languages that have entered and enriched the general vocabulary of the English-speaking world. He also

includes Africanisms, words which, while familiar to English speakers in Africa, do not appear in standard English dictionaries. Perhaps most importantly, the *Dictionary* presents a representative view of Africa's contributions to the English language. These contributions are recorded in the form of lexical entries from all aspects of life: social, religious, economic, cultural and political, conceptual, zoological, botanical, agricultural, geographical, fashion, crafts, and others. The approximately 3,000 entries were collected from a wide range of sources including novels, newspapers, magazines, and textbooks. Definitions are illustrated by quotations that use the term in context, and indicate the extent to which these words have entered the general English vocabulary. Quotations from the *New York Times*, the *Times* (London), and *Time Magazine* appear along with excerpts from the *Ghanaian Times*, the *Times of Swaziland*, and the *Weekly Review* (Nairobi), providing a balanced perspective on the world behind the words themselves. The entries included in this dictionary come from the four major African language families: Niger-Congo; Nilo-Saharan; Afro-Asiatic; and Khoisan. Also included are words that originated in one of these African languages but entered English speech through some other language, as well as words that originated in non-African languages but entered English vocabulary through an African language."

Gerrit Jan Dimmendaal. *The Turkana Language*. Publications in African Languages and Linguistics, 2. Dordrecht: Foris Publications, 1983. Dfl. 78 (cloth), Dfl. 58 (paper).

[From the publication notice]: "This monograph presents a detailed description of a Nilotic language spoken in Kenya. Among the phonological issues treated are cyclic vowel harmony processes, non-voiced vowels, tone and syllable-structure. Turkana is a non-configurational verb-initial language. The description gives an account of basic word order types on the basis of a prominence hierarchy, and discusses case marking by way of tonal inflection. The grammar gives an extensive discussion of verbal and nominal morphology, dealing with such varied aspects as basic and derived predicate structures, number marking and strategies for relative clause formation. Throughout the description reference is made to statements about language universals in recent linguistic literature."

Carol M. Eastman. *Language Planning: an Introduction*. San Francisco: Chandler & Sharp Publishers, Inc., 1983. no price listed

[From the Preface]: "The idea of language as a plannable societal resource developed as an area of sociolinguistic research in the 1960's. ... This book is an introduction to the field of language planning from an interdisciplinary perspective." Though general, it utilizes African, particularly Swahili, examples extensively. Chapter titles are Language planning, the political and social aspects of language planning, Language planning and other related fields, The history of language-planning study, Language-planning theory, Language-planning method, The application of language planning.

Ecole des hautes études en sciences sociales. *Essai de nomenclature des populations et des langues du Cameroun*. Paris: Centre d'Etudes Africaines, n.d. FF 100 surface mail, FF 50 (student price) surface mail, FF 150 air mail. (Secrétariat des publications du CEA, Madame Naizot, E.H.E.S. S., 54 Bd Raspail, 75006-Paris).

[From the publication notice]: "*L'Essai de nomenclature des populations et des langues du Cameroun* ... se présente sous la forme d'un thésaurus de termes d'appellation et de leurs variantes, accompagnés de la localisation des groupes ou langues répertoriées et des références."

Bernd Heine (ed.). *Recent German Research on Africa: Language and Culture*. Tübingen, FRG: Institute for Scientific Cooperation, 1982. gratis (German Studies, Editorial Office, Landhausstrasse 18, D-7400 Tübingen 1, Federal Republic of Germany).

"In [this] series ... research contributions by German scholars are abstracted in the form of book reviews." There are summary statements of 15 linguistic projects by German scholars, including several maps, tables, and lists of references. Appendices include lists of German scholars working on African languages and lists of German periodicals and monograph series on African languages.

Melvin K. Hendrix. *An International Bibliography of African Lexicons*. Metuchen, NJ: Scarecrow Press, Inc., \$22.50 (Scarecrow Press, Inc., P.O. Box 656, Metuchen, NJ 08840).

