ACQUISITION OF LANGUAGE BY LUQ CHILDREN

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PREFACE

The motivation for the research on the acquisition
of language by Luo children derived from the work of
an interdisciplinary group of anthropologists and
psychologists at the University of California, Berkeley.
Their Field Manual (Slobin 1967) served as the basic
theoretical reference for the research, and I am heavily
indebted to the authors, Susan M. Ervin-Tripp, John J.
Gumperz, Dan I. Slobin, Jan Brukman, Keith Kernan,
Claudia Mitchell, and Brian Stross.

A debt of gratitude is owed also to Professors
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for instruction and training received prior to the re-
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drafts of the present work and provided helpful suggestions.
Advice and aid were provided through discussions with Jan
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Brian Stross on the nature of child language and studies
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ological issues in the research.

The Institute for Development Studies, University
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also was kind to provide me with the position of
Visiting Research Associate.

An expression of thanks is due the Luo people
of Alego sub-location, Sakwa Location, Homa Bay District.
They kindly allowed me to reside among them and
welcomed me into their homes during the course of the
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preters and co-workers, Julius Okumu Obare and Peter
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research would have suffered immeasurably.

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CHAPTER 1:

INTRODUCTION

1.1 INTRODUCTION

Field research on the acquisition of communicative competence was conducted among the Luo of Kenya from April, 1967, until June, 1968.[1] The Luo, who number approximately 1,148,335, live in Siaya, Kisumu, and Homa Bay Districts, Nyanza Province, in southwestern Kenya (Kenya Census 1962).[2] The Luo are Nilotics, representing the southernmost group of that family. The original home of the Luo was the southern Sudan, and the Luo are related culturally and linguistically to Nilotes in the Sudan--the Dinka, Nuer, and Shilluk-- and in Uganda--the Acholi, Alur, Langi, and Jopadhola. The Luo language, according to Tucker's classification, is a member of the Southern Lwo group of the Nilotic languages (Tucker and Bryan 1966).[3]

1.2 ETHNOGRAPHIC SKETCH OF THE LUO

Despite the fact that settlement by the Luo in the present Nyanza Province occurred over a period of a few hundred years (cf. Ogot 1967), the culture and especially the language of the Luo sub-tribes (or tribes) remained remarkably uniform. During the colonial and post-independence periods, changes were greatly accelerated, to the extent that considerable variation has come to prevail.

An account of the variation, however, the degree of social change, or even an adequate ethnographic description is beyond the scope of the present work. As a means of providing basic background information, however, a brief sketch of some of the major features of Luo society will be presented, since they are integral to later analyses (cf. DuPré 1968 for ethnographic references).

1.2.1 Economy and Residence Patterns. Traditionally, the Luo had a mixed economy, with the major emphasis on pastoralism, primarily cattle herding. Some agriculture was practiced, the major crops being cereals--maize, millet and sorghum. Today, cattle herding is still an economic pursuit, but its importance has declined, and agriculture predominates in some areas. In addition to the traditional grain crops, a variety of crops are now grown, such as beans, groundnuts, sisal, sugar cane, cassava, and some coffee.

The homestead in the domestic economy was the most important unit, and the head of the homestead, the senior man, was in charge of the acquisition and distribution of wealth. The acquisition of wealth was tied closely to the land, which was ultimately under the control of the corporate lineage. Now, with land consolidation, units of land are owned privately, and each plot is controlled by a nuclear or an extended family. Although the shift in locus of control has had effects on social organization, the domestic economy per se has not been

altered greatly. Regardless of the ultimate controlling body, the use of the land was patterned so that the gardens and grazing areas of each homestead encircled the home. Each homestead was an "isolated" unit, encircled by a euphorbia hedge and separated from the other homesteads by gardens and grazing areas. Each homestead contained several huts, the number depending on the number of wives and married sons. Traditionally, a homestead would include members of three or perhaps four generations, traced patrilineally. At present, it is far more common for a homestead to contain only two generations, i.e. a nuclear family.

The essential features of the domestic economy, then, are that a mixed economy is practiced, agriculture is beginning to predominate in some areas, and the homestead is the prime unit in the domestic economy. Each homestead has its own gardens, and, nowadays, its own cattle grazing area, and each homestead is spatially isolated (this point will be discussed further in the following chapter; also cf. Whisson 1964).

1.2.2 Social Organization. Although the Luo are sometimes referred to as a tribe, there was not in traditional times any over-riding authority for the group as a whole, or any type of over-arching formal organization. Unification, to the extent that it existed, was on linguistic and cultural grounds. Formal types of organization existed at lower levels, based on a segmentary opposition type

of system. These levels consisted of sub-tribes, clans, and lineages.

Sub-tribes (ogendini) were the largest units within which all disputes were settled by mediation. Sub-tribes occupied a single piece of territory, and they were made up of a core lineage and a number of attached lineages (cf. Southall 1952; Whisson 1964). Within each sub-tribe, there was usually one dominant agnatic lineage and several clans or group of clans. The clans (ɟoudi) were the major subdivisions of the core lineages of the sub-tribes, and the focus of unity was the eponymous ancestor. The generational depth of the clans varied, with a range of four or five generations to as many as twelve (cf. Evans-Pritchard 1949).

The clans were divided further into lineages, based on founding ancestors. The degree of segmentation within a clan varied, depending on the size of the clan and the territory it covered. There were also minimal and maximal agnatic lineages (cf. Southall 1952). Minimal lineages generally lived together in one area and cooperated in garden work and cattle herding.

References to the sub-tribes, clans, and lineages have been made here in the past tense, mainly because they no longer function in the traditional manner, with the exception of lineages. The functions of the sub-tribes and clans have been usurped by local government and churches, and some of the activities of the lineages,

as for example in marriage ceremonies, have been abandoned or altered. Residence patterns, settlement of disputes, and cooperation in economic and ritual activities still are closely allied with or based on lineage affiliation. Significant aspects of a person's daily life, then, are affected still by his kinship network and lineage affiliation.

Some changes in the patterns of behavior and of interaction within the family unit have been brought about by Westernization, but many basic features have remained relatively stable. The men's activities still compel them to be absent from the homestead much of the time, attending meetings, court cases, and community affairs. They continue to do the more difficult agricultural work, such as preparing the soil for planting, and they are responsible for any construction or repair work on the buildings in the homestead.

The women are charged with the responsibility for most of the agricultural work and with the preparation of food and brewing of beer. The older girls assist their mothers in their work, and they are also usually responsible for the care of the younger children.

Nowadays, the boys attend school for the greater part of the day, and their traditional activity of cattle-herding has been limited. After school hours and on holidays, they are still charged with the task of grazing and watering the cattle. They also assist with the

agricultural work. The younger children are given menial tasks such as fetching water from the river, collecting firewood, assisting with food preparation, and keeping the compound clean.

Aspects of intra-familial interaction will be discussed in detail in the following chapter, and consequently the issue will be ignored here. It may be noted, though, that in traditional society, and to a large extent in the present, there was a clear pattern of expected behavior between people who stood in certain relationships to each other. The two dominant features in this system were relative generation and sex.

Generational seniority is basic to the maintenance of the social organization. Older men have ritual and economic control over the younger men (this is less true today) and correspondingly, any older man traditionally could give an order to a younger man and expect that it would be followed. Social position based solely on age provided an individual with a set of rights broad in scope and relatively inflexible in their application.

As the Luo are patrilineal and have patrivirilocal residence, the social position of women, overall, is much lower than that of the men. The comparison is not entirely apt, as in effect, a different set of duties, rights, and obligations are expected of the women. In social and ritual terms, they have fewer rights than the men, but in terms of the day-to-day operation of the

homestead, they occupy a central niche (cf. Southall 1952 for an analysis of the position of women in the lineage system).

1.3 RESEARCH AREA

The research was conducted in the Ulanda clan of Alego sub-location, Sakwa Location, Homa Bay District. Ulanda is located at the southeastern tip of Sakwa Location, and it is bordered on the north and east by Masai territory and on the south by Kanyamkago Location (another Luo sub-tribal area).

Ulanda represents one of the outlying areas in Homa Bay District that has been settled only recently. The first settlers came to the area in 1927 from Alego Location in Siaya District (formerly Central Nyanza), and the main period of settlement occurred in 1939-1942. That the settlement of the area has been recent means that land, initially, was more plentiful and that corres- pondingly individual units are much larger than home- stead areas in other parts of Luo land. Consequently, the homesteads are relatively more isolated, and the people are relatively more secure economically.

Alego sub-location is located at an altitude of approximately 5000 feet above sea level, and it enjoys an average annual rainfall of 50 inches. The abundant rainfall and temperate climate allow the people to har- vest two crops annually, a factor contributing signifi- cantly to their enhanced economic position. In more

arid areas of Nyanza Province, only one crop may be harvested annually, and the soil is generally of a poorer quality. The major cash crop in Alego sub-location is sugar cane, and the major subsistence crops are maize and, to a lesser extent, millet. Some cattle are kept, but due to the proximity of the Masai, who are traditional cattle raiders, the Luo are often raided and some people keep no cattle at all because of the danger.

The size of Ulanda clan territory is estimated to be approximately 1½ square miles. Within this area are located 60 homesteads, with a population of 362 people in 1967. Of the 362 people, 62 were men, 88 were women, and 212 were children. Although ethnographic data were collected from all 60 homesteads, only 15 of them were included in the primary sample unit. As indicated, 38 children were included in the sample, but the eight children in the present study each came from a different homestead.

1.4 RESEARCH PROGRAM

The research was conducted according to the designs and goals of A Field Manual for Cross-Cultural Studies in the Acquisition of Communicative Competence (Slobin 1967). The major objectives of the study will be recounted here, followed by a brief "natural history" of the research endeavor. The latter is included in order to recount the procedures and techniques employed

in the course of the work.

1.4.1 Objectives of the Research. As the present study
is concerned only with a portion of the overall sample
of children and consequently has a more limited set of
aims, a complete listing of the objectives of the research
would be superfluous. The general goal of the study,
however, was to collect information on the acquisition
of language, the competency required for the generation
of language, and on the acquisition of competency in the
use of the language.

In brief, the goal of the study was to provide a
description of the progression of a Luo child from an
infant with a severely limited repertoire of vocal
signals to a fully competent speaker of the Luo language.
Toward that end, a description of the acquisition of
communicative competence by the Luo, an initial sample
of 24 children was selected from the Ulanda clan, and
the children were visited periodically over a period of
nine months. Fourteen children were added to the sample
later in order to provide data on intra-cultural varia-
bility and to fill "gaps" in the age ranges of the initial
sample.

An effort was made to adhere to the suggested age
and sex distribution in the sample as instructed in the
Manual (1967:3). The ages of the 24 children in the
sample corresponded closely with those suggested in the
Manual, and the age range of 6 months to 13 years was

present. In the present analysis, only children in the age range of 7 to 35 months are included. According to the instructions in the Manual, children C and D were to be of indeterminate age, but were to be in the one-word stage and have a limited vocabulary (3). Due to the difficulty in ascertaining the level of speech development in the early stages of the research, the levels of both C and D were underestimated. When this fact was discovered, two children, A2 and B2, were added to the sample as a corrective measure. The children in the present study, their age ranges during the research, and their sex are given in Table 1.

Table 1: Distribution of Children by Age and Sex

Child	Age Range (in months)	Sex
Ogotu (A)	7-12	M
Wanga (B)	8-15	F
Othieno (A2)	15-19	M
Aoko (B2)	17-22	F
Ochieng (C)	25-32	M
Risper (D)	21-28	F
Rabuogi (G)	27-34	M
Akinyi (H)	28-35	F

The major research tasks outlined in the Manual that were appropriate for the eight children were as follows: II. Record babbling; V. Elicit and list

initial vocabulary; VI. Record free interaction between child and mother (or mother-surrogate) for intensive grammatical analysis; X. Describe child's interaction networks and standard daily activities...; XI. Record and observe dialogs between children; XIII. Observe communicative routines; and XIV. Interview adults concerning beliefs about language acquisition (1967:2).

On the basis of these tasks and the information collected, an attempt has been made here to provide answers to specific questions as: 1) at what age does babbling terminate; 2) at what age does the use of one-word utterances begin; 3) what are the characteristics of the one-word stage; 4) when does the two-word stage begin, and what are its characteristics; and 5) what are the features of subsequent grammatical development? In addition, information is provided on the general nature of speech socialization, and on the acquisition of rules governing the use of speech.

In brief, the major objectives of the analysis are: 1) to provide a description of the acquisition of language in terms of categories acquired, by Luo children in the age range of 12-35 months; 2) to account for their linguistic competence in the generation of their language; and 3) to illustrate how social settings alter the linguistic performances of the children. The third objective assumes primary importance in the study, as an exposition of 1) and 2) are directly contingent on

the children's speech as performed in a social environment.
Social factors governing the use of speech in Luo society
impinge on the data collecting process, and they conse-
quently affect measurements of competence.

As will be seen, social rules for behavior need not
be internalized by the child in order for his speech to
be socially constrained or regulated. External factors
also pose methodological problems. Examples of such
features in Luo society will be considered in Chapter 2,
but some background information will be provided here
in a brief record of the fieldwork procedure.

1.4.2. Plan of the Field Research. The initial two months
of the research period were devoted almost exclusively
to study of the Luo language, working both with texts and
informants. The third month was occupied with observations
of nursery school children (ages 4-7 years) at the Ulanda
Catholic Mission.[4] Work also continued toward acquiring
the language. Months four through six were spent in
collecting census information from the people of Ulanda
clan. Particular emphasis was placed on collecting infor-
mation on the children. During these months, the visits
to the homesteads also served as a means of introduction
into the community and provided opportunities for explaining
the research to the people.

Once the census was complete and it was possible to
select appropriate children for the study, regular visits
were begun to homesteads for the purpose of collecting

speech data. Visits continued on a periodic basis for
the remaining eight months of the study.

The visits to the homes of the eight children were
made under remarkably uniform social conditions. All of
the interaction with the children was in the homestead,
and in most cases at least one parent was present. Usually
all three researchers were present, although at times,
only Okumu and/or Oyugi visited the homes. Almost all of
the verbal interaction with the children was initiated
and sustained by Okumu, although due to social factors
and to the elementary level of the children's linguistic
ability, initiation and maintenance of conversation was
difficult.

A number of techniques were tried in order to stimulate
the children to talk. They were encouraged, for example,
to play games, such as building houses from maize cobs,
and to tell stories, sing songs, etc. None of these
attempts were successful. In order to minimize the
influence of the visitors' presence, the parents attempted
to engage the children in conversation in a secluded area
where a tape recorder was in operation. This technique
met with only limited success, as the children often
refused to talk at all.

1.5 PLAN OF THE PRESENT WORK

Organizational features of Luo society, such as
relative isolation of homesteads, restricted mobility of

the children, and the allocation of duties in child care, all relate to the children's communicative routines. In addition, social rules governing the use of speech have an effect. Chapter 2 provides an analysis of some of these organizational features and rules.

In Chapter 3, the linguistic development of children A, B, A2, B2, C, and D will be considered. Focus will be on acquisition of lexical items and on the early stages of grammatical development. In Chapter 4, the speech of children G and H will be described, and continued grammatical development will be noted. In both of these chapters, analysis of grammar will be restricted to considerations of sentence surface structure.

Chapter 5 will present a summary of generative grammar theory, and then the children's utterances in the age range of 19-35 months will be analyzed within this framework. Statements of the linguistic competence of the children will be given, and the order of emergence of specific grammatical categories will be provided.

In Chapter 6, the concluding chapter, a summary of the linguistic development of the eight children will be summarized, and the account of the development will be placed within social contexts and related to social constraints as they effect the performance of the children. In the discussion, acquisition of speech in terms of functions expressed will be considered, as well as the acquisition of some aspects of social awareness by the

children. Concluding and additional remarks will then
follow.

CHAPTER 2

METHODOLOGICAL CONSIDERATIONS

2.1 INTRODUCTION

Linguistic competence is a fundamental concept in generative linguistic theory, and a second concept which is sometimes confused with competence is linguistic performance. In linguistic analyses, the two are kept conceptually distinct, and an analysis of competence may proceed in the absence of considerations of performance. In studies of language acquisition, however, in which a description of the acquisition of linguistic competence is a primary goal, considerations of performance assume a more central position. In order to ascertain the reasons for the emphasis on performance, it is necessary first to consider the concepts as they are defined linguistically, and secondly, to consider the methodological features of the description of competence from the point of view of acquisition.

The plan of the present chapter is to provide the definitions of competence and performance, to discuss their relationship in the context of language acquisition, and to illustrate with a discussion of Luo children's speech behavior some methodological considerations necessary in empirical studies on language acquisition. The central argument of the presentation will be that linguistic information per se will not suffice for a description of

the acquisition of competence. Contextual information,
particularly in the form of social constraints on speech
behavior, is required for a more precise measurement of
competence.

2.2 LINGUISTIC COMPETENCE AND PERFORMANCE

2.2.1 Definitions of Competence and Performance. The
basic distinction between competence and performance
has been stated clearly by Chomsky:

> "Linguistic theory is concerned primarily with
> an ideal speaker-listener, in a completely
> homogeneous speech-community, who knows its
> language perfectly and is unaffected by such
> grammatically irrelevant conditions as memory
> limitations, distractions, shifts of attention,
> and interest, and errors(random or characteristic)
> in applying his knowledge of the language in actual
> performance...To study actual linguistic performance,
> we must consider the interaction of a variety of
> factors, of which the underlying competence of the
> speaker-hearer is only one...We thus make a funda-
> mental distinction between competence (the speaker-
> hearer's knowledge of his language) and performance
> (the actual use of language in concrete situations).
> (1965:3-4).

In other words, competence represents an abstraction away
from performance. It represents a native speaker's

linguistic intuition, the knowledge he must have in order
to understand any of the grammatical sentences of his
language. Performance is the expression of competence,
subject to various types of constraints, such as memory.
In relation to grammar, questions of how a speaker might
proceed in some practical or efficient way to construct
a certain derivation of a sentence to a particular
generative grammar belong to a theory of performance,
but the important point in this theoretical framework
is that such a theory of perfromance must ultimately be
based on a generative grammar that expresses the speaker-
hearer's knowledge of the language (cf. Chomsky 1965:9).
2.2.2 <u>Competence</u> <u>and</u> <u>Performance</u> <u>in</u> <u>Child</u> <u>Language</u>. The
role of linguistic intuition as the final arbiter of
grammaticality is diminished when attempts are made to
characterize children's early grammatical systems. The
basic problem is that there is no readily available system
of reference, that there is in fact no convenient way
to consult the child as to what constitutes his linguistic
intuition. An example, which has come to be called the
"pop goes the weasel effect", well illustrates the
problem. Roger BROWN and Ursula Bellugi reported the following
dialogue in their attempt to tap a two-year old child's
knowledge of plurals (1964:134):

  Interviewer: "Adam, which is right, 'two shoes'
       or 'two shoe'?"

Adam: "Pop goes the weasel!"

The problem of a frame of reference in relation to the child's linguistic competence has even more complex roots. The core feature has been stressed by Chomsky in the following manner. "There is surely no doubt that the child's achievements in systematizing linguistic data, at every stage, go well beyond what he actually produces in normal speech" (1964:39). Information about the types of sentences a child is able to understand and respond to appropriately shows that his basic linguistic competency exceeds that represented in "telegraphic speech", that a child using telegraphic style "can be shown to have an underlying, fuller conception of sentence structure (unrealized in his speech, but actively involved in comprehension) if misplacement of the elements he does produce leads to difficulties of comprehension, inability to repeat, etc., while correct placement gives utterances intelligible to him, and so on" (1964:39). In other words, the utterances generated by a child will provide only a partial record of what his underlying competence is. For a more adequate account, both a comprehension model and a production model are needed.

While acknowledging the need for a comprehension model, focus in the present analysis will be solely on production. Motivation for the selection of production

is that as yet no reliable cross-cultural technique of measuring or judging comprehension is available for children in the age range of the study. Immediately obvious techniques as testing a child's ability to follow instructions do not necessarily tap the child's competence, as his information may be derived from the recognition of a single lexical item in the instructions and not from a decoding of the grammatical input. In any event, no attempt is made in the present discussion to account for the children's comprehension.

Turning now to the problem of accounting for competency in the production of grammar, viewing competence in relation to the concept of performance, one possible approach to the problem is to ask the question "what is the complex of features which a child is expected to manipulate in order to communicate effectively?" By "complex of features" is meant the child's lexicon, grammar, and the various cultural rules and social constraints placed on his verbal behavior and which decree the social appropriateness of the behavior. In other words, specific forms of verbal behavior may be expected of the child by adults in designated situations, and the question becomes "what does a child need to recognize in order to behave according to the expectations?" The question of how well the child recognizes and manipulates the features may then be examined empirically. A diachronic study of the child's ability to observe social rules, i.e. a description of the acquisition of sociolinguistic rules,

there must be an ethnographic description of the communi-
cative routines of the children and the relation of the
routines to the data collection process.

As performance is embedded in a cultural matrix, an
ethnographic description of performance-related routines
should include the major features of the culture which
regulate communicative routines. It is expected that in
the socialization process, a child would eventually acquire
the rules which allow him to communicate competently in his
society, but the regulation of his speech in the early
stages is not always dependent on the internalization of
the rules. As an extreme example, a child may simply be
prevented from talking in certain situations by being
physically removed for violation of the norm that dictates
silence on his part.

2.3 SOCIAL CONSTRAINTS ON CHILDREN'S SPEECH

As a way of introduction to the account of communicative
routines for Luo children and the concomitant restrictions
on data collection, some experiences of researchers with
English-speaking American children will be provided. The
behavior of the American children furnishes a striking
contrast with that of the Luo children.

Studies on American children have shown that the onset
of two-word utterances is characteristically in the age
range of 18-24 months. It was expected that the onset for
Luo children would be in the same approximate range, and a

number of children in the sample were visited regularly in order to gather speech samples at the beginning period of the stage. The age of onset of two-word utterances corresponded fairly closely with that of the American children, but there was a striking difference in the number of utterances they seemed to make freely or spontaneously. Braine, in his study of American children, recorded the number of different word combinations for one of the children in his sample over a period of seven months as 14, 24, 54, 89, 350, 1400, and 3500+ (1963:2).

In another study with American children, Brown and Fraser reported the following. "We hoped to get as much speech as possible in as little time as possible and to have examples of the full variety of sentence types the child could produce. There were those who warned that the child would be shy and speechless in our presence; this was not the case. Mothers told their children that visitors were coming and, in general, we were eagerly welcomed, shown a parade of toys and games, and talked to steadily. It became clear that the child expected a guest to put in some time as a playmate, and so the recording was a two-man job with one of us taking data and the other prepared to play cowboy, horsie, coloring, trains, and the mule in 'Kick the mule'"(1964:51). In a period of a few hours, Brown and Fraser were able to obtain for all six subjects a speech corpus of a minimum of 500 different utterances.(1964:52).

In the Luo sample there were six children in the sample
(A2, B2, C, D, G, and H) who were at one point during the
course of the study in the appropriate age range. Altogether
the children were visited a total of 54 times. The visits
varied in length from 15 minutes to one hour, with the majority
being approximately 30 minutes, and the visits were made
at different times of the day so as to attempt to collect
speech samples over a wide variety of circumstances in the
daily routines of the children.[1] As noted earlier, a variety
of techniques also were used in attempting to collect the
data, such as trying to persuade the children to teach us
games, to tell us stories, etc., but these were all singu-
larly unsuccessful. Despite the large number of visits,
the variation in time of the day when visits were made, and
props for stimulating speech, the number of two-word utter-
ances collected for all of the six children was less than
200. Compared with Brown and Fraser's collection of 500
different two-word combinations per child, the Luo sample
is remarkably small. The disproportion is sufficiently
large so as to indicate gross differences were involved in
the collection process, derived from the differences of what
was deemed to be appropriate behavior in the two societies.
2.3.1 <u>Behavior in the Presence of Strangers</u>. In search of
an explanation, perhaps the most logically immediate one
is that my presence as a stranger rendered the children shy
and speechless. This explanation has merit, particularly
for the early stages of the research when visits to the

homesteads were first made. The youngest children, those in the 6 months to 2 years age range, without exception were frightened by my presence. The older ones reacted by crying and sometimes running away to hide in the house or behind it. Even after several visits were made to the homes, the children would show no outward manifestation of fear, but they would not talk at all. Their parents invariably would interpret their speechlessness as a sign of fear, saying that I still was strange to them, and they were being cautious. The parents also explained the children's fear by reporting that they had never seen a non-African before, and they were afraid because of my different appearance.

A factor contributing to the children's reaction to strangers is their restricted mobility. Very young children (below four years old), as a rule, do not have a great range of mobility, due in part to the type of Luo settlement pattern. Briefly, the Luo live in comparatively isolated homesteads, which are separated by distances ranging from twenty to several hundred yards. Usually the homesteads are organized spatially into clusters on the basis of kinship relations. Clusters of homesteads are separated by distances ranging from a mile or more to a few hundred yards, but within a cluster, the homesteads are also separate units. As noted in the Introduction, a homestead typically is surrounded by a tall euphorbia hedge, and there is only one entrance to the compound. The homestead is, effectively,

a single social unit. Children, especially the younger
ones, spend the majority of their time inside the compound,
aying with their siblings or caretaker.

While a child may visit the nearest homesteads, there
ly will be no more than one or two within the permis-
range of his mobility. Even then, there may be
motivated restrictions on his mobility. Disputes
sehold heads sometimes lead to suspension of social
among the members of the households, so that
n homesteads separated by only twenty or thirty
ented from playing together.

en, due to residence patterns and restricted
ome into frequent contact with many strangers.
se, strangers who come to visit at the
roportion of these is negligible in com-
er of regular visitors. S. H. Ominde,
ial development of Luo girls, stresses
"Children of two to five know very
ers of their own family circle.
ld, did not know who I was,
me and talked to her many times.
as due to their never having
_) It might be added that strangers
direct ways to the children's reticence
with subsequent strangers. In some cases, the
uren's fear of our presence was interpreted by their
father as their reaction to the fear of being innoculated.

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While a child may visit the nearest homesteads, there
usually will be no more than one or two within the permis-
sible range of his mobility. Even then, there may be
socially motivated restrictions on his mobility. Disputes
among household heads sometimes lead to suspension of social
interaction among the members of the households, so that
children from homesteads separated by only twenty or thirty
yards are prevented from playing together.

Luo children, due to residence patterns and restricted
mobility do not come into frequent contact with many strangers.
There are, of course, strangers who come to visit at the
homestead, but the proportion of these is negligible in com-
parison with the number of regular visitors. S. H. Ominde,
in his study of the social development of Luo girls, stresses
this point. He states: "Children of two to five know very
few people beyond the members of their own family circle.
Thus Obala, at three years old, did not know who I was,
although I had been to her home and talked to her many times.
Her parents told me that this was due to their never having
told her my name." (1952:11) It might be added that strangers
may contribute in indirect ways to the children's reticence
to interact with subsequent strangers. In some cases, the
children's fear of our presence was interpreted by their
father as their reaction to the fear of being innoculated.

The sudden appearance of strangers in the compound in the
past had meant that the children were going to be innocu-
lated by local medical authorities. The children generalized
their past experience to interpret the intentions of all
strangers.

Another factor which restricts the children's mobility
is the practice of Luo mothers or mother-surrogates of
telling children that they will be taken by a lion or by a
Jalano if they stray far from the homestead. The term
Jalano, in this particular area, was a reference term for
Masai, who had a common territorial boundary with the Luo.
The children are cautioned also to be wary of strangers
who visit the homestead when the parents are away, again
for the same reason, i.e. that the children may be stolen.
Although in more traditional times, according to reports
of elder informants, child-theft was a danger, it ceased
to be so many years ago.

Historically and culturally, there are sound bases for
xenophobic behavior on the part of the Luo. All of the
tribal groups in the East African cattle area, of which the
Luo are a member, exhibit such behavior (as do pastoralists
in other regions of the world; cf. Barth 1966). The ethno-
graphic literature for East African pastoralists is replete
with accounts of tribal xenophobia (cf. Evans-Pritchard
1940), but rather than reviewing the material here, it will
suffice to indicate that cattle raiding is the root pheno-
menon in the complex of forces generating xenophobic behavior.

Any cattle-herding group was, traditionally, subject to frequent cattle raids, and the presence of a stranger in the area would render him suspect automatically as a spy or cattle thief. Even within tribal groups raiding occurred, with clan pitted against clan. In the raids and resultant warfare, plundering and taking hostage of women and children was frequent, in which cases, the children would be incorporated into the raider's lineage. The restriction of mobility of children therefore had the sound practical basis of minimizing exposure to danger.

In areas where cattle raiding is no longer practiced, the reduction of xenophobia has not necessarily proceeded apace. Inculcation in children of fear of strangers is still an important part of the socialization process, based on information collected in informal conversations and from interviews with parents on child-rearing practices.

From observations, it appeared that Luo children behaved as they had been taught. During the first visits to the homes, I was struck by the fact that older children (5-9 years of age) upon seeing us approach the homestead, would gather the younger children into the house and keep them there as we passed through the compound on the path to another home. If we stopped to converse, the oldest child would act as spokesman, while the younger children remained in the background in the safety of the house.

Fear of strangers, then, is an element acting to restrict verbal behavior of Luo children. For very young children,

a fear response is probably universal, an expression of an
adaptive value. As the child grows older, the response is
overlaid and ameliorated by cultural factors. The Luo
capitalize on the response in their socialization practices
as a mechanism for limiting the mobility of the child and
thereby insure his safety. Traditionally, he was protected
from marauders, and there is the auxiliary advantage of
preventing him from becoming lost or possibly coming into
contact with harmful animals or insects.

