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SYSTEMS OF CONVERSATIONAL INTERACTION:
A STUDY OF THREE EAST AFRICAN TRIBES

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CHAPTER I

INTRODUCTION

1.1 Purpose of the study

When people interact with one another in conversation, there is much accompanying behavior which is not purely linguistic-- both verbal and body movement behavior. The purely linguistic behavior itself is not the same as what one might find, e.g., in a grammar of the language which the people speak. Yet all of this behavior gives a very strong impression to an outsider, and particularly to a member of the same culture as that of the speakers, of 'naturalness' and 'appropriateness.'

The research reported here is a study of the conversational interaction systems in three different African cultures with three very different languages. While the bulk of the work consists of description and language-specific generalizations, the central question as to why all of this behavior is 'natural' is answered with the hypothesis that, at least in dyadic interactions, all of the linguistic and non-linguistic elements are part of a single system of interaction. Rather than constituting separate 'channels' which function independently, the verbal and non-verbal modes are completely interdependent. This is not to say, however, that their roles or functions are interchangeable. Under normal conditions people don't attempt, e.g., to express the question 'How are you?' by wholly non-verbal means, and they do not (usually) indicate direction by verbal means.

Although it may be argued that the natural context for 'language' is conversational interaction, language has not been

studied extensively in this context nor has the context itself been studied. It is only in recent years that studies of language have progressed beyond the sentence and these studies have for the most part dealt with narrative, i.e., monologue (e.g. Grimes and Glock 1970). Although it is now over twenty years since the publication of Birdwhistell's Introduction to Kinesics (1951), no treatments of kinesic behavior in languages other than English have appeared. The present study was conceived as an attempt to fill these gaps by providing some basic information concerning the behavioral organization of human interactions in non-European cultures.

1.2 The Field Work Context

Bearing in mind the difficulties of highly detailed examinations of body movements in interaction (McQuown, ed., in preparation, 1956-), it was decided that a study which operated at a fairly gross level might be both feasible as well as likely to yield useful information from which to plan further work profitably (and hopefully also insightful in its right). A comparative study was set up in an attempt to make field work maximally profitable and because it seemed likely that in the short period of field study it would not be possible to attain a deep level of 'intuitive' insight into the interaction systems of any one culture.

The Western part of Kenya is inhabited by a number of tribes of various diverse origins which both prior to and since the coming of the British have lived relatively apart from one another (except for occasional cattle rustling in the past, a small amount of intertribal trading, etc.). Three of these tribes were selected on the basis of linguistic and cultural distinctness and residential propinquity (so as to make practicable field work among all three simultaneously): the Kipsigis, the Luo and the Gusii.¹ In section 1.3 the interrelationships of these three tribes, past and present, will be briefly sketched.

Shortly before this study was planned, portable video tape recording equipment became available. In addition some of the portable recorders were provided with stop- and slow-motion analyzing feature. Thus two of the objections which

might be made against video equipment were eliminated. As the disadvantages of cine equipment are numerous (noisy, sound-picture synchrony awkwardly achieved, dependent on good lighting conditions, long delay between filming and viewing pictures, etc.) it was decided to rely principally on television equipment. This equipment consisted of a Sony portable video recorder and playback unit (with a stop motion feature)--AV-3400, a video camera with zoom lens, condenser microphone and playback monitor. As the equipment could be powered by 12 volt car battery for playback purposes, the outfit was almost entirely independent of mains electricity (only the recording batteries required to be charged with mains current).

In practice the system, except for a few problems discussed below, worked beautifully. Recording was feasible under a great variety of lighting conditions from high noon to evening dusk (both difficult to handle with cine film). The camera and recorder were silent and because the equipment could be set up at some distance from the individuals being recorded, camera shyness was not a great problem. Playback and analysis similarly presented no mechanical problems. It was very convenient not to have a time lag while waiting for the film to be developed, and (as anyone who has spent any amount of time analyzing cine films will appreciate) it was convenient to be able to play the tapes back through an essentially quiet and cool tape recorder.

The equipment, however, did have a number of drawbacks with respect to the possibility of 'live' recording (it should

be noted, however, that these same drawbacks would also be present with the use of cine equipment). First, focussing was relatively critical and difficult to achieve accurately with a moving subject. Second, the equipment was heavy enough so that extended recording without the use of a tripod was impossible. Third, the small condenser microphone mounted in the camera itself did not provide sufficient audio quality to be useful, and it was necessary to use a separate microphone placed near to the speakers. For all of these reasons it was not possible to film people under conditions where they were as free to move about as they would be if they were not being filmed.

Most recording was accomplished by setting up the equipment at a distance of about thirty feet from the individuals being filmed. Initially people were asked to not move far from their initial positions, but it became clear that under these conditions people did not move far anyway, and in later filming nothing was said about this. As the equipment functioned automatically with respect to lighting and sound level adjustments, the investigator always left the vicinity of the recorder and camera after starting it in motion. The restriction to stationary positions was only critical where recording of children was attempted. Children of all three tribes did not interact with one another while in stationary positions.²

Recordings were made under two principal types of conditions. First, a great deal of recording was done of male secondary school students at schools in each of the three tri-

bal areas. With sex, age and role held relatively constant, this material was used primarily for comparisons of intertribal and intratribal variation as affected by certain mechanical factors such as relative posture, distances between interactors, etc. Secondly, recordings were made in the homes of families within the areas of each tribe. The homes were primarily those of friends, but in all cases large numbers of neighbors participated in being recorded. Recordings in the case of the Luo were also made at barazas (local meetings at which disputes between individuals are heard and decided upon by a government official in the company of and with the assistance of the elders of the area). Due to the engrossing nature of the proceedings the baraza situation proved to be excellent for recording without the camera being obtrusive. On several occasions recordings at local markets were attempted, but this proved impossible, partly because of the awkwardness and obtrusiveness of the equipment and partly because of the impersonal relationship between the recording team (the investigator and local co-workers) and those being recorded.

Although a small number of multiperson interactions were recorded, the bulk of the conversations were dyadic as the problems of transcription and analysis multiply enormously when more than two individuals are involved. Future work will have to deal with this dimension as it was clear that in interactions in triadic and quadratic conversations at least some of the organizing principles are not the same as those in dyadic conversations. A total of 154 individuals were taped in

128 dyadic conversations ranging from five to twenty minutes in length. The tribal breakdown of individuals is: Luo, 48; Kipsigis, 66; and Gusii, 40. In addition recordings were made of a few triadic and quadratic conversations and of larger groups (Luo and Kipsigis), of a small number of Samburu dyadic conversations, and of one conversation in Swahili. Field work was continuous from April 1970 to May 1972.

A major difficulty in the work was presented by the languages. Like all other East African languages (with the possible exception of Swahili because it is non-tonal), Gusii, Kipsigis and Luo are highly complex at all (traditional) levels of linguistic organization--phonological, morphological, syntactic and lexical. In particular the vowel systems, tonal systems (all three languages have both lexical and grammatical tone) and systems of verbal inflection and derivation are very extensive in each language. Like the vast majority of languages in East Africa there were no adequate linguistic descriptions available for these languages with the important exceptions of a small monograph by Whiteley, *The Tense System of Gusii* (1960) and an extensive article by Tucker and Bryan, *Noun Classification in Kalenjin: Nandi-Kipsigis* (1964, 1965) which were both accurate and useful.³ In the short period of field work it was not possible to operate all three of these languages and for this reason effort was concentrated on one of them only, Kipsigis. In Kipsigis a fair to moderate level of fluency was achieved and the necessary descriptive work (to complement that of Tucker and Bryan) was carried out. Swahili and English were

used for all work in Luo and Gusii. The preparation of transcripts of the verbal portions of the recorded material was an extremely tedious and time-consuming process for the author and his co-workers.