[From the publication notice]: "*An international Bibliography of African Lexicons* represents the most comprehensive effort to date to apply current standards of African nomenclature to over four hundred years of African lexicographical writing and research. The volume contains some 3,500 entries, representing almost 700 African languages and over 200 dialects, which reflect the great diversity of Africa and its peoples on the continent and in the many adjacent island communities. The bibliography is divided into five parts: general, polyglot, special and classified, conversation and phrase books, and periodical publications. Most of the entries have some annotation informing the reader which languages are included and how they are arranged in each work. The language and dialect index, together with the authors and names index, should permit both the knowledgeable student of African languages and the casual reader easy access to material of interest."

Human Sciences Research Council. *Data Collection: a Problem Area in Human Sciences Research*. Occasional Paper No. 1. Pretoria: Human Sciences Research Council, 1983. R5,00.

Papers from a 1982 seminar of the HSRC on the problems concerning data collection in South Africa.

Jonathan Kaye et al. (eds.). *Projet sur les langues kru, premier rapport*. Université du Québec à Montréal. Papers in the volume are the following: La construction associative en bété de gbadi (M. Charette), Le ton

abstrait du kagWe (H. Koopman & D. Sportiche), Harmony processes in vata (J. Kaye), Bete reciprocals and clitic binding (D. Sportiche), Variables and the bijection principle (H. Koopman & D. Sportiche), control from COMP and comparative syntax (H. Koopman), Les dialectes dida (J. Kaye), Les traits phonologiques (J. Kaye), Les traits morpho-syntaxiques (M. Charette), Lexique comparatif (D.B. Siméon).

Wilma Meier (ed.). *Bibliography of African Languages*. Wiesbaden: Otto Harrassowitz, 1984. DM 140,-.

[From the publication notice]: "This Bibliography of African Languages contains titles concerning the structure of individual languages as well as works dealing with the history, classification and geographical spread of linguistic phenomena, and the development of national and standard languages. In addition to the works of scientists and scientific institutions the first translations of theological writings, e.g.: Potken, Johann: *Psalterium, Hebraicae, Graecae, Aethiopiae et Latinae*, Rome 1513, have also been included as well as the reports of early seafarers such as Leo Africanus, Olfert Dapper etc. Also included are the language publications of missionaries and missionary societies, which constituted a considerable proportion of early research into African languages, and works written by civil servants and doctors serving colonial administrations. The period covered begins with the early 16th century and ends in the year 1980. The works of approximately 4000 authors are included; around 2500 African languages and dialects are listed in the Language Index."

P. Akujūobi Nwachukwu (ed.). *Readings on the Igbo Verb*. Nsukka: The Igbo Languages Association, Department of Linguistics and Nigerian Languages, University of Nigeria, Nsukka, 1983. no price listed

Contents of the volume are as follows: Some problems related to Igbo verbal studies (A.A. Uwalaka), Towards a classification of Igbo verbs (P.A. Nwachukwu), Verb derivational morphology (E.'N. Emenanjo), Inflectional and non-inflectional affixes (P.A. Nwachukwu), Non-finite forms of the verb (N. Oji), Transitivity (P.A. Nwachukwu), The status of auxiliaries (E.'N. Emenanjo), Motion verbs (A.A. Uwalaka), Selectional restrictions: verbs meaning 'to buy' and Selectional restrictions: dimension and weight (G.M.K. Anoka).

P. Akujūobi Nwachukwu. *Towards an Igbo Literary Standard*. London, Boston and Melbourne: Kegan Paul International, 1983. \$15.95.

[From the Introduction]: "This monograph is divided into five chapters. Chapter 1 deals with the general question of a standard form of Igbo, chapter 2 is concerned with unsettled issues of Igbo orthography and suggests how the 1961 Onwu orthography could be supplemented to make it an adequate system for writing all Igbo dialects, chapter 3 describes the morpho-syntactic characteristics of Central Igbo, suggests ways of systematising the classification of Igbo lexical items and outlines two com-

peting conventions for tone-marking Igbo. Chapters 4 and 5 are of a more general nature: 4 is concerned with the procedures of language modernisation and enrichment and 5 contains a number of proposals which would, if adopted, ensure that the process of standardisation be maintained."