2.3.2 Behavior in the Presence of Visitors. The fear
response was not the only factor responsible for constraining
the speech of the children in the presence of the researcher,
and moreover, its strength diminished with the passage of
time and repeated visits to the home. By visiting the homes
repeatedly, the social position of the researchers became
that of visitors, not strangers, and the appropriate behavior
of the child vis-à-vis visitors was exhibited.

There are socially appropriate ways in which children
are to conduct themselves when visitors are present, and the
children are taught the behavior by practice. According
to Luo etiquette, everyone in the homestead must come and
greet a visitor who has arrived, both verbally and by
shaking hands. Children who cannot talk yet and are barely
able to toddle are taken through the routine of shaking hands
even if they have to be assisted physically by an older
person. Children then leave the immediate area to continue
with their previous activity or to play, and the adults
converse without any interference from the children.

Sometimes the children remain present, but they are silent for the duration of the visit. The older children are taught explicitly the proper way to behave in the presence of visitors. Informants, in response to the question "Do you teach children what to do when visitors come?", always answered that they instruct children that they should be polite, greet the visitor, and then go away to leave the adults to their conversation. The children have received training in advance, for pre-verbal age children are taught the behavior by example. They are always in the care of an older child, even if the child is not a sibling but a relative who has come to live at the younger child's home to act in the capacity of nursemaid. The older child, who observes the rules, provides a model for the younger children, and he also is responsible for seeing that the younger children follow the rules. The net effect on the children's behavior in the presence of adults, regardless of the age of the child, is to reduce greatly, if not eliminate altogether, the verbal output of the child.

It was explained to the parents of all of the children in the sample that our purpose in being there was to study language development in children, and it therefore became acceptable, within limits, to have the children present when we visited. During the visits, though, it was first necessary to make polite conversation with the head of the homestead for a period of 10-15 minutes. When it was permissible to interact with the child, it was necessary

to attempt to collect his speech in the presence of the parents. To have suggested that we wanted to talk with the child in private would have been not only a breach of etiquette, but would have aroused suspicion about our intentions. Traditionally, enquiries about children, their ages, activities, etc. could be done only among very close friends and relatives. The only other category of person wanting information about the child would be someone who would put the information to evil use, as e.g. a sorcerer.

As matters were, there was a limit on the amount of time that the adults could be expected to sit patiently while we interacted with the children. A more severe hindrance to our task of collecting speech samples was that the children were faced with the task of performing in a situation which created role conflict. They had been taught by example and precept that such behavior was not permissible, and they were being asked to momentarily suspend all prior training. Not surprisingly, the children were reluctant to transgress the norms, and the result was severely restricted speech behavior.

To fully appreciate why the norms of behavior for a host are strongly sanctioned and why violations are serious, it is necessary to know something of the place of visiting in Luo society. It is not feasible to give a detailed analysis here, but it may be noted that visiting is a daily phenomena in the life of the Luo, and a high premium is placed on it. Luo men spend many of their after-

noons and much of the weekend, in short, most of their free time, visiting at nearby homes to converse and drink koŋo, the traditional millet beer. The women also often visit with women from nearby homes whenever their work schedule permits. In brief, all of the Luo are expected to be regular visitors and hospitable hosts when they in turn are visited. To violate this code of conduct, to make oneself unavailable for social intercourse, is to indicate that one's intentions must be evil, i.e., that there is something to hide, which by definition can only be detrimental to the group. To behave in such a fashion arouses suspicion, fear, and hostility, and it has the effect of ostracizing a person from the community.

In a society where the dictates of subsistence and defense require a high degree of cooperation, a course of action by an individual against the group is simply not tolerated. An individual requires the assistance of his kinsmen, not only in subsistence matters as preparation of land for planting, but for support against opposing groups, who may, for example, attempt to take his land or cattle. In short, a person cannot lightly ignore his responsibilities as a visitor and as a proper host. He cannot afford to alienate his kinsmen and neighbors.

2.3.4 Child-Adult Interaction. Other features of Luo society regulate and shape children's verbal behavior. To consider some of these, it is necessary to focus on aspects of Luo children's position in society.

2.3.4.1 <u>Constraints</u> <u>on</u> <u>Children's</u> <u>Behavior</u>. The behavior
of children vis-à-vis adults in visiting situations has
been noted, and it may be taken as a rough indicator of the
child's relationship with adults in other situations. The
relationship is essentially hierarchical, i.e., one of
superordination and subordination, and a feature of the
relationship marked in interaction is mutual respect. The
basic Luo attitudes on the issue can be shown in the following
account. One question asked of adults in the language belief
interviews was "Should children speak differently to adults
than to other children?" The answer invariably was "yes",
and when the informants were asked to elaborate, they replied
that children should be polite and show proper respect.
They also should be direct and precise in their speech,
avoiding joking and frivolous topics, and they should not
raise their voice, shout, or in general be boisterous. They
also should show respect by not looking the adults directly
in the eye when talking to them. Observations of adult-
child interaction confirmed the operation of these behavioral
features. It should be noted, however, that the implication
is not being made that all adult-child interaction is of
that type. Obviously there are more intimate aspects of
interaction, but their intimate nature precluded any frequent
observations of their manifestations. The majority of ob-
served adult-child interactions conformed roughly to the
model sketched above, which was to be expected if the
presence of a visitor was counted as an important factor

in the definition of the speech situation as a whole.

One further point to indicate what the model for children's behavior is general in Luo society is that the question in the language belief questionnaire was intentionally 'open' rather than 'closed,' and yet there was near unanimity in the answers given. Rather than postulating specific situations and asking the informants how a child should behave in them, the informants were allowed the freedom of expressing how they felt that a child should act in general situations, or if they so desired, of stating how the child should act in particular instances. None of the informants chose to give specific instances, but rather chose to answer in a general way, and when they were asked about variations in mode of behavior, they replied that there were none. Children always were supposed to show respect.

The rigidity of adherence to the constraints on respectful behavior varies situationally, and for children, according to age, but the general claim can be made that respect is a non-variant feature in social interaction between actors of unequal status. An analysis of even the major situational forms of the behavior is not feasible here, and in addition, the internalization of the rules for the various forms has not yet been established for children in the earliest periods of speech development. The net effect of the general feature of respect, however, is to reduce the verbal output of the child in the presence of adults and particularly when the verbal interaction must be with adults. The cardinal rule

is that children do not interrupt adult activities, and
young children who have not mastered this feature of behavior
follow it by fiat. Their nursemaids, held responsible for
their behavior, effectively prevent the children from vio-
lating the rule.

Children's speech is limited, then, in the number of
utterances they can make freely in the presence of adults
and, furthermore, it is limited by stylistic constraints.
The dominant feature follows from the requirement that
children be direct in their speech to adults. The direct-
ness in their speech is reflected by a low number of mor-
phemes per utterance, as compared with casual child-child
speech. There are other stylistic constraints, as e.g.
low pitch, but the essential feature for the present dis-
cussion is that the required respect of children for adults
is coded stylistically in the language, and the respect
has the overall effect of severely restricting the flow of
spontaneous speech of children in the presence of adults.

The hierarchical nature of adult-child interaction
and the consequent restriction of spontaneous speech posed
extremely difficult problems for the collection of speech
samples. Attempts to bypass the restrictions placed on
interacting with visitors or strangers by enlisting the
aid of parents was usually not successful. First there
was the problem of enlisting the parent's aid, which was
no simple matter, but even in cases where this problem was
resolved, the hierarchical relationship still prevailed,

and the speech still was constrained. For example, in several instances, the tape-recorder was left in operation in the presence of a mother and child or father and child, but the parents were unable to elicit even a single word from the child. Most likely, the child recognized the situation as "unusual", that it was not a typical everyday occurrence, and he consequently switched into a style of behavior that permitted him, appropriately, to do nothing.

2.3.4.2 Constraints on Adult Behavior. Having considered the child-to-adult-relational features on the theme of mutual respect, the adult-to-child features can now be considered. To begin with, the Luo have a general attitude toward the children and their behavior, which they express as the children "living in a world of their own". The children have activities of their own, created and sustained by them. Several informants remarked on this aspect of the children's daily life, and in relation to the are of language, many informants were in agreement in answer to the question "From whom does a Luo child learn most of his language?" that they learn their language from other children. As they pointed out, children spend most of their time in the company of other children and not with adults, and it is to be expected that they learn from them. Luo children are left, in effect, to their own devices much of the time, so that in some respects they do live in a "world of their own".

Luo men are frequently absent from the homestead. In the mornings, they may be engaged in such activities as doing the heavier work in the gardens, either in their own or others' fields, attending meetings, such as court cases or perhaps going to market. In any event, they as a rule are not at home in the morning, unless there is some specific activity to keep them there, such as repairing the house or granary. In the afternoons, the men frequently are visiting at other homesteads. When they are at home, visitors are often congregated there, and there is little or no interaction with children, as they are excluded from the company of the men.

Luo women spend the vast majority of their mornings working in the gardens, an activity, again, from which children are excluded. In the afternoons, the women continue to work in the homestead, and there is more opportunity for interaction with the children. The women also often visit with women from nearby homesteads in the afternoons, and they spend some afternoons at nearby markets, so that in effect, they are often away from home. Of course, the women do spend considerable time in the homestead and they do interact frequently with the younger children, as do the Luo men, but the important point is the attitude of the parents as to how much time is spent interacting with the children, their conception of the allocation of responsibility for the child's behavior and how he is engaged in the course of his daily routine. That Luo adults are

frequently not in the immediate vicinity of the homestead implies that the children are expected to be able to take care of themselves and that this feature of life is taken for granted by the adults. As an extreme instance of the degree to which this behavior is taken-for-granted, the adults will sometimes attend a funeral for several days, leaving the children at home to assume responsibility for themselves.

Allowances for age are made, of course; a small child will not be left to fend for himself. A mechanism is employed for assigning responsibility, which may be stated simply as "any older child is responsible for the welfare of a younger one". For the very young children, less than three years of age, the allocation rule is more explicit. An older child, preferably a girl in the age range of 6-12, is assigned to be the child's *japidi* "nursemaid", and in the absence of the parents, and even during much of the time when they are present, the *japidi* has primary respon- sibility for the child. If the child is neglected, harmed or commits some offense, his *japidi* is held accountable. Luo children are socialized early to assume responsibility for their younger siblings. It is not unusual, for example, for a 5-6 year old child, as he goes about his daily activi- ties, to carry with him on side or back a younger sibling.

Luo children, then, as a group, are largely self- sufficient and much of their time is spent in the company of other children. One aspect of the separation of adult

and child activities is that clear boundary markers are provided to demarcate the areas in which interaction is not socially appropriate, or conversely, where it is required. As an example of the latter, all the males, young and old, in a homestead eat their meals together (unless a visitor is present, in which case the young boys eat separately), and the females have their meals together as a group. As clearly stressed, the presence of a group of men in the homestead is a clear indicator for children that they are not to interact with the men, except ritually in the form of greetings and in leave-taking behavior. In cases where children are asked to make an exception to the rule, the request is often phrased in such a way as to communicate to the child that he may interact with the adults. As will be seen, the child is not obligated to interact. He has an option, and more often than not, he chooses not to participate.

The most common way of signalling to the child that he may talk with visitors is the use of the term ane, which may be glossed as "please", but the term is not general in its use, i.e. it is used only in speech to children. The phase bi ane omera "come (here) please my friend/brother" or bi ane nyaAlego "come (here) please daughter-of-Alego (a term of respect)" were standard opening remarks in such cases. Parents, in attempting to persuade their children to talk with us, often would state wač ane kod msungu "talk please with European" (cf. pp. 62-66).

Informants notes, repeatedly, that in order to persuade the children to talk, we first would have to please them, and being polite was one necessary factor in the process. In addition to the use of the term ane, another way to "please" the children was to use a nickname or a term of respect, such as omɛra or nyaAleʒo. A nickname would be used in the same fashion as omɛra. As an example, the father of one of the children in the sample repeatedly called the child by his nickname, Nyambuoro, explaining to the researcher that he was attempting to cajole the child into talking with us.

As clearly indicated above, a Luo child had the option of not talking, which he frequently exercised. Failure to interact verbally in such sentences brought no reprimands or reprisals from his parents. The strongest type of statement to be made would be of the order "if you don't talk, you won't get any candy", but even a remark of that kind was rare. After failing to persuade their child to talk, parents would state, simply, ogomo or odagi "he refuses", and nothing further would be said.

2.4 SUMMARY AND CONCLUSIONS

The major characteristics of the speech behavior of Luo children may be summarized in the following fashion, but with the prior qualification that the model described represents the speech behavior of the children from the point of view of a visitor, i.e., in terms of the behavioral

configuration which has as a basic component the feature
in-the-presence-of-visitors. Most likely, the model is
more general. It probably represents in rough outline
the broader dimensions of child speech, but the problem
under consideration is the nature of the data collection
process, and the basic factor in the process was the effect
of the presence of visitors on the speech of the children,
i.e. the in-the-presence-of-visitors model will suffice.
The first rule for speech behavior of children is that they
are not to engage in conversation with adults in the presence
of visitors. For the youngest children in the sample unit,
the rule is observed de facto. Initially, a fear response
prohibits interaction, capitalization on the response is
made through social reinforcement, and this in turn is
reinforced by the children's nursemaid, who keeps them
physically removed from the adults. As the children grow
older, they internalize the rule and observe it as an
assumed background expectancy.

When speech is directed to an adult, in the presence
of other adults, and, according to informants, in general,
the correct mode of speaking is to be brief, direct, and
in terms of style, subdued. The net effect is a reduced
verbal output, which is characterized by a low number of
morphemes per utterance.

The number of constraints which a child must recog-
nize and adhere to are reduced in casual speech, in
intermediate form in casual situations with adults, as

e.g. at meal-times, when the child initiates conversation but observes stylistic constraints, and in more complete form in interaction with peers.

Viewing this speech behavior model in relation to the competence-performance distinction, the earlier contention that measures of competence must be related to accounts of performance, production, and socio-linguistic rules seems valid. The extent to which competence can be inferred from performance follows directly from the nature of the performance model and its embedding in a cultural matrix. As an example, the competence described for the Luo children will be more limited and partial than descriptions for English-speaking American children at corresponding ages, because of the nature of the performance restrictions. The Luo description is essentially for non-casual for formal speech, dictated by the social rules governing the use of speech. For the English-speaking children, a different type of situation prevails, as indicated by the quotes from the studies with them. At any rate, it seems clear that the behavioral expectations of both children and adults in the Luo studies and those in the United States are markedly different.

The expectation on the part of the American children that the visitor was to put in time as a playmate would simply not be present for Luo children, and these differences in expectations affect drastically verbal interaction with the children.

In summary there are two main points to be stressed. First, cultural knowledge of a society is necessary for studies in language acquisition. In the present study, any description of competence must follow an account of the major rules governing children's speech. The basic rules are: (1) children do not interact with strangers; (2) children interact only ritually with visitors; (3) children interact formally with adults in the presence of other adults, according to a prescribed manner; and (4) children interact "freely" (with minimum constraint) with peers. The best account of the acquired competency for children would then come from samples of speech under conditions in rule (4). The data collecting situation could not be manipulated so that any systematic collection of data of that type could be carried out. Consequently most of the samples came from conditions as in (2) and (3).

The second major point is that, due to restrictions on the data collecting process, the accounts of language development in the following chapters must represent the minimal degree of development for particular developmental ages. The production information is limited, performance data is limited, and the inferred competence must also be limited. Despite this qualification, the analysis can demonstrate, however, important aspects of Luo language development, primarily in terms of the sequence of acquisition of various categories of language. Despite the fact that a particular category of language in the child's

development may be overestimated in terms of age of appearance and despite the fact that there may be gaps in the record, the overall sequence of acquisition and the general direction of language development should become apparent in the analyses.

CHAPTER 3

LANGUAGE DEVELOPMENT: 12-27 MONTHS

3.1 INTRODUCTION

Six children in the sample unit were in the earliest
stages of language acquisition during the course of the
research. Four of the children were in the babbling
stage at the beginning of the research, and they provided
some information on the transition to the one-word
utterance stage. In addition, they provided data on the
characteristics of initial vocabulary and on some features
of earliest grammatical development. The two older chil-
dren furnished speech samples which yielded more insight
into vocabulary development and the acquisition of grammar.

Important aspects of each of the stages of language
development, i.e., those characterized by babbling, one-
word utterances, and two-word utterances, and the transi-
tions between the stages will be discussed in the present
chapter. Rather than initially segmenting into the component
stages the data presented by each child, the linguistic
development of each child will be presented in turn, so as
to provide a continuum in chronological age and corres-
ponding language development. Stages in the linguistic
growth of the children may then be identified and discussed
both in terms of ages at which they appear and in terms of
the formal linguistic features associated with them. Studies
with English-speaking American children have indicated that

chronological age is not as important a measure in the
acquisition process as developmental age. Children at the
same age chronologically may vary considerably in their
linguistic ability, but the stages of acquisition in
developmental terms are not variant (cf. Braine 1963;
Bloom 1968). Linguistic competence will be correlated
with chronological age for the Luo children, however, with
the intent of identifying the extent of individual variation.

In each of the stages of development mentioned in the
above general framework, specific questions will be addressed
to the data. The ages of termination of babbling behavior
and the earliest use of words will be sought. An approxi-
mation of the age range of the one-word utterance stage
will be the goal,[1] as will the corollary of noting the age
for appearance of two-word utterances. Characteristics
of initial vocabulary will be described, according to the
goals outlined in the Field Manual:

> The aim of this exploration (initial vocabularies)
> will be to reveal (1) the extent and range of
> vocabulary, (2) the semantic domains named by
> the child, (3) the "innominate" zones, (4) the
> nature of generalizations of meaning, and (5) the
> extent of homonymity (Slobin 1967:15).

At the two-word utterance stage, a major focus will
be on the acquisition of grammar. In the past decade
there has been a flowering of interest and studies in the
early period of children's grammatical development. Studies

by Braine (1963), Brown and Fraser (1963), and Miller and Ervin (1964) all have yielded remarkably similar findings on the initial period of grammatical development. A major finding of the studies was that in the speech samples of children at the two-word utterance level, the words employed by the children were not unstructured juxtapositions, but rather a distributional selection process was at work. Children's grammar seemed to be structured from the start, i.e. combinations of words and parts of words seemed to be systematic rather than random. A small class of words seemed always to occupy the same position in the utterance and to be combined with a large variety of a different class of words. For example, Braine found that one of the children in his study consistently used the term more in combination with such terms as cereal, cookie, read, high, and car to produce the utterances more cereal, more cookie, more read (meaning "don't stop reading"), more high (meaning "there's more up there" (more cookies up on the shelf)), and more car (meaning "drive around some more"). Likewise the term off was used consistently following such words as boot, light, and shirt, and the term allgone was combined with juice, shoe, and outside (said when the door was closed). (1963:5)

Braine, in his examination of the speech corpus, found that a number of terms almost always occupied the initial position in the utterances and that they occurred with any one of a large number of content words, mostly nouns and

pronouns. Characteristics of the latter class of words
were that the number of words in its membership expanded
rapidly, and that the words often occurred in the children's
speech as single-word utterances. Braine called these items
"open-class words" and the small, relatively stable class
was designated "pivot words". A pivot word may be in the
first or second position of a two-word sentence, as indicated
by the examples above, but its position is usually fixed or
stationary in the frame in which it occurs. In English,
for example, the pivot word <u>off</u> almost always occupies the
second position. The utterances of the Luo children will
be examined with the view of identifying pivot constructions
in their language and comparing their characteristics with
those in English.

Attention also will be focused on morphological deve-
lopment. Morphology is more highly productive in Luo than
in English, and one would expect that inflectional rules,
and accompanying morphophonemic ones, would be acquired
relatively early by the Luo children. The first uses of
inflection by them will be noted and later development
will be traced. Note also will be made of the use and
development of negatives during this early period of language
acquisition. Children's ability to handle "wh-" questions
(where...? when...? what...?) also will be discussed.

3.2   PARENTAL REPORTS ON EARLY LANGUAGE

Two questions asked of Luo adults in the language belief questionnaire[2] were "What is the first word that Luo children are able to say?" and "How old are the children when they begin to say this word?" Thirteen people were asked these questions, and all but one replied that the first words were mama "mother" and baba "father", although there was some uncertainty in the informants' minds as to which of these terms appeared earlier. All were in agreement that the two terms appeared in the same month for Luo children, but again, there was some uncertainty regarding the age at which the terms typically appeared for Luo children. Nine respondents claimed that the words appear in the age range of 7 to 8 months; one gave the age as one year; and three replied that the words first appeared at the age of approximately two years. From a questionnaire on child-rearing practices, all the mothers of the children in the sample were asked the question "How old was ... when he first began to say 'mama' and 'baba'?" Again, essentially the same age range was represented in their replies, with a spread of 5 to 24 months. Of the 31 responses to the question, 16 were clustered in the range of 5-7 months, and the remainder were spread over the range 8-24 months, with a minor clustering of 5 responses at 18-19 months.

The qualification should be made that the reported information provides only a rough account of what Luo

adults report about the speech behavior of Luo children.
The "measurements" are not exact, since the adults were
trying to reconstruct from memory the ages of their children
at the time when they first be_an to use <u>mama</u> and <u>baba</u>.
Furthermore, what counted as "mama" and "baba" could have
been the production of the sounds ma-ma and ba-ba rather
than the terms per se. Later empirical evidence suggests
that some mothers reported the ages for the former. Luo
children characteristically begin to produce ma and ba
sounds in their babbling at approximately six months. This
may account for the clustering of parental reports in the
5-7 month range. Also from the available evidence, it
appears that some children use the terms as early as 12-14
months, even though they continue to babble for several
more months. Productive speech begins at approximately
18 months, at which time the use of the morphemes <u>mama</u> and
<u>baba</u> are clearly distinguished, as babbling has ceased
and monomorphemic utterances are prevalent. Eighteen
months is the age for which the parental responses form the
minor cluster in the sample. From this point of view,
i.e. by making the distinction between the phones and
morphemes, the parents' reports can be considered as
essentially accurate.

Parental reports, then, can give some initial indica-
tions of the nature of child speech. The desired objective
is a reconstruction of the development of Luo children's
speech, beginning with some approximate notion of the age

at which words first appear, what these words are, and
what the rate and nature of subsequent development is.
In order to view this process more closely, the available
empirical data can be supplemented with parental reports
and cross-checked where possible. In the previous chapter
it was noted that visits to collect speech samples from the
youngest children in the sample were very unproductive, and
in cases where little or no information could be collected
directly, we were forced to rely on reports and interpre-
tations of the parents or parent-surrogates. Information
of the latter type is used only minimally to fill gaps in
the record and with the restriction that judgments in
highly subjective areas not be included. In essence,
parental reports were used to supplement data on initial
vocabulary development, i.e. as to whether a child used a
particular term in his speech, and more complex questions
concerning grammar were avoided.

3.3 SPEECH SAMPLES OF OGUTU (A1) AND WANGA (B1)

The two youngest children in the sample, Ogutu (A1)
and Wanga (B1), were visited primarily for information on
babbling and phonological development. Near the end of
the research period, though, they began to use a few short
words, and thus provided some data on the transition from
the babbling to the one-word stage.

3.3.1 Ogutu (A1). Ogutu was able to produce [ma] and [ba]
sounds at the age of nine months, and would occasionally

produce sequences of the sounds as [ma-ma-ma] and [ba-ba-ba].
There was no evidence that he was producing mama and baba
at this age, but at 12 months, he was using the terms freely,
and he had added a third to his vocabulary, the term miya.
Miya is an inflected form of the verb miyo "to give", with
a pronomial inflection -a "me", but of course it is highly
unlikely that Ogutu was applying an inflectional rule.
Rather, the term represented as a unit his expression of
desire or wanting, and was generalized to cover all pheno-
mena in that category. The following interchange gives an
example of his use of the term. Ogutu's mother and older
sister were attempting to induce him to talk and/or babble,
and they were attracting his attention by jangling a ring
of keys in front of him. He responded by extending his hand
for the keys and saying "miya". He was given the keys, but
his mother promptly withdrew them, saying

    Miye kiɸungu. Itimi kode nade?

    "Give-it key. You (will)-do with-it how/what?"
Ogutu shouted his reply, miya, miya as he was attempting
to retreive the keys from his mother.

    The above information on Ogutu was collected on the
final visit to his home, and there was thus no opportunity
to continue with a study of his language development. His
vocabulary at the age of 12 months was established as
containing the three terms mama, baba, and miya.

3.3.2 Wanga (B1). Wanga presented a similar developmental
picture. Her mother reported during the eighth month that

Wanga could say [ta-ta] but was unable to say [ma-ma] or
[ba-ba]. We were not able to get her to utter any sounds
during our presence at this age. At 10 months, she made
the sounds [te-te-te] and [ne-ne-ne], but no [ma] or [ba]
was evident. At 11 months, her mother reported that she
could make many sounds, including [ma] and [ba]. By the
fourteenth month, she was using mama and baba and was also
able to say miya. She generalized the term to cover both
receiving and giving. Her older sister offered her a piece
of candy, and Wanga held out her hand for it, saying miya.
After playing with the candy briefly, Wanga gave it back
to her sister, again saying miya. A similar exchange
occurred with a set of key-rings. Observations ended in
the fifteenth month for Wanga and no new words were re-
corded for that month. From the available information,
Wanga had a vocabulary at fourteen months identical with
Ogutu's, consisting of mama, baba, and miya.

3.4 SPEECH SAMPLES OF OTHIENO (A2) AND AOKO (B2)

Two additional children, Othieno (A2) and Aoko (B2),
were added to the sample three months after the beginning
of the research, so as to provide more information for the
age range of one to two years.

3.4.1 Othieno (A2). Othieno was fourteen months old at
the time of our first visit, and for this and the second
visit a month later, we were not able to record any
utterances. He was still in the babbling stage, and there

was no information as to whether he was also producing
words. Later in the fifteenth month, we enlisted the aid
of his mother, but the only responses we were able to obtain
in a 30-minute period were e: "yes" in response to his
mother's question ičamo tamtam? "you (have)-eat(en) candy?"
and 'a'a "no" in response to her demand miya tamtam "give-
me candy".

In the seventeenth month, his mother reported that he
still could not talk, but that he continued to babble.
During this visit, his mother reported that he had begun
to say mama and baba at the age of six months, but we were
never able to get a record of him actually saying them.
Early in the eighteenth month, we still were not able to
record any speech, but he had begun to reply [hUh] to
questions that were directed to him, as if he were asking
for a repetition of the question. In adult Luo, the expression
is used to indicate that the previous remark was not heard
or understood, but in this particular session, Othieno
used it after each question addressed to him. It is
difficult to ascertain just what role the utterance played
in his speech. It may have been the case that he was not
capable of decoding the questions and was actually asking
for them to be repeated, or perhaps more likely, he
recognized that the utterance was a correct response to
some questions and had generalized it as a response to all
of them, "feeling" that it was a sufficient answer.

Later in the eighteenth month a few words began to appear. As we entered the homestead, Othieno's nursemaid told him to greet us misawa, and Othieno loudly called [ca]. A few minutes later, after his mother had unsuccessfully tried to get him to talk, he walked outside and began to call for his Nursemaid Obare, by calling [baya] loudly several times. His mother reported that he was beginning to talk now, even though he still continued to babble. She reported that he was able to say miya when he wanted something, andin addition, he was able to say mama, baba, čam "food" and baya "Obare".

More terms and the first two-word utterances appeared in the nineteenth month. He answered the question mama εrε? "mother is-where" with (1)[3] en ka "sheis here". He would not say anything else in our presence, but his brother Obare told us that he would say pi, pi "water" whenever he wanted a drink, said Uka for /nyUka/[4] "porridge", and said (2) čam miya "food give-me" rather than the correct adult versions of miya čam "give-me food" or miya ačam "give-me I-eat".[5] In the twentieth month, he made the utterance mama, ne "mama, look/see" as he was holding us a piece of candy for her to see. He also began to play with the term mama, which he kept repeating over and over in the form of a song. Observation ended in the twentieth month.

As incomplete as the record is for Othieno, it is possible to make a few generalizations concerning his speech development. First, babbling had begun by the sixth

month and it continued at least through the eighteenth month. Secondly, he was capable of responding in a yes-no fashion to questions at the age of fifteen months. It was reported in the seventeenth month that he was not yet able to talk, and in the eighteenth month, a few words began to appear. The ones recorded were <u>mama</u>, <u>baba</u>, <u>miya</u>, <u>ča</u> (for <u>misawa</u>, a greeting), <u>čam</u> "food", and <u>baya</u> "Obare". In the nineteenth and twentieth months, new items to appear were <u>en</u> "he/she/it is", <u>ka</u> "here", <u>pi</u> "water", <u>Uka</u> "porridge", and <u>ne</u> "see/look". Also in the nineteenth month, the first two-word utterances appeared, and reports from his mother and nursemaid confirmed the fact that he was capable of using two-word sentences at this age.

3.4.2 <u>Aoko (B2)</u>.

3.4.2.1 <u>Speech Samples</u>. Aoko (B2) was 16 months old when observations began and attempts were made to collect speech samples. No speech was evident on our first visit, although it was apparent that she was able to understand some of the remarks addressed to her, such as <u>bi ka</u> "come here" and <u>bed piny mɔndɔ amiyi nyUka</u> "sit down so that I-give-you porridge", and <u>mak gi lwɛtɛni arIyo</u> "hold with hands both". She responded appropriately to such demands as the above. On another visit, her brother succeeded in getting her to imitate the word <u>čam</u> "food/eat".[6] He gave her a piece of candy, repeating over and over <u>čam</u>, <u>čam</u> ..., and she finally replied, in a whisper, [tam].