1.3 The Three Tribes

1.3.1 Historical relationships

The Gusii are a Bantu speaking people who seem to form a bridge between the Bantu peoples of the Inter-Lacustrine area (Ganda, Nkore, etc.) and the Bantu peoples of Central Kenya. Such features as bi-syllabic noun prefixes link Gusii with the more westerly languages, while a seven-vowel system (as opposed to a five-vowel system) link it with Kikuyu, etc. (see Whiteley 1960:64-67). The Bantu languages are classified by Greenberg (1966) as belonging to the Niger-Congo language family and have no known relationship to either Luo or Kipsigis which are both members of Greenberg's Nilo-Saharan family. Linguistically Gusii's closest relatives are Kuria (Tende) which is spoken just to the south of Gusii in Tanzania and Logooli (Maragoli) which is spoken just south of the equator and north of the Luo tribal area. Of other languages, the various languages and dialects which constitute the Luyia group and Kikuyu are probably the closest relatives.

The relationship of Kipsigis and Luo has implicitly been the subject of some controversy. In traditional terms, Kipsigis, along with Nandi, Maasai, Turkana, Teso, Bari, etc., is a Nilo-Hamitic language, while Luo, along with such languages as Acoli, Shilluk, Dinka and Nuer, is a Nilotic language. Originally, Nilo-Hamitic languages were considered to be either of mixed origin (Westermann 1912) or of ultimately Hamitic origin (Meinhof 1912) with heavy Nilotic borrowings.

Greenberg (1966) rejected both of these notions and grouped Nilotic and Nilo-Hamitic together. Today most linguists

would probably agree with Greenberg that there is no question but that the Nilotic and the Nilo-Hamitic languages are genetically related. Greenberg's grouping of the Nilotic languages into three coordinate branches: Western (including Luo), Eastern (including Maasai, Teso, etc.) and Southern (including Kipsigis), and his statement that the Southern group is as distinct from the Eastern as from the Western (1966:85,128) are perhaps not wholly accurate as there are many features shared by the Eastern and Southern groups which are not found or only found sporadically in the Western grouping. These features include a typical sentence order of verb-subject-object (Kipsigis, Maasai), two major morphological classes of verbs which are distinguished tonally and in many languages also by the presence of a prefix in one class (Kipsigis, Maasai), dual aspect systems (Teso, Kipsigis), tonally distinguished cases (Kipsigis, Maasai).

The term Paranilotic has been coined by Tucker and Bryan (1966) to cover Greenberg's Eastern and Southern groupings (i.e., the old Nilo-Hamitic) and to indicate the connection with Nilotic, but at the same time to emphasize the close degree of relationship implied by the above evidence. What this means for Kipsigis and Luo is that they are genetically related (share a common proto-language) but quite distantly. As stated above, neither language has the remotest relationship with Gusii. Luo's closest relatives linguistically are found in Uganda--Padhola, Acholi and Lango. Kipsigis' closest relatives are primarily in Kenya and are grouped together in a

grouping called Kalenjin by the speakers themselves. These languages include Nandi, Geyo and Pakot. A somewhat more distant relative is Barabaig or Datog in Tanzania. The Gusii display linguistic affinities with both the Inter-Lacustrine Bantu and the Central Kenya Bantu groups. These latter groups have, until recently, been considered to be of coastal origin and the question of Gusii origin has remained a difficult problem. Recent historical research, however, presents a substantially more reasonable account of Kenya Bantu origins (Ochieng' 1970). There is apparently no basis for the previously held beliefs that the Kikuyu, Kamba, Embu, etc., migrated from the coast. With the exception of one section of the Meru, the Tharaka, which probably did come from the coast, these groups state either that they have been in their present lands since time immemorial or that they entered their territory from the northwest. The Gusii also all (i.e., all clans or sections) indicate an origin in this direction and in particular to the north of Mt. Elgon. From there they either went in broad sweep to the east of Kalenjin occupied land or went by way of the lowlands south of the Nandi escarpment which were later occupied by the Luo. The closest linguistic relatives of the Gusii (excluding the Kuria who at this early date were probably one with the Gusii) are the Maragoli who live just above these plains, and this factor as well as Luo accounts of encounters with Bantu groups supports this route. Judging from the Luo accounts (Ogot 1967:207) there were Gusii on the Kano plains about 1760. From there at least some of the Gusii were driven to Gelegele on the present Gusii-Kipsigis border

where they stayed some thirty years before being driven out by the Maasai. Two routes were followed from Gelegele. One, to the northwest, ended in escape from the Maasai but a state of subjugation under Luo protection. The state was ended by revolt in 1820. The second route, to the north, involved fighting with the Luo as well as with the Kipsigis. At least some raiding and fighting with the latter was carried on until near the end of the 19th century.

The Luo, whose early history has been thoroughly treated by Ogot (1967), reached the northern part of their present lands some time between 1490 and 1600 (1967:28), and the occupancy of South Nyanza (which involved movement around the shore of Lake Victoria as well as into the hills to the southeast began c. 1733-1760 (1967:152). During this process numerous Bantu groups were assimilated or expelled, the Gusii in particular being among those pushed back. With one exception, a battle at Nyabondo Hill which took place in the latter part of the 19th century, encounters with the Kipsigis were not frequent.

Unlike the Luo and the Gusii, historians have not yet worked with the Kipsigis and except as noted below anthropologists have also not dealt with historical matters. Linguistic evidence points to a possible dispersal point on or near Mt. Elgon for the Kalenjin group as a whole, and the southernmost Kalenjin group, the Barabaig, also recall coming from a large mountain (although the reliability of this tradition cannot be vouched for). The first ethnographer of the Kipsigis,

Orchardson (1929:5), states that the Kipsigis first encountered a people known as the Sirikwa when they moved into their present lands. In southern Kipsigis country elders still recall accounts of encounters with these people. Who the Sirikwa really were is an unsolved question. Although the people have long since disappeared there is abundant evidence of their former presence in the form of large circular depressions in the ground which are found scattered throughout Kipsigis country. Orchardson also states that the Kipsigis encountered Maasai in what is presently Belgut (north Kipsigis), Gusii in Bureti (central Kipsigis where in fact many place names are of Gusii origin), and probably Kuria in Sot (southern Kipsigis). The Kuria (or Nata) were assimilated and the Gusii and Maasai pushed back, a process not completed until the latter part of the 19th century (1929:5-6).

It is not possible to date with any certainty the arrival of the Kipsigis into their present lands, but it is unlikely to have been earlier than the 18th century. The Kipsigis have a cyclical age-set system and attempts have been made to date their entry into their present lands by correlating this with the age-set of that time. Peristiany states (1939:43) that during the Chuma age-set the Kipsigis were occupying their present lands. As he favors a 15 year duration for an age-set this gives a date of c. 1835. Orchardson favors a twenty-one year period and gives 1796-1817 as the time of the Chuma age-set.

1.3.2 Present day relationships and modes of life

At present the Luo tribe is located principally in the (relative) lowland area around the northeastern shore of Lake Victoria. It is bounded on the east by highlands which are inhabited by Kipsigis to the north and Gusii to the south, and on the north by highlands which are inhabited by Luyia (Bantu) and Nandi (Paranilotic). The Kipsigis tribe is located entirely in highlands (5,000-7,000 feet) and on the east is bordered by extensive tea plantations and by the Mau forest. The savanna area to the southeast is inhabited by Maasai and the highlands to the south by the Gusii. In Kenya the Gusii are bordered by the Luo (west and northwest), the Kipsigis (northeast) and the Maasai (southeast). The Kuria (principally in Tanzania) are neighbors to the south.