Joyce Penfield. *Communicating with Quotes? the Igbo Case*. Westport, CT: Greenwood Press, 1983. \$29.95.

[From the publication notice]: "Joyce Penfield contends that the use of proverbs in different cultural settings has not been adequately explored. She claims that there are few, if any, satisfactory ethnographic investigations of where, why, how, and by whom or among whom proverbs are used, and the range of interactional situations in which they are used. Penfield's methodology includes an in-depth analysis of the interactional settings in which proverbs are used. She collected various interactional settings typical of the Owerri Igbos in which different proverbs were used, and then analyzed similar settings for factors which might explain why the proverb was quoted and what effect it was intended to have. Her data were drawn from the folk conceptions of expert Igbo users of proverbs—narrative descriptions and interpretations of recalled situations in which proverbial speech was appropriate. Penfield answers three broad interrelated questions in this study: why is quoting behavior used in Igbo society; what allows proverbs to be considered as quoting behavior; and what are the immediate and ultimate functions of quoting behavior in Igbo society."

M.A. Smirnova. *The Hausa Language*. (Translated by G.L. Campbell) Languages of Asia and Africa, Volume 5. London, Boston and Melbourne: Routledge and Kegan Paul, 1982. \$13.95.

Translation of Smirnova's 1960 grammar, *Yazyk Khausa*. Contains brief description of Hausa phonetics, morphology, and syntax, a few short texts, and a bibliography. Tone and vowel length are not marked.

Yéro Sylla. *Grammaire moderne du pulaar*. Dakar, Abidjan, Lomé: Les Nouvelles Editions Africaines, 1982. no price listed

Descriptive grammar of the Pulaar dialect of Fula. Though the grammar is intended for use by Pulaar speakers, Sylla has introduced modern linguistic concepts to add new insights into the language of interest to general linguists.

Rainer M. Voigt. *Comptes Rendus du Groupe Linguistique d'Etudes Chamito-Sémitiques G.L.E.C.S.* Index des Tomes I à XVIII-XXIII, 1931-1979. Geuthner, 1983.

List of papers which have appeared in *Comptes Rendus du Groupe Linguistique d'Etudes Chamito-Sémitiques* alphabetical by author.

Ursulu Wiesemann, Etienne Sadembou and Maurice Tadadjeu. *Guide pour le dé-*

veloppement des systèmes d'écriture des langues africaines. Collection PROPELCA, No. 2. Yaoundé: Département des Langues Africaines et Linguistique, F.L.S.H., Université de Yaoundé, 1983. no price listed

Course of instruction in basic phonetics and phonology intended to provide a systematic method for developing orthographies for unwritten languages with inadequate writing systems. Also included are chapters on choosing a dialect of reference and on developing basic literacy materials.

Publications of African Studies Center, Michigan State University

Gene G. Gragg. *Oromo Dictionary*. Monograph No. 12, Committee on Northeast African Studies. East Lansing, MI: African Studies Center, Michigan State University, in cooperation with Oriental Institute, University of Chicago, 1982. \$21.75, plus \$1.50 for postage and handling.

The Oromo-English dictionary has extensive illustrative material and grammatical annotations. Also included is a systematic index, organizing the words in the dictionary into semantic groupings for reference to the dictionary.

M. Lionel Bender (ed.). *Nilo-Saharan Language Studies*. Monograph Number 13, Committee on Northeast African Studies. East Lansing, MI: African Studies Center, Michigan State University, 1983. \$13.95, plus \$1.50 for postage and handling.

Papers in this volume are the following: Introduction (M.L. Bender), Position, structure and classification of Songay (R. Nicolai), Languages of Wadai-Darfur (P. Doornbos and M.L. Bender), Phonetic notes on tone and quantity in the For language (B.H. Jernudd), Reidob Nubian: phonology, grammatical notes and basic vocabulary (R. Thelwall), Majang phonology and morphology (M.L. Bender), Aspects of Didinga phonology and morphology (D. Odden), Comparative Eastern Nilotic (R. Vossen), Southern Nilotic (F. Rottland), Topics in a grammar of Turkana (G.J. Dimmendaal), Some aspects of Logo phonology and morphology (D.L. Goyvaerts), Kunama: phonology and noun phrase (E.D. Thompson), Twampa Phonology (R. Thelwall), Remnant languages of Ethiopia and Sudan (M.L. Bender).