A similar episode occurred during the eighteenth month. Aoko's mother, brother, and sister were all encouraging her to talk, but she declined, which prompted her mother to remark Elisa, ok nyal wuoya kata mond? "Elisa, not able (you) talk-to-me even for-a-little-while?" There was no response, and her mother reported to us Elisa ogomo "Elisa refused" and let the matter end there. Aoko's brother persisted in his efforts, and by whispering to her čam repeatedly, she began to repeat after him, whispering čam in return. Her sister then said to her ne mara "see mine" (talking about a piece of candy), and Aoko replied maya , maya . Her sister then addressed her in falsetto, agoyi, agoyi, agoyi "I (am going to)-beat-you", and Aoko replied [go]. Later, in an attempt to get her to name the people present, her sister said "Auma, Tabu, Ageyo". Aoko replied "Tab", and this performance was repeated three times.

All of the above utterances by Aoko were obviously imitations, but her mother assured us that she was beginning to say a few words, such as the names of her brother and sister and other words such as miya and weya. As with Ogutu (A1) at an earlier age, the term miya "give-me" most likely does not represent two morphemes for Aoko, but rather functions psychologically as a unit/ i.e. it is monomorphemic. Weya is of a similar construction. The verb root weyo may be glossed as "stop, let alone, leave alone", and inflected with the pronominal -a "me, mine", renders "leave-me-alone" or "leave-mine-alone". For Aoko the term weya is probably a generalized form meaning "stop"

or "don't", but this cannot be known for sure, due to lack
of contextual information.

In the last visit in the eighteenth month, Aoko
provided two more features of development, one a minor
example of naming behavior, by pointing to a piece of candy
and naming it tamtam. The second feature was an 'a'a
response to her mother's command ǒi ine welo moko "go you-
see visitors some". During the visit, her mother reported
that she no longer babbled, and that she stopped a month
earlier, i.e. in her seventeenth month.

In the nineteenth month, there was another instance
of a "no" response to a command. Her father told her
ǒi imos wɛndo "go you-greet visitor", to which she replied
'a'a. In the same visit, she used her first two-word
utterance in our presence, saying (3) ne tamtam "see candy"
to her brother, holding the candy for him to see.

Due to the extreme difficulty of collecting systematic
data for Aoko's speech, we asked her father to supply us
with some information. The following material which is for
her twentieth month, and the qualification must be made that
the data is fragmentary, that the vocabulary, for example,
is only a partial list of the terms Aoko had at her command.
His reports do supply some valuable information, though,
which could not be gained in any other fashion. An
immediate objection which may be made as to the reliability
of the father's reports is that he would not have enough
contact with the children or be concerned with their deve-

lopment to the extent that he would notice features such
as vocabulary development. There is some merit in this
objection, but it should be noted that due to spatial arrange-
ments of the living quarters which facilitate interaction,
and to such practices as the children sleeping with their
parents until the age of two (or more), there is ample
opportunity for contact between all members of the family.[7]
There is also a pattern in some Luo families of close contact
between a father and his young daughter, although the rela-
tionship alters drastically as the girl grows older. Several
of the men in the sample unit responded to my question on
daily routines as to "whom do you talk with most when you
are at home?" by naming their young daughter. Aoko's father
answered the question in this fashion.

Most of the information her father gave was related
to her vocabulary development, telling us which words
she was and was not able to use in her speech. The items
listed in Table 2 are terms which he reported Aoko as
being able to use without difficulty.

Table 2:
Reported Vocabulary for Aoko (B2) at 20 Months

Terms	Glosses
odUma	maize
čiemo	food
kuon	bread
nyUka	porridge
mač	fire
yIɛn	wood
san	plate

Table 2 (Continued)

Terms	Glosses
nanga	cloth(es)
kom	chair
mesa	table
ðiaŋ'	cow
gwɛno	chicken
dIɛl	goat
aloθ	vegetables
ðɔɔt	door(way)
tamtam	candy
kwɛr	hoe
koɸia	hat, cap
kImbo	lard (tinned)
agwata	drinking cup (gourd)
tɔŋ'	spear
tɔŋ'	egg
rIngo	to run
beto	to cut, harvest
ne	see
miya	give-me
weya	stop
pi	water

Aoko's father also reported that she was able to
string a few short words together to form sentences, such
as (4) miya pi "give-me water" or (5) miya tamtam "give-
me candy". She was not yet able, however, to use the

verb <u>dwaro</u> "to want, need", which always occurs in an inflected form. Likewise, she was not yet able to use the appropriate term for expressing hunger, which is <u>keč kaya</u> "hunger bites-me", but uses instead <u>miya</u> plus objects. An interesting feature of naming behavior during this period was Aoko's term for ants. An ant had stung her, and her father, in explaining what had happened, told her <u>mor</u> <u>kayi</u> "ant bit-you", which she took to be the name for ants and used in that respect.

Some more speech samples were recorded in the twentieth month. Like Othieno (A2), Aoko, in the midst of playing, began to make a song of <u>mama</u> and <u>baba</u>, chanting them over and over again. In the same observation period, she began to play with her father's cap, which was hooked over the back of a chair. As she was trying to get the cap, she repeated (6) <u>game</u> "hand-it-over" three times. The appearance of the third person singular marker <u>-e</u> may indicate that a rule for marking pronominal inflection has been acquired, i.e. with the contrast provided by the first person singular <u>-a</u> in <u>miya</u> or <u>weya</u>, but again, the term <u>game</u> may have been learned as a unit. As we shall see, the use of inflections is clearly marked in the 21st month, and it is probably present in the twentieth, but the evidence is not sufficient to establish that claim.

Another utterance in the twentieth month was (7) <u>ndawa piny</u> "tobacco (cigarette) down/floor", which Aoko said as she picked up a cigarette butt which had been extinguished

on the floor. She pretended to smoke the cigarette, showing
her father and saying (8) baba ndawa "father cigarette".
She was then given a piece of candy, to which she responded
(9) miya tamtam "give-me candy". Her father, teasing her,
took the candy away from her, prompting her to shout (10)
miya tamtam, miya. He returned the candy to her, and she
began to suck on it, remarking ðɔk "mouth". Later, she
was aked to identify the researcher, and she replied (11)
ma wɛndo "this visitor".

During the 21st month, we were still experiencing
considerable difficulty in persuading Aoko to talk. Her
father agreed to try to get her to talk in our absence,
but with the tape recorder in operation. After one
unsuccessful attempt, we were able, several days later,
to collect a small sample of speech between Aoko and her
father. Portions of the conversation are given in Table 3.[8]

Table 3
Recorded Conversation between Aoko and her Father
(21 months)

Father	Aoko
Omiyi ŋano ma omiyi?	---
"gave-you who which gave-you?"	
Wɛndo!	---
"Visitor!"	
Elisabeth, msungu oði kanye?	---
"Elisabeth, European went where?"	

Table 3 (Continued)

Father	Aoko
<u>msungu</u> <u>oði</u> <u>ooko</u>?	<u>ee</u>
"European went outside?"	"yes"
<u>wač</u> ane <u>kode</u>, Elisabeth	<u>'a'a</u>
"talk please with-him, Elisabeth"	"no"
<u>joka</u> <u>oði</u> <u>giwenwa</u> <u>gima</u> <u>ber</u>, <u>ineno</u>?	<u>ber</u>
"those-people went, they-left-for-	"good"
us thing-which good, you-see?"	
<u>gino</u> <u>ber</u>	<u>gino</u>
"thing-that good"	"thing-that"
<u>ber</u> <u>kabisa</u>	(12) <u>gino</u> <u>ber</u>
"good very-much"	"thing-that good"
<u>Elisa</u>, <u>Joab</u> <u>oɸuwo</u>	<u>ee</u>
"Elisa, Joab is-foolish"	"yes"
<u>msungu</u> <u>oði</u> <u>oko</u>. <u>msungu</u> <u>osea</u>	<u>ee</u>
"European went outside. European	"yes"
has-left."	
<u>ɛrɛ</u> <u>msungu</u>, <u>oði</u> <u>oko</u>?	---
"Where-is European, he-went	
outside?"	
<u>wač</u> <u>ni</u> <u>msungu</u> <u>osea</u>	<u>čungu</u> <u>osea</u>
"say 'European has-left'"	"European has-left"

Table 3 (Continued)

Father	Aoko
msungu osea. oδi kure?	čungu osea. (13) oδi Ulanda.
"European has-left. He-went where?"	"European has-left. He-went to Ulanda."
ose kuro? oδi Ulanda?	ee. čungu osea. (14) oδi Ulanda.
"he-has (gone) there? he-went to Ulanda?"	"yes. European has-left. he-went to Ulanda."
ma e bεr, mare.	(15) ma e mare.
"this one good, his" (talking about the tape recorder)	"This one his."
mare mabεr.	ee. (16) okelo.
"his good"	"yes. he-brought (it)."
okelo nwa.	(17) okelo ma e.
"he-brought (it) for-us"	"he-brought this one"
we:, kik ikeθ. kikeθo to rači, di msungu gowa.	ee.
"don't! don't you-break it. If you break-it, bad-you, then European (will) beat-us."	"yes"
ee. koro inenogi?	ee, (18) anenogi.
"yes, then you-see-them?"	"yes, I-see-them."

must be made between her utterances which are imitations,
immediate or delayed, of previous utterances of her father,
and those that are produced spontaneously. At issue here
is one of the basic questions toward which the research is
directed, namely the identification of the types of regular
productions of grammatical features and the ages at which
they occur in Luo children. A basic assumption is that
the utterances of the children at some point are not merely
rote learned, but are generated by the grammar of the child.
At times, however, the distinction is blurred, and it is
difficult to categorize an utterance, particularly in the
early stages of grammatical development where it is obvious
that imitation is a prominent feature of the child's speech.
The criteria employed for the above conversation (and for
later ones) are (1) if the child's utterance is a word-
for-word imitation of an utterance produced by another
party, whether it was immediately contiguous or not, the
utterance was counted as an imitation; (2) all other utter-
ances were counted as being generated by the child's syntax,
including those that include terms from previous utterances
of the other party and those that employ no new terms, but
represent a concatenation of the terms in the previous
utterance. According to these criteria, the utterances
čungu osea "European has-left" are all imitations, but (12)
gino bɛr "thing-that good" and (13) oди Ulanda "he-went to
Ulanda" are produced by the child's grammar.

For morphology, the problem is more complex, as even the spontaneous appearance of an inflected form does not necessarily mean that an inflectional rule was applied. The child may have learned the term as a unit. The criterion employed in the present analysis is that the child is credited with the ability to apply inflection rules when there is a basis for contrast for inflection of each particular kind. Ideally a contrast set for a particular term would be preferred. For utterance (13) oḏi Ulanda, for example, the child would be credited with the inflectional rule if he produced other pronouns to contrast paradigmatically with the third person singular o- in the environment __ ḏi. The criterion accepted here, however, specifies that the child is capable of applying the rule if a contrast set of pronominals appears in the environment __ Verb.

Utterances (13) oḏi Ulanda " he-went to Ulanda" and (16) okelo "he-brought (it)" contrasted with (18) anenogi "I-see-them" and (28) awaŋe: "I-burned-him" indicate that Aoko is able to inflect verb stems to mark pronominal subject. The pronouns an "I" and en "he/she/it" become a- and o- in the environment __Verb. There is also some supportive evidence for Aoko's ability to use verbal inflection of this type. In utterance (18) anenogi "I-see-them", she was responding to her father's question inenogi? "you-see-them?", indicating that she was able to transpose correctly from second person singular to first person singular in the subject.

Utterance (18) _anenogi_ "I-see-them" contrasted with
(28) _awane:_ "I-burned-him" indicates that Aoko is able
also to inflect the verb to show pronominal object, i.e.
neno + _gi_ → _nenogi_ and _wano_ + _e_ → _wane._ Utterance (18),
though, as indicated, followed her father's question
inenogi "you-see-them?", and it is possible that the third
person plural _-gi_ was simply an imitation, in which case,
no contrast is available in the pronominal object set.
Utterance (28) was spontaneous, however, indicating at
least the possibility that inflection for pronominal object
is within Aoko's linguistic capacity.

In any event, it is clear that Aoko was able to use
inflection to mark pronominal subject, at the age of
21 months. There was continued use of two-word utterances
at this age, as clearly shown in Table 3. Several new
combinations appeared, such as numbers (13), (19), (23),
(24), and(25). The sample is far too small to identify
a pivot grammar, but attempting to discover a pivot grammar
at this stage is not necessary. It may have been the
case that Aoko was using a pivot grammar in earlier speech,
as in the preceding month. There are hints that some words
may have acted as pivots, such as _en_ ((21) and (25)) and
_ma_ ((11), (20), and (23)), but the evidence is not conclu-
sive. At any rate, it does seem clear that in the 21st
month, Aoko's grammar is more complex than a pivot type.
The use of verb inflections show that her grammar is already
hierarchical and cannot be accounted for by pivot construc-

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month, Aoko's grammar is more complex than a pivot type.
The use of verb inflections show that her grammar is already
hierarchical and cannot be accounted for by pivot construc-

tions.   In addition, there are several three-word utterances
in her speech, indicating that she is past the two-word
stage.

It is interesting to note that the three-word utter-
ances in Aoko's apeech represent hierarchical constructions
similar to those appearing in the speech of American children.
For example, the utterances "man car" and "other car" are
combined to form "other man car" or "man other car" (cf.
Slobin 1967:108-9). Aoko's utterances that appear similar
in construction are: (15) ma e mare "this one his"; and
(22) ma e čungu "this one European". If the introduction
of the particle e represents the addition of another morpheme
to constructions with the morpheme ma, as (11) ma wɛndo
"this visitor", then (15) and (22) would represent the
following kind of construction:

```
    p   o              +        p    o       --->          p-o        o
    |   |                       |    |                     / \        |
   ma   e                      ma  čungu                  p   o     čungu
                                                          |   |
                                                         ma   e
```
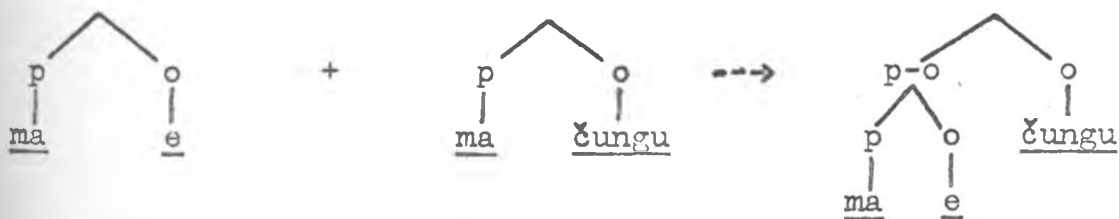
The question of synonymity must be raised, however,
for the expressions ma and ma e. Studies with English-
speaking children have shown that the terms "that",
"that's", and "thatsa" are all monomorphemic and synonymous
(Miller and Ervin 1964:17-20). Conceivably ma "this" and
ma e "this one" could be similar to the English examples.
If this were the case, (15) and (22) would not be
hierarchical.

As a first step in clarifying the issue, we can turn
to an explication of the role of the particle e in the Luo
language. Edgar Gregersen, in his analysis of Luo grammar,
makes the following points.

> "Use of the deictic E-phrase (as opposed, say, to
> an expression of place in or on) is limited to
> nonverbal constructions altogether. A deictic E is
> required: (a) before a ma clause; (b) after the
> noun ma "this-one", or a nominal phrase with ma
> as the head; (c) before an infinitive verb; (d) when
> the subject is a proper name and the predicate noun
> is modified by a conjunctive pronoun or demonstra-
> tive. When the subject is not a proper name, use
> of E before a noun modified by a conjunctive pronoun
> or demonstrativeis facultative. Elsewhere, E is
> emphatic, so that one might translate ɛn e ruoθ as
> "he is the chief", as opposed to ɛn ruoθ "he is
> a chief" (1961:62).

With Gregersen's analysis in mind, an inspection of
the data indicates that Aoko has acquired the rule that
"the particle e is required after the noun ma". In an
earlier utterance, (11) ma wɛndo "this visitor", the
rule was absent, but in all of her utterances in the
21st month, the particle was present. From this evidence,
it would appear that e as a direct (deictic) particle
served no semantic purpose, and that ma and ma e were, in
fact, synonymous. Other evidence, though, show that
the opposite is more likely the case.

"I-burned-him". Although the evidence on this issue is
meager, it appears that the standard word order is
acquired early. Later information will be considered
on this point.

During the final visit with Aoko, in the 22nd month,
we were able to add only slightly to her record. At one
point in the visit, Aoko pointed to a chicken nearby and
remarked gwɛno "chicken". Here sister asked ɛrɛ gwɛno,
Elisa? "where-is chicken, Elisa?", to which she responded
(29) ne mača "see that". Later in the visit, she and her
brother were playing with a toy car, and in the midst of
playing, Aoko remarked (30) gaye yIngo /gare rIngo/ "car
runs".

Viewing the development of Aoko's speech, the prominent
features, in summary, were: (1) babbling behavior continued
until the seventeenth month; (2) one-word utterances were
characteristic of the eighteenth month; (3) the first
recorded two-word utterances were in her nineteenth month
of age; (4) two-word utterances resembling pivot construc-
tions were present in the twentieth and twenty-first months,
with the terms miya "give-me", en "he,she,it", ne "see",
and ma "this" possibly functioning as pivots; (5) inflec-
tions began to be used in the twentieth month, were clearly
present in the twenty-first month, and the inflections
marked pronominal subject and object; (6) non-predicative
three-word utterances, hierarchically constructed, appeared
in the twenty-first month, with the construction ma e used
in combination with open-class words; and (7) predicate

sentences appeared in the twenty-first month, with
constrained word order.

3.5 SPEECH SAMPLES OF RISPER (D)

3.5.1 Speech Samples. Child D in the sample, Risper
Adhiambo, like the other children, was shy and speechless
in our presence, especially during the early period of the
research. Consequently, most of the information collected
during this period was from the child's mother or older
sister. As in Aoko's case, it was possible to reconstruct
some of her early vocabulary by asking her mother to tell
us all the words that Risper knew and was able to use in
her speech. Those reported by her mother are given in
Table 4.

Table 4
Reported vocabulary for Risper (D) at 21 months

Terms	Glosses
mama	mama
čam	food
pi	water
kuon	bread
alot	vegetables
nyUka	porridge
ugi	porridge
san	plate
pala	knife
beti	slasher

Table 4 (Continued)

Terms	Glosses
kom	chair
θen	stool
ɔt	house
dala	home
mač	fire
gwɛno	chicken
ðiaŋ	cow
gwok	dog
dIɛl	goat
rombo	sheep
paka	cat
kidi	stone
bel	millet
odUma	maize
rabwon	potato
rabolo	banana
tamtam	candy
čak	milk
wiyo	head
waŋ'	eye
tielo	leg, foot
bat	arm
it	ear
um	nose
lweto	hand
lak	tooth

Table 4 (Continued)

Terms	Glosses
toŋ gwɛno	egg
lum	grass
dwaro	to want
nindo	to sleep
tuo	to be ill
čɪɛmo	to eat (intran.)
doyo	to dry
miyo	to give
moðo	to drink

During the visit when the vocabulary list was
compiled, we were successful in obtaining a few two-word
utterances. Risper asked her older sister for a drink
of water, saying (31) miya pi "give-me water". As she
was pausing for breath while drinking, she remarked
(32) amoðo pi "I-drink water". Later, as her mother was
preparing breakfast, she said (33) adwayo čam /adwaro/
"I-want food", and a few minutes later, she said (34) miya
ugi "give-me porridge".

Risper was visited a number of times over the next
six months, but we were singularly unsuccessful in
collecting more speech from her. A number of expedients
were tried, such as having only one person, Oyugi, visit
the home and remain in the background while attempting to
record her speech. On such attempts, he was not able to
record even a single utterance. On one visit, in the 23rd

month, he managed to get a response from the question
mama ɛrɛ? "mama is-where?". Risper replied (35) mama ɟi
lwoko "mother goes to-wash". Not until her 27th month
were we able to collect a speech sample of any size at all,
and most of the utterances were answers to questions,
particularly ones in which she was asked to name objects
in the environment. Some of the utterances are important
for morphological and syntactical considerations, and these
utterances are given below in Table 5. All of the utter-
ances were collected in the presence of Risper's mother,
sister, and the investigators, and all of the questions
were asked by Okumu.

Table 5
Recorded utterances of Risper (D) at 27 months

Okumu	Risper
mama ɛrɛ?	(36) onge
"mama is-where?"	"absent"
mača aŋo?	(37) mača en gwɛno
"that-there what?"	"that-there it chicken"
ma e aŋo?	(38) mača sandwa
"this one what?"	"that-there box-ours"
to ma e?	(39) akia
"and this one?"	"I don't know"
(a dresser in the room)	

Table 5 (Continued)

Okumu	Risper
to ma e aŋo, man e lwetani?	(40) en sa:
"and this one what, which is on hand-my-here?"	"it watch"
ma e aŋoni?	(41) lwɛta
"this one what here?"	"hand-my"
to ma e aŋo, maruakoni?	(43) en sa:
"and this one what, which-you-wear-here?"	"it watch"
ma e aŋo maruakoni?	(44) toča /wuoča/
"this one what which-you-wear-here?"	"shoe-my"
to ma e an aŋo, Risper?	(45) akia
"and this one it what, Risper (talking about the clipboard)?"	"I-don't-know"
to ma e aŋo?	(46) tienda
"and this one what?"	leg-my"
ɛrɛ ŋuti? where is back-your?"	(47) ma e "this one"
" ḍogi? " " mouth-your?"	" "
" laki? " " tooth-your?"	" "
" iθi? " " ear-your?"	" "
" umi? " " nose-your?"	" "
" waŋi? " " eye-your?"	" "

Table 5 (Continued)

Okumu	Risper
mani, ma aŋo? ikiaye?	(48) aŋeyo
"this-one, this what?	"I-know"
do-you-not-know-it?	

Another utterance, collected in the same visit, was
(49) mama, mičungu biro "Mama, European is-coming", which
Risper shouted to her mother as she ran to tell her we
were approaching the homestead. The final sample was for
the 28th month and was in response to the question mama ɛrɛ?
"mother is-where?". Risper replied with (50) oði kulo
"she-went to river".

3.5.2 Analysis. For the early period of Risper's develop-
ment, all that can be said is that in the 21st month, two-
word utterances were present, that the word order (S)VO
was present, and that she was past the pivot stage, if one
had existed. The presence of adwayo "I-want" probably
indicates that inflection was present as an aspect of her
grammar at thisage, as the input form would have been
idwaro "you-want..." (i.e. the term adwayo would not have
been imitated directly). At the 27th month, inflection
was used in several instances. In (39) and (45), inflection
was used to mark pronominal subject, and in (38), (41),
(42), (44), and (46) inflection was used to mark possession.
For the latter, several morphophonemic rules were also used.
These are shown, with examples in Table 6.

Table 6
Morphophonemic rules in Risper's speech at 27 months

Utterance	Rule	Example
(41)	-d- --→ -t-	(lwɛdo + -a --→ lwɛta)
(42)	-c --→ -y-	(wič + -a --→ wiya)
(44)	-r --→ -č-	(wuor + -a --→ wuoča)
(46)	-l- --→ -nd-	(tielo + -a --→ tienda)

In the 27th month, an interesting new syntactical
construction is provided by utterance (37). Number (37),
mača en gwɛno "that-there it chicken" appears at first glance
to be a topic-comment construction, such as "the salt,
it's on the table" or "the boy, he...". Luo contains
constructions of that type, but as in English, the juncture
between the topic and comment is prolonged. Risper did
not provide a long juncture between mača and en, and the
utterance thus provides an example of a special construction
in Luo, that of cross-reference agreement in the subject.
In this construction, according to Gregersen, "...a noun
or disjunctive (non-inflected) pronoun stands in construction
with another pronoun subject. The disjunctive pronoun can
stand in such a construction only with a following conjunc-
tive (inflected) pronoun subject; the noun (or noun phrase),
with either a conjunctive or disjunctive pronoun" (1961:69).
In (37) the noun mača stands in construction with the
disjunctive pronoun en.

Risper, at this age, handled "wh" questions with ease,
by providing appropriate "th" answers, as in (37) and

(38); naming responses, as in (40), (41), (42), (43), (44),
(46), and (47); and the proper negative responses, as in
(39) and (45). Utterances (39) and (45), <u>akia</u>, are
interesting in that a negative is expressed in verb form.
The best gloss for the verb root <u>kia</u> is "to not-know",
meaning not-to-know a fact, not-to-recognize something, or
not know how to do something. Another verb, <u>ŋeyo</u>, when
used with the negative particle <u>ok</u>, also has the same
meaning, but it also can mean "to-not-understand". Utter-
ance (48), <u>aŋeyo</u>, provides an instance of an affirmative
use of the verb, meaning in that instance "to recognize".
Risper, then, used the negative verb to indicate negation
rather than using the more complex 'positive' verb plus
negative particle, even though the positive verb was in
her vocabulary.

Response (36), <u>oŋge</u>, is also interesting in that it
also expresses a negative concept. <u>Oŋge</u> is a verb meaning
essentially "to be absent" and isused to indicate lack of
possession, i.e. "to not have"; lack of presence "not to
be here"; and non-existence, "there isn't any". Risper's
use of the term meant, in context, "she isn't here", but
she did not use the pronominal marker <u>o-</u>. In addition,
the reply was not appropriate, since her mother was present
at the time. Her mistake may represent an example of
overregularization of use, in that <u>oŋge</u> is a proper reply
to questions of "where", as for example, <u>mama ɛrɛ</u>? "mama
is-where?" -- <u>ooŋge</u> "she-not-here". In other words, Risper

recognized the utterances as a "where" question and provided an answer that would be appropriate for some contexts, but not for that particular one.

3.6 SPEECH SAMPLES OF OCHIENG (C)

Child C in the sample, Ochieng, proved to be the most reticent of all in his speech behavior. Although he was visited a total of fifteen times over a period of seven months, he, unlike, the other children, never overcame his shyness, and consequently, we were able to collect almost no direct information about his speech development. Ochieng was 25 months of age when observations began. During this month, we attempted to collect information from his mother on the range of his vocabulary. Those reported for him were the same as for Risper (D) as shown in Table 4, but with the following additions: otinga, "tractor", mitoka "motor car", maua "flower", ĵapuonĵ "teacher (his term for his father)", sabun "soap", kibrit "matches", and činga "rain-water".

During the 25th month, we were able to collect the following utterances: (51) miya pi "give-me water"; (52) adway čam "I-want food"; and (53) ket kaya /keč/ "hunger bites-me". The only other utterance we were able to collect was in the 32nd month, when he said adway čam to his mother as she was preparing breakfast.

Ochieng's father and mother both reported that he was perfectly capable of talking, and in the absence of

visitors, he would talk normally. He simply would not talk when visitors were present in the homestead. It might be mentioned that he was expected to decode rather complex messages during the latter period of the study. For example, in the 28th month, his mother, in a futile attempt to persuade him to talk, used such remarks as:

> Kiwačo eka obiro miyi ka ok iwačo to ok obimiyi.
>
> (K(a)iwačo eka obiro miyi ka ok iwačo to ok obi(ro)miyi)
>
> "If-you-talk then he-is-going to-give-you (candy),
>
> but if not you-talk then not he-is-going-to-give-(it)
>
> to-you".

At this age, he was expected to handle negatives, future tense, subjunctive mood, and truncations.

3.7 SUMMARY

If we now place the speech development of the four children, A2, B2, C, and D, in chronological order, answers may be provided for some of the questions posed at the beginning of the chapter.

3.7.1 <u>Babbling</u>. To begin with, babbling behavior continued to be exhibited during the early one-word utterance stage. Ogutu (A1) at 12 months and Wanga (B1) at 14 months each had three-item vocabularies, and both were still engaging in babbling behavior. Othieno (A2) was still babbling at the age of 18 months, but there was no evidence of continuation into the nineteenth month. Aoko (B2) stopped babbling at the age of 17 months. Babbling, then, seems to terminate

during the 17-18 month age range. The children from whom
this information was obtained, though, A2 and B2, were
relatively slow in the onset of speech, and the babbling
period for them may have been slightly extended. The
earliest recorded utterances for A2 and B2 were in the
eighteenth month, whereas for A1, it was in the twelfth
month and for B1 in the fourteenth month. One consistent
feature is that the earliest terms were the same for all
the children, with the terms mama, baba, and miya all
appearing in the same month for each child.

3.7.2 Lexical Items. It was not possible to measure the
one-word utterance stage for A2, and for B2 the stage was
relatively brief, lasting approximately only two months,
as she began to use two-word utterances regularly during
the twentieth month. Information on the progression of
the acquisition of lexical items is at best sparse, but
from the original three-item vocabularies at 12-14 months,
a child in his twentieth month has mastered a fairly large
number of items. As one would expect, a limited environ-
ment is expressed in the earliest terms. The first forms
are names of "caretakers" -- mama, baba; personal names
(Baya); the command "give-me" or "want" -- miya; and the
generalized term for food -- čam. Expansion of the voca-
bulary consists primarily of an extension of naming behavior
to objects in the immediate environment of the child,
particularly for food and objects related to food, such as
cooking utensils.