All three tribes are now primarily agricultural on a subsistence basis. In addition the keeping of cattle is an important part of the economy although none of the tribes is presently pastoral. Among the Kipsigis and Luo cattle keeping was formerly a primarily male occupation with young men of warrior age living with the cattle at times when it was necessary to move some distance in search of better grazing. Today, as nearly all land is owned or occupied, cattle as well as people are tied to the homestead and cattle keeping tends to become the chore of women, young children, and the aged.

Since the only means of acquiring land now is by cash payment or inheritance a very high premium has been placed upon education as the best means of acquiring a cash income. Cash crop agriculture (maize, tea, pyrethrum, coffee) is also

practiced to an increasing extent, particularly by the Gusii who are among the most productive tribes in Kenya in terms of their contribution to the national economy. The keeping of dairy cattle and the sale of their milk is also common among the Kipsigis and the Gusii.

Inter-tribal contacts are, with one exception, not common. Gusii-Kipsigis interactions are almost entirely confined to a few market towns along the tribes' common border (Roret, Sondu, and Sotik). Contacts of Kipsigis and Gusii with Luo are relatively frequent (although the converse is not true) for two reasons. First, nearly all markets in Kipsigis (i.e. not just border ones) are visited regularly by Luo craftsmen selling pots, mats, rope, etc. Second, large numbers of Luos are employed as agricultural help by Kipsigis and Gusii. These Luos often bring their families with them for at least part of the year, and in some parts of Kipsigis country the number of Kipsigis who are fluent in Luo (having learned it while children) is quite large.

Footnotes to Chapter I

1. Here I was assisted by Prof. Phillip Gulliver, a social anthropologist who has long worked in East Africa, although not with any of the three tribes.
2. Television equipment, at least of the portable, field-use type, does have two major disadvantages compared with 16mm cine equipment. The first is the lack of a time base such as can be provided for cine film either by frame counting or more conveniently by the use of a frame numbered 'B' roll (Sarles 1966a). While scans on the video tape can be counted and durations determined, the procedure is a very laborious one and is hard on the equipment. In addition this still does not provide an overall time reference base. Secondly, detail (on half inch tape of American standard) is not as fine as is achievable with 16mm film. In practice what this meant was that movements of certain body parts, such as eyelids, could not be determined with accuracy on all of the tapes. Since in the present study micro-recording was not done, neither of the above difficulties created problems. It should be noted for future work, however, that attempts to make accurate estimates of frequencies of occurrence of specific behaviors should have a time reference base in order to help make it possible to set up objective decision criteria for considering a given movement an instance of a given behavior.
3. In Kenya only Maasai (Tucker and Mpaayei 1955) and Swahili (Ashton 1947 and Maw 1969) have been reasonably accurately and thoroughly described, and in Tanzania (in addition to Swahili)

only Yao (Whiteley 1966). Prof. Tucker is now in the final stages of preparing a full linguistic description of Luo for publication.

The material in this chapter is primarily a presentation and discussion of data for the language, Kipsigis. Due to the unavailability of the languages of the group studied and to the author's (Hollis) lack of familiarity with these languages, it was not possible to deal in depth with the linguistic aspects of Luo and the rest of them. Kipsigis was chosen because the available work of Tucker and Ryan (1964, 1965) gave the author a useful insight into the language, and because, as the author's field base was in Kipsigis land, it was the language which he heard most often on a day to day basis and in which he was generally understood when speaking and conversing. The choice was a fortunate one in that it allowed the author to study a language without any systematic collection of material (intensity and hence constituted a comparison with respect to English for the comparison of certain linguistic elements). This chapter is divided into three parts. In the first chapter, attention is given to certain wide areas of linguistic description and discussion: word-level form, sentence-level form (inflection), non-sentence and supra-sentential forms (intonation, emphasis, etc.).

CHAPTER II

The Linguistic Organization of Interaction

2.1 Introduction

The material in this chapter is primarily a presentation and discussion of data for one language, Kipsigis. Due to the complexity of the languages of the groups studied and to the author's (initial) lack of familiarity with tone languages, it was not possible to deal in depth with the linguistic portion of more than one of them. Kipsigis was chosen because the excellent work of Tucker and Bryan (1964, 1965) gave the investigator a useful headstart with the language, and because, as the investigator's home base was in Kipsigis land, it was the language which he heard most often on a day to day basis and in which he could acquire some degree of fluency in speaking and understanding. The choice was a fortunate one in terms of linguistic structure as Kipsigis is a language without any systematic utilization of stress or intensity and hence constitutes a polar type with respect to English for the comparison of certain kinds of kinesic behavior. This behavior is discussed in Chapter Three. In this chapter phenomena relating to various kinds of linguistic organization are discussed: word-level tone, sentence-level tone (intonation), semi-words and supra-sentence level interactional organization.

What is of interest here is the occurrence of these various linguistic elements in interactional and non-interactional contexts. A central issue to be dealt with is the question of the boundedness (or well-definedness) of language. As only a very small portion of the language is dealt with here any full answer to this question is impossible, but the implications of the examination here are interesting.

It appears that, in general, the elements present in a language as they might be uncovered by a linguist working with a single informant are also present in an interactional context. The word level tones and the sentence level 'question' tone in Kipsigis are present and presumably functional. There are, however, other phenomena which in all likelihood would not be discovered by the linguist, and which, if they were discovered, would not fit into any (traditional) niche in a grammar of the language. Among these phenomena are emphatic tones and semi-words. Such phenomena resemble non-gestural body movements in their difficulty of elicitation and hence in their virtual confinement to an interactional context. How such features should be incorporated into a linguistic description is not clear. There do not appear to be consistently reliable grounds for distinguishing traditional linguistic elements from these other phenomena. Criteria such as membership in a series, easy elicibility, etc. are by no means always applicable. Rather there seems to be more of a continuum with elements such as the kA-, kOO-, and kII- tense prefixes at one end and elements such as the 'insistive' -(I)s at the other.¹ Expressions such as

āaca, ācica, ā-a 'no' may fall in the middle.

While the existence of a large number of clear cases at the explicit end of the continuum (as well as the difficulty of using conventional field procedures at the other end) justifies the linguist's concentration on this end, the decision is more one of convenience than of principle. There is much work to do with linguistic elements whose status and function are not in question, but at the same time if language is to be fully and adequately characterized it is sound strategy to deal with the more difficult features as well.

The sentence has traditionally been the ultimate large unit of linguistic structure and attempts to discover higher order structure have not been successful. The conversational materials examined here support the notion that at this level structures which can be defined only with reference to their being made up of lower level elements (for example, sentences or clauses) are not found. In the conversations studied here the linguistic behavior of the interactors seems best understood in terms of two non-linguistic notions: 1) the distinctive roles of the interactors (speaker and listener, with different behavior appropriate to each role), and 2) a carefully adhered to rule of proceeding in small meaning increments in conversation. From these two notions various kinds of higher organizational structures can be derived: different kinds of speaker-listener interchanges, procedures for exchanging roles, procedures for maintaining roles, etc.

2.2 Word tone

2.2.1 The tones of Kipsigis as determined from recording and analysing contrasts found in isolated forms are three in number: high, falling and low (symbolized \acute{v} , \grave{v} and v , i.e. unmarked, respectively). The following sets of doublets illustrate these contrasts which, judging from the vast number of such sets, would seem to have a relatively high functional load, both lexically and grammatically.

Low-high contrasts: ²

<u>keekuut</u>	to ooze
<u>keekúut</u>	to blow (on fire)
kiisip	to follow this way
kiisíp	to follow after
<u>kiiákas</u>	I heard (some time ago)
<u>kíiaakas</u>	I have heard (some time ago)
yaan <u>kíkas</u>	'when we hear'
yaan <u>kíkás</u>	'when it is heard'

Falling-high contrasts:

kiimúut	to rumble
keemúut	to go around
laakōk	children (nominative case)
laakók	children (accusative case)

Low-falling contrasts:

keeken	to lie (tell untruth)
kiikēn	to expect, wait for
finken	you (sg.) know
ínkēn	he knows

ányiny tasty (accusative sg.)