Publications of SELAF

Bernard Surugue. *Etudes Gulmance (Haute-Volta): Phonologie, classes nominales, lexiques*. Bibliothèque de la SELAF, 75-76. Paris: SELAF, 1979. no price listed

[From the résumé]: "This work is a study of the Gulmance dialect spoken in the Botu region in the east of Upper Volta. The author first exposes the phonology of the language: its phonemes (vowels and consonants) and tonemes are listed and defined. Indications follow concerning the frequency of these elements in the lexicon and their combining possibilities. The noun class system is then defined and discussed. The work concludes

with a Gulmance-French and a French-Gulmance vocabulary, containing the corpus of data on which the preceding analyses are based. The vocabulary entries are phonologically transcribed, and are accompanied, when necessary, by their structural forms and an indication of their class."

Diana Rey-Hulman. *Les bilinguismes littéraires: signification sociale de la littérature orale tyokossi (Togo)*. Bibliothèque de la SELAF, 83-84. Paris: SELAF, 1981. no price listed

[From the résumé]: "The author examines the social meaning of oral literature as a "manifestation of linguistic choices" and as an "act of communication among speakers". The analysis is based on the Tyokossi society of Togo, but a theoretical introduction broadens the horizon of the work by bringing in the problems of the relationship between written and spoken language and of bilingualism in a society such as the French society (the example of the Picardy dialect is discussed), and by developing a critique of the school. In the case of the Tyokossis, whose society is particularly complex, ethnically, socially, and linguistically, there is no question of a written language/spoken language or a national language/regional language bilingualism, but rather of different forms of bilingualism expressing relationships among social groups: masters/underlings, dead/living, old/young, men/women, etc. The society's complexity forces the author to make constant reference to its history, to its economic context, and to the development of its socio-economic organization. A certain number of occasions for literary utterances occur within this global context: the kurubi ceremony, funerals, story-telling sessions. These occasions involve bilingual situations which illustrate both the contrast and the complementary nature of the social groups."

Nicole Tersis-Surugue. *Economie d'un système: unités et relations syntaxiques en zarma (Niger)*. Bibliothèque de la SELAF, 87-88. Paris: SELAF, 1981. no price listed

[From the résumé]: "This work is a complete grammar containing a study of the language's phonology, syntactic units, composition and derivation, phrase structures, functions, and utterances. The author attaches herself to showing the importance of the principle of economy in the combining possibilities of lexemes and grammemes, and in the relations among syntactic units which are submitted to a predominant relation of order: modifier-modified. Zarma is furthermore characterized by the low degree of differentiation of its syntactic units and by the absence of a clear-cut noun/verb contrast. This leads the author to adopt a special terminology to denote the syntaxemes of the language so as to stress the difference between this system and the traditional Indo-European type."

Zakari Tchagbale and Suzanne Lallemand. *Toi et le ciel, vous et la terre: contes paillards tem du Togo*. Bibliothèque de la SELAF, 89-90. Paris: SELAF, 1982. no price listed

[From the résumé]: "This work contains a presentation, transcription

and translation of twenty-five tales in the Tem language spoken by the Kotokolis of central Togo. A linguistic introduction sketches the phonology, tonology and morpho-syntax of Tem. An ethnological introduction indicates where in West Africa such tales can be heard and proposes interpretations for some of them with respect to their moral content, the underlying images and fantasies, and the stylistic features of this "epico-comical" genre. These tales either take the sexual act as the central theme of the narration or use sexual organs or parts of them as heroes."