The early, inanimate nouns have the characteristic
of being mass rather than count nouns. This results from
the fact that the terms for food, which are learned early,
are mass nouns in Luo. The early animate nouns are count
nouns, being the names of people with whom the child comes
into contact. The inanimate nouns fall into several
categories, most of which are related to food and to objects
in the home. The categories and entries are given below
in Table 7. Likewise, the animate nouns break down into
major classes, human, animal, and names for body parts.
These are also shown in Table 7. The numbers in the
columns represent the earliest age for which a record of
the use of the terms was available.[11]

Table 7
Lexical Items for Children A2, B2, C, D

NOUNS	A2	B2	C	D
Animate				
1) Human				
mama "mama"	17			
baba "papa"	17			
"personal names"	17	18		27
wɛndo "visitor"		20		
čungu "European"		21		27
nyaθi "child"			25	27
ŋato "man"				27
ðano "person"				27
ji "people"				27

Table 7 (Continued)

NOUNS	A2	B2	C	D
ʝaduoŋ "elder"				27
2) Domestic animals				
ɗiaŋ "cow"		20	25	21
gwɛno "chicken"		20	25	21
dIɛI "goat"		20		21
gwok "dog"			25	21
paka "cat"			25	21
rombo "sheep"				27
3) Wild animals				
winyo "bird"			25	27
lIɛč "elephant"				27
sImba "lion"				27
4) Body parts				
ðɔk "mouth"		20		27
wiyo "head"			25	21
waŋ "eye"				21
tielo "leg, foot"			25	21
bat "arm"			25	21
it "ear"			25	21
um "nose"				21
lweto "hand"			25	21
lak "tooth"			25	21
ič "stomach"			25	

Inanimate

1) Food

	A2	B2	C	D
čam "food"	17	18	25	21

Table 7 (Continued)

NOUNS	A2	B2	C	D
pi "water"	18	20	25	21
nyUka "porridge"	18	20	25	21
tamtam "candy"		18		21
aloθ "vegetables"		20		21
toŋ "eggs"		20		
oduma "maize"		20		21
kuon "bread"		20	25	21
čak "milk"				21
rabwon "potato"				21
rabolo "banana"				21
reč "fish"				27
2) Utensils				
san "plate"		20	25	21
kom "chair"		20	25	21
mesa "table"		20	25	
kwɛr "hoe"		20		
agwata "gourd cup"		20		
toŋ "spear"		20		
beti "slasher"		20		21
pala "knife"			25	21
θen "stool"			25	21
sanduk "box"			25	27
taya "lamp"				27
3) Cooking				
mač "fire"		20	25	21
yIɛn "firewood"		20	25	

Table 7 (Continued)

NOUNS	A2	B2	C	D
kImbo "lard (tinned)"		20		
kibrit "matches"			25	
4) Homestead				
ɔt "house"			25	21
ðoɔt "doorway"		20		
dala "home"			25	21
5) Clothes				
nanga "cloth(es)"		20		
koɸia "cap, hat"		20		27
lawa "clothes"			25	
wuoče "shoes"				27
6) Natural features				
lum "grass"			25	21
kidi "stone"				21
lowo "dirt"			25	
maua "flower"			25	
kulo "river"				28
7) Vehicles				
gare "car"		22		
mitoka "car"			25	
otinga "tractor"			25	
ndinga "bicycle"			25	
8) Other				
keč "hunger"			25	
činga "rain water"			25	
bel "millet"				21

Table 7 (Continued)

NOUNS	A2	B2	C	D
sabun "soap"			25	
ndawa "tobacco"		20		
gi "thing"		21		
saa "clock"				27

PRONOUNS

<u>Personal</u>

	A2	B2	C	D
en, o-, -e "he, she, it; his"	18	21		27
an, a-, -a "I, me, my"		21	25	27
wa- "we, us, our"				27
-gi "them"		21		

<u>Demonstrative</u>

	A2	B2	C	D
ma "this"		20		27
-ni "this"		21		
-no "that"		21		
-ča "that"		21		27

VERBS

<u>Transitive</u>

	A2	B2	C	D
miyo "to give"	17	18	25	21
weyo "to leave alone"		18		
neno "to see"		19		
gamɔ "to hand over"		20		
beto "to cut, harvest"		21		
kelo "to bring"		21		
čamo "to eat"		21		21

Table 7 (Continued)

NOUNS	A2	B2	C	D
kɪmbo "lard (tinned)"		20		
kibrit "matches"			25	
4) Homestead				
ɔt "house"			25	21
ðoɔt "doorway"		20		
dala "home"			25	21
5) Clothes				
nanga "cloth(es)"		20		
koɸia "cap, hat"		20		27
lawa "clothes"			25	
wuoče "shoes"				27
6) Natural features				
lum "grass"			25	21
kidi "stone"				21
lowo "dirt"			25	
maua "flower"			25	
kulo "river"				28
7) Vehicles				
gare "car"		22		
mitoka "car"			25	
otinga "tractor"			25	
ndiṅga "bicycle"			25	
8) Other				
keč "hunger"			25	
činga "rain water"			25	
bel "millet"				21

Table 7 (Continued)

NOUNS	A2	B2	C	D
sabun "soap"			25	
ndawa "tobacco"		20		
gi "thing"		21		
saa "clock"				27

PRONOUNS

Personal

	A2	B2	C	D
en, o-, -e "he, she, it; his"	18	21		27
an, a-, -a "I, me, my"		21	25	27
wa- "we, us, our"				27
-gi "them"		21		

Demonstrative

	A2	B2	C	D
ma "this"		20		27
-ni "this"		21		
-no "that"		21		
-ča "that"		21		27

VERBS

Transitive

	A2	B2	C	D
miyo "to give"	17	18	25	21
weyo "to leave alone"		18		
neno "to see"		19		
gamɔ "to hand over"		20		
beto "to cut, harvest"		21		
kelo "to bring"		21		
čamo "to eat"		21		21

Table 7 (Continued)

VERBS	A2	B2	C	D
doyo "to dry"				21
moðo "to drink"				21
waŋo "to burn"		21		
pƴoðo "to fall down"				21
lwɔkɔ "to wash"				23
dwaro "to want"			25	
keto "to put"			25	

Intransitive

	A2	B2	C	D
rIngo "to run"		20		
ði(yo) "to go"		21		23
biro "to come"				27
čiemo "to eat"		20	25	21
nindo "to sleep"				21
tuo "to be sick"				21
oŋge "to be absent"				21
kia "to not-know"				27
ŋeyo "to know"				27

INTERJECTIONS

	A2	B2	C	D
'a'a "no"		18		
ee "yes"	15	20		
misawa "hello"	17			27
erokamano "thanks"				28

Two types of pronouns were present in speech at this
age, personal and demonstrative. It is interesting to note
that no second person pronouns were present, which may

result from the fact that the second person is addressed by children at this age by commands or by their name, as mama or baba. Only two adverbs were present, ka and piny, and both of these are locatives, "here" and "down". One adjective was used, bɛr, which glosses as "good, pretty". Two interjections were also used early: 'a'a "no" and ee "yes".

As shown in Table 7, both transitive and intransitive verbs were present in the lexicon. The verbs were mostly names of actions or states occurring in the daily routines of the children, as e.g. čamo "to eat", moǰo "to drink", nindo "to sleep", etc.

There is relatively little information available on vocabulary development for the age range of 22-28 months. Information from Ochieng (C) at 25 months yielded a few lexical items not present at 20-21 months, such as otinga "tractor", but all of the new items fall under the classes already established in the earlier period. It is noteworthy that at 25 months there is still no appearance of abstract nouns except the predicate adjective bɛr. For example, such nouns (or adjectives) as ŋic "cold, cool" or liet "warm, hot" had not appeared in the children's speech, and more "abstract" verbs such as hɛro "to like, love" or mɔr "to be pleased, happy" also had not appeared. The lack of the use of plurals should be noted also. Although verbal inflection is present and inflection of nouns for subject and object, there were no examples of noun inflection for plurals.

Speech samples from Risper at 27 months indicate that
vocabulary development at this stage consists mainly of
addition of terms to the pre-existing categories, but with
some differentiation occurring within the categories. For
example, in the "human" category, Risper now has the terms
nyaθi "baby", ʒaduoṇ¹ "elder", ɗano "person", and ṇato
"man", indicating that age distinctions are now made, as
well as definite-infinite (man-person). She also at this
age knew the terms for undomesticated as well as domes-
ticated animals, as e.g. liɛč "elephant" and sImba "lion".

New verbs to appear were oṇge "to be absent", kia "to
not-know", and ṇeyo "to know, understand", all of which
were discussed earlier. The verbs lwɔkɔ "to wash" and biro
"to come" also appeared during this period.

At 27 months, we also have the first examples of
possessive pronouns, first person singular -a and first
person plural -wa. The latter marks the first appearance
of the concept "we" or "first person plural". There were
no new adverbs or adjectives recorded for the 27th month.

In terms of the original aims in the exploration of
initial vocabulary (p. 46), the extent and range of
vocabulary, the semantic domains named by the child, the
"innominate" zones, and the nature of the generalizations
of meaning have all been discussed. The latter does not
seem to be pronounced in the children's speech. There
are only a few examples in the children's speech of a
multiplicity of semantic referents associated with a
particular form, but this is probably a function of the

small sample size. For the final aim, the extent of homo-
nymity, the evidence from the Luo children is totally
negative. Homonymity is not extensive in adult Luo, in
fact, almost non-existent, and it is therefore to be
expected that it does not occur in child speech.

3.7.3 Grammar

3.7.3.1 Syntax. Two-word utterances began to appear in
the nineteenth month for both Othieno (A2) and Aoko (B2).
Risper (D) was in the two-word utterance stage at 21 months,
and no information was available for Ochieng (C), except
that he was using two-word utterances at the age of 25
months. At the age of 27 months, Risper, from available
evidence, was not regularly using utterances of three or
more words, and in terms of syntax, she is considered to
be still in the two-word stage at this age.

Using the criterion of predication, two types of
sentence construction may be identified in the children's
speech, predicative and non-predicative (corresponding to
the narrative and equational in Appendix A). In the latter,
the word order was constrained to yield constructions of
the type 'subject plus predicate nominative or locative.'
The subject in these cases was a noun (or pronoun) and the
predicate nominative could be a noun or an adjective.
Examples of these are given in Table 8.

Predicative constructions were of two basic types,
according to the functions of the utterances. Performatives
(demands, commands) had the basic order VO (Verb-Object),

and descriptions of acts or states had the order SV(O),
although in most cases the subject was marked by verb
inflection. Examples of these constructions are given
also in Table 8.

Table 8
Examples of Early Sentence Constructions

Non-Predicative

Type	No.	Utterance	Gloss
N+N	(28)	en gini	"it thing-this"
N+loc.	(1)	en ka	"she here"
N+adj.	(12)	gino bɛr	"thing-that good"

Predicative

Type	No.	Utterance	Gloss
V+N	(3)	ne tamtam	"see candy"
N+V	(30)	gare rIngo	"car runs"
N+V+N	(15)	aneno čungu	"I-see Europ."
N+V+loc.	(35)	mama ɗi lwɔkɔ	"mama went to-wash"

In terms of the original motivation for studying
syntax, for investigating the early utterances with the goal
of discovering pivot grammar, the present analysis can do
no more than suggest that Luo children may have used such
a grammar in the beginning stages of syntactic development.
Unfortunately, the record is incomplete on this matter. Very
few utterances were available for the period between the
one-word stage and the appearance of hierarchical constructions,

created by use of inflection. Several conclusions can be drawn from what information is available, the most important being that from the outset, all of the utterances except one (number (2)) followed the model of adult speech in terms of word order.

A second conclusion is that the two-word stage appeared to be of very brief duration. Soon after the onset of two-word utterances, more complex constructions utilizing inflection began to appear. In Aoko's speech, for example, the time span was no more than one month, and was probably less.

The third point, a hypothetical one, is that granted the presence of pivot constructions, in the brief span of a two-word stage, the most likely candidates for pivots were the terms en "he, she, it", ne "see", and miya "give-me". These were all present early in the two-word stage, and in subsequent development, they appeared in combination with a number of other words. For example, en was used in combination with ka "here", gini "thing-this", and saa "clock" (2x); ne appeared with tamtam "candy" and mača "that"; miya "give-me" occurred with čam "food", tamtam (3x), pi "water" (3x), and ugi "porridge"; and ma was used with wɛndo "visitor" and e "one" (11x).

More data would be required for a resolution of the problem of the existence of pivot grammar, but it may be concluded that pivot constructions do not occupy as important a position in the syntactic development of Luo

children as in their American counterparts.

Only a few utterances consisting of three or more words were collected for the age range of 19-27 months. Utterances containing the pivot construction ma e "this one" in combination with other terms were discussed earlier (pp. 69-71), and utterance (36) mača en gwɛno "that-there it chicken" also has been discussed (p.79). Utterance (35) mama ði lwoko "mama goes to wash", while an acceptabe utterance syntactically, was inappropriate in the context in which it was uttered. The child's mother had already gone to wash, and the past tense then should have been indicated. The verb ði should have been prefixed with the past tense marker o-. Risper, from this evidence, did not seem to have the rule for forming past tense in the environment Noun__Verb. Utterance (35) forms an interesting contrast with (50) oði kulo "she-went to river". In the case of (50), the o- represents inflection for third person singular en, and the past tense marker is understood from the context. Utterances (35) and (50) differ, then, in that the subject is indicated syntactically in the first and morphologically in the second, which provides evidence that Risper was able to use verbal inflection to mark pronominal subject.

Utterance (35) is interesting also in that an infinitive lwɔkɔ "to wash" is used in conjunction with another verb form, ði. The utterance was a reply to a "wh" question (mama ɛrɛ "mama is-where"), as was (50), but Risper replied by naming the activity of her mother rather

than giving a locative, as in (50). In Luo society, however, when one goes to wash, it is at a nearby stream or river, and Risper's reply was not ambiguous.

3.7.3.2 Morphology. The use of productive morphology seems to appear at a slightly later age than syntax in the grammatical development (using the regular appearance of two-word utterances as the criterion for early syntax). No use of inflection was present in Othieno's (A2) speech at 19 months, nor in Aoko's (B2) at the same age, unless it is assumed that terms such as miya had ceased to be monomorphemic. Inflection was present, however, in her 21st month, and likewise, there is evidence that Risper (D) at 21 months was capable of employing it. There are further examples of inflection in Risper's speech at 27 months, and it was present for Ochieng (C) at 25 months. The utterances showing inflection are given in Table 9.

Table 9
Inflection in the speech of B2, C, D

Age (in mos.)	Utterance	Gloss
	B2	
21	(13) oɟi Ulanda	"he-went to Ulanda"
21	(16) okelo	"he-brought (it)"
21	(17) okelo ma e	"he-brought this one"
21	(18) anenogi	"I-see-them"
21	(19) aneno čungu	"I-see European"
21	(28) awaŋe:	"I-burned-him"

Table 9 (Continued)

Age	Utterance	Gloss

C

| 25 | (52) adway čam | "I-want food" |
| 25 | (53) ket kaya | "hunger bites-me" |

D

21	(32) amoðo pi	"I-drink water"
21	(33) adwayo čam	"I-want food"
27	(38) mača sandwa	"that-there box-our"
27	(39) akia	"I-don't-know"
27	(41) lwɛta	"hand-my"
27	(42) wiya	"head-my"
27	(44) toča	"shoe-my"
27	(45) akia	"I-don't-know"
27	(46) tienda	"leg-my"
27	(50) oði kulo	"she-went-to river"

In Luo, personal pronouns, when used with a verb, are
marked by inflection of the verb stem (the pronouns and
morphophonemic rules are given in Appendix A). Nominative
pronouns are prefixed, whereas objective and possessive
forms are suffixed to the verb stem. From Table 9, it is
clear that inflection for pronominal subject was present
at 21 months. Numbers (13), (16), and (17) are instances
of third person singular, en, o- + verb. Numbers (18),
(19), (28), (32), and (33) show first person singular, an,
a- + verb. Both of these forms are shown in later utterances,

but none of the other pronominals are represented as subjects.
For objects, only one form is present at 21 months, third
person singular in (28), -e. Third person plural is present
in (18), but as indicated earlier, this could be simply a
result of imitation. Number (53) provides an example of
objective first person singular, -a (kayo + -a). Possessive
forms are present in the 27th month, with all the utter-
ances, (44) - (49), indicating first person singular, -a,
except number (38), which shows first person plural, -wa.
The morphophonemic rules accompanying the inflection were
shown in Table 6.

From the available evidence, little can be said about
the development of negation during the age range of 21-27
months. A child at 15 months is able to recognize questions,
probably by terminal intonation rise, and he can give the
negative response 'a'a. The negative command weya "stop;
leave me alone", was present at 18 months, and the "nega-
tive" verbs onge "to be absent" and kia "to not-know" were
present at 27 months. There were no instances of the use
of the negative particle ok or the negative command kik.

In capsule form, the development of language for a Luo
child in the age range of 12-27 months, appears to be as
follows. Babbling terminates in the age range of 17-18
months; the first lexical items appear at 12-14 months,
and there is relatively slow development until the 18th
and 19th months, at which time, most lexical items are
nouns; two-word utterances appear at 19 months; verb inflec-
tion appears at 21 months and probably earlier; utterances

of more than two morphemes are present as early as 21 months, but with a very low frequency; and the common adult forms of negation are not present.

Table 10 provides a summary of the major features of the acquisition of morphology and syntax. The numbers represent the age for the earliest appearance of each feature shown in the table.

Table 10
Acquisition of Syntax and Morphology, Children A2, B2, C, D

Syntax

Type	A2	B2	C	D
Non-predicative				
N+N	--	20	--	27
N+loc	19	20	--	--
N+adj.	--	21	--	--
Predicative				
V+N	--	19	25	20
N+V	--	21	--	27
N+V+N	--	21	25	20
N+V+loc.	--	21	--	23

Morphology

	A2	B2	C	D
Noun inflection:				
Possession	--	--	--	27
Verb inflection:				
Subject	--	21	25	20
Object	--	21	25	--
Suffixation:				
Demonstratives	--	21	--	27

CHAPTER 4

LANGUAGE DEVELOPMENT: 28-35 MONTHS

4.1 INTRODUCTION

By the age of 27 months, Luo children have acquired
the ability to use some of the basic aspects of the Luo
language. Their lexicon includes nouns, pronouns, verbs,
adverbs, and a few adjectives. Their morphology has
become productive in the area of verb inflection for
marking pronominal subjects and past tense, and in the
area of syntax, they use pivot constructions and a few
utterances of greater morpheme length. In the present
chapter, evidence presented in the speech of two older
children will be examined, primarily to trace further
development in grammar.

4.2 SPEECH SAMPLES OF RABUOGI (G)

Child G in the sample, Rabuogi, was 27 months of
age at the beginning of the study, and like the other
children, he seemed reticent to talk in our presence
during the first visits to his home. Despite his rela-
tively advanced age, it is likely that he was not
advanced in his speech development at that time. His
father reported that he was able to say only a very few
words, and these were mostly names of objects located
in the homestead. He was not able to give the names of
the family members, but when asked to point to them, he
could follow the instructions without a mistake.

Rabuogi's father reported that Rabuogi was at the stage where he tried to imitate adult activities, and he pointed to some scratches in the soil nearby where Rabuogi had been "hoeing". The imitative behavior also extended to his speech. During this particular visit, pictures were being shown to Rabuogi's older brother, Oware, and he was asked to name the objects in the pictures. Rabuogi, standing nearby, imitated some of the remarks, which, according to his father and brother, were the first instances of his verbalization of the terms, which were ɗok "cattle", paka "cat", and ɗano "person".

From the available evidence, then, Rabuogi's speech was not advanced at the 27th month, and in fact, was considerably less developed than Risper's (D) at the same age.

In the following month, a few samples of Rabuogi's speech were collected, and although the sample size is small, there is some evidence that he was at the two-word pivot stage. In the observation period, Rabuogi made the following remarks. It was mid-morning, the time of day for the first meal, and Rabuogi was attempting to get something to eat. He said to his mother (54) adwayo čam "I-want food". She was busy and directed him to his older sister, Owuor, to whom he repeated his request (55). She fed him, and then his mother sent him into the house to get some medicine that he was to take. He returned, carrying the bottle of medicine, and reporting (56) mama,

čam yaθ "mama, eat medicine". Although it isn't entirely
clear from the context, Rabuogi was probably telling his
mother to "eat" the medicine, rather than describing what
one normally does with medicine, i.e. one eats it. His
next comment was (57) ičamo? "you-eat?", to which she
replied "yes". Later, Rabuogi, still hungry, told his
mother (58) miya buon /rabuon/ "give-me potato". Still
later, Okumu, in trying to persuade him to talk, asked
mama ɛrɛ?, and Rabuogi replied (59) en kača "she there",
pointing to where she was standing.

In the following month, the 29th, Rabuogi continued
to learn the names of objects in the immediate environment
of the home and to learn new verbs and adverb forms. New
verbs were yudo "to find", čando "to trouble, bother,
annoy", and tamo "to defeat", and new adverbs were podi
"still, not yet" and pɛk "heavy". Podi was a response to
his mother's question isečamo? "you-have-eaten?, and
(60) ičanda "you-annoy-me" was said to his brother, who
was aiding us in persuading Rabuogi to talk by asking him
questions. Other utterances collected at this time were
(61) miya moro "give-me more"; (62) oluru oði e gʊnda
"quail went to garden"; (63) mičungu omiya tamtam "European
give-me candy" in response to the question ŋano ma omiyi
tamtam? "who (is it) who gave-you candy?"; and (64) baras
otama "brush defeated-me",said after he had followed his
father's request ɖak ikelo baras? "why-don't-you-bring
brush?" and was not able to find the brush.

Utterances (62) and (63) are of special note in that they represent the first examples of noun subjects for Rabuogi, and they are also the first utterances of more than two words. He also has shown that he has internalized the rule for marking past tense, with o- occurring in the environment Noun __ Verb. In (62), oluru oḍi e gUnda "quail went to garden", he has used the correct prepositional form e "to", which must be employed when a specific destination is indicated by the verb, as e.g. gUnda in this case. Utterance (64) baras otama "brush defeated-me" expresses the Luo formula for indicating lack of ability or success in some specific endeavor. The Luo speak of a failure as a defeat. Failing an examination, for example, is expressed as "the exam defeated me", or as in (64), "the brush defeated Rabuogi".

In the 30th month, we were able to obtain a relatively large sample of speech from Rabuogi, although most of the speech consisted of answers to questions. In contrast with question-answer sessions with other, younger children, many of Rabuogi's replies (over 50%) were of two or more morphemes in length. All of these utterances were collected at one interview, with Okumu asking most of the questions. The utterances are given in Table 11.

<div align="center">

Table 11
Recorded Speech of Rabuogi at 30 Months

</div>

Okumu	Rabuogi
ɛrɛ mama?	(65) mama čandɛ oa e gUnda
"where-is mama?"	"mama that (you spoke of) left-for garden"
ɛrɛ baba?	(66) baba čandɛ obet piny
"where-is father?"	"father that is-sitting down"
	(67) ne kača, gini
	"see there, thing-this"
mama iwačo ni timo aŋo?	(68) omoyo odUma
"mama you-said is-doing what?"	"she (is)-drying maize"
Uhuru ɛrɛ?	(69) Uhuru ičandɛ..
"Uhuru is-where?"	"Uhuru you-spoke-of.."
otimo aŋo?	(70) obet piny
"he-doing what?"	"he-sitting down"
gwɛno ɛrɛ? en mar ŋa?	(71) gwɛno ičandɛ mar baba
"chicken is-where? it of who?	"chicken you-speak-of of father"
ɛrɛ mari in?	(72) mar baba
"where-is yours?"	"of father"

Table 11 (Continued)

Okumu	Rabuogi
<u>Owuor</u> <u>to</u> <u>ođi</u> <u>kanye</u>?	(73) <u>ođi</u> <u>skUl</u>
"Owuor went where?"	"she-went to school"
<u>in</u> <u>to</u> <u>dak</u> <u>i đ i</u> <u>skUl</u>?	(74) <u>a'a'</u>. <u>adagi</u>
"you and why-don't you-go to school?"	"no. I-refuse."
<u>naŋo</u>?	(75) <u>oŋge</u>
"why?"	"no reason"
<u>gUnda</u> <u>ɛrɛ</u>?	(76) <u>gUnda</u> <u>e</u> <u>ča:</u>
"garden is-where?"	"garden one there"
<u>ođi</u> <u>timo</u> <u>aŋo</u>?	(77) <u>ođi</u> <u>beto</u>
"he (father) is-going-to-do what?"	"he-goes to-harvest"
<u>ođi</u> <u>gi</u> <u>kwɛr</u> <u>koso</u> <u>gi</u> <u>beti</u>?	(78) <u>ođi</u> <u>gi</u> <u>beti</u>
"he-went with hoe or slasher?"	"he-went with slasher"
<u>mama</u> <u>to</u> <u>ođi</u> <u>timo</u> <u>aŋo</u>?	(79) <u>mama</u> <u>ođi</u> <u>pur</u>
"mama then went to-do what?"	"mama went to-cultivate"
<u>ođi</u> <u>gi</u> <u>kwɛrkoso</u> <u>gi</u> <u>beti</u>?	(80) <u>ođi</u> <u>gi</u> <u>beti</u>
"she-went with hoe or with slasher?"	"she-went with slasher"

Table 11 (Continued)

Okumu	Rabuogi
in bende iða puoðo?	(81) aðiga beto
"you also you-go-usually to garden?"	"I-go-usually to harvest"
bedi ɛrɛ?	(82) beda oŋge
"slasher-your is-where?"	"slasher-my absent"
Ohuru ema omiyi nyUka gi agwata koso gi suøuria?	(83) gi siøiria
"Ohuru only gives-you porridge with gourd or with sauce-pan?"	"with sauce-pan"
a umaðo nyUka gi ŋa?	(84) gi Ohuru
"(past tense) you (pl.)-drank porridge with whom?"	"with Ohuru"
idwa ði kanye?	(85) ir mama
"you-want to-go where?"	"to mama"
idwa ði mama omo aŋo?	(86) adwa ði ir mama
"you-want to-go-to mama to-get what?"	"I-want to-go to mama"

Utterances (65), (66), and (69) show examples of over-extension or over-regularization of the use of a term by Rabuogi. The term čands may be glossed as "that" or "which", and it is used in instances that are potentially

ambiguous, i.e. in which there may be some doubt as to the
specificity of the referent. The term specificies the
referent by relating it to a particular noun given in a
previous utterance. A more adequate gloss, then, would be
"that person (or thing) referred to in the previous remark"
or "that person you spoke of ". Rabuogi's use of the form,
while grammatically correct, was not obligatory, since there
was no ambiguity as to the possible referent. Utterance
(71) gwɛno iȼandɛ mar baba "chicken that of father", however,
was appropriate. Several chickens were nearby, and Rabuogi
identified a particular one as belonging to his father.
As shown in (71), the form ȼandɛ can also be used with a
subject, making (71) a case of a nested construction (cf.
Chomsky 1965:12).

Rabuogi, in utterance (81) adiga beto "I-go-usually
to-harvest", illustrates his capacity for the use of the
adverbial suffix -ga, which means "usually" or "habitually".
In the preceeding utterance, Okumu used the truncated form
in iȼa (iȼi + (g)a), but Rabuogi expanded it in his utter-
ance, indicating that it is a part of his linguistic
repertoire.

Utterance (82), beda onge "slasher-my absent", appears
to be an unusual way of expressing the notion of "being
without + object", i.e. by showing possession (beti + a
beda) and using it with a 'negative' verb, but this mode
of expression is perfectly acceptable in Luo. There are
other ways of expressing the same idea, with aongego "I-

am-without-it" being a more common one, but Rabuogi's expression is acceptable.

Some more speech samples were collected in the following month, the 31st. After Rabuogi had greeted us by shaking hands and saying misawa, Okumu asked him where his father had gone. Rabuogi answered (87) baba oɗi loka Utoma "father went up-there-to Utoma". Then in response to mama ɛrɛ?, he said (88) mama oɗi e siro "mama went to market". Other utterances were: (89) miya tamtam "give-me candy"; (90) neye ma "see-it this", said to his brother as he was showing him a piece of candy; (91) koŋo čandɛ "beer there", in response to his mother's question koŋo ɛrɛ? "beer is-where?"; (92) baba oɗi lokača "father went up-there", in response to his mother's question ɛrɛ baba? "where-is father?"; (93) miya ɵuno "give-me breast", said to his mother as he was sitting in her lap; and (94) mano toka in? "that car yours?", said to his brother, who was playing with a toy clay car.

In the 32nd month, the following utterances were collected. Rabuogi had just returned from the river, bringing some water back to the homestead. Okumu asked him where he got the water, and Rabuogi replied (95) bar kača "river there". To the question "aye un gi ŋa? "then you and who (went)?", he replied (96) wan gi Odindo "we and Odindo". Rabuogi approached Oyugi, who was taking notes while observing him, and demanded (97) miya kalam "give-me pencil". He then began to point to the control

knobs on the tape recorder and said gi, gi, gi, gi "thing, thing...(in a counting fashion). He tried to turn the knobs, and his brother, who was responsible for Rabuogi's behavior, grabbed his arm to prevent him from touching the tape recorder. Rabuogi shouted at him (98) we maka, we maka "stop grabbing-me...". Rabuogi began to examine Oyugi's notes, and Oware (his brother) encouraged him Rabuogi, somie gigo, som gigo "Rabuogi, read things-those, read things-those", but Rabuogi simply pointed at the letters and said (99) koni gi koni "on both sides/side by side".

In the following month, when Rabuogi was 33 months old, we were able to collect another question-answer type sample. The major features of the conversation are given in Table 12.