ányiny tasty (absolute sg.)

Extensive work has made it clear that these and only these contrasts are present when words are given as isolation forms or in brief, grammatically contrastive utterances. As the examples given above illustrate, it is primarily by means of these tones that distinctions of case (nouns and adjectives) and aspect (verbs) are realized.

In pitch, a high tone is most frequently between a minor and a major third above a low tone. Both high and low tones are level. A falling tone falls from the height of a high tone to that of a low tone. The acoustic impressions are confirmed by instrumental measurements.³ For example, the high and low tones of the second syllables of keepar 'to take cattle' and keepáar 'to become wealthy' (AT 9, female speaker) had frequencies of 186.0 Hz and 232.5 Hz respectively. These frequencies comprise an interval of 386.2 cents (300 cents equals a minor third and 400 cents a major third of an equally-tempered scale).

In another example (AT 17, simulated dialogue, female speaker) naan kó 'that is', the frequencies are 231.3 Hz and 288.2 Hz, corresponding again to an interval of 386.2 cents. The following example of a falling tone is taken from spontaneous dialogue (VT 34-4, p.2, 1.19): mfi 'there is'. Here the pitch falls from an initial 268.6 Hz to 247.4 Hz, an interval of 149.1 cents.

2.2.2 Listening to the tones of words spoken in spontaneous dialogue reveals the existence of another word tone. This tone

is always higher than the normal high tone third above a neighboring low tone and often is higher than a fifth. It is accompanied by lengthening and probably by increased intensity, and is only found on what are in isolation high and falling tones. Both in function and in phonetic form it seems to be equivalent to what Pike calls extra-strong stress in English (1945:85). As its function is clearly emphasis, it is referred to here as 'emphatic' tone. The following are some examples, together with measurements, of its occurrence:

míitén 'there is' (VT 34-4, p.2, l.17)

Here the first tone is emphatic and falls over an interval of 824.3 cents (approximately a minor sixth). The frequency at the end of the falling tone is 324.4 Hz while the following high tone has a frequency of 384.0 Hz. The interval comprises 286.6 cents and illustrates clearly that an emphatic tone need not affect the intervallic relationships of tones of following syllables. This example should be compared with that of the same word given above. That form follows the one given here and is a non-emphatic repetition by the same speaker, of the emphatic form.

eemaanín 'that (over there) country' (VT 34-4, p.12, l.4)

The interval between the low tone and the emphatic high is 633.0 cents (between an augmented fourth and a perfect fifth).

2.2.3 Stress

Stress is not utilized in the expounding of the lexical and grammatical systems of Kipsigis and it is difficult to determine whether there are any consistent stress phenomena at all. The

emphatic tone described above is the only instance when it appears that differential stress is utilized in articulation and here it is associated with very high tone and lengthening.

Prominence is heard, but seems primarily to be a statement about the language background of the listener.⁴ The conjunction of a long vowel with a high tone surrounded by short vowels with low tones is consistently prominent to an English speaker:

mfi kasáarta 'there is space'

However a syllable which has only vowel length or only contrastive tone is not heard consistently as prominent:

ányóoné 'I'm coming'

kiiákas 'I heard'

A short final vowel with a high tone preceded by a low tone is heard as prominent, but this is undoubtedly due to the non-occurrence of short vowels in English in open syllables in final position and the combination of this phenomenon with contrastive tone.⁵

tuuká 'cattle (acc. case)' with prominence on the final syllable.

tuuka 'cattle (nom. case)' where the syllables are equally prominent.

There are no prominence phenomena connected with phrases or sentences which are not of the type described above. As far as is known no use is made of prominence in Kipsigis (except where associated with the emphatic tone).

2.3 Sentence level tone

2.3.1 Questions

Sentences which are yes-no questions in Kipsigis are marked with a sentence-final particle, -i/-i, which bears a very high,

often rising tone. If the final word of a sentence ends in a vowel this particle usually assimilates to the preceding vowel; in some cases it is omitted entirely and the final vowel itself takes the question tone. The pitch of this tone is always at least a fifth above a low tone and is often more. Frequently the pitch gives the acoustic impression of heading for the interval of an octave, although on measuring it appears that it rarely gets there and that the ear of the listener is supplying the effect. As far as is known this feature is only found among the Kalenjin languages. It is definitely not found in Luo or Gusii nor does it appear to be present in the more closely related Maasai. Although it may be possible to identify this question tone with the emphatic raised tone of the preceding section, two factors mitigate against this decision: 1) the tone is rising rather than raised and 2) there is normally no increased length such as occurs with the emphatic tone.

The following are some examples:

máce kípíkirúy keepe túkul tuulweet-í? 'Does Kipkiruy want us all to go to the mountain?' (AT17)

Here the final syllable before -í is said at 234.4 Hz while the -í at its highest point is 439.5 Hz. The interval as measured is 1093.0 cents (about a major seventh) and is clearly heard as an octave.

námé? 'Is (it) holding (it)?' (VT 35-4, p.5, 1.5)

The first high tone is 261 Hz and the question high is 328.5 Hz at its highest, an interval of 400.2 cents (a major third).

Note that the question particle is elided here.

Although the particle -í/-í occurs primarily with questions there are two other grammatically defined contexts in which it occurs. The first is in an idiomatic construction, *káale-í* 'I say', and the second is in listing. In both of these cases there follows an obligatory response on the part of the person spoken to. This is normally the semi-word *ee* 'yes'.

Examples:

káale-í 'I say' (VT27-3, p.2,1.14)

The low tone (on e) has a frequency of 118.7 Hz and the following *-í* a frequency of 182.0 Hz. The interval between the two is 736.2 cents (male speaker).

2.3.2 Emotionality and downdrift

If one listens to dialogue material (whether simulated or spontaneous) as opposed to words in isolation, it is clear that the pitch intervals between high and low tones are not constant but are subject to widening and narrowing. Two factors seem to be involved: position in the utterance and the emotionality of the speaker. The first high or falling tone in a sentence is usually higher in pitch than a following high tone which is preceded by a low tone. In the absence of a low tone (or until one occurs) all high tones following the first one are spoken at the same pitch. This set of tones will be called a non-low tone group. On occasion each successive non-low tone group in an utterance is lower than the preceding one giving a 'terraced' effect acoustically. This phenomenon was first observed by A.N. Tucker in Maasai (Tucker and Mpaayei 1955: 170-172) and termed 'downdrift' by him. In Kipsigis this relationship is most often found between the first and second non-low tone groups of an

utterance. Successive (to the second) non-low tone groups are most often at the same pitch level as the second. Degree of emotionality on the part of the speaker is expressed by varying the height of the first non-low tone group. This first tone group may have a pitch level of as much as a fifth above low tone base level. This relative freedom of pitch placement is sharply curtailed on coming to the second and succeeding non-low tone groups. The second group is usually in the vicinity of a third, and following tone groups tend to maintain the same interval. On rare occasions a third, fourth, etc. tone group may be higher than the second.

In the examples which follow note that the prior occurrence of a low tone (i.e. before the first high tone) does not affect the height of this tone group. ⁶

céeng' neeká 'look for the goat (or sheep).' (AT 17)

The interval between the first high tone and the following low tone is 648.5 cents (700 cents is a perfect fifth). The interval between the low tone and the following high tone is 289.4 cents.

ácéeng'é akó inkoró 'I'm looking for it, but where (is it)? (AT 17, the 'reply' to the above). Pitches are approximately fff cd ccd. Note that the three initial highs are on the same pitch and that the highs of the following two non-low tone groups are also on the same pitch, but lower than that of the first tone group.

kasút kwaanta kweentēet 'The woman picked up the (piece of) firewood.' (AT 17). The interval between the first low tone and the immediately following high tone is 653 cents. Note in these

examples that the raised high tones shown are acoustically quite distinct from the emphatic tones discussed earlier. Here there is no lengthening involved.