J.-M. Dallet. *Dictionnaire Kabyle-Français*. Etudes Ethno-Linguistiques Maghreb-Sahara. Paris: SELAF, 1982. no price listed

[From the résumé]: "This dictionary of an Algerian Berber dialect, Kabyle, replaces and updates previous dictionaries both in its method of classification by roots and in its content. Thus, it is addressed not only to the inhabitants of Kabylie, but also to other Berber speakers of the Maghreb, to students of Berber, and to linguists in the field of Hamito-Semitic (through references to other Berber dialects and to Arabic). Further, the numerous examples illustrating individual, family, and social life in the female as well as the male world will be of interest to sociologists, anthropologists and specialists in oral literature, in short, to all who seek to understand the realities of North Africa as they are revealed in this most lively language."

Publications of l'Institute de Linguistique Appliquée, University of Abidjan

Cassian Braconnier. *Le système tonal du dioula d'Odienné*, tome 1. Institut de Linguistique Appliquée et l'Agence de Coopération Culturelle et Technique, No. 86. Abidjan: Université d'Abidjan, 1982. no price listed

[From the introduction]: "Notre démarche sera la suivante: nous prendrons comme fil directeur le problème de la réalisation tonale des noms; nous présenterons comme point de départ un ensemble de données constituées par diverses réalisations tonales des noms et nous essaierons peu à peu de cerner les problèmes qu'elles posent et, si possible, de les résoudre. Pour ce faire nous serons amenés à établir un certain nombre de règles tonales qui s'appliquent dans notre parler avec un certain degré de généralité et dont le jeu rend compte d'au moins une partie des faits de tonalité qui concernent les noms. Avant de présenter le matériel nominal nous présenterons d'abord le matériel verbal, qui interagit avec lui, et nous terminerons en examinant certaines questions délicates encore mal comprises."

C. Braconnier and S. Diaby. *Dioula d'Odienné (parler de Samatiguila): matériel lexical*. Institut de Linguistique Appliquée et l'Agence de Coopération Culturelle et Technique, No. 96. Abidjan: Université d'Abidjan, 1982. no price listed

Alphabetical Dioula-French lexicon with some grammatical annotations.

Periodicals

Annales Aequatoria, Tome I, Volume II, 1980. (*Annales Aequatoria*, B.P. 1064, Mbandaka, ZAIRE)

Annales Aequatoria, Tome II. 1980. (same address)

"*Annales Aequatoria* will cover quite a large domain: linguistics, anthropology, Bantu literature, history ... There will be one volume each year. For 1980, however, two volumes have appeared; a third is being printed. ... We would like to encourage scientific research on the cultures and languages of the peoples of Zaïre, especially of the Mongo people (the people of the central basin of the country)." [From the publisher's notice].

Cahiers ivoiriens de recherche linguistique, no. 13, avril 1983. [Institut de Linguistique Appliquée, U.N.A.C.I., Abidjan] (2 year subscription, 5000 CFA; back issues, 1250 CFA; for air mail rates and available back issues, write Service des Publications, Institut de Linguistique Appliquée, 08 BP 887, Abidjan 08, IVORY COAST)

[From the publisher's notice]. "C.I.R.L. ... appears twice a year, in April and October. It includes articles relating to theoretical or applied linguistics, especially on African languages and Ivoirian languages in particular. For the past four years articles in the following widely varied areas were published: Anthropological Linguistics, Literacy Program, Language Teaching and Learning, Orthography, Phonology, Syntax, Semantics, Lexicology, Language Classification, Bibliography, etc."

JOLAN [Journal of the Linguistic Association of Nigeria], No. 1, 1982. (published once per year; members of LAN and students, ₦5.00, other individuals in Nigeria ₦10.00, overseas individuals \$20.00; write to JOLAN, Department of Linguistics and Nigerian Languages, University of Nsukka, Nsukka, NIGERIA)

Journal of the Linguistics Association of Nigeria. Number 1 contains 17 articles, including descriptive studies and studies in language classification, language typology, and language planning.

Meroitic Newsletter/Bulletin d'Informations méroïtiques, No. 22, octobre 1982. Paris: Valbonne, 1983. [Centre de Recherches archéologiques U.R.A. 4] no subscription information

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