Table 12
Recorded conversation between Okumu and Rabuogi
(33 months)

Okumu	Rabuogi
a: upuroga kod ŋa?	(100) kenda
"(past tense) you cultivate-usually with whom?"	"only-I"
mama ɛrɛ?	(101) ičogo:
"mama is-where?"	"that-way"
mama timo aŋo?	(102) obaro yIɛn
"mama is-doing what?"	"she-splits firewood"

Table 12 (Continued)

Okumu	Rabuogi
<u>Owuor</u> <u>to</u> <u>timo</u> <u>aŋo</u>?	(103) <u>oywečo</u>
"Owuor then is-doing what?"	"she-is-sweeping"
<u>baba</u> <u>ɛrɛ</u>?	(104) <u>oiðo</u> <u>loka</u>
"father is-where?"	"he-went up-there"
<u>loka</u> kanye?	(105) <u>korgi</u>
"there where?"	"side-this"
<u>ma</u> e <u>aŋo</u> ma <u>Pitalis</u> <u>nigoni</u>?	(107) <u>en</u> <u>gini</u>
"this one what which Pitalis has-here?" (talking about Pitalis's shirt)	"it thing-this"
<u>en</u> <u>gwɛnd</u> <u>na</u>?	(106) <u>gwɛnd</u> <u>baba</u>
"it chicken-of who?"	"chicken-of father"
<u>to</u> ma <u>aŋo</u> <u>man</u> <u>e</u> <u>tiendani</u>	(108) <u>en</u> <u>wuoče</u>
"and this what which-is on foot-my here?"	"it shoes"
<u>en</u> <u>ŋano</u> Rabuogi <u>man</u> <u>e</u> <u>dira</u> <u>kaeni</u>?	(109) <u>en</u> <u>misungu</u>
"it who Rabuogi who-is at side-of-me here?"	"it European"

Table 12 (Continued)

<u>Okumu</u>   <u>Rabuogi</u>

<u>to</u> <u>mano</u> <u>aŋo</u> ma <u>otiŋo</u> e <u>lweteni</u>?   (110) <u>en</u> <u>kalani</u> /kalatas/

"and that what which he-holds   "it paper"

in hand-his here?"

<u>mača</u> <u>to</u> <u>aŋo</u> <u>maračar</u> ma <u>ondikoni</u>?   (111) <u>gire</u>

"that then what white which he-   "thing-his"

writes-on?"

<u>kom</u> <u>ŋa</u>?   (112) <u>kom</u> <u>baba</u>

"chair whose (that you are   "chair-of father"

sitting on)?

<u>en</u> <u>θuon</u> <u>ŋa</u>?   (113) <u>θuon</u> <u>baba</u>

"it rooster whose?"   "rooster father"

<u>to</u> <u>ma</u> <u>e</u>, <u>ma</u> <u>e</u> <u>aŋo</u> <u>močuŋni</u>?   (114) <u>en</u> <u>bao</u>

"and this one, this one what   "it board"

which-is-standing-here?"

<u>to</u> <u>mača</u>, <u>ma</u> <u>gwɛn</u> ni <u>tiende</u> <u>ni</u>?   (115) <u>en</u> <u>gwɛno</u>

"and that, this chicken at   "it chicken"

feet-his here?"

<u>to</u> <u>ma</u> en <u>aŋo</u>?   (116) <u>en</u> <u>dɛro</u>

"and this it what?"   "it granary"

<u>to</u> <u>mača</u> en <u>aŋo</u>?   (117) <u>en</u> <u>dɛro</u>

"and that it what?"   "it granary"

Table 12 (Continued)

Okumu

en od ŋa?
"it house-of who?"

gwɛno manadɛ?
"chicken what-kind-of?"
(is that over there?)

gwɛn manadɛ?
"chickens what-kind-of?

to man but·θen to aŋo man
en dir ðɔɔt ča?
"but that near stool then what
which-is near doorway there?"

mama ookoni ni iði pur koso
aye ipuro apura kendi?
"mama outside here has you to-
cultivate or do you cultivate
by yourself?"

Rabuogi

(118) od baba
"house-of father"

(119) gwɛn madičol
"chickens which-are-
black"

(120) gin dičol
"they black"

(121) en ǰiko

"it kitchen"

(122) pod lɪθ
"still hurts"
(previous conversation was
about his hand, which was
burned several days before;
he was commenting that his
hand still hurt him).

(123) a: apuro apura kenda

"I have cultivated just
by-myself"

Table 12 (Continued)

Okumu   Rabuogi

upuroga gi Pitalis?
"you usually cultivate with
Pitalis?

to mača ano moyIɛɲrɛ itado ča?   (124) en toŋ Ohuru
"and that what which-is-leaning- "it spear Ohuru"
against roof there?"

mača en ma e Rabuogi, moyIɛŋ   (125) en par
e tado kae mi?
"that it which one, Rabuogi,   "it mat"
which-leans-against roof here?"

to man e dir par ča ano?   (126) en par
"but that which near mat there   "it mat"
what?"

a'a', marateŋ! man e dir par   (127) en θigo
moyIɛɲrɛ e kor ot ča?
"no, black which is near mat   "it door"
which-leans-against side of
house there?"

iwačo ni en ano, Rabuogi, ma   (128) en gwɛno
ouum go gwɛn ča?
"you-said that it what, Rabuogi,   "it chicken"
which covers those chickens there
(talking about a basket covering some chickens).

Table 12 (Continued)

<u>Okumu</u>   <u>Rabuogi</u>

<u>to</u> <u>man</u> <u>e</u> <u>dir</u> <u>ot</u> <u>ka</u>; <u>gik</u> <u>ma</u>   (129) <u>en</u> <u>čuoðo</u>

<u>obiwre</u> <u>e</u> <u>dir</u> <u>ot</u> <u>maŋeny</u> <u>ka</u> <u>gin</u>

<u>aŋo</u>?

"and this which is near house   "it excrement"

here; things which are near

house many here they what?"

<u>momo</u> <u>elar</u> <u>ka</u> <u>gin</u> <u>aŋo</u>?   (130) <u>gin</u> <u>obando</u>

"things in courtyard they what?"   "they maize cobs"

<u>ŋano</u> <u>ma</u> <u>omoyo</u> <u>obando</u>?   (131) <u>akia</u>

"who (is it) who-dried cobs?"   "I-don't know"

<u>Owuor</u> <u>ča</u> <u>timo</u> <u>aŋo</u>?   (132) <u>oywečo</u>

"Owuor there is-doing what?"   "she-is-sweeping"

Utterance (105) <u>korgi</u> is an incorrect usage. <u>Kor</u>
is a noun (or noun construct) meaning "side", <u>gi</u> is plural
demonstrative adjective suffix, "these", and although they
may appear in the form <u>korgi</u>, it is unusual and in the
context in which Rabuogi used it, inaccurate. The correct
response to the question <u>loka</u> <u>kanya</u>? "up-there where?"
would have been <u>koni</u>, "this-side".

In (111) <u>gire</u> "thing-his", Rabuogi correctly used the
construct <u>gir-</u> (of <u>gi</u> "thing") and suffixed the proper
possessive form <u>-e</u> "his". His confusion in (105) may have
derived from the 'inconsistent' rules for the formation of

constructs, e.g. an r is deleted for kor in koni "this-side" and added for the construct of gi, gir-.

Utterances (119) gwɛn madičol "chickens which-are-black" and (120) gin dičol "they black" provide an interesting comparison, in that the relative pronoun ma is used in one expression and not the other. In Luo, noun modifiers are preferably expressed in the form of relative clauses, so that in (119) the preferred form is madičol "which-are-black" rather than simply dičol. In ostensive or translative sentences with pronoun subject, as e.g. (120), the relative pronoun is not used, and Rabuogi was able to handle this cooccurrence restriction rule successfully at this age.

In utterance (123), a: apuro aɒura kenda "I have cultivated just by-myself", two new features have appeared in Rabuogi's speech. The initial a is a past tense marker, an adverbial form indicating that an action was just recently completed. The form had been used several times by Okumu in the course of the conversation, and it is possible that Rabuogi was simply imitating, as a always occupies initial position in the sentence and recall or memory would be easy. However, the utterance immediately preceding (123) did not contain the form. Utterance (123) in fact contained lexical items from the three previous utterances' of Okumu, indicating that Rabuogi was able to generate the appropriate syntax for linear ordering of the lexical items. In addition to the adverb a, one of the features in (123) was the use of reduplication to give

aɔuro apura "I just cultivated". Reduplication is used
for Luo verbs to mark an action as simply or merely being
carried out (it also has other grammatical functions),
i.e. it is an adverbial derivation. The rules for its
production are: (1) the **verb** stem is repeated, and (2) it
is prefixed and suffixed with the particle a. Rabuogi
used the form correctly.

In the final month of observation, Rabuogi's 34th
month, the following utterances were collected. He had
been given a piece of candy, which he held out for his
mother to see, and said (133) ma to amuodo "and this I-eat
(by grinding with the teeth)", and (134) ma to akano "but
this I-keep". He then asked his mother (135) barna ma
"split-for-me this". His mother reported that he had
taken his first ride in an automobile a few days earlier,
and he had been terrified. Oyugi asked him why he had
been afraid, iluɔrnaŋo?, and he replied (136) mačača to
koro rača "motor-car-that then bad-for-me". Oyugi asked
en aŋo ma rač? "It what which is-bad?"; Rabuogi replied
(137) mitokača koro rača "motor-car-that then bad-for-me."
Rabuogi was still playing with his candy and said (138)
daŋ'anyul tamtambni duto "I would like I-put-in-my-mouth
candy-this all". To his brother he said (139) en to koro
imuodo amuoda "it and then you chew just" and (140) ne
kaka omuodo "see how he-chews". To Oyugi he said (141) neye
laka "see-it tooth-my". Oyugi asked aŋo ma otimo laki?
"what (is it) that happened-to tooth-your?", and Rabuogi

replied (142) <u>tamtam</u> <u>motimo</u> <u>laka</u> "candy is-that-which-did-it-to tooth-my". Then he addressed his brother, trying to push him out of a chair, (143) <u>daŋ'</u> <u>agoli</u> <u>piny</u> <u>ku</u> "I would "I would like to-push-you down here."

Later, as Oyugi was preparing to leave, Rabuogi pointed to one of his pockets and said (144) <u>tamtam</u> <u>oŋge</u> <u>ka</u>? "candy isn't here?" Oyugi replied <u>oŋge</u> "not any", and Rabuogi pointed to the other pocket and said <u>to</u> <u>koni</u>? "but this-side?". Oyugi asked <u>idwaro</u> <u>tamtam</u> <u>kende</u>? "do-you-want candy only?", to which Rabuogi replied (146) <u>kel</u> <u>ku</u> "bring (it) here". As Oyugi was leaving, Rabuogi asked (147) <u>ibiro</u> <u>duogo</u>? "are-you-going to-return?".

Rabuogi's speech in the 34th month contained several new features. One is the conjunction <u>to</u> which can mean, depending on context, either "but" or "and". Where a contrast is indicated, as in (133) <u>ma</u> <u>to</u> <u>amuodo</u> "this and I-eat" and (134) <u>ma</u> <u>to</u> <u>akano</u> "this but I-keep", the term is maximally contrastive, i.e. "and...but...". Sometimes, however, the meaning of the term is not clear, and often it is used as a conjunction in a neutral way, i.e. a conjunction is required syntactically, but the semantic load is unimportant. The term <u>to</u> is also used as a device for specifying antecedent referents. In (136) <u>mačuča</u> <u>to</u> <u>koro</u> <u>rača</u>, for example, <u>to</u> refers to the motorcar mentioned by his mother in her preceding remark, and Rabuogi's remark is "but/and then that motor car was bad for me". The element <u>koro</u> functions in the same manner, meaning "now

or "then". In utterance (137) <u>mitokaca</u> <u>koro</u> <u>rača</u>, Rabuogi

states "then, that motor car was bad for me." <u>To</u> and

<u>koro</u> often appear together, as in (136) and (139), <u>en</u> <u>to</u>

<u>koro</u> <u>imuodo</u> <u>amuoda</u>, and they can have any of the four

meanings, "and now", "and then", "but now", and "but then",

as well as serving the role as filler.

Another new feature is the use of the conditional

particle <u>daŋ'</u> in utterances (138) <u>daŋ'</u> <u>anyul</u> <u>tamtambni</u>

<u>duto</u> "I would like to put-in-my-mouth candy-this all" and

(143) <u>daŋ'</u> <u>agoli</u> <u>piny</u> <u>ku</u> "I would like to push-you down

here". The term <u>daŋ'</u> is a concatenation of a conditional

marker <u>da</u> and a future tense marker <u>aŋ'</u>, and may be glossed

as "would like". As neither conditional markers or future

tense markers per se have appeared in his speech Rabuogi

probably learned the particle as a unit. Its position is

regular, always occurring initially, and the syntactical

rules for its use are not complex. Rabuogi's uses of the

particle were both syntactically and semantically correct.

In utterance (147), <u>ibiro</u> <u>duogo</u> "are-you-going to-return?"

Rabuogi gives the first use of the common expression of

future tense in Luo. Although there are future tense

verbal particles, as <u>aŋ'</u> cited above, the preferred way of

expressing the future is through the use of the auxiliary

verb <u>biro</u> "to come", which glosses into English as "going

to". Utterance (147) was spontaneous, indicating that the

ability to use the expression is part of his linguistic

proficiency.

4.3   SPEECH SAMPLES OF AKINYI (H)

Akinyi, child H in the sample, was 28 months old at
the beginning of the study, and there is available a monthly
comparison of her language development with Rabuogi's. As
such, a summary of the major features of Rabuogi's speech
will be deferred until Akinyi's speech samples are given,
in order to facilitate comparison of the two children's
abilities.

Akinyi was also shy and speechless in our presence.
On the first visit, she hid behind the house, peered around
the corner at us, and refused to be coaxed from her hiding
place until her father returned home. It was not possible
to collect any speech samples on this visit, but her mother
volunteered some information. She reported that Akinyi
was able to talk, but that she could not say very many
things. She knew a few words, most of which she used alone
in one-word utterances, but she would occasionally use a
few words together, such as (148) adwayo čiemo "I-want
food" and (149) adwayo pi "I-want water".

Akinyi, like Rabuogi, was at the stage at which she
imitated many adult activities. Her mother reported that
Akinyi would imitate her whenever she was cooking. Akinyi
would mix soil with water, pretend to cook it over the
fire, and had to be watched carefully or else she would
eat the concoction. Her mother said that Akinyi seemed to
learn new words by imitating them, by hearing them spoken
by older people and then repeating them afterwards.

A month later, when Akinyi was 29 months old, it was possible to collect only a small amount of information about her speech. During the visit, Akinyi was eating her breakfast of porridge, and after satiation, she handed the drinking-cup to her older sister, saying (150) ma, ma nyUka "drink, drink porridge". As cited earlier, the term ma in Luo means "this", and (150) could be interpreted as "this porridge", but in this case, it was obvious that she meant "drink", for she held the cup up to her sister's mouth, indicating that she should drink it. Okumu and Oyugi both interpreted the meaning as "drink", so it can be concluded that Akinyi meant that and used the term ma instead of the correct maðʒ. Other speech samples collected in this month were: (151) adagi "I-refuse", said to her sister Asira, who wanted her to do a small chore for her; reč "fish", which Akinyi generalized to cover all solid food, according to her mother's report; and paka "cat", Akinyi's term for both cats and small goats.

During the same visit, an attempt was made to elicit speech from Akinyi by having her mother show her a picture book and ask her questions about it. The attempt was not successful. Most of her mother's questions were answered with u:, which in adult Luo is a negative indicating disgust or boredom, but it was not clear if Akinyi used the term in that manner; with e:, "yes"; a: (not intelligible); and ma "this", uttered as she pointed at the book. Occasionally she would merely repeat the final element of the

question.

In the 30th month, Akinyi's speech was still limited, but she had made some definite progress. She was better able to carry out instructions given to her by members of the family, indicating that her comprehension was improved. Her father demonstrated for us her ability to follow instructions and her knowledge of the names of objects in the homestead. For example, he would send her to collect some tworo "sisal" and bring it to him, and she would comply. There was almost no verbalization on her part; she simply performed the chores in silence. One exception occurred when she brought him a cup, which, she discovered, had a hole in it. She pointed to the cup and remarked (152) otu, otu /otuč/ "it has a hole...". Okumu asked her ere kama otuč? "where-is hole?", and she replied, pointing to the hole (153) ka otu "here is-hole".

Later in the same visit, we recorded the following: (154) miya čak "give-me milk", said to her mother; (155) miya bolo /rabolo/ "give-me banana", said to her mother after Akinyi had finished her milk; and (156) adwa pi "I-want water", said to her mother, who was drinking water from a gourd; (157) piyɔiy keč /pilupilu/ "peppers hot", said to her father, who told her to take some peppers into the house; and (158) miya tamtam "give-me candy", said to Okumu, who was giving candy to the other children present.

Akinyi's speech samples for the 31st month were collected in a question-answer session with her mother, and they were

almost all one-word utterances. An exception was (162) <u>ne</u>
<u>tamtam</u> "see candy", uttered twice, in response to her
mother's questions <u>Akinyi, ok imiya</u>? "Akinyi, not you-give-
me?" and <u>iði ineye gino</u>? "you-go-to show-it thing-that?"
It is interesting that at this age, Akinyi's responses to
questions were in the form of one-word utterances. Her
performance contrasts markedly with Rabuogi's performance
in the 20th month in which the majority of his responses
were of two or more morphemes. Some of the questions were
asked in each setting were practically identical, such as
<u>gwɛno ɛrɛ</u>? "chicken is-where?", <u>en mar ŋa</u>? "it of who?"
for Rabuogi, which he answered (71) <u>gwɛno iðandɛ mar baba</u>
"chicken you-speak-of of father" and for Akinyi, <u>ma aŋo</u>?
"this what?" and <u>en gwɛnd ŋa</u>? "it chicken-of who?", to
each of which she replied <u>gwɛn</u> "chickens".

Only a few speech samples are available for the 32nd
month. Her mother, who had been working in the garden,
returned to the homestead and asked Akinyi <u>baba oði kanye</u>?
"father went where?". Akinyi replied (163) <u>owuok</u>"he-left".
Her mother asked <u>kod ŋa</u>? "with whom?", and Akinyi replied
(164) <u>giði gi kwara</u> "they-went with grandfather". Some
more samples were collected in the 33rd month. The obser-
vation for the visit was made during the family's mid-
morning meal. Akinyi, eating an ear of roasted maize,
discovered that one end of the ear was slightly burned.
Showing this to her father, she asked (165) <u>baba, ma aŋo</u>?
"father, this what?". He replied <u>rač</u> "bad". She then

asked (166) <u>baba</u>, <u>itieko</u>? "father, are-you-finished?". A
minute later, she pointed to the burned kernels on the ear
of maize and remarked (167) <u>baba</u>, <u>ma</u> <u>rač</u> "father, this bad".
After she finished eating, she started to go into the
house, and as her father accompanied her, she asked (168)
<u>baba</u>, <u>ibiro</u>? "father, you-coming?".

When Akinyi returned from the house, she approached
her older sister, who was sitting on the ground holding
a baby. Akinyi said to her (169) <u>mi</u> <u>Sabomo</u> "give Sabomo"
(the name of a young boy who was present), but as Akinyi
was carrying an orange, it wasn't clear if she meant "give
the orange to Sabomo" or "give the baby to Sabomo". Her
sister didn't react. Akinyi then asked (170) <u>ma</u> <u>čungu</u>?
"this European?", speaking of the baby. Again, there was
no reaction. Akinyi turned to her father and said (171)
<u>baba</u>, <u>weya</u> "father, let-me". The meaning of her utterance
isn't clear. As noted earlier, the verb <u>weyo</u> means to
"leave alone, let alone, stop", but in this situation, her
father interpreted it as "where do you want to go?", i.e.
"where is it that you want to go if I let you", as indicated
by his question <u>idwaro</u> <u>ši</u> <u>kanye</u>? She did not reply.

Information was collected also for the 34th month, in
the form of a question-answer session between Akinyi and
her father. Akinyi's utterances of more than one morpheme
in length are presented below in Table 13.

Table 13
Recorded conversation between Akinyi and her father
(34 months)

Father

Akinyi

ma aŋo?
"this what?" (talking about a
doll Akinyi held)

(172) waŋe
"eye-her"

to ma?
"and this?"

(173) ume
"nose-her"

to ma?
"and this?"

(174) iɵe
"ear-her"

mondo otim nadi?
"in-order-to do what?"
(i.e. you were given a piece of
candy so you could do what?)

(175) oǰamu
"to-be-eaten"

en nyaɵi ŋa?
"it baby whose?"
(talking about the doll)

(176) en ɵi ǰuŋgu
"it baby European"

nyaɵi mar ŋa?
"baby of who?"

(177) mara
"mine-of"

mar ŋa?
"of who?"
(talking about a cigarette
her father was smoking)

(178) mari
"of yours"

Table 13 (Continued)

Father	Akinyi
ŋano ma omiyi; omiyi aŋo?	(179) Auma omiya nyUka
"who (is it) that-gave-you;	"Auma gave-me porridge"
she-gave-you what?"	

The final month of observation for Akinyi was her
35th month. A few speech samples were collected during this
month, again at the homestead. Akinyi greeted Oyugi and
then requested (180) miya tamtam "give-me candy." Her older
sister, in jest, tried to take away Akinyi's candy, but she
protested (181) we tamtamba "leave-alone candy-my". Her
sister asked Akinyi ɛrɛ siruači? "where-are clothes-your?",
to which she replied (182) siruača mama kano "clothes-my
mama keeps" (according to Oyugi, it should be okano "kept").
Then, in response to Akinyi, isetieko tamtambi "Akinyi,
have-you-finished candy-your?", she replied (184) a'a', ne
tamtam "no, see candy". Akinyi then asked (185) ma tenda?
"this stool-my?". Her sister replied mano tend Auma "that
stool-of Auma", but Akinyi insisted (186) adwa tenda "I-
want stool-my", (187) ma tenda "this stool-my". A small
boy present, Sabomo, was playing with a scarf, tying it
around his head. Akinyi exclaimed (188) ee! Sabomo tweyo
kitamba "ee! Sabomo ties scarf". Akinyi wanted the scarf,
reporting to her sister (189) Asira, adwa kitamba "Asira,
I-want scarf", and calling (190) Sabomo, bi ka "S..come
here", (191) twe waŋe "tie head-her".

4.4 SUMMARY

4.4.1 Rates of Development. A comparison of Rabuogi's and
Akinyi's speech acquisition over an eight month period
indicates a differential rate of growth, and if we view
their acquisition in relation to the level of development
exhibited by Risper at 27 months, the degree of individual
variation is even more pronounced. At 27 months, Risper
was using, productively, pivot constructions and inflection,
both of which had been present in her speech for several
months. She also at 27 months had a relatively extensive
vocabulary, to the extent that she could name most of the
objects with which she came into contact during normal daily
routines.

Rabuogi, at 27 months, appeared to be much less advanced,
although it is necessary to exercise caution in forwarding
this claim. His 27th month was the first month of obser-
vations, and the factors of fear and shyness undoubtedly
functioned to reduce his speech production. Nevertheless,
according to his father, mother, and nursemaid, he could
say only a few words and was not able to give the names of
members of the family. He was fully capable, though, of
decoding messages, as he was able to follow instructions
readily and without mistakes. In the following month, his
28th, both inflection and pivot constructions were present
in his speech, and in this respect, his speech for that
month was comparable to Akinyi's. In his 29th month,
however, Rabuogi advanced considerably, three and four-word

utterances making their appearance, with some new features being endocentric noun phrase constructions, ((65) mama ǰandɛ oa e gUnda "mama you-spoke-of-has-left for garden"); past tense markers ((62) oluru oǰi e gUnda "quail went to garden"); and unstressed elements, such as prepositions (the particle e in (62) and (65)). These features of his speech were regular for the subsequent months of his development, and in the 34th month, examples were present for the use of the present conditional tense ((138) daŋ' anyul tamtambni duto "I would like to put-in-my-mouth this candy whole") and for the use of relative clauses ((142) tamtam motimo laka "candy is-that-which-did-it-to tooth-my").

Rabuogi, then, was a slow beginner in language development, but once he began to acquire grammar, new features were quickly incorporated into his system, indicating that his cognitive development was in advance of his linguistic development. His ability to follow directions, i.e. his comprehension model, seemed to be roughly at par with Risper's and Akinyi's, but there was an initial delay in the generation of a speech production model.

Akinyi, whose level of development at 28 months, seemed slightly lower than Risper's at 27 months, did not show the same marked, rapid increase as Rabuogi had shown. Two-word utterances and inflection were definitely present in the 29th month, but grammatically, her speech in the 34th and 35th months was at essentially the same level. Her progress was represented in the acquisition of new terms

and the regular use of these within the same grammatical framework, although some new items did make their appearance, such as past tense markers ((179) Auma omiya nyUka "Auma gave-me porridge"). From the available evidence, introduction of new features into Akinyi's speech paralleled the process of development in Rabuogi's. Two particular features in the advance to the three-word stage were: 1) noun subjects were used, whereas in earlier speech, almost all subjects in the noun phrases were pronominal; and 2) with a noun subject, an obligatory marker for past tense was added to the verb form, i.e. in the environment Noun __ Verb.

Although there is individual variation in the rate of grammatical development for Luo children, the direction of the direction of the development seems to be patterned. There are, in other words, stages of development that need not correspond closely with chronological age. For the younger children in the sample, A2, B2 and D, the two-word stage was clearly present in the age range of 19-21 months. For Rabuogi and Akinyi, it began at approximately 28 months, but Rabuogi, two months later, was clearly in a more advanced stage. His two-word stage was of such short duration that it is not possible to identify clearly a pivot grammar in his speech. In his speech in later months, pivot type constructions continued to appear, but a pivot grammar could not account for the complexity of the speech. The same qualification holds for Akinyi's speech development.

The presence of a pivot grammar in Rabuogi's and Akinyi's speech cannot be positively identified, but the possibility remains that pivots may have been present. The sample size for all of the Luo children is small, to the extent that the distributional evidence may have been insufficient not only for the discovery of words in the lexicon that might have been acting as pivots, but more importantly, that the place of pivot constructions in overall language development might be obscured. The problem remains unresolved, but from the available evidence, it seems clear that although Luo children may employ pivot constructions in the earliest stage of their grammatical development, their early systems soon become morphologically productive. Types of grammatical relationships that are expressed syntactically in English pivot grammars, as e.g. possession, are expressed morphologically in Luo. The importance of pivot constructions in Luo is not directly comparable to their place in English, since identical functions of speech, i.e. communication of the same ideas, are expressed through syntactic relations in English and morphological devices in Luo.

4.4.2 <u>Lexical Items</u>. The early acquisition of lexical items by Rabuogi and Akinyi parallel the categories expressed in Table 7 for the younger children. Not all of the lexical entries were duplicated by Rabuogi and Akinyi, but the relative order of acquisition and the basic categories were constant. Some new items did appear in their vocabularies

in the post-28 months range, and these are shown in Table 14.

<div align="center">
Table 14
Lexical items; post-28 months
</div>

Category	Children (age in months)	
	G	H
Prepositions		
e "to, in, at"	29	--
mar "of"	30	--
ir "toward"	30	--
gi "with"	30	32
ni "for"	34	35
Particles		
o- (past tense)	29	34
a "recently"	33	--
daŋ' "would like"	34	--
ma "which, who"	34	--
Auxiliary Verbs		
dwa(yo)"Want"	--	30
we "stop"	32	35
biro "come (going to)"	34	--
Adverbs		
moro "more"	29	--
-ga "usually"	30	--
pod "still"	33	--

Table 14 (Continued)

Category	Children	
	G	H
Adverbs (continued)		
a...a "just"	33	--
kende "only"	33	--
Conjunctions		
gi "and"	32	--
to "but, and"	34	--
koro "and, then"	34	--
kaka "how"	34	--

As can be seen from the table, the new items are
function words. The earliest terms to appear in the
children's vocabularies were content words, nouns, pronouns,
and verbs, as is clearly shown in Table 7. Once a signi-
ficant vocabulary of content words is accumulated, the
children begin to add function words, with prepositions
appearing first, then particles and auxiliary verbs, and
followed by adverbs and lastly, conjunctions.

4.4.3 Grammar. Early grammatical development for Rabuogi
and Akinyi follows a similar pattern as that for the
younger children. In the area of syntax, both predicative
and non-predicative constructions appear early in simple
forms and then gradually become more complex. Verb inflec-
tion appears early as a productive morphological device,
and it is followed by suffixation and then noun inflection.

Table 15 gives a summary of the acquisition of grammar by

Rabuogi and Akinyi.

Table 15
Acquisition of Syntax and Morphology, Children G and H

<u>Syntax</u>

Type	Children G	H
Non-predicative		
N+N	33	33
N+loc	28	--
N+adj.	34	30
N+S'	34	--
Predicative		
V+N	28	29
N+V	28	30
N+V+N	28	28
N+V+loc.	29	--
N+N+V	34	35
V+N+S'	34	--

<u>Morphology</u>

	Children G	H
Noun inflection		
Possession	30	34
Verb inflection		
Subject	28	28
Object	29	30
Tense	29	34
Suffixation		
Demonstratives	28	--

Table 15 (Continued)

Type	Children	
	G	H

Morphology

Suffixation (continued)

Adverbial	30	--
Circumfixation		
Adverbial	33	--

Comparison of the results presented in Table 15 with
those in Table 8 shows that whereas the simpler forms of
predicative and non-predicative sentences were acquired at
approximately the same age (19-20 months) by the younger
children, the non-predicative sentences appeared later,
overall, in Rabuogi's and Akinyi's speech. These differences
are probably due, however, to the small size of the samples.
Rabuogi did use N+loc. utterances early (28 months); Akinyi
used N+adj. early; and it is likely that N+N was present
much earlier than the 33 months shown. It is evident,
however, that the more complex constructions, as N+N+V
(object inversion) appeared later than N+V+N, and of course
subordinate sentences appeared late.

In the area of morphology, verb inflection for subject
and object marking appeared before noun inflection. A new
feature also appeared in the category of verb inflection,
that of the past tense marker o-. Suffixed adverbs were
in Rabuogi's speech at 30 months, and the use of circumfixa-
tion was present at 33 months. For noun inflection, marking

for possession was present, but inflection showing

pluralization was still not present at 34-35 months.

CHAPTER 5

GENERATIVE GRAMMAR: 19-35 MONTHS

5.1   INTRODUCTION

In the preceding chapters, all discussion of syntax
and morphology has focused on surface structures of the
children's sentences. Syntax has been treated only in
terms of dominant word order, and morphology has been
discussed in terms of inflection of nouns and verbs. In
the present chapter, a more formal approach to the analysis
of the data will be employed, using a framework of genera-
tive linguistic theory.