Ópéentíi tuun oocéeng'é ng'étuntá? 'Will you (pl.) be going looking for the lion?' (AT 12). Relative pitches are ggg c cec ece-g.

kaípú ng'aa péek éen sapúryéet? 'Who brought the water in the pan?' (AT 17). Approximate pitches are dgg c f f cee-c. This group is unusual in showing the tone of the second non-low group as quite high.

Compare the above examples, all said with some degree of emotionality, with the following examples said matter-of-factly.

ni kó sotéet 'This is a gourd' (AT 17) Pitches approximately c e ce.

íp saantúukuunyaan kwa ká 'Take our box home' Relative pitches: e cdbb b d. Note that the first low tone is not as low as the second.

ámáce akás 'I want to hear (it)' (AT 9)
Here the pitch of the first syllable is 245.6 Hz and that of the syllable of the second non-low tone group is 242.2 Hz. The difference between the two is 17.1 cents.

2.3.3 Register shifts

One sometimes hears pronounced alterations in loudness and/or pitch which extend over an entire utterance. On examination these utterances constitute major shift points (change of topic, change of emphasis). It appears that once the shift is accomplished the pitch and loudness levels return to a general 'normal'. If

the change is accompanied by excitement, pitch and loudness rise. In the Kipsigis conversation transcribed below (2.6) utterances 225 and 228 are examples of such shifts. In 225 A answers a question about weapons used in his area by saying that people no longer have any weapons there. In saying this his voice level is both higher and louder than in his preceding and immediately following utterances. In utterance 228, speaker B interrupts A to say that where he lives people still do have weapons. In this case also the pitch and loudness levels fall back to normal by the next utterance. It should be noted that there is a clear meaning relationship between utterances 225 and 228, but it is not clear if the relationship is underlined by the common use of a high register or if it is the emotional nature of the topic which gives rise to the register used in both cases.

If the change is not accompanied by excitement the register shift may be effected by reduced loudness. Such a case occurs in the portion of utterance 170 following the initial ee, where the scenario is changed by speaker B from A's area to his own. While loudness is reduced, pitch is not.

All of the Kipsigis conversations studied exhibit similar kinds of register shifts. Because the phenomena extend over an utterance they are extremely laborious and difficult to notate and study. Perhaps it may prove possible to instrumentally extract an average pitch and/or intensity level for given utterances and hence make comparisons (weighting each average for the relative frequencies of the various tones when dealing with pitch shifts).

2.3.4 Luo

The tonal system of Luo is extremely complex and cannot be dealt with here (see Tucker, forthcoming, for a full description), but because of their importance for the understanding of material in the next chapter two matters are briefly discussed here: stress and sentence intonation. Luo, unlike Kipsigis, has word-stress: every word, spoken in isolation has prominence given to one of its syllables (or to the one syllable if monosyllabic). This prominence is primarily effected by vowel lengthening and only secondarily by increased loudness. Since, in most languages which have word-stress, increased loudness is accompanied by increased pitch, it may be the case in Luo that the presence of a highly functional tonal system in some sense blocks the realization of stress by intensity. In any event, while a high-toned, stressed syllable may have increased loudness, a low-toned stressed syllable does not (it should also be noted that there is no length difference either which is conditioned by tone). Nonetheless it is appropriate to use the word stress here (as defined by Jones (1967:134ff)), because what is involved is not just increased length but differentially greater effort on the part of the speaker. The acoustic realization is primarily lengthening, but there is a body movement realization as well. As in English, minimal pairs showing contrasts of stress are relatively rare in Luo (see Jones (1967:146) for an hypothesis as to why this is so), but there is normally very little doubt phonetically which is the stressed syllable (dealing with words spoken in isolation). From a grammatical point of

view it may be said that stress is heard on stem vowels. Stressed vowels are lengthened except in final open syllables (and in a few isolated instances elsewhere). Hence CV words have short vowels (which are, however, prominent through increased loudness and possibly other factors).

Examples: ⁷

ultimate stress:	<u>nyathí</u>	'child'
	lê	'animal'
penultimate stress:	<u>nyá:dhí</u>	'pride'
	lé:ni	'this animal'
antepenultimate stress:	oi:morē	'good evening' (AT7)

As has long been noted for English stress (Pike 1945:87-88), Luo word stress is subject to variation when words are embedded in actual utterances. In Luo stress is usually found only in pre-pausal position and hence there are no secondary and tertiary stresses. If one compares ísomó kitā:bu 'you are reading a book' with íso:mo' 'you are studying' (AT7) there is a clear difference in length between the second syllable of ísomó and that of íso:mo'. The stress in the former has been reduced.

Luo, unlike Kipsigis, does not have any question-tone. Nor is stress utilized differentially in asking a question. Rather, a combination of higher base pitch ('key') and possibly a wider interval separation of the pitches of different tonemes accompanies a question. Compare the following sentences spoken in close proximity to one another (AT7): ngato obí:ro' (ee egf) 'the person has just come' and ómiyógi barú:a? (baaa gbe) 'is he giving them the letter?'. In the first example the highest

pitch reached is a third lower than the high pitches of the second example. Also to be noted in the second example is the absence of downdrift where it might be expected: the penultimate syllable of the final word is as high as the initial syllable.

2.3.5 Gusii

Gusii occupies an intermediate position between Kipsigis, which is without prominence features, and Luo, with stress. As in Kipsigis, stress in Luo has no function in the expounding of the morphology or in the lexicon, and words spoken in isolation show only weak and inconsistent prominence phenomena. Whiteley, without attempting an acoustical characterization, states:

"Prominence (in Gusii) tends to occur on the radical if this is of a shape (VC, CVC, CVVC, CV), and on the first syllable of long radicals. In such long radicals there may be a subsidiary prominence on the final syllable (1960:6)." This statement is identical to Whiteley's description of prominence in Yao, a Bantu language of Tanzania, except that there the description is stated to apply to stems as well as radicals, and prominence on monosyllabic radicals is stated to be slight (1966:7).⁸

However, in interactional conversation there are definite stress phenomena (i.e. syllables with distinctive loudness) as well as instances of prominence which involve tone as well as loudness: much more than Luo or Kipsigis, the conversational stream in Gusii is broken into pieces by pauses and prepausal intonation features. A characteristic intonational feature involving high pitch and increased loudness is found before pauses internal to the extended utterance. It may be followed by an assentive response (e.g. eé 'yes').⁹

In the following examples, a comma indicates a pause-point with a high tone and increased loudness on the preceding syllable (sometimes syllables).¹⁰ B: nāacíéte (e)skú¹⁰ú, (A:mm) ínka¹⁰gēnd(a)

ómotienyi oyómó, taatá... (cont'd) 'I went to school,
(B:yes) and I went for one month, father...' (VT 15-3.1.1)

Compare the prepausal tones with the isolation forms of the same: éskuru 'school', óyomo 'one (Class 3 prefix)'.

B: éskuru nabó óráányóóre onye gokorem(a) ámaúgá, (A:mm)
ónyoore cíbeesa ógore fíis, (A:mm) ónyoore cíbeesa ógore cíángá,
(A:mm) nabó (o)koyenyoora. 'Thus you will be able to go to
school if you cultivate pyrethrum, (A:yes) so that you may get
money to pay fees (for school), (A:yes) so that you may get
money to buy clothes, (A:yes) in that way you will obtain it.'
(VT 15-3.1.13)

Here compare the isolation tones of ámaúga 'flowers (used with
reference to pyrethrum)' and cíanga 'clothes'. The final word,
okoyenyoora (literally, 'you-it-obtain'), is markedly soft with
respect to the prepausal words.

2.4 Semi-words

In Kipsigis there is a fairly large class of particles
which do not fit any of the traditional word classes (which them-
selves may be quite satisfactorily defined). These particles
have a very fluid tonal structure and an unusually variable phonemic
composition (this variability is not only found in actual con-
versational material but in informant's variability in assign-
ing tonal and phonetic shapes, in sharp contrast to full words
where there is no such variability). Most of the particles do
not occur in isolation, but only in actual interaction. They do
not form part of any paradigmatic system (such as tense, plurality,
definiteness, etc.), and in some cases have expressive func-

tions which are nearly impossible to pin down. The listing below is divided into two parts: forms which can occur in isolation (as single utterances) and 2) bound forms. Free forms are distributionally limited to response contexts in conversation. The glosses are tentative and approximate only.

Free forms:

1) ee, mm, ehée 'yes' This particle functions not just to answer questions, but to comment in a positive way on a speaker's statement.

a) 194.B: aní amaalo? 'And the Amalo (River)?'

195.A: ee kyaakas 'Yes I've heard (of it)' (VT5-2a)

b) A: kaséerēec keméut éen éemāani 'Drought is about to finish us in this country.'

B: ee 'Yes (it is)' (VT35-2.1.11)

2) áca, áaca, ácica, ácica, é-e (hyphen indicates separation by a glottal stop) 'no'

máce íceek meesoosyéek-í? 'Do they want tables?'

ácica máce ng'ceróok kityo 'No they just want chairs.'

3) ára, āa 'of course' often used with -pak

a) A: ee makilēen kakíinte tóloytá káat-í? 'Yes isn't it said that the center pole is fixed in the house?'

B: āapak 'of course' (VT 1-1.3.10)

b) A: só áme sákēek een káaríik alák? 'Then the (cattle) are eating leaves in some homesteads?'

B: árá maámé? 'Of course, aren't they eating (them)' (VT35-3.3.31)

4) āāá 'so I see' 'is it so?' (this particle is quite sim-

ilar to English ooh? expressive of surprise and a bit of sarcasm, and although neither of these connotations is present here a response from the speaker is required).

a) A: aakéere ūu ng'écín suuswéek iin káap áráap iin...

káap áráap áráap ceemāasít 'I understand he is cutting grass, uh, at the home of M., uh,..., the home of Mr., Mr. Chemosit.'

B: āāá? 'Is that so?'

A: ee 'yes' (VT 1-1.9.1)

b) A: salwéet 'cooking utensil'

B: āāá 'Is it not so?'

A: mm 'yes'

5) éyye, éuco, co, ó expressions of surprise

See utterances 31 and 39 in the transcription of VT 5-2a (2.6).

6) áya from Swahili haya 'now then'

B: ... makáamwāa ínyee ng'aleek áng'wān óo? 'Haven't I said four words?'

A: ee 'yes'

B: áya kómáce káaynúutíkywaak... 'Now then their words are needed' (VT1-1.2.9)

7) alá from Swahili ala 'indeed'

See utterance 121 in the transcription of VT 5-2a.

8) sōo, sōoe, sōe 'is it not so?'

a) A: kakípa kimóonycók 'we are going to the peak of the house'

B: kimóonycók 'the peak of the house'

A: sōe? 'It's so isn't it?'

B: mm 'yes' (VT1-1.3.8)

b) See under example 3b above (árá)

c) A: kípéentii Máasāy sōe? 'We are going to Maasai-land aren't we?'

B: ee kípéentii Máasāy 'yes we are going to Maasai-land' (VT 34-2.2.8)

9) aní, aní 'what about...?' a question introducer

See utterance 194 in transcription of VT 5-2a

Bound forms:

10) ô normally follows imperatives; indicates a state of excitement on the part of the speaker and gives an immediacy to the action--what is to be done must be done immediately for to delay would be to miss it or be too late, etc.

No examples are available in context. The following examples were elicited:

kás 'listen!' kas ô 'listen right away'

kéer 'look' keer ô 'look quickly'

11) ípak/pak (latter form following a vowel) expresses entreaty, insistence.

A: kíikong'éet ípak-í? 'Have they come out of seclusion?'

B: ee 'yes'

A: tōoma 'not yet' (answering self)

12) is/s (latter form following a vowel) expresses impatience,

irritation, slighting.

a) B: māanken amúun máa ciitás ne síire 'I don't know because I'm not a person who writes' (VT7-1.1.14)

b) B: kēelēs ankot kó kó keenām kiing'óol kó kákoyáíit
'And it was said that if we took and mixed (them) then it was bad' (VT7-2.6.26)

c) B: ee ák tuun ínyōon ís kaaroon kiināam ís
'Yes, and when you come tomorrow we may start'

A: ee 'yes' (VT 35-2.1.26)

13) āny, ānyun indicates readiness, the state of 'just now.'

B: kó kōong'úun āny kó mfi áno éen irōyu? 'So whereabouts is your house around here?' (āny follows the word 'house-your')
(VT 34-4.3.23)

14) ōo expresses intimacy and friendliness; used between age-mates especially men.

a) A: íle íi nēe ōo? 'What are you saying you are (referring to age-set)'

B: áa Nyāanki 'I'm Nyongi' (VT 7-1.1.20-21)

b) B: máanámíin euut-í? 'Won't I take your hand?'

A: ínámáan euut óo? 'You'll take my hand?'

B: ee (VT 34-2.2.15) ¹¹

15) ee Occurs in utterance-final position and is used by adults in speaking to children in an insistent way.

a) Ceerootíc nyōon ee 'Cherotich (girl's name) come here!'

b) Ceepkéemáa ipuun pēek ee 'Chepkemoi (girl's name) bring the water here!' (VT 23-2, woman speaking to her children)

These particles could well be considered suffixes, but their behavior is quite distinct from that of suffixes which normally exhibit vowel harmony (or themselves cause the same) with the vowel of the word with which they are associated. The forms above are invariant in vowel quality and those with close vowels exercise no influence on the words they modify.

2.5 Supra-sentence linguistic organization

All three of the tribes share in common a basic conversational pattern in which two features stand out as distinctive: 1) the roles of speaker and listener (non-speaker) are very sharply demarcated and 2) the listener's verbal behavior tends to be highly restricted but highly regular and frequent.

The role of the listener is active in that he is continually responding to the speech of the speaker, but he does this in such a way that he contributes little in terms of content. The regular occurrence of a response on the part of a listener breaks the conversational stream into statement-comment groups. In general a speaker is concerned with a single, delineable topic (i.e. at any given point it is possible to decide what is being talked about--this does not mean that the conversational stream is divided into topics. Matters may slide into one another in very subtle ways.) Verbal behavior at some topic change points is distinctive, in particular those where speaker and listener exchange roles.

While in some circumstances at least, there may be an overall organization to a conversational interaction, this matter is not dealt with here. The videotaped conversations, while

spontaneous with respect to what was talked about, were as events themselves not natural and their timing with respect to continuity of interaction within the conversation and with respect to total duration was not necessarily spontaneous. For this reason the tapes do not constitute suitable material for investigating this kind of organization.

Although a breakdown into statement-comment groups is often characteristic of ordinary conversational interaction, there are numerous special circumstances in which these groups do not occur. These include story-telling, talking to young children (which can be a very one-sided affair), speech-making, preaching, and sometimes teaching. The basic characteristics of these 'semi-interactions' is the absence of someone to fill the role of comment-maker. In his stead one finds that speakers break their utterances up with frequent use of particles such as basi 'well' or haya 'now then' (both from Swahili) and wherever feasible, speakers also actively elicit response from listeners. Public speeches in general in East Africa are characterized by frequent elicitation of audience response on the part of the speaker. These special interaction types are not basic, but probably constitute derived systems. While their study as such would be highly worthwhile they will not be considered further here. Only the organization of conversational interaction is dealt with below.