The plan of the chapter is as follows. First, a
brief description of the theory of generative grammar
will be given. Second, the criteria for establishing
developmental stages in the children's language will be
recounted, and then an analysis of the utterances for
each stage will be presented. A summary of the pattern
of development will follow to conclude the chapter.

5.2   GENERATIVE GRAMMAR THEORY

As a preface for a discussion on the nature of early
generative grammar for Luo children, it also should be
stressed that a generative grammar does not provide an
account of how a speaker actually proceeds to construct
sentences. Rather, the writing of a generative grammar
is an attempt to construct a model which accounts for

what a speaker has to know intuitively about the language. Such a grammar is an abstract, formalized representation of rules or system of rules which a child (or any native speaker) 'uses' to produce sentences.

A sentence, in generative linguistic theory, has two representations, a surface structure and a deep, or underlying, structure. The surface structure is the actual production of a sentence, in physical and acoustic terms. It is the string or linear sequence of units used in speech by receivers and senders. The deep structure represents an intrinsic construction of the sentence, which specifies an abstract account of the meaning of the sentence.

Both representations of a sentence are accounted for by a grammar through the functioning of three interrelated components, the syntactic, semantic, and phonological. The latter two are solely interpretative, in that they "interpret" information provided to them by the syntactic component. The semantic component uses the syntactic information to determine the semantic interpretation of the sentence, and the phonological component uses the syntactic information to determine the phonetic signals. The syntactic component has two components, a base component and a transformational component, and the base, in turn, has two subcomponents -- a categorical subcomponent and a lexicon (Chomsky 1965: 141). Figure 1 gives a schematic representation.

Figure 1
A schematic representation of the components of a
generative grammar and the syntactic component

```
                           Grammar
            _____|_____
           /                   |            \
    Semantic          Phonological        Syntactic
    Component          Component           Component
                                          ____|____
                                         /         \
                                      Base        Transformations
                                     __|__
                                    /     \
                          Categorical  Lexicon
                          Component
```
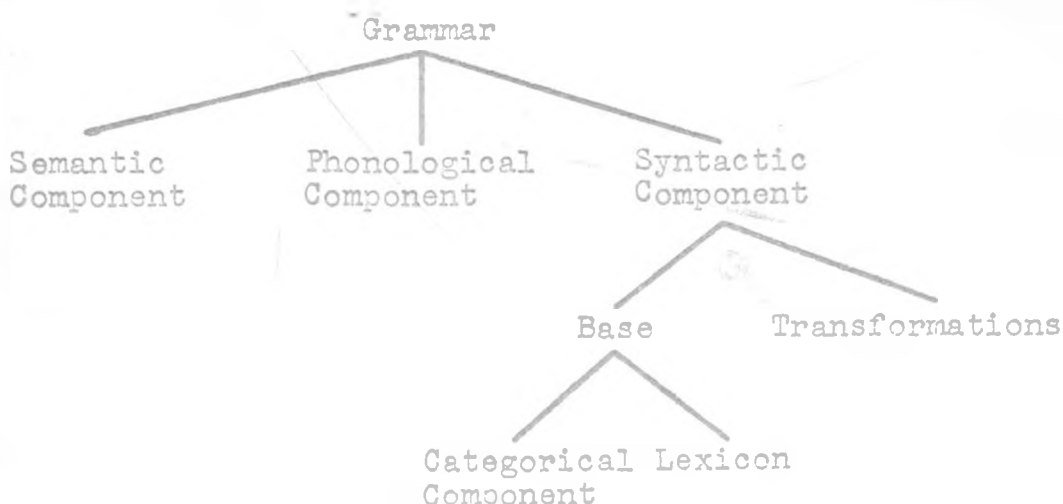
Phrase-structure rules, which operate in the base,
specify the underlying structure of the sentence, which
is mapped into the surface structure by an ordered set of
rules, or transformations, through processes of deletion,
permutation, and addition of elements. In the categorical
subcomponent of the base, the phrase structure rules are
an unordered set of context-free rewriting rules. These
have the form:

$$x \rightarrow y$$

which is read "x is rewritten as y". The rewriting rules
are given in a linear sequence, as illustrated by the
following fragment of a set of such rules:

$$S \rightarrow NP + VP$$

$$VP \rightarrow V(NP)$$

$$NP \rightarrow \begin{Bmatrix} a \\ the \end{Bmatrix} N$$

The notational features are: S = sentence; NP = noun
phrase; VP = verb phrase; V = verb; and N = noun.
Parentheses indicate that enclosed symbols are optional
choices in the string; all other symbols are obligatory
and must occur. Braces indicate that a choice of elements,
mutually exclusive, may occur. The concatenation of ele-
ments is indicated by a +, although this symbol is implied
when parentheses or braces are used.

A derivation of a sentence results from the successive
application of the re-write rules, and it can be represented
by a branching tree-diagram, which is specified as the
derivation's phrase-marker. Examples of these will be
given in the analysis of the Luo data, but it should be
noted that a phrase-marker specifies a unique structure
which represents only one semantic interpretation, i.e.,
that of the underlying structure of the sentence.

The syntactic component of a grammar specifies the
operation of three kinds of rules, the phrase-structure
rules just described, lexical rules, and transformations.
Transformational rules, some of which are optional and
others obligatory, are applied sequentially to derive the
specification for the surface structure of a sentence.
Each transformation is defined by a structural description,
"S. D.", which gives the base string of elements, and a
structural change, "S. C.", which specifies the transform
operation on the original string. The lexicon, in the
base, specifies the semantic features and syntactic features

of lexical entries and the rules which provide for their
substitution as terminal, lexical items in the preterminal
string of a sentence derivation. The inherent (semantic)
features of a lexical entry indicate such features as e.g.
for a 'noun' that the noun is abstract [+abstract] or that
it is not animate [-animate]. Contextual (syntactic) features
specify the syntactic contexts in which the lexical items
can occur in relation to other category symbols. Contextual
features for a noun in English would include its occurrence,
or nonoccurrences, after the Determiner ("a" or "the"),
which is a grammatical formative.

With this brief summary of generative grammar theory,
an inspection of the Luo data may now be made.

5.3 DEVELOPMENTAL STAGES

The utterances of the six children in the study have
been divided into four developmental stages. Normally in
studies on the acquisition of grammar, developmental stages
are identified on the basis of the mean utterance length
(MUL), measured in terms of morphemes per utterance. Tradition
has not been followed here, for two reasons. First, in
many instances, an insufficient number of utterances were
available for any kind of accurate measurement. For Risper
(D), only a few utterances were collected in the 20th month,
and almost no other utterances were collected until her
27th month. There is thus no possible means of measuring
her speech in developmental terms, such as MUL. The second

reason for not using MUL is that it becomes affected by
social factors in the speech of Rabuogi (G) and Akinyi (H),
and MUL therefore does not provide an accurate measurement
of their speech ability.

In the absence of MUL as a device for identifying
stages, the more arbitrary technique of comparing the com-
plexity of surface structure of the utterances has been
employed. The utterances of the six children were compared
first on a chronological basis and then regrouped according
to 'natural' breaks in the order of increasing complexity.
For example, all utterances involving the use of embedded
constructions were considered to be representative of a
more advanced stage than those without embeddings and which
appeared at earlier months in the children's speech. The
characteristic features of each stage will be discussed
more in detail in the analyses of the stages.

5.3.1 Stage 1. Stage 1 includes only a few utterances
from Othieno (A2) at 19 months and Aoko (B2) at 20 months
(numbers 1-11 in Appendix B). All the utterances in this
stage consist of only two morphemes, and the utterances
are of two basic types, commands and non-predicative con-
structions. A fundamental problem is encountered when an
attempt is made to write a grammar to encompass these
constructions. First, a grammar incorporating predication
would allow for constructions which did not appear in the
record of child speech. Numerous restrictions on
cooccurence would thus necessarily be written into the

lexicon feature rules.

The solution to the problem of the presence of two sentence types accepted here is to write two structural descriptions, one to account for each type of construction. These are:

Phrase Structure:

1) $S_1 \rightarrow N + \begin{Bmatrix} N \\ Loc. \end{Bmatrix}$

2) $S_2 \rightarrow V + N$

Lexicon Feature Rules:

i. $N \rightarrow [+N, \pm animate]$

ii. $[+animate] \rightarrow [\_\_N], [\_\_Loc.]$

iii. $[+N] \rightarrow [\pm Pro]$

iv. $[+ Pro] \rightarrow en$

v. $[- animate] \rightarrow [V\_\_]$

vi. $V \rightarrow [+ V]$

5.3.2 Stage 2. Stage 2 most likely comprises what should be two or perhaps more stages but which cannot be identified for lack of clear evidence. A very disparate age range is included in the stage, and while individual variation in the onset of the stage may account for some of the disparateness, it is unlikely that Risper's utterances over a period of seven months all would be generated by the same grammar. Nevertheless, the utterances available for analysis show sufficient similarity to be grouped into this stage.

The children included in this stage, their ages, and the utterances are: Aoko, 21-22 months, numbers (12) - (30); Risper, 20-27 months, numbers (31) - (50); Ochieng, 25 months, numbers (51) - (53); Rabuogi, 28 months, numbers (54) - (59); and Akinyi, 28-31 months, numbers (148) - (152).

The structural description to account for the utterances in this stage is:

3) $S \rightarrow NP \begin{Bmatrix} N \\ VP \end{Bmatrix}$

$NP \rightarrow N \begin{pmatrix} Adj \\ Dem \\ Loc \end{pmatrix}$

Dem $\rightarrow$ -ni "this", -no "that", -ča "that"

$VP \rightarrow V$ (nom)

$nom \rightarrow \begin{Bmatrix} N \begin{pmatrix} Adj \\ N \end{pmatrix} \\ Loc \end{Bmatrix}$

Lexicon Feature Rules:

    i. $N \rightarrow [+ N, \pm nom]$

    ii. $[+ nom] \rightarrow [V \underline{\quad}]$

    iii. $[+ N] \rightarrow [\pm Pro]$

    iv. $[+ Pro] \rightarrow [\pm Nom]$

    v. $[+ Nom, + Pro] \rightarrow [\pm Dem]$

    vi. $[+ Dem] \rightarrow$ -ni, -no, -ča

    vii. $[- Dem] \rightarrow$ -a "me, my", -e "him, his",
                                   -gi "them, their"

viii. $[- \text{Nom}, + \text{Pro}] \rightarrow$ a- "I", o-, en "he, she,
it", i- "you", ∅ "you
(understood)"

ix. $V \rightarrow [+ V]$

x. $[+ V] \rightarrow \pm [\_\_ NP]$

No attempt was made in the description to account for
ellipsis. Utterances such as (41) lwɛta "hand-my" can be
considered as an elliptical form of ma e lwɛta "this one
(is) hand-my", but utterances of this type are counted
as simple naming behavior.

Two utterances are not accounted for by the grammar.
Number (153) ka otu "here it-has-hole" involves locative
inversion, which is not a normal feature of the language,
and therefore it is counted as a mistake in (153). Number
(160) adwa ɟi nindo "I-want to-go to-sleep" has a more
complex verbal construction that other utterances in this
stage, and as it is a single example, the child is not
attributed with the general ability to use the form. As
we will see, the appearance of double verbal construction
is a feature of the following stage.

Stage 2 in comparison with Stage 1 shows that the
children have acquired the ability to use predicative
constructions, with or without the subject present. The
verb phrase consists of a single verb with or without a
noun phrase. Noun phrases show considerable expansion
over those in Stage 1, with adjectives, demonstratives, and
nominals all appearing as modifying elements.

In the discussion for Stage 1, the problem of accounting for the absence of marking of agent in imperatives was noted, and the problem was resolved by writing separate structural descriptions for predicative and non-predicative utterances. In Stage 2, this solution was not feasible, or at least was not justifiable, and the method of handling the problem was to account for the phenomenon in the lexicon feature rules. In rule viii., $[-$ Nom, $+$ Pro$] \rightarrow$ a- "I"... i- "you", $\emptyset$ "you (understood)", the non-marking of the subject, i.e., $\emptyset$, is counted as a semantic choice of the same order as choice of person and number. In the selection of the proper semantic distinctions for marking of pronouns in the surface structure, the decision of "understood-from-context" could be reached in the same fashion by the child as "first person, singular, etc.". In this fashion, it is not necessary to write a trans-formational reduction rule, which would make the non-marking of subject a process of the grammar.

5.3.3 <u>Stage 3.</u> Stage 3 is comprised of Rabuogi's speech in months 29-33, numbers (60) - (132), and Akinyi's speech in months 32-35, numbers (163) - (191). The phrase structure grammar for this stage is:

Phrase Structure:

$$4) \quad S \rightarrow NP \begin{Bmatrix} VP \\ Pred. \ Nom \end{Bmatrix}$$

$$NP \rightarrow N \begin{pmatrix} S' \\ Adj \\ Dem \\ N \end{pmatrix}$$

$S' \rightarrow N + V$

Dem $\rightarrow$ -ni "this", -no "that", -ča "that"

Pred. Nom. $\rightarrow \left\{ \begin{array}{l} N \binom{Dem}{N} \\ Prep.\ p. \end{array} \right\}$

Prep. p. $\rightarrow$ mar "of" + N

$VP \rightarrow \binom{Aux.}{Part.} \quad V \left(\begin{array}{l} nom \\ Prep.\ p. \\ Adv \end{array} \right)$

Aux $\rightarrow$ dwa "want"

Part $\rightarrow$ o- (past tense, completed aspect);

a (past tense)

$nom \rightarrow \left\{ \begin{array}{l} N\ (N) \\ Loc \end{array} \right\}$

$Prep.\ p. \rightarrow \left\{ \begin{array}{l} \left\{ \begin{array}{l} e\ "to,\ in" \\ ir\ "toward" \\ loka\ "up\ to" \end{array} \right\} \ Loc\ (Dem) \\ \left. \begin{array}{l} gi\ "with" \\ ni\ "for" \end{array} \right\}\ N \end{array} \right\}$

Lexicon Feature Rules:

i. $N \rightarrow [+N, \pm\ nom]$

ii. $[+\ nom] \rightarrow [V\ \underline{\quad}]$

iii. $[+\ N] \rightarrow [\pm\ Pro]$

iv. $[+\ Pro] \rightarrow [\pm\ Nom]$

v. $[+\ Nom,\ +\ Pro] \rightarrow [\pm\ Dem]$

vi. $[+\ Dem] \rightarrow$ -ni, -no, -ča

vii. $[-\ Dem] \rightarrow$ a- "I", en, o-, "he, she, it",

i- "you", ∅ "you (understood)"

. vii. $[- \text{Nom}, + \text{Pro}] \rightarrow$ -a "me, my", -e "him, his,
her...", in "you, your"

ix. $\left[+ \text{N}\right] \rightarrow \pm \left[+ \text{Prep} \_\_\right]$

x. $\left[+ \text{Prep}\right] \rightarrow$ e, "to, in", ir "toward", loka
"up to", gi "with", ni "for"

xi. Part $\rightarrow \left[+ \text{Particle}\right]$

xii. $\left[+ \text{Particle}\right] \rightarrow$ o- "past tense, completed
aspect", a "past tense"

xiii. Aux $\rightarrow \left[+ \text{Auxiliary}\right]$

xiv. $\left[+ \text{Auxiliary}\right] \rightarrow$ we "stop", dwa "want"

xv. $V \rightarrow \left[+ V\right]$

xvi. $\left[+ V\right] \rightarrow \pm \left[\_\_ \text{NP}\right], \pm \left[\_\_ \text{Prep. p}\right], \pm \left[\_\_ \text{Adv}\right]$

Transformations:

$T_{\text{Placement}}$ S. D.: $X + \underline{a} + Y$ where X and Y are
category symbols
(obligatory) S.C.: $x_1 + x_2 + x_3 \Rightarrow x_2 + x_1 + x_3$

Two utterances in the sample were not accounted for
by phrase structure rule 4). Utterance number (175),
očamu "it-was-eaten", if it was correctly interpreted, is
an example of the passive, completed aspect, but there was
some question as to whether the child said očamu or očamo.
The latter would be simple past tense. Due to absence of
clear evidence that the child was actually using the passive,
no allowance was made for it in the phrase structure rule.
In utterance (182), siruača mama kano "sweater-my mama
keeps", there is object inversion, with "sweater", the object,
appearing in initial position. The inversion could be

accounted for with a placement transformation, but as the sample contained only one example of object inversion, the use of a transformation seems unwarranted.

Viewing Stage 3 in relation to Stage 2, definite advances were made in the verb phrase. Not only did verbal particles and auxiliaries appear, but prepositional phrases of a variety of types were present. In addition, the first use of adverbs in predicative sentences were noted. Adverbs of place, such as ka "here" had been used much earlier, but only in non-predicative constructions. All of these new features, particles, auxiliaries, prepositional phrases, and adverbs had the effect of making the verb phrase in Stage 3 much more complex than in Stage 2.

In the noun phrase, there was the new feature of embedded constructions. The form čandɛ, generally used as a demonstrative, was inflected to give the embedded construction "... you-spoke-of ...", as in (72), gwɛno ičandɛ mar baba "chicken you-spoke-of of father".

5.3.4 Stage 4. Only one child was at Stage 4. Rabuogi at 34 months, utterances (133) - (147), used speech that is accounted for by phrase structure rule 5).

Phrase structure:

$$5) \quad S \rightarrow NP \begin{Bmatrix} VP \\ N^{\cdot} \\ ma + S^{\cdot} \end{Bmatrix}$$

$$NP \rightarrow N \begin{pmatrix} Adj \\ Dem \end{pmatrix}$$

$$Dem \rightarrow -\check{c}a$$

$S' \rightarrow N + VP$

$VP \rightarrow \begin{pmatrix} Adv \\ Part \\ Aux \end{pmatrix} V \begin{pmatrix} Adv \\ nom \\ kaka + S' \end{pmatrix}$

$nom \rightarrow N \begin{Bmatrix} (N \mid Adj) \\ Prep. \ p. \end{Bmatrix}$

Prep p. $\rightarrow$ ni "for" + N

$S' \rightarrow N + V$

Lexicon Feature Rules:

   i. $N \rightarrow [+ N, \pm nom]$

  ii. $[+ nom] \rightarrow [V \underline{\quad}]$

 iii. $[+ N] \rightarrow [\pm Pro]$

  iv. $[+ Pro] \rightarrow [\pm Nom]$

   v. $[+ Nom, + Pro] \rightarrow [\pm Dem]$

  vi. $[+Dem] \rightarrow$ -ǎa

 vii. $[- Dem] \rightarrow$ a-, o-, i-, ∅

viii. $[- Nom, + Pro] \rightarrow$ -a, -e, -i

  ix. $[+ N] \rightarrow \pm [\pm Prep \underline{\quad}]$

   x. $[+Prep] \rightarrow$ ni

  xi.   Part $\rightarrow [+ Particle]$

 xii. $[+ Particle] \rightarrow$ o-, daŋ'(future conditional)

xiii.   Aux $\rightarrow [+ Auxiliary]$

 xiv. $[+ Auxiliary] \rightarrow$ biro "to come (be going to)"

  xv. $V \rightarrow [\pm V]$

 xvi. $[+ V] \rightarrow \pm [\underline{\quad} NP], \pm [\underline{\quad} kaka\ S'],$
        $\pm [\underline{\quad} Adv], \pm [+ Adv \underline{\quad}]$

Transformations:

$T_{\text{Object Inversion}}$
(optional)

S. D.: X - Y - Z where X, Y and Z are category symbols

S. C.: $x_1 + x_2 + x_3 \Rightarrow x_3 + x_1 + x_2$

$T_{\text{Placement}}$
(obligatory)

S.D.: X + <u>dan</u>' + Y

S.C.: $x_1 + x_2 + x_3 \Rightarrow x_2 + x_1 + x_3$

The prominent advances made in Stage 5 were an embedding and a subordinate sentence. In the former, the relative pronoun <u>ma</u> "which, who, what" introduced the dependent in the utterance (142) <u>tamtam motimo laka</u> "candy (is) what-did-it-to tooth-my". Number (141), <u>ne kaka omuodo</u> "see how he-chews", gives an example of a subordinate sentence, introduced by the subordinating conjunction <u>kaka</u> "how".

As shown, two transformations are necessary, both being placement transformations. The obligatory placement of the verbal particle <u>dan</u>' "would like" corresponds to the transformation in Stage 3 of the particle <u>a</u> (past tense marker). Optional object inversion was a new feature, although utterance (182) in Stage 3 may have been a precursor for that feature.

5.4 SUMMARY

Viewing the four stages in sequence, the development of the children's grammar may be summarized in the following fashion. From an initial grammar consisting of

simple non-predicative constructions and of commands, the
children progress to predicative constructions, with the
noun phrase showing the greatest development. In terms of
categories, Stage 1 contains nouns, verbs, and locatives;
Stage 2 contains adjectives and demonstratives as well.
In Stage 3, the noun phrase is further developed to include
an embedded construction, but the greatest development is
in the verb phrase, where verbal particles, auxiliaries,
prepositional phrases, and adverbs all make an appearance.
The first transformation, an obligatory placement rule,
also appears to be used in this stage. In Stage 4, more
embeddings occur, and an optional object inversion trans-
formation appears. In terms of the acquisition of categories,
the developmental stages may be represented as in Table 16.

Table 16
Acquisition of Categories in Stages of Development

Category	Stage 1	Stage 2	Stage 3	Stage 4
N	+	+	+	+
V	+	+	+	+
Loc	+	+	+	+
Adj		+	+	+
Dem		+	+	+
VB part			+	+
Aux			+	+
Prep. p.			+	+
Adv.			+	+
S' (NP)			+	+
S' (VP)				+

CHAPTER 6

SUMMARY AND CONCLUSIONS

6.1 SUMMARY OF LANGUAGE DEVELOPMENT

6.1.1 <u>Lexicon</u>. Lexical items may begin to appear in Luo
children's speech as early as the age of 12 months,
although the onset may be at a later age. Universally,
the earliest items are the names of significant others in
the environment, <u>mama</u>, <u>baba</u>, and the names of caretakers,
and a general term, <u>miya</u> for the command "give-me" or
"want". 'Yes' and 'no' responses occur early, as much as
a month or two before significant vocabulary development.

Babbling behavior may continue for as much as two
months after the first appearance of lexical items, but
it is terminated before a marked increase is shown in lexi-
cal acquisition. Once babbling has ceased and lexical
acquisition has begun in earnest, the rate of acquisition
is rapid. Not enough information is available to provide
vocabulary counts, but two months after lexical items
begin to appear, a child has a vocabulary containing animate
and inanimate nouns with a variety of sub-classes, personal
and demonstrative pronouns, and both transitive and intran-
sitive verbs.

Subsequent development shows first an increase in the
number of entries for the sub-categories and further
differentiation within the categories. Secondly, and slightly
later in terms of chronological age, new categories are

added. The relative order of acquisition appears to be:
1) prepositions; 2) auxiliary verbs; 3) particles and
adverbs; and 4) conjunctions. Using as a base the age at
which rapid acceleration in vocabulary acquisition begins,
the approximate periods required for acquisition of the
four categories above are, respectively, 2-3 months, 3-4
months, 4-5 months, and 5-6 months.

6.1.2 <u>Grammar</u>. The earliest productive morphological
device for the Luo children was verb inflection for pro-
nominal subject and object. The use of verb inflection
was present in the second month following the appearance
of two-word utterances. Suffixed demonstratives were
present at approximately the same age. Noun inflection
for possession made its appearance approximately two
months later for one child, but six months later for other
children.

Verb inflection to indicate tense appeared later than
noun inflection, with a range of one month for one child
and four for another. Adverbial suffixation was present
only in the speech of one child, as was adverbial cir-
cumfixation. The former occurred two months after inflec-
tion was first present, and the latter five months after
first appearance.

The earliest two-word utterances for Luo children appear
in the 19-20 month range. Two types of constructions are
present at this stage, non-predicative and imperatives.
In the second stage, predicative constructions other than

imperatives are present, and noun phrases show considerable development, with adjectives, demonstratives, and nominals all appearing as modifying elements.

In Stage 3, there is further development of the noun phrase, with nested constructions appearing, but the maximum development is in the verb phrase. Verbal particles, auxiliaries, prepositional phrases, and adverbials all appear in the stage, and an obligatory placement transformation is used. Stage 4 shows the use of another transformation, for optional object inversion. Subordinating sentences in the verb phrase also appear in this stage.

In summary, the acquisition of syntax follows the pattern: 1) initial constructions consisting of a verb phrase or non-predicative elements; 2) predicative constructions with major expansion of the noun phrase; and 3) expansion of the verb phrase. Word order is highly constrained from the outset, with SVO dominant. In Stage 4, an optional transformation may be applied to provide OSV.

6.2 LANGUAGE DEVELOPMENT IN SOCIAL CONTEXT

The above summary of language development ignored, for the purposes of analysis, the social context in which the language was used, the social constraints placed on the language, and the functions for which the language was generated. As was outlined in Chapter 2, the constraints placed on language use, however, has an effect on the collection of data and thus ultimately on the linguistic

competence as measured for an individual performer. It
was stressed that the conditions under which the speech was
collected from the Luo children was not optimal, and
therefore the expressions of competence would be restricted
accordingly. An attempt will be made here to provide some
concrete evidence of the effect by social factors on the
speech of the children and on the expressions of their com-
petence. Some speculations on the nature of the interstices
in the record of development will also be provided.

In the initial stages of the research, the children's
fear response, both naturally and socially induced, prohi-
bited collection of any data from them directly. All of
the children in the present study, except A and B, were in
the early one-word utterance stage at this period of the
research, and the record is lacking, except for parental
reports. Once the children overcame their fear and
interacted with us, social restrictions of a different
nature came into play. In brief, the children were allowed
to interact with us only under controlled conditions,
which effectively prevented the systematic collection of
spontaneous speech.

6.2.1 Context and Function of Speech. The major restriction
on the children's speech by the controlled conditions is
that most of their speech in our presence consisted of
answers to questions, particularly to "what" and "where"
questions. The expectations of the adults as to the
linguistic ability of the children, i.e. the adults' cultural

attitudes, then had an effect on the type of speech provided by the children. The early appearance of non-predicative constructions in the speech record is directly attributable to this interplay between the child's capacity and the adults' attitudes. This is not to argue that there a direct one-to-one correspondence between the acquisition of language by the children and the adults' expectations, but the latter had the effect of channeling the children's speech in the contexts in which the speech was collected. The children were asked to name (what is this?) and to locate (where is ...?), and accordingly, they provided non-predicative, equational sentences (en gwɛno "it chicken" and en ka "she here").

The Luo children's speech, then, was socially controlled in that the design for the functions of their utterances was established by the adults in the interaction setting. A catalogue of the verbal exchanges in the record will not be attempted here, but an account of the children's speech in terms of functions expressed will be given, and a rough correlation with the types of requests made of them by adults will be reported.

All of the children's utterances have been typed according to the function expressed (cf. Appendix B). The criteria for designating function, however, are not readily apparent, and depending on the frame of reference, an utterance may have different functions. An utterance such as (3) ne tamtam "see candy" could be taken as an example

of naming behavior, i.e. "see, this is that object which is
called candy", but contextual information for utterance (3)
specifically indicated that the intent was that of a demand,
an order for someone to perform by looking at the candy.
The utterance was therefore classified as a 'demand'.
Specifically, the criteria used for ascribing function were:
1) contextual information, which included such features as
preceding utterance(s) and ongoing activity of the actors
in the setting; and 2) basic grammatical relations of the
classes of words in the utterance. Using these criteria,
it was possible to classify all of the utterances into six
functions. The classification for each utterance is given
in Appendix B, and Table 17 gives the number of utterances
in each category according to the four developmental stages.
The first number in each column represents the total number
of utterances for the particular stage and function, and
the second number is the percent for each function of the
total number of utterances for the particular stage.

Table 17
Functions of Utterances According
to Developmental Stages

Stage	Locate	Name	Demand	Desire	Describe	Negate
1	2/18%	1/ 9%	7/64%	--	1/ 9%	--
2	10/17%	13/22%	12/20%	7/12%	17/27%	1/2%
3	17/18%	37/40%	12/13%	2/ 2%	26/27%	3/3%
4	1/ 7%	2/13%	4/27%	2/13%	5/33%	1/7%

Inspection of Table 17 shows that developmental trends can be identified, but that an overall progressive development is lacking. For the former, the most striking feature is that the percentage of utterances in the 'negate' category is negligible throughout. Secondly, in Stage 1, the preponderance of utterances, 64%, is in the 'demand' category. Given this feature and the early appearance of the terms miya "give-me" and ne "see", it is likely that the earliest two-word combinations consist of these terms plus objects, perhaps generated by a pivot grammar. The non-predicative, equational N + N (or loc.) constructions then would appear slightly later, as suggested by the information in the table. If this reconstruction is correct, the Luo speech development would parallel that of American children, with the earliest constructions being pivot + open and followed by open + open (cf. Braine 1963), but there would be a kaleidoscoping of the transition period for the Luo children.

In any event, it is evident that the majority of utterances in Stage 1 are unsolicited demands. In Stage 2, however, there is a more even distribution across functions. The utterances for the functions 'locate' and 'name' represent children's responses to "where" and "what" questions, to which they were able to provide brief, non-predicative replies.

The function 'describe' is well marked in Stage 2, and it is shown in the language by the presence of simple

predicative constructions. Many of these utterances are
unsolicited descriptions of acts or states, as amoŏo pi
"I-drink water", which contrasts with the make-up of the
utterances in Stage 3 for the same function. In this stage,
many of the utterances represent responses to "doing what"
questions, in which the children are asked to describe on-
going activities. Another stage in the expectations for
the children's behavior is thus exhibited, with the pro-
gression being shown in the adults' questions of "where",
"what", and "doing what".