Statement-comment groups are of various types: a yes/no question and reply, a content question and reply, a rhetorical question and reply, a statement and a repeat of that statement

or a fragment of it by the listener, a statement and assentive reply, an incomplete statement completed by the listener, a statement followed by a comment which is itself followed by a comment by the speaker. These various types of groups do not occur randomly within a conversation as will be noted below.

Since it will be quite difficult for the reader to follow 'cold' an examination of conversational interaction in Kipsigis, a simpler but related system is first given in some detail. The dialects of Swahili which are often used in Kenya for communication between members of different tribes (each with their own complex vernacular) are grammatically truncated versions of standard Swahili, and the interaction systems (although they have not been studied in any detail) appear also to be somewhat less complex than those of the various tribal languages. In this section we will look at the structure of one of these Swahili interactions. ¹²

The conversation is divisible without too much difficulty into a number of more or less discrete topics. In large part this is possible because each topic has its own speaker (that is, within a topic there is no interchange of role). The speaker does most of the talking and the listener comments on and elicits from the speaker. Very few utterances are over a few phrases in length and every pause on the part of the speaker is punctuated by an utterance of the listener. Topic transitions normally do not constitute an exception to this pattern of alteration but occasionally it is unclear who will initiate a new topic and both speakers may start at once. Out of sixteen transitions, this

occurs twice.

Within-topic structure is centered about a topic-eliciting question which frequently takes building up to. There may then be some exchanges eliciting more detail from the questioner and then the questionee takes the role of speaker. Thus the answer following the central question has a pivotal role; it is a response to the question, but it is oriented to as a statement by the questioner. Topic endings have three elements: a final statement by the speaker, a comment by the listener and a final comment by the speaker (the last two elements may occur twice).

It is clear that at this point it is the listener's turn to speak, but that he has no material to orient to. It is up to him either to continue in his role as listener by asking a question (or beginning a series of statements leading up to a question) or to assume the role of speaker by making a statement himself or by (by his silence) allowing the previous speaker to assume the role of listener by asking a question. In this conversation, of the sixteen transitions, the listener continues in his role fifteen times. At the one point where the roles change the previous speaker assumes the listener's role by asking a question (this occurs roughly midway in the conversation). The following is an expandable picture of the within topic structure of interactive sequences. Parentheses indicate optional components: ¹³

(S C)

(S . C)

(S C)

Q (Q)

A	Q
A)	A
C	S
C	C
(C	C)

The first four topic groups of this conversation (comprising utterances 1-74) are given at the end of this chapter in transcription and translation and illustrate clearly the structure discussed above.

With the Swahili conversation as a basis we may proceed to discuss a considerably more complicated Kipsigis conversation (VT5-2a). This conversation was between two secondary school students who, since they were from widely separated and culturally and ecologically quite distinct areas, chose to describe and compare their respective homes. The complexity found here is due primarily to an enlarged role for the listener and in general a more fluid interchange with respect to the occupancy of the speaker and listener roles.

Rather than a simple assentive comment the listener often repeats a section of the speaker's utterance. This may vary from repetition of the last word only to repetition of the entire utterance:

16. B: koróok ne táay né kyásoománêe kyásománêe sùkúulít
ne kíle Mēenkít 'The first place I studied at I studied at a school called Mengit.'

17. A: Mēenkít 'Mengit'

97. A: araampē proeksíicu kó kotaa kēe 'These cooperative projects which have recently begun.'

98. B: ee araampē proceksíicu kó kotaa kēe 'Yes these cooperative projects which have recently begun.'

The listener may also add on previously unspoken material to his initially repetitive comment. This new material may then elicit a response from the speaker (rather than the speaker continuing in his role as the presenter of the new material in the conversation). Thus:

40. B: kík^wáng'e kityo. 'its just amazing'

41. A: kík^wáng'e kityo. áké eemáanāan. 'Its just amazing. That country is something else.'

42. B: áké eemáanāan. 'That country is something else.'
More rarely the listener's response is not based directly on any part of the speaker's utterance (and again results in a shift of roles).

101. A: kó lōo éen kooreenyuun, kó aaiin aanyóone kōoyumi kēe paíisyek kiimáce kole kotéec tít nenywāan een Kāaptapayti. 'But its far from my home, and the other day when I came (from there) the elders were getting together wanting to build their own cattle dip at Kaptoboiti.'

102. B: yāani pa serkáli néng'wáng'. 'So yours belongs to the government.'

103. B: ee ne pá serkáli nényāan. 'Yes ours (i.e., the dips we presently use) belong to the government.'

These examples show that a single utterance may either be broken into two portions, one functioning as a response to the previous statement and the other as a statement itself, or that the entire utterance may have these two functions.

A consequence of this fluidity is that the topic is not always well-defined both with respect to content (i.e., there is no major change of content within that portion of the conversation said to comprise a topic) and to higher level structural organization, in particular the regular interchange of speaker statements and listener comments. In the Swahili conversation it was noted that the ends of topics were characterized by comment-comment sequences and that the beginnings of topics were characterized by question-asking on the part of the listener-to-be. Both of these features are of frequent occurrence in the Kipsigis conversation but often in situations where in terms of content there is no major change (only the minor change brought about by the question). Utterances 6,7,8 and 9 comprise one such sequence, these utterances being functionally statement, comment, comment by the speaker and question (by the listener). Similarly the following example:

107. A: kílípánii éen teetá ake túkūl éen teetá ake túkūl peesanāani. 'We pay for each cow for each cow twenty-five cents.'

108. B: peesanāani. 'Twenty-five cents.'

109. A: peesanāani. 'Twenty-five cents.'

110. B: peesanāani. 'Twenty-five cents.'

111. A: aní éen oliing'wāang'? 'And how about over your way?'

Note here that although there is no topic change there is role change as the individual asking the question was the prior speaker. This did not happen in the Swahili conversation.

While the relatively straight-forward organization of the Swahili interaction might tempt one into assuming that there are such things as topic units and statement-comment units for Kipsigis an attempt to develop these notions seriously would be very frustrating. Possibly if one wanted to program a computer to carry on a semblance of a conversation in Kipsigis such notions would be useful. In dealing with the real language, however, they are not easy to apply nor, I think, are they insightful.

The point of view which does lead to some understanding is not a units one but a process one: what gives conversation its forward flow? The answer (recognizing that underlying this all is the conventional agreement that such forward flow indeed occur) is by the introduction of new material. The accomplishment of this task is basically what defines the role of speaker. When the speaker flags in this task the listener may either attempt to stimulate him by means of a question or may himself assume the role of a speaker.

In general, a speaker proceeds in small 'meaning' increments, and for this reason, in the absence of outside influence, sticks to a topic. At those points where the process needs a shot in the arm it is possible that the topic may be altered slightly or even completely changed. But this is not necessary; what is necessary is that the conversation flow. Hence we may say that while topic groups may be found they are an outcome of the procedures used to maintain a conversation and these same procedures need not always result in a conversation which has readily

determinable topic units. While of course there is no way to conclusively demonstrate it, I think that it is not always the case that there are such units as topics from the point of view of the interactors. What there are are procedures for conversing.

On a lower level, the same point may be made with respect to the nature of the sentence as a linguistic level. Sentences occur as often as they do in interaction perhaps at least partly because they constitute good structures for the dual task of delivering new material while meaningfully relating it to old. In the video-taped conversation under study, out of 226 utterances, 128 are full sentences. If we divide this collection into the functional categories of statements and comments we find dramatic differences. Of 99 utterances which function as statements (i.e. which bring in new material to the conversation), 81 are full sentences. Of 129 comments only 47 are full sentences. Clearly sentences do occur in conversational interaction, but their occurrence is quite bound up with their function.

Why successive statements by speakers should progress in small increments with respect to meaning is not clear, but it is definitely the norm here. We may examine the first set of utterances of the Kipsigis conversation to see what a 'small increment' is. The broad topic seems to be the home area of B, the southernmost portion of Kipsigis land, Sot. From Sot the conversation moves to Longisa, the town in Sot nearest to B's home, and from Longisa to Kiprereres which is the name of B's home area proper. Here the conversation la... and A asks if B went to school there.

B answers yes and then assumes (or reassumes) the role of speaker, moving from studying at Kipreres to the first place he studied at, Mengit. Mengit is near to the Amalo River, the Amalo River is the border with the Maasai (a neighboring tribe), etc. Each statement is meaningfully related to the previous one yet introduces something new.

Illustrative Conversation: Swahili (fragment only)

1. A: Habari...habari ya hiyo mzee?

What's the news...what's the news of that old man?

2. B: Mzee gani?

What old man?

3. A: Mzee yule, yule mwenye ndovu.

That old man, that one with the elephant.

4. B: Oo, yule mzee naenda juu?

Oh, that old man who goes up (there)?

5. A: Ee.

Yes.

6. B: Yeye alikuja tu.

He just came.

7. A: Eh-heh.

Eh-heh.

8. B: Alikuwa halafu alikuwa ametuma kijana yake,

He came but then he had sent his boy,

9. A: Eh-heh.

Eh-heh.

10. B: aende akaangalie halafu kama kijana yake naona hii

to go and look (at the elephant) and then as his

ndovu iko na...na meno yote,

boy saw that the elephant had his...both his tusks,

11. A: Mm-hm.

Mm-hm.

12. B: atakuja nafikiri atakwenda kupiga ripoti kule kwa game.

He's coming and I think he's going to fill out a report

over at the Game Department.

13.A: Oo.

Oh.

14.B: Aa.

Ah.

15.A: Aa-ha.

Uh-huh.

16.B: Ndiyo.

Yes.

17.A: Lakini mara huona mawe mawe kubwa kule,

But now you see the big rocks over there,

18.B: Ah-ha.

Uh-huh.

19.A: Yote inatiririka maji?

Do they all have a bit of water?

20.B: Hapana.

No.

21.A: Ee.

Yes.

22.B: Hatuwezi kusema yote iko na maji.

We can't say that they all have water.

23.A: Eh-heh.

Eh-heh.

24.B: Walakini iko ingine ambayo iko naye.

However there are some which do.

25.A: Eh-heh.

Eh-heh.

26. B: Kama kwa mfano hii ambayo inalingana na kampi yetu.

For example like this one which is next to our camp.

27. A: Ee.

Yes.

28. B: Aaa...na ingine ambayo hatuwezi kuona hapa sababu

Uh...and another which we can't see from here because
ya hema hii.

of this tent.

29. A: Ah-hah.

Uh-huh.

30. B: Na ile ingine ambayo iko kule upande wa north.

And that other one which is over to the north.

31. A: Eh-heh.

Eh-heh.

32. B: Ee.

Yes.

33. A: Oo.

Oh.

34. B: Ndiyo.

Yes.

35. A: Na ile msituni?

And that forest?

36. B: Hm?

Hm?

37. A: Aa, habari ya ile ndovu alisumbua wewe siku ile?

Uh, what about that elephant that was bothering you
that day?

38. B: Nakuambia bwana,

I tell you man,

39. A: Eh-heh.

Eh-heh.

40. B: Nilkuwa nachunga hapa kwa msituni.

I was herding here in the forest.

41. A: Eh-heh.

Eh-heh.

42. B: Halafu nilikuwa na elekeza ng'ombe kule kwa mlima

kule juu pahali iko nyasi mingi.

Then I was heading the cattle over there to the mountain,

high up over there where there's lots of grass.

43. A: Mn-hm.

Mn-hm.

44. B: Halafu wakati umefika wa mimi kuleta ng'ombe kwa maji.

Then the time came for me to take the cattle to water.

45. A: Aa-ha.

Uh-huh.

46. B: Halafu kuleta kwa maji,

Then taking them to water,

47. A: Eh-heh.

Eh-heh.

48. B: Mimi kutaka...aam kutaka kuteremukia pahali iko maji,

I wanted...uh I wanted to go down to where the water was,

49. A: Mn-hm.

Mn-hm.

50. B: bahati mbaya ndovu anaye iko chini hapo nafikiri
By bad luck the elephant was down below there I think
ilikuwa natoka kwa pahali ya maji.
he was coming from where the water was.
51. A: (laughs) Ikakusumbuliaje?
(laughs) And how did he bother you?
52. B: Ilikuwa nataka kurudisha mimi kule kwa mlima ya Kiteng'.
He wanted to push me back over there by Mt. Kiteng'.
53. A: Eh-heh.
Eh-heh.
54. B: Sasa kielekezo nilikuwa ninafanya,
Now what I did,
55. A: Eh-heh.
Eh-heh.
56. B: Mimi na...mimi najaribu kutibia moyo kwa maana unajua
I...I tried to take heart because you know the way
kawaida ya ndovu kama iko pahali ya juu,
an elephant behaves when he's in a steep place.
57. A: Mm-hm.
Mm-hm.
58. B: Hapana rahisi sana kukimbilia ikiwa kule juu.
Its not easy for him to escape in a steep place.
59. A: Eh-heh.
Eh-heh.
60. B: Maana yake ata, ata yeye najua kwamba...aam unaweza
That is he'll, he'll he knows that...uh you can hurt
kumwumiza ikiwa pahali ya juu.

him in a steep place.

61. A: Ee.

Yes.

62. B: Na si rahisi tena kwa ndovu kupanda.

And its also not easy for an elephant to climb.

63. A: Eh-heh.

Eh-heh.

64. B: Maanake ni kitu mzito.

Because he's heavy.

65. A: Mm.

Mm.

66. B: Eh-heh.

Eh-heh.

67. A: Na ile rayeni yenu alikusaidiaje?

And that helper of yours, how did he help you?

68. B: Rayeni bado maanake yeye alikuwa na upande mwengine

The helper couldn't because he was on the other side
na ng'ombe.

of the cattle.

69. A: Eh-heh.

Eh-heh.

70. B: Na mimi nilikuwa kwa u...kwa upande wa mbele.

And me, I was in...in front.

71. A: Eh-heh.

Eh-heh.

72. B: Kwa hivo ni, ile kitu nilifanya ni kumjulisha tu

So I, what I did was just warn him of the elephant danger.

kwamba kuna hatari ya ndovu.

73. A: Mm-hm.

Mm-hm.

74. B: Kwa hivyo aji...aa, ajiweke tayari kwa kuepaepa kama
kama ikija.

So that he,...aa, so that he get ready to get out of
the way if it comes.

Illustrative Conversation: Kipsigis

1A: ámu nēe oliin pá kooreng'uung' ány?

How are things over by your home area?

2B: cáme kēe oliin pá koorenyuun ínē.

Its fine over by my home area.

ák ánēe áaményé oliin pá Sāat.

And me, I live over there by Sot (a major geographical division).

3A: ímeng'úunēe Sāat.

You live in Sot.

4B: áménye Sāat kómósí éep iin Lónkísá.

I live in Sot this side of Longisa.

5A: Lónkísá eemeet.

The place is Longisa.

6B: kó ínkeemíi Lónkísá korá, kēepēentíi máeeliisyék

And when one is at Longisa one still has to go five

mút kéepá ole kíle Kipreerēes.

miles towards a place called Kiprereres.

7A: Kipreerēes.

Kiprereres.

8B: Kipreerēes.

Kiprereres.

9A: sō kiiísoománēe...

So you were studying at...

10B: interrupts

11A: kíiilikas sukuulínaan