In Stage 3, then, the children's speech sample repre-
sents unsolicited utterances for the categories 'demand',
'desire', and some in 'locate', 'name', and 'describe';
and the majority of utterances in the latter three cate-
gories are responses to questions asked by adults. Of the
speech samples available for analysis, a significant portion
are thus programmed by the cultural attitudes relating to
children's speech capabilities. In Stage 1, there are a
few resultant N + N constructions; these are expanded in
Stage 2, and again in Stage 3. In Stage 2 simple predica-
tive sentences appear, and in Stage 3, these are expanded
in response to "doing what" questions.

6.2.2 Internalized Social Constraints. The social con-
straints on interaction with children in Luo society
discussed so far have all been external to the children's
behavioral repertoires. The constraints operated indepen-
dently of the children's internalization of the rules

gulating the various situations. As the children advance
age and development, they begin to acquire some of the
cial rules and code the social information in their lan-
uage and speech behavior. Two children in the study, G
d H, provided information on this acquisition process,
hich we now may consider.

Note was made earlier that the mean utterance length,
UL, was computed for each child, insofar as possible,
rom the corpus of data. It was further noted that the
UL became affected by social factors as the children
rogressed in age and development. In order to consider
he effects and examine more closely the social factors
involved, the MUL results are first given, as shown in
able 18.

Table 18
Mean Utterance Length for G and H, by Month

	G			H		
nth	No.	Morph.	MUL	No.	Morph.	MUL
28	7	11	1.57	--	---	---
29	2	5	2.50	--	---	---
30	34	92	2.71	16	21	1.31
31	10	33	3.30	16	17	1.06
32	9	24	2.67	2	6	3.00
33	59	115	1.95	15	23	1.53
34	17	72	4.24	44	64	1.45
35	--	---	---	15	37	2.47

The table shows that, allowing for individual variation
between G and H, there is a more or less steady increase in
the size of MUL until the 32-33 months age range, at which
time the progression is broken. The record is not as clear
for H as for G, in that MUL for months 30-32 does not
advance regularly, but it is clear that MUL drops from
month 33 to month 34 and then rises sharply in month 35.
For G, the break in the record is more pronounced, with a
drop from 3.30 to 2.67, then to 1.95 at 33 months, and then
up to 4.24 at 34 months.

In searching for an explanation for the fluctuations
in performance, the most immediate suggestion would seem
to be that the data collection situations differed, i.e.
that the social settings were different, and were reflected
in the children's performances. As we will see, this
approach helps to explain the increase in MUL in months 34
and 35, but it does not account for the initial decreases
in MUL in months 32 and 33. In order to illustrate more
fully, we can turn to the ethnographic record.

The speech samples collected from Rabuogi at 30 months
was recorded in a question-answer session with his father,
Okumu, Oyugi, and the researcher present. The group was
sitting together in front of the home, which was the common
pattern for the majority of the visits with all of the
children. Rabuogi stood between his father and Okumu,
leaning and swinging against Okumu's chair., answering Okumu's
questions in turn. As can be seen from Table 11 (p.104),

many of the questions were of the "wh-" variety. At 31
months, the same situation prevailed, except that his
mother was present rather than his father.

In the 32nd month, the setting remained constant,
but the speech samples contained spontaneous utterances,
directed to Oyugi and to Rabuogi's brother. Some of these
utterances were simple naming of objects in the eviron-
ment, which is primarily responsible for the reduction in
MUL. More importantly, in the 33rd month, the setting
remained constant, with all the researchers present and
all the family except the father present also. Rabuogi's
behavior, however, was markedly different from that of
previous visits. For the first time, he refused to come
near us, and he hid behind the house, peering around the
edge at us. Okumu interpreted his behavior as due to
shyness, saying that he was dirty (he was playing in the
dirt as we arrived) and was ashamed for us to see him in
that condition.

After some coaxing, Rabuogi was persuaded to come from
behind the house. He came and stood by us, and he answered
some questions, but he appeared to be shy, averting his
eyes, generally toward the ground, and putting his finger
in his mouth. Whereas in earlier visits, he exercised a
choice in answering or not answering questions, he attempted
to provide brief answers to every question in this case.
The session terminated when Rabuogi's father returned home.
Rabuogi, upon seeing his father arrive, slowly walked away

from us, back to his play. This aspect of his behavior also contrasts strongly with earlier behavior, in which he made a point of standing near the group, and on one occasion, even interrupted the conversation.

Viewing Rabuogi's behavior in perspective, the essential quality seemed to be that he had developed a social consciousness. Whereas earlier, he had not the appropriate standards of social interaction, he had mastered, in the 33rd month, the major features of the standard. He approached the visitors only when requested, did not initiate conversation, observed the proper paralinguistic behavior, and his speech was characterized by brevity and directness. In short, he observed the proper speech etiquette for that social situation, i.e. the etiquette for interacting with visitors. The MUL of 1.95 was a result.

Rabuogi's MUL in the following month, the 34th, was measured at 4.24. In this case, the social setting was different, and his speech was therefore not restricted by the same types of social constraints. In this instance, the actors in the setting were Rabuogi, his mother, and his brother, and the speech was recorded by Oyugi, who remained quietly in the background. Cognizance of Oyugi's presence as an adult did not seem to be a feature in Rabuogi's definition of the situation, and his speech was accordingly freer of constraints. The result was that not only was the MUL more pronounced in Rabuogi's speech, but content and stylistic features were different. For the

former, Rabuogi made evaluative judgments, which were absent
in earlier speech. For example, he spoke of his first ride
in a motor-car as (137) mitokača koro rača "motor-car-that
then bad-me". Stylistically, his speech showed a greater
variety in volume, tone, and pitch.

Akinyi's case parallels Rabuogi's, except that the
acquisition of a social consciousness was not as positively
shown in her behavior. The social settings were the same
as in Rabuogi's case, with the family and researchers
present. In Akinyi's 34th month, the standards of appro-
priate behavior were present insofar as the nature of contact
was concerned, but stylistic features did not seem to be
present. Akinyi did not approach us unless requested, she
did not initiate speech, and she gave direct answers, but
she failed to observe the proper paralinguistic features
of behavior as direction, personal space, etc. The possession
of a social awareness or consciousness was not as clearly
evident as it had been for Rabuogi.

In the following month, Akinyi's 35th, it was possible
for Oyugi to collect speech samples in a situation directly
comparable to that with Rabuogi in his 34th month. Oyugi
remained in the background while Akinyi interacted freely
with her older sisters. The results were increased MUL,
initiated conversations, and marked stylistic variation.

6.3 CONCLUSIONS

The general goal of the study was: 1) to provide a
description of the acquisition of language in terms of
categories acquired, by Luo children in the age range of
12-35 months; 2) to account for their linguistic competence
in the generation of their language; and 3) to illustrate
how social settings alter the linguistic performances of
the children. The following chapter by chapter account
provides an overview of the conclusions reached in the
pursuit of the goals.

In Chapter 2, methodological problems were discussed, so
as to specify the conditions encapsulating the data
gathering process. Ecological factors, such as mode of
subsistence and land organization, and social factors, such
as patterns of interaction, hierarchical relationships,
and daily routines, all affected the types of interaction
permissible for the children and investigators. In short,
the rules regulating the children's behavior were: 1) do
not interact with strangers; 2) interact only ritually with
visitors;3)interact with adults according to the contingencies
of the situation, e.g. formally in the presence of other
adults; and 4) interact with minimum constraints with peer
groups.

The factors controlling the data collection process
allowed access to only particular kinds of speech data,
since the performances by children were regulated by the
same factors. Expressions of the children's competence

were thus subject to the qualification that restrictions
performance had the effects of 1) providing only limited,
partial accounts of competence, and 2) overestimating the
ages at which various linguistic categories entered into
the children's competence.

In Chapter 3, the speech data for children A, B, A2,
B2, C and D were presented, and summaries were provided
for lexical, morphological, and syntactic development for
the age range of 12-27 months. The speech data of children
G and H were presented in Chapter 4, and further development
in language was recorded, with the age range of 28-35 months
represented. The major findings for the two chapters were:
1) lexical items began to appear at 12-14 months; the earliest
items were nouns, pronouns, and verbs; and later categories
to appear were prepositions, auxiliaries, particles, adverbs,
and conjunctions; 2) verb inflection for pronominal subject
and object appeared at 20-21 months, and noun inflection
for possession appeared later at 27 months; and 3) the earliest
syntactical constructions began at 19-20 months and were
imperatives (V + 0) and non-predicative sentences (N + N);
predicative sentences followed, with development of the
noun phrase first and the verb phrase second.

In Chapter 5, a generative grammar was provided for
the age range of 19-35 months in order to account for the
linguistic competence in the children's generation of their
grammar. Four stages of development were recognized.
Characteristics of each were: 1) non-predicative constructions

and verb phrases; 2) predicative constructions (NP + VP)
with expanded noun phrase; 3) expanded verb phrase and
an obligatory placement transformation; and 4) an optional
placement transformation.

In Chapter 6, a summary of the language development
of the children has been provided, and information on the
social constraints as they effected the measurements of
competence has been discussed. Specifically, the cultural
expectations of the adults, as expressed through the ques-
tions asked of children, conditioned the responses of the
children. The functions of the children's speech were
therefore channeled to a degree by the cultural attitudes
of adults and expressions of competence were consequently
affected.

Internalized social constraints began to appear in the
32nd and 33rd months age range of the children, and they,
again, regulated the flow of speech available for analysis.
Specifically, the constraints limited the speech both in
terms of mean length of utterances and stylistically. The
imposition of the constraints were situation specific,
clearly indicating that the children were able to manipulate
the variables of the speech setting.

In conclusion, descriptions of the linguistic competence
of children in acquisition studies, which must be empirical,
should consider both the larger social environment of the
speech community and the conditions which restrict, permit,
and generally regulate the data collection process.

Accounts of the children's competence can then be placed
in a context which illustrates the nature of the limited
descriptive adequacy. An attempt has been made here to
present an analysis of the acquisition of language by Luo
children in such a framework.

6.4 ADDITIONAL REMARKS

The major approach of the present account of language
acquisition has been to treat as the basic unit of concern
the social setting in which the language was generated and
collected. Emphasis was placed on the regulatory features
of the environment which defined and delimited the speech
information available for analysis.

Within this framework, a description was provided of
the children's language, both in terms of the acquisition
of grammatical categories and relations. The account was
primarily descriptive, in an attempt to identify what
actually was acquired and when acquisition occurred, both
in chronological and relative order. Due to the logically
prior questions of "what" and "when" of language acquisition,
no attempt was made, except within the broader social frame-
work, to deal with the questions of "how" and "why" the
language was acquired. Discussions of the input language,
comprehension, cognitive development, and the ability to
handle semantic relationships, as well as other features
such as synthetic versus analytic modes of representation
as strategies of the children all have been reserved for

future research.

Scant attention has been paid also to cross-cultural
comparisons in the acquisition of language, as this is
envisioned to be the second stage of the general study on
the acquisition of communicative competence. Some of the
general findings of the research with the Luo may be
mentioned in relation to results of other studies.

First, studies on language aquisition have shown that
individual differences are present in the acquisition process
(cf. Slobin 1968:7-8). These differences are generally
ones of strategy, through which children rely on different
grammatical techniques or processes to convey the intended
meaning of their utterances. The Luo data is not sufficient
to identify marked individual variation of this type, but
one striking phenomenon is that the age of onset of the use
of grammar shows a high degree of variation. In all other
studies, grammar has become productive in the age range of
18-24 months, but two children in the Luo sample, G and
H, did not begin to use two-word utterances until the 27th
month and possibly the 28th.

Most studies on child language have shown relatively
clearly identifiable one-word and two-word stages. The Luo
data corroborate this finding, even though Luo is a
morphologically productive language. Although it may seem
intuitively obvious that one and two-word stages would
appear in children's speech, there are no firm a priori
grounds for making such an assumption. Burling, for example,

found in the study of Garo (a language of the Bodo group of Tibeto-Burman) that it was not possible to speak of a two-morpheme or two-word stage in the acquisition of language (1959:65).

The earliest stage of two-word utterances is generally characterized by pivot constructions, for almost all children for whom there is sufficient data. The Luo data indicate that the earliest stage of the children's grammar may have been a pivot grammar, but the evidence is not conclusive. It does appear to be the case, however, that syntax precedes morphology as a productive device in the speech of the Luo children, a feature that occurs in other languages (except Garo), regardless of the morphological productivity of the input language (cf. Slobin 1968:19).

Almost all studies of child language have noted that inflections emerge suddenly, generally a few months after the beginning of two-word sentences. The emergence of inflections in Luo does not seem to be sudden, but they do appear after the beginning of the two-word sentences.

Slobin reports that Soviet psycholinguists "...interpret the order of emergence of inflectional classes in terms of the relative semantic or conceptual difficulty of various classification criteria for children. One line of evidence in this argument is the observation that lexical items referring to certain semantic categories appear at the same time as those categories become morphologically marked in child's speech" (1968:33). Such an

analysis could be applied fruitfully to the Luo data and
could serve as a convenient means not only for cross-
cultural comparison of the order of emergence of morpholo-
gical classes, but as a means of relating the emergence of
semantic distinctions to the environmental and cultural
conditions particular to individual languages.

NOTES

CHAPTER 1

1. The abundance of prefixes in African languages
denoting such concepts as singular-plural, people-of,
language-of, etc. has led often to individual tribal
groups being referred to in the literature by a multipli-
city of terms. One solution to this problem is to use the
root term to refer to the group, ignoring prefixes. This
approach has been employed here, and all reference will be
to the Luo and Luo language, rather than to the more tech-
nically correct Joluo (people-of-luo) and ðoluo (language-
of-luo).

2. Siaya and Kisumu Districts were created in 1967 by a
division of the former Central Nyanza District. South
Nyanza District became Homa Bay District in 1968.

3. According to Greenberg's classification, the Luo
language is a member of the Western Nilotic languages, which
is a branch of the Eastern Sudanic group. This Eastern
Sudanic grouping belongs to the wider Chari-Nile family
(Greenberg 1963).

4. The Mission, located in the center of the Ulanda clan,
operated a nursery school in addition to an elementary
school and a medical dispensary. In 1968, an Harambee

Girls Secondary School was constructed.

CHAPTER 2

1. Investigators working with English-speaking American children have stressed the necessity of longer visits. The amount of the children's verbal output varied greatly over a period of hours, and in order to obtain a representative sample of their speech, it was necessary for a visit to cover the greater portion of a day (cf. Bloom 1968: 29). As will be seen, visits covering several hours were not feasible for the present investigation, due to the Luo etiquette for receiving visitors. Furthermore, the restriction that visits must be several hours in length may well hold for American children, but it need not for other societies, in which rules governing the use of speech for children may be very different. A basic assumption for the desirability of longer visits is that familiarity with the child will be increased and therefore speech will be more spontaneous, but this assumes a priori that the social position of the receiver becomes defined as "one to whom it is appropriate to send messages", and this need not be the case.

CHAPTER 3

1. The usual method for defining the stages is on the basis of mean utterance length (MUL) (cf. Brown and Fraser 1964). Sufficient information is not available to

determine the stages accurately for the Luo children,
due to the difficulty of collecting one-word utterances
in particular. The information for the babbling stage is
more complete, as is that for the two-word stage. The
one-word stage is then defined in part by fiat, as that
stage intermediate to babbling and two-word utterances.

2. The language belief questionnaire used for Luo
informants was a shortened version of the one given in
the Field Manual (1967:50-55). There was some redundancy
in the original version, and in addition, it was too
lengthly to be administered to an individual informant
in one session.

3. The utterances of morpheme length greater than one
are numbered consecutively throughout the text, so as to
facilitate analyses. A listing of all the numbered
utterances is given in Appendix B.

4. Frequently the children's words were reduced or
simplified versions of the adult terms. Where this is
the case, the adult term is given phonemically, following
the child's utterance.

5. Utterances that are at variance with correct adult
forms are noted and discussed in the text. Unless an
utterance is discussed in this way, it may be assumed that

it corresponds to adult standards.

6. The form čam in Luo has as referents both "food" and "to eat (intransitive)". The referent "food" has been selected as the gloss for the term in the Luo children's speech, so that miya čam, for example, is "give-me food" rather than "give-me I-eat". The latter, as noted on page 58, would require a verbal inflection to give ačam.

7. At first glance, this conclusion seems to be in contradiction with the discussion in Chapter 2 (pp. 39-42), in which the self-sufficiency of the Luo children was stressed. However, the fact that many activities are segregated on a child-adult basis is balanced by the fact that integration is also strictly observed for some activities (as e.g. at meal-time). The Luo homesteads are not large spatially, and much of the family interaction occurs in the courtyard area in the center of the compound, i.e. in a restricted space. The social mechanism for allocating rights, duties, and obligations in behavior probably functions in such a way as to regulate the amount of interaction and thereby control generation of such emotions as hostility. In any event, there is no lack of opportunity for father-child contact.

8. Only selected portions of the conversation are given in Table 3, a pattern that will be followed in subsequent

tables. The format used is that the child's speech
appears in the right-hand column, and the adult's in the
left. In standard format procedure, the order is reversed,
but the nature of the conversations for the Luo inter-
locutors favors the present system. Rarely does the Luo
child initiate the conversation (in the samples), but
rather most of his utterances are answers to questions,
and the left-right (question-answer) sequence seems more
appropriate. Pauses in conversation are not marked in
the tables, nor are markers included for changes in topic.
Comments necessary for providing contextual information
to allow for semantic interpretation are given. All of
the recorded conversations were in the setting of the
child's home.

9. The distinction between morphemes and words is
employed in the present discussion, glossing over the
theoretical issues involved in making such a distinction.
The rationale for the use of the distinction is that it
heuristically affords a convenient basis for consideration
of the morphological processes of inflection, prefixation,
and suffixation on the one hand, and of syntactic ordering
of words on the other. In Chapter 5, the distinction will
be ignored in the process of assigning structural descrip-
tions to sentences.

10.   There seems to be pronounced individual variation on
this point. Some Luo always employed the particle e in the
environment ma ___. Others used it selectively as an
emphatic, in the sense of the definite article, and still
others used it sparingly, if at all.

11.   As inspection of Table 7 shows, there are gaps in
the record. No use of personal names, for example, were
recorded for child C, or child D until the 27th month.
These omissions are most likely a function of an inadequate
record, but patterns of acquisition are discernible for
the Table. Terms for wild animals do not appear until
after the age of two years; names of parts of the body are
acquired at post-21 months; and a number of transitive
and intransitive verbs have been acquired by the 21st month.

BIBLIOGRAPHY

BARTH FREDRIK

    1966 Ecologic Relations of Ethnic Groups in Swat,
           North Pakistan. American Anthropologist,
           68:1079-1089.

BLOOM, LOIS MASKET

    1968 Language Development: Form and Function in
           Emerging Grammars. Unpublished Ph. D.
           Dissertation, Columbia University.

BRAINE, M. D. S.

    1963 The Ontogeny of English Phrase Structure:
           The First Phase. Language, 39:1-13

BROWN, ROGER AND URSULA BELLUGI

    1964 Three Processes in the Child's Acquisition
           of Syntax. Harvard Educational Review,
           34:133-151.

BROWN, ROGER AND COLIN FRASER

    1963 The Acquisition of Syntax. In C. N. Cofer
           and B. S. Musgrave (eds), Verbal Behavior
           and Learning: Problems and Processes.
           New York: McGraw-Hill.

BURLING, ROBINS

    1959 Language Development of a Garo and English
           Speaking Child. Word 15:45-68.

CHOMSKY NOAM

    1964. Formal Discussion of The Development of Grammar
          in Child Language (Wick Miller and Susan Ervin).
          In U. Bellugi and Roger Brown (eds), The
          Acquisition of Language. Monographs of the
          Society for Research in Child Development
          29:9-33.

    1965 Aspects of the Theory of Syntax. Cambridge,
          Mass.: MIT Press.

DUPRE, CAROL

    1968 The Luo of Kenya: An Annotated Bibliography.
          ICR Studies 3, Washington, D. C.: Institute
          for Cross-Cultural Research.

EVANS-PRITCHARD, E. E.

    1940 The Nuer: A Description of the Modes of
          Livelihood and Political Institutions of
          a Nilotic People. London: Oxford
          University Press.

    1949 Luo Tribes and Clans. Rhodes-Livingston
          Journal 7:24-40.

GREENBERG, JOSEPH H.

    1963 The Languages of Africa. International
          Journal of American Linguistics, Part II,
          29(1).

GREGERSEN, EDGAR

    1961 Luo: A Grammar. Unpublished Ph. D.
           Dissertation, Yale University.

KENYA CENSUS

    1962 Kenya Population Survey. Government
           Printers, Nairobi.

MILLER, WICK AND SUSAN ERVIN

    1964 The Development of Grammar. In U. Bellugi
           and R. Brown (eds), The Acquisition of
           Language. Monographs of the Society for
           Research in Child Development 29:9-33.

OGOT, B. A.

    1967 Peoples of East Africa: History of the
           Southern Luo. Vol I, Migration and
           Settlement 1500-1900. Nairobi: East
           African Publishing House.

OMINDE, SIMEON

    1952 The Luo Girl: From Infancy to Marriage.
           London: Macmillan and Co., Ltd.

SLOBIN, DAN I.

    1967 A Field Manual for Cross-Cultural Study of
           The Acquisition of Communicative Competence
           (Second draft), University of California,
           Berkeley.

1968   Early Grammatical Development in Several
        Languages, with Special Attention to Soviet
        Research. Working Paper No. II, Language-
        Behavior Research Laboratory, University of
        California, Berkeley.

SOUTHALL, AIDAN
    1952   Lineage Formation Among the Luo. Memoranda
            of the International African Institute, No. 26,
            London.

STAFFORD, R. L.
    1967   An Elementary Luo Grammar with Vocabularies.
            Nairobi: Oxford University Press.

TUCKER, A. N. AND M. A. BRYAN
    1966   Linguistic Analyses: The Non-Bantu Languages
            of North-Eastern Africa. London: Oxford Univ.
            Press for International African Institute.

WHISSON, MICHAEL G.
    1964   Change and Challenge: A Study of the Social
            and Economic Changes Among the Kenya Luo.
            Nairobi: The Christian Council of Kenya.

1968   Early Grammatical Development in Several
Languages, with Special Attention to Soviet
Research. Working Paper No. II, Language-
Behavior Research Laboratory, University of
California, Berkeley.

SOUTHALL, AIDAN

1952   Lineage Formation Among the Luo. Memoranda
of the International African Institute, No. 26,
London.

STAFFORD, R. L.

1967   An Elementary Luo Grammar with Vocabularies.
Nairobi: Oxford University Press.

TUCKER, A. N. AND M. A. BRYAN

1966   Linguistic Analyses: The Non-Bantu Languages
of North-Eastern Africa. London: Oxford Univ.
Press for International African Institute.

WHISSON, MICHAEL G.

1964   Change and Challenge: A Study of the Social
and Economic Changes Among the Kenya Luo.
Nairobi: The Christian Council of Kenya.

APPENDIX A

AN OUTLINE OF LUO GRAMMAR

This outline is based mainly on the material
presented in three works on Luo grammar: Edgar
Gregersen, Luo: A Grammar (1961); R. L. Stafford,
An Elementary Luo Grammar: With Vocabularies (1967);
and A. N. Tucker and M. A. Bryan, Linguistic Analyses:
The Non-Bantu Languages of North-Eastern Africa (1966).
The latter, as a survey work, summarizes primarily the
major phonological and morphological categories of
Luo. In Gregersen's work, phonology and morphology
are extensively analyzed, and syntax is treated in an
Immediate-Constitutent framework. Stafford's work,
though non-technical, is extensive in scope and has
been used here to supplement the other two references.
Overall, an attempt has been made in the outline to
summarize the major features of the Luo language in
order to present a brief sketch of the relevant
morphological and syntactic devices. The qualification
must be made, however, that such a sketch cannot give
an even moderately adequate phrase structure state-
ment, much less a generative grammar.

I. `Phonology: the major features are:

    A.   Vowels: Tucker and Bryan give a simple
dichotomy of five 'hard' vowels against
five 'hollow' vowels, in which the cate-
gories are distinguished by both tongue
position and voice quality (404).

Close (Hollow)	Open (Hard)
i	I
e	ɛ
ä	a
o	ɔ
u	U
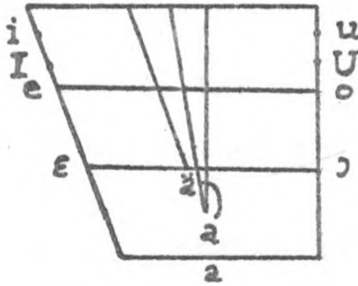
    B.   Consonants: Gregersen gives the consonant
phonemes as: /p· θ t č k; b ð d ɟ g; m n ɲ
ŋ; f s h/ (27). In chart form the conso-
nants are as follows (29):

	labial	dental	alveolar	palatal	velar
stop fortis	p	θ	t	č´	k
stop lenis	b	ð	d	ǰ	g
nasal	m		n	ɲ	ŋ
spirant	f		s		h
liquid			l,r		
semi-vowel				y	w

In addition to the 21 consonants in
traditional Luo, there are three of foreign
origin --š v and z. In accordance with tne
traditional orthography for African languages,
the palatal nasal /ɲ/ will be given as /ny/,
and in addition, the labial spirant will be
written as /φ/ rather than as /f/.

Final consonant change is a grammatical
feature in Luo. The change is used in for-
mation of the possessive, before some de-
monstratives, in the plurals of nouns, and
in derivative verbs. The changes are
(Tucker and Bryan 407):

č > y   wíč "head"   wíyà "head-my"

r > č   okúro "thorn"   okúč yaθ "thorn-of tree"

k > g   gùòk "dog"   gúógnÍ "dog-this"

m > mb   kóm "chair"   kòmbè "chair-his/
                                  chairs"

l > nd   búl "drum"   bùndè "drum-his/
                                  drums"

C. Allophony: there is considerable free
variation phonetically between [ɸ] and
[h], [θ] and [t], and [ð] and [d].

D. Morphophonemics, Canon, and Supraseg-
mentals:

   1. Alternations:

      a. automatic alternation: polysyl-
         labic morphemes with prepausal
         allomorphs in unstressed -V have
         allomorphs without the -V before an
         allomorph with a vowel (Gregersen 33);
         e. g. pal(à) òdik "knife dull"

      b. narrow static alternation: morphemes
         with root vowels (vowels of stressed
         syllables essentially) that are open
         take open clitic vowels (vowels of
         unstressed syllables). Similarly,
         closed root vowels take closed clitic
         vowels (34-35);
         e. g. (1) within a word
                  lɪɛǰ "elephant"
                  lieǰ "elephants"
              (2) of clitics
                  ɔ̀~ ọ "he, she, it"
                  ɛ ~ ẹ "him, her, it"

      c.   miscellaneous alternations: a group
          of monosyllabic words of the form CV
          has allomorphs without the vowel be-
          fore an allomorph beginning with a
          vowel (36):

          e.g. <u>dà</u> > <u>d(a)ìnɛnɛ</u> "if you see him"

2. Canon: the simplest and most common form
    of word is CVCV, the final vowel being
    fully articulated. CV and CVV are also
    common (Tucker and Bryan 409).

3. Suprasegmentals:

      a.   stress: falls regularly on the pen-
          ultimate syllable with secondary
          stress on geminate vowels (Gregersen
          40).

      b.   tone:

          (1) high tone does not occur in an
              unaccented syllable except after
              midtone.

           (2) stressed ultimate syllables con-
               tain only low tone.

            (3) complex tones occur only in a
                stressed penultimate syllable
                (41).

4. Reduplication: there are two types of
    reduplication which are important
    devices in Luo.

a. major reduplication: a considerable
number of nouns have disyllabic
stems reduplicated in full (114);
(1) without prefix:
pilùpílu "pepper"
sUrɛsUrɛ "small-pox"
(2) with prefix:
kábondɔbondɔ "blister"
nyàliŋlìŋ "dragonfly"

b. minor reduplication: several items
with monosyllabic stems show re-
duplication (114);
e.g. máma; bába; dede "locust"

II. Morphology: Luo has three major word classes:
two inflected (nominals and verbs), one un-
inflected (particles) (Gregersen 53-54).

A. Nominals: they share the general and regular
feature of a singular-plural inflection, and
syntactically, they have the prime function
of being the subjects and objects of predica-
tion (53).

1. Dependent nominals: there are two
classes:

a. conjunctive (affixed) pronouns:
characterized by a dimension of
person as well as number. As

subjects of predicate verbs, they
appear as (53):

  1st P. 2nd P.   3rd P.

s. <u>a-</u>"I" <u>I-</u>"you" <u>o-</u>,<u>e-</u>"he,she,it"

p. <u>wa-</u>"we" <u>U-</u>"you" <u>gI-</u>"they"

b. demonstratives: usually follow
another nominal or nominal phrase (54);
e.g. <u>ni</u> "this"; <u>tàmtàmbni</u> "candy-this"

2. Independent nominals: using the criteria
of case inflection for the remaining
nominals, there are two large divisions:

a. group I: all nominals without an
appertentive (genitive) case feature:

(1) disjunctive pronouns (same as con-
junctive pronouns [above] except
for double vowel length and final
consonant -n).

(2) interrogatives: never occur as
the direct subject of a predica-
tion, only as the antecedent of
a relative <u>ma-</u> clause. Listed
as (Gregersen 54):

  <u>nà</u>
      "who"   <u>àŋò</u>   "what"
  <u>nàwà</u>   <u>àŋowà</u>
  <u>nàgìnì</u> "who <u>àŋogìnì</u> "what
      (pl)"   (pl)"

           (3) quantitatives: e.g. dùtò "all",

                mɔrɔ "some"

    b. group II: all nominals with apperten-
        tive inflection.

        (1) numerals

        (2) nouns: those nominals that can
            occur in the appertentive before
            conjunctive pronouns (55).

3. Plural: stem plus suffix. There are
    four plural suffixes (86):

    a. a consonant (either /k/ or /n/)

    b. zero

    c. the syllable -nI

    d. a vowel (either -i, -ɔ, or -ɛ) (also
        cf. pg.   for morphophonemic alter-
        nation rules). The plural suffix
        -ɛ is the most productive of the
        plural suffixes.

4. Appertentive (genitive): appertentive
    inflection follows closely the pattern
    for plural suffixation;

    e.g. číémo "food"   číémbe "foods"
        číémbe "his food" číémb(e)ne "his
                              foods"
        gùòk "dog"   gùògi "dogs"
        gùòga "dog-my"   gùògina "dogs-my"
        gùòg mumbo "dog mumbo" gùògi mumbo
                                   "dogs mumbo"

(cf. Gregersen 88-93 for a more
complete discussion).

5. Composition and Derivation: the most
productive method of noun formation is
the use of prefix plus stem.

   a. prefixes: there are eight prefixes
      (106):

      (1), (2): a- and o- are used as sex
         markers, especially for proper
         names;

           e.g. Očieŋ (male) Ačieŋ (female)
           a- frequently denotes an agent;
           e.g. àʲuɔ̀gà "physician, diviner"
              (ʲuɔk "witchcraft")
           Both a- and o- are constituents
           of a large number of nouns de-
           noting plants and animals;
           e.g. apùɔ̀yo "rabbit"
              ondíek "hyena"

      (3) kà- has two distinct meanings;
         agent and place;
           e.g. kàdalà "country person"
               (dalà "home")
               kàdὲm "Kadem (a district in
               Homa Bay District)

(4) kalà- has the general meaning of
"large size";

 - e.g. kalàbugò "big fly"

(5) kÍ-; ·stem is usually a verb
derivative;

e.g. kÍdènyà "period of famine"
(dɛnyò "to be hungry")

(6) mà- is rarely used; stem is always
a noun derivative.

(7) mI-; stem is a verb derivative;

e.g. mIgànga "thief"
(gàngo "to steal")

(8) sI-; occurs rarely; stem is
usually a verb derivative;

e.g. sIganà "story" (ganò "to tell")

b. suffixes: most important is -rUòk
(113);

e.g. rInrUòk "body" (rInò "meat")
parrUòk "thought" (parò "to think")

c. reduplication: discussed on page

d. compound nouns: two kinds: (1) those
where the first element varies in the
plural; and (2) those with invariant
nonfinal elements (116):

    (1) three prefixes in'double-plural'

    nouns:

      - (a) nyà- carries meaning of

         "young", "offspring",

         "diminutive";

         e.g. nyaguòk "puppy

            (guòk "dog")

            nyiguògi "puppies"

      (b) rà- means "infirm agent" and

         also "instrument";

         e.g. ràbàm"cripple"

            (bàm "thigh")

            ràgUàr "rake"

            (gUàro "to scratch")

      (c) Jà- has general meaning of

         agent;

         e.g. Jàpùr "farmer"

            (purò "to dig, hoe"

            Jàpuònj "teacher"

            (puònjo "to teach")

e. derivation: the only significant kind

    of derivation in Luo is that of nouns

    from verb forms. Nouns may be de-

    rived from non-o and -o verb forms

    (120):

      e.g. g̲e̲r̲o̲ "cruelty" (g̲è̲r̲ "to be cruel")

           r̲a̲č̲ "evil" (r̲à̲č̲ "to be evil")

           t̲i̲č̲ "work" (t̲i̲y̲ò̲ "to work")

           č̲à̲m̲ "food" (č̲à̲m̲ò̲ "to eat")

B. Pronominals: the conjunctive and disjunctive pronouns are given on page   . As subject of a predicate sentence, the conjunctive pronouns are prefixed to the verb stem. To show possession, the pronouns are suffixed to the noun which is possessed, and they are suffixed to verb stems to show nominal objects.

    e.g. w̲à̲ð̲í̲y̲o̲ "we-go"

       o̲d̲w̲à̲ "house-our"

       k̲o̲n̲y̲(̲o̲)̲w̲à̲ "help-us"

C. Verbs: verb morphology has essentially two parts: (1) segmented structure, and (2) aspectual tone contour in pronoun-verb constructions (138).

    1. segmental structure: there are three classes of verbs, based on the type of suffix used in citation form:

        a. -̲n̲í̲ suffix: the majority of verbs in this category denote states of nervous behavior, tingling noise, shiny appearance, etc. All are intransitive, and the total number of verbs

in the category is small (138).
Verbs in -nı invariably have mono-
syllabic stems of the general form
C_1VC_2 (C_1 -any single consonant;
C_2 - any single consonant or nasal-
stop cluster) (140);

    e.g. kirnı "to shake with fear or cold"
        laŋnı "to be shiny, bright"
        pičnı "to sparkle"

b. zero suffix: all the verbs are in-
    transitive, and frequently stative (138).
    . There are two major subdivisions: (1)
    those with reduplicated stems, and
    (2) those without (141):

    (1) the stem is monosyllabic, of the
        form C_1VC_2 (C_2 is a nasal,
        voiceless-fortis stop, or liquid)
        (141);

        e.g. bɛrbɛr "not to be beautiful"
           (bɛr "to be beautiful")
           kɛčkɛč "to be somewhat bitter"
           (kɛč "to be bitter")

    (2) the majority of the verbs have
        final C (142);
        e.g. bòr "to be tall"
           duòŋ "to be old, large"

c. ‑o suffix: all transitive verbs
belong to this class, and some in-
transtive-qualitative verbs. This
class is the most productive (138).
Verbs with ‑o suffix have non-
reduplicated stems (142).

2. Transitive-intranstive derivation: a
number of verbs are groupable into pairs
such that they constitute transitive and
intransitive alternants of the same verb
stem. Three techniques are involved (143):

a. use of the intransitive affix ‑n‑,
followed by an ‑o suffix;
e.g. pugò "to fatten"
pugnò "to be fat"

b. change of verb suffix, ‑o > ‑ø.
Stems ending in a stop or the
cluster /ŋg/ show regular consonant
alternation (144):

	Trans.	Intrans.
d>t	kedò	kèt
	"to scarify"	"to have cicatrices"
y>č	ŋeyò	ŋèč
	"to know"	"to know"
y>ø	ŋueyò	ŋuè
	"to smell"	"to smell"

g>k ŋɔgɔ̀   ŋɔ̀k

     "to vomit"   "to vomit"

ŋg>ŋ čungɔ̀   čùŋ

     "to stop"   "to stop"

ɔ>uo dɔngɔ̀   duɔ̀ŋ

     "to make grow" "to be big"

c. change within the -o class. Morpho-
logically transitive-applicative
verbs generally have 'open' vowels
and voiced-lenis consonants; in-
transitive-qualitative ones, 'closed'
vowels, voiceless-fortis consonants
(144);

    Trans.   Intrans.

a>e barɔ̀   berɔ̀

    "to split" "to split"

a>ie čàmɔ̀   číémo

    "to eat"   "to eat"

ɛ>e nɛnɔ̀   nenɔ̀

    "to see"   "to see"

ɔ>o gɔyɔ̀   gočɔ̀

    "to beat"   "to beat"

ð>θ màðɔ̀   mèθɔ̀

    "to drink" "to drink"

y>č kayɔ̀   kečɔ̀

    "to bite"   "to bite"

3. Aspectual contours: a nondefective verb
   has five contours, shown below (145-46);
   a. infinitive (same as citation form,
      v̄, v̀)
   b. durative-inceptive 'v́ v̄v̀,v̀ (or v̀,v̀)
   c. perfective-present v̀ 'v́v̄,v̀
   d. imperative   v̄,v̄
   e. subjunctive   v̄ 'v̄v̄,v̄
      (v = syllable; ` = low(-fall) tone;
      ¯ = mid tone; ´ = high(-rise) tone;
      the first column represents the subject
      pronoun, and the second, the verb
      proper).

D. Particles
   1. Prepositions: occur only in construction
      with a nominal or nominal phrase. The
      major prepositions are (56-57):
      è "in, on, to, at"   kɔd "with"
      gI "with, during"   kuɔ̀m "from, among"
      ir "toward"   nI "for"
      mar "of"
   2. Particle derivation: there are two
      major techniques for particle deriva-
      tion: reduplication and affixation using
      the circumfix a...a (157):

a. the stem of particles showing redup-
   lication is variously a verb or
   particle derivative;
   e.g. <u>lɪŋlɪŋ</u> "quietly" (<u>lɪŋ</u> "to be quiet")
        <u>piyopiyo</u> "quickly" (<u>piyo</u> "to be
                                         quick")

b. the circumfix <u>a</u>...<u>a</u> has two uses:
   (1) one use is associated with a
       stem derived only from verbs.
       The general meaning is "in the
       manner (implied by the verbal
       stem)" (158):
       e.g. <u>ahɪnya</u> "very" (<u>hɪnyo</u> "to be
                                          many")

   (2) the second use is associated with
       noun, disjunctive pronoun, as well
       as verb-derived stems. The
       general meaning is "just...",
       "simply...", "keep on doing...";
       e.g. <u>sabun</u> <u>abuna</u> "just soap"
            (<u>sabun</u> "soap")
            <u>ayweyo</u> <u>ayweya</u> "I-rest just"
            (<u>yweyo</u> "to rest")

3. Verbal particles: they are the tense
   and aspect auxiliaries for the Luo verb.
   The major particles are:

a. a denotes the immediate past, i.e. "just completed", "very recently";

    e.g. a abíro "I just came"

b. nende (usually in the concatenated form ne): denotes the past, but with the restriction "in the past twenty-four hours":

    e.g. nénde oðíyo "he went earlier today"

c. nyo(ro): denotes the past --yesterday; nyó wabíro ka "yesterday we came here"

d. nyoča: denotes the past --day-before-yesterday.

e. yande: denotes the past -- recently, formerly;

    e.g. yánde wagédo dɛro "recently we built a granary"

f. nene (usually ne): denotes relatively remote past;

    e.g. né Otieno ðìyo Kisumu "Otieno was going to Kisumu (some time ago).

g. čon: denotes remote past;

    e.g. čon Jalúo obíro e Nyanza "long ago the Luo came to Nyanza"

h. aŋ: denotes the immediate future;

    e.g. áŋ owùòk "soon he will leave"

i. kiɲy: denotes the future -- tomorrow;

    e.g. kíɲy walìmógi "tomorrow we will

        visit them"

j. n(o): denotes the future: (1) pre-

    fixed to the subjunctive form of the

    verb (i.e. final -o > ∅); or (2)

    infixed to the verb stem, with vowel

    assimilation;

    e.g. (1) nakél rabólo "I will bring

           bananas"

        (2) anákel rabólo "I will bring

           bananas"

           infkel...   "you will bring.."

k. tinde/tinende: denotes the present --

    today, nowadays, these days;

    e.g. tínde kɔθ nyálo čwe "today it

        may rain"

l. -se-: denotes the Perfect "has/have";

    wasèpáko rùòθ "we-have-praised the

    chief"

    Otieno nosěmóko taya "Otieno had-lit

    the lamp" (n(e)o-se-moko).

m. pok: denotes negative Perfect --

    have not yet;

    e.g. pòk olóso čièmo

"she has not yet prepared the
food"

n. da: denotes conditional present;

e.g. ka dá kìkómbe obarórɛ, dá očuer
"if the cup were cracked, it
would leak"

o. di: denotes conditional past;

e.g. di né ačóp siro, di né aŋlɛwo
aloθ "if I had reached the
market, I would have bought
vegetables"

4. Other particles:

a. preverbal nonsubordinating particles:

(1) ká "when, if"

(2) káká "when, as"

(3) kátá "whether"

b. negative particles:

(1) ok/ɔk "no, not"

(2) kik/kɪk "don't"

(3) pok "not yet"

c. relative particle ma "who, which":
introduces relative phrases and is
used with adjectives and adverbs;

e.g. ŋat máθɔ "a dying man"

nyUka mímaðo "porridge which
you are drinking" (m(a)-i-)
ŋato má čiémbe očΙ£k "man whose
food is cooked"

d. plural particle -uru: occurs only in
an imperative or exhoratory verb;
e.g. wačnàúru "you(pl) tell me"
(wač = tell; n(i)a = to me;
uru = you)
waðúúru! "let's go!"

e. the particle -(ŋ)ga: means "habitually",
"regularly";
e.g. en ̀è móywéčóga larU "he is the
one who usually sweeps the
compound" (ywečo "to sweep",
-ga "usually")

f. the reflexive particle -rɛ: occurs
immediately after the verb and before
pronoun objects (Gregersen 73-74);
e.g. àhɛ́rɔrà "I-love-myself"
wàhɛ́rɔr̀ "we-love-ourselves"

E. Adjectives: are postposed to nouns, and except
for quantifiers and where used as a predicate,

they are introduced by the relative particle
ma. Only a few, but very common, adjectives
show pluralization;

e.g. bɛr "good" beyo (pl)
   rač "bad" ričo
   duoŋ "big" doŋo

1. Predicate adjective: may stand alone, or
   be preceded by a noun or pronoun;
   e.g. tɛk! "it is difficult"
      obɛr "he is good"
      tiŋ pɛk "burden is heavy"

2. Quantifiers: follow the noun;
   e.g. dwesini ariyo "cows two"
      ðok duto "cattle all"

3. Interrogative adjectives: there are
   three;
   manɛ "which" (magɛ, pl.)
   manadɛ "what kind of"
   adí "how many"

4. Demonstrative adjectives: there are
   three main types, and they are suf-
   fixed to the nouns that they qualify
   (Stafford 1967:32):
   a. proximate: -ni "this", -gi "these"
      -no "that", -go "those" (used when
      the object is within reach of the

of the person spoken to).

b. distant: -ča "that", -ka "those"
(used when the object is out of
reach but in sight).

c. reference: -ɔnɔ "that referred to",
-ɔgɔ (pl); -nɔgɔ "that very", -gɔgɔ
(pl).

5. Articles: there are no definite or in-
definite articles in Luo. For emphasis,
the demonstrative adjectives may be used,
as well as other forms;

a. the particle e:

(1) may stand alone;

e.g. okélo mà é "he-brought this
one"

(2) be prefixed to a reduplication of
a demonstrative adjective;

e.g. (from Stafford 33)

komni eri "chair-this one"

komno erɔ "chair-that one"

komča ɛča "chair-that one"

kombegi eki "chairs-these ones"

etc.

b. the quantifier mɔrɔ;

e.g. ŋat mɔrɔ "man certain"

    c. interrogative adverbs (except for

        maraŋo, terminal position in the

        sentence is obligatory);

        kanyɛ?, kure? "where?"

        maraŋo? "why?"

        naŋo? "why?"

        karaŋo? "when?"

        nadɛ, nadi? "how?"

G. Conjunctions: there are coordinating and sub-
ordinating conjunctions:

  1. Coordinating:

    a. kendo "and; again";

        e.g. Auma ɔlɔsɔ čiɛmo, kendo

            gičiémo "Auma prepared food

            and they ate"

    b. to "but; and";

        e.g. in Jàmɔkɔ, to wa Jɔčándè

            "you richman, but we poor-men"

  2. Subordinating:

    a. nikeč "because";

        e.g. nyaθi ywàk nikéč ɔlal

            "child cries because she is lost"

    b. mɔndɔ "in order to";

        e.g. obíro e siro mɔ́ndɔ ŋIɛ́wɔ gwɛno

          "he-came to market in order to

            sell chicken"

   c. <u>Kátá</u> "even if; whether; or" ;

    <u>idwáro</u> <u>rabolo</u> <u>kátá</u> <u>rabuon</u>?

    "you-want banana or potato?"

   d. <u>ká</u> "if; like; when; unless";

    e.g. <u>ká</u> <u>Opiyo</u> <u>čópo</u>, <u>wamóse</u>

     "when Opiyo arrives, we (will)

     greet him"

   e. <u>káká</u> "as; how";

    e.g. <u>ne</u> <u>káká</u> <u>omuódo</u> <u>njúgu</u>

     "see how he-eats ground-nuts"

III. Syntax: the word órder in Luo is SVO, and
despite a productive morphology, the word order
is highly constrained. Using as a criterion
the type of class(es) in the predicate, two
major sentence types may be identified: (1)
equational sentences -- with nominal predicate;
and (2) narrative sentences -- with verbal
predicate.

A. Equational sentences: have the basic form;

$$S \rightarrow NP \begin{pmatrix} NP \\ Adv \\ Prep.\ P. \end{pmatrix}$$

$$NP \rightarrow N \begin{pmatrix} Dem \\ N \end{pmatrix}$$

Prep. P. $\rightarrow$ Prep. + N

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e.g. <u>Otieno</u> <u>ruóθ</u> "Otieno (is) chief"

<u>an</u> <u>gi</u> <u>pésa</u> "I with (have) money"

<u>gln</u> <u>adék</u> "they (are) three"

<u>Otieno</u> <u>ni</u> <u>pačU</u> "Otieno is home"

<u>Auma</u> <u>e</u> <u>čiége</u> "Auma one wife-his"

The form of the equational sentence as given is basic. More elements, essentially adverbial ones, can be preposed and postposed to the sentence. E. g. adverbs of negation, temporal adverbs, nominal and prepositional phrases of place, manner, time, etc. can be used.

B. Narrative sentences: have the simple basic form:

$$S \rightarrow NP + VP$$

$$NP \rightarrow N \begin{pmatrix} N \\ Dem \end{pmatrix} (Adv)$$

$$VP \rightarrow (adv)\ (aux)\ V\ (Adv) \begin{pmatrix} Prep.\ P. \\ NP \\ adv \end{pmatrix}$$

C. Noun Phrase: has the following maximal construction:

$$N\ (N)\ (adv) \begin{pmatrix} ma+statal\ V \\ numeral \end{pmatrix} (Dem)\ (Quan)\ -$$

$$\begin{pmatrix} ma+N+V \\ (ma+)\ Perp.\ P. \end{pmatrix}$$

D. Verb Phrase: has the maximal construction:

$$(adv)\ (aux)\ V\ (Adv) \begin{pmatrix} adv \\ Prep.\ P. \\ NP \\ S' \end{pmatrix}$$

S' is introduced usually by subordinating
conjunctions (cf. pg.   ).

E. Interrogative: there is no change in word
order for interrogatives. Interrogative
adverbs usually occur in sentence terminal
position.

F. Negation: the negative particle is inserted
directly before the verbal;
    e.g. <u>Auma</u> <u>ók</u> <u>otémo</u> <u>rInò</u> "Auma did not try to
        run"

G. Passive: there is no true passive in Luo.
The passive equivalent may be formed in two
ways (Stafford 75-76):
    1. by the impersonal pronoun prefix <u>i-/I-</u>
       (in the incomplete aspect of the verb);
       e.g. <u>Igóyá</u> "I am being hit"
    2. by the prefix <u>ɔ-/o-</u> (in the complete
       aspect);
       e.g. <u>ɔgówá</u> "I have been hit"
           <u>ɔgówá</u> <u>maték</u> <u>gI</u> <u>lUðɛ</u> "we have been
           beaten severely with sticks"

APPENDIX B

SAMPLES AND FUNCTIONS OF SPEECH

Sample		Age	Function
	Othieno (A2)		
(1)	en ka	19	locate
	she here		
(2)	čam miya	19	demand
	food give-me		
	Aoko (B2)		
(3)	ne tamtam	19	demand
	see candy		
(4)	miya pi	20	demand
	give-me water		
(5)	miya tamtam	20	demand
	give-mc candy		
(6)	game	20	demand
	hand(over)-it		
(7)	ndawa piny	20	locate
	cigarette down		
(8)	baba ndawa	20	describe
	father cigarette		
(9)	miya tamtam	20	demand
	give-me candy		
(10)	miya tamtam	20	demand
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hand(over)-it		
(7) ndawa piny	20	locate
cigarette down		
(8) baba ndawa	20	describe
father cigarette		
(9) miya tamtam	20	demand
give-me candy		
(10) miya tamtam	20	demand
give-me candy		

(11)	ma wendo	20	name
	this visitor		
(12)	gino bɛr	21	name
	thing-that good		
(13)	oði Ulanda	21	locate
	he-went Ulanda		
(14)	oði Ulanda	21	locate
	he-went Ulanda		
(15)	ma e mare	21	name
	this one his		
(16)	okelo	21	describe
	he-brought		
(17)	okelo ma e	21	describe
	he-brought this one		
(18)	anenogi	21	describe
	I-see-them		
(19)	aneno čungu	21	describe
	I-see European		
(20)	ma e	21	locate
	this one		
(21)	en čungu	21	name
	it European		
(22)	ma e čungu	21	name
	this one European		

(35) mama ði lwɔkɔ   23   locate
      mama goes to-wash

(36) oŋge   27   negate
      absent/without

(37) mača en gwɛno   27   name
      that-there it chicken

(38) mača sandwa   27   name
      that-there box-ours

(39) akia   27   describe
      ⅼ-not-know

(40) en saa   27   name
      it clock

(41) lwɛta   27   name
      hand-mine

(42) wiya   27   name
      head-mine

(43) en saa   27   name
      it clock

(44) wuoča   27   name
      shoes-mine

(45) akia   27   describe
      ⅼ-not-know

(46) tienda   27   name
      leg-mine

(47) ma e (7x)   27   name
      this one

(48)	aŋeyo 1-know	27	describe
(49)	čungu biro European comes	27	describe
(50)	oði kulo he-goes river	28	locate

Ochieng (C)

(51)	miya pi give-me water	25	demand
(52)	adway čam 1want food	25	desire
(53)	keč kaya hunger bites-me	25	describe

Rabuogi (G)

(54)	adwayo čam 1-want food	28	desire
(55)	adwayo čam 1-want food	28	desire
(56)	čam yaθ eat medicine	28	demand
(57)	ičamo? you-eat?	28	describe
(58)	miya buon give-me potato	28	demand
(59)	en kača she there	28	locate

(60)	ičanda	29	describe
	you-bother-me		
(61)	miya moro	29	demand
	give-me more		
(62)	oluru oði e gunda	29	describe
	quail went to garden		
(63)	mičungu omiya tamtam	29	describe
	European gave-me candy		
(64)	baras otama	29	describe
	brush defeats-me		
(65)	mama čandɛ oa e gunda	29	locate
	mama that left for garden		
(66)	baba čandɛ obet piny	29	describe
	father that sits down		
(67)	ne kača	30	demand
	see there		
(68)	omoyo oduma	30	describe
	she-dries maize		
(69)	Uhuru ičandɛ	30	locate
	Uhuru that (you spoke of)		
(70)	obet piny	30	locate
	he(is)sitting down		
(71)	gwɛno ičandɛ mar baba	30	name
	chicken you-spoke-of of father		

(60)	ičanda	29	describe
	you-bother-me		
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	he(is)sitting down		
(71)	gwεno ičandε mar baba	30	name
	chicken you-spoke-of of		
	father		

(72)	mar baba	30	name
	of father		
(73)	oði skul	30	locate
	he-went school		
(74)	adagi	30	**describe**
	1-refuse		
(75)	oŋge	30	negate
	absent		
(76)	gunda e ča	30	locate
	garden one there		
(77)	oði beto	30	locate
	he-went to-harvest		
(78)	oði gi beti	30	describe
	he-went with slasher		
(79)	mama oði pur	30	locate
	mama went to-cultivate		
(80)	oði gi beti	30	describe
	he-went with slasher		
(81)	aðiga beto	30	describe
	1-go-usually to-harvest		
(82)	beda oŋge	30	negate
	slasher-mine absent		
(83)	gi sifiria /sufuria/	30	describe
	with sauce-pan		
(84)	gi Ohuru	30	describe
	with Ohuru		

(85)	ir mama toward mama	30	locate
(86)	adwa ði ir mama 1-want to-go toward mama	30	desire
(87)	baba oði loka Utoma father went up-there Utoma	31	locate
(88)	mama oði e siro mama went to market	31	locate
(89)	miya tamtam give-me candy	31	demand
(90)	neye ma see-it this	31	demand
(91)	kono ǯandɛ beer that	31	locate
(92)	baba oði lokaǯa father went up-there	31	locate
(93)	miya Ɵuno give-me breast	31	demand
(94)	mano toka in that car yours	31	name
(95)	bar kaǯa river there	32	locate
(95)	wan gi Odindo we and Odindo	32	name

(97) miya kalam   32   demand
      give-me pencil

(98) we maka (2x) ..   32   negate
      stop grabbing-me

(99) koni gi koni   32   locate
      side by side

(100) kenda   33   name
      only-1

(101) ičogoo   33   locate
      that-way

(102) obaro yɛn   33   describe
      she-splits wood

(103) oywečo   33   describe
      she-sweeps

(104) oiðo loka   33   locate
      he-went-up there

(105) korgi   33   locate
      side-this

(106) gwɛnd baba   33   name
      chicken-of father

(107) en gini   33   name
      it thing-this

(108) en wuoče   33   name
      it shoes-his

(109) en misungu   33   name
      it European

(110)	en kalani /kalatas/	33	name
	it paper		
(111)	gire	33	name
	thing-his		
(112)	kom baba	33	name
	chair-of father		
(113)	Θuon baba	33	name
	rooster-of father		
(114)	en bao	33	name
	it board		
(115)	en gwɛno	33	name
	it chicken		
(116)	en dɛro	33	name
	it granary		
(117)	en dɛro	33	name
	it granary		
(118)	od baba	33	name
	house-of father		
(119)	gwɛn madičol	33	name
	chickens black		
(120)	gin dičol	33	name
	they black		
(121)	en ǰiko	33	name
	it kitchen		

(122) pod llθ   33   describe
       still hurts

(123) a apuro apura kɛndɛ   33   describe
       (past) 1-cultivate
       just only

(124) en toŋ Ohuru   33   name
       it spear-of Ohuru

(125) en par   33   name
       it mat

(126) en par   33   name
       it mat

(127) en θigo   33   name
       it door

(128) en gwɛno   33   name
       it chicken

(129) en čuoðo   33   name
       it excrement

(130) gin obando   33   name
       they cobs

(131) akia   33   describe
       1-not-know

(132) oyweðo   33   describe
       she-sweeps

(133) ma to amuodo   34   describe
       this and 1-chew

(134) ma to akano   34
      this but I-keep

(135) barna ma   34
      split-for-me this

(136) mačača to koro rača   34
      that-there but then
      bad(for)me

(137) mitokača to koro rača   34
      motor-car-that but then
      bad(for)me

(138) daŋ anyul tamtambi duto   34
      would-like I-put-in-my-
      mouth candy-your whole

(139) en to koro imuodo amuoda 34
      it but then you-chewed
      just

(140) ne kaka omuodo   34
      see how he-chews

(141) neye laka   34
      see-it tooth-mine

(142) tamtam motimo laka   34
      candy which-did(it to)
      tooth-mine

(143) daŋ agoyi piny ku   34
      would-like I-push-you
      down here

(144)	tamtam oŋge ka?	34	negate
	candy absent here?		
(145)	to koni?	34	locate
	but side-this?		
(146)	kel ku	34	demand
	bring here		
(147)	ibiro duogo?	34	describe
	you-going to-return?		

Akinyi (G)

(148)	adwa čiemo	28	desire
	I-want food		
(149)	adwa pi	28	desire
	I-want water		
(150)	ma nyuka	29	demand
	drink porridge		
(151)	adagi	30	describe
	I-refuse		
(152)	otu, otu /otuč/	30	describe
	it-has-hole		
(153)	ka otu	30	describe
	here it-has-hole		
(154)	miya čak	30	demand
	give-me milk		
(155)	miya bolo	30	demand
	give-me banana		

(156)	adwa pi I-want water	30	desire
(157)	piypiy /pilupilu/ keð pepper hot	30	describe
(158)	miya tamtam give-me candy	30	demand
(159)	atuo I-sick	30	describe
(160)	adwa ði nindo I-want to-go to-sleep	30	desire
(161)	uma cover-me	30	demand
(162)	ne tamtam (2x) see candy	31	demand
(163)	owuok he-left	32	describe
(164)	giði gi kwara they-went with grand- father	32	describe
(165)	ma aŋo? this what?	33	name
(166)	baba, itieko? father, you-finished?	33	describe
(167)	ma rač this bad	33	name

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(168) baba, ibiro?   33   describe
      father, you-coming?

(169) mi Sabomo   - -   33   demand
      give Sabomo

(170) ma čungu   33   name
      this European

(171) baba, weya   33   demand
      father, let-me

(172) waŋe   34   name
      eye-her

(173) ume   34   name
      nose-her

(174) iθc   34   name
      ear-her

(175) oǯamu   34   describe
      it(was)eaten

(176) en θi čungu   34   name
      it baoy-of European

(177) mara   34   name
      mine

(178) mari   34   name
      your

(179) Auma omiya nyuka   34   describe
      Auma gave-me porridge

(180) miya tamtam   35   demand
      give-me candy

(181)	we tamtamba	35	demand
	leave-alone candy-mine		
(182)	siruača mama kano	35	describe
	sweater-my mother kept		
(183)	rwakna siruača	35	demand
	dress-for-me sweater-my		
(184)	ne tamtam	35	demand
	see candy		
(185)	ma tenda?	35	name
	this stool-mine?		
(186)	adwa tenda	35	desire
	I-want stool-mine		
(187)	ma tenda	35	name
	this stool-mine		
(188)	Sabomo tweyo kitamba	35	describe
	Sabomo ties scarf		
(189)	adwa kitamba	35	desire
	I-want scarf		
(190)	Sabomo, bi ka	35	demand
	Sabomo, come here		
(191)	twe waŋe	35	demand
	tie head-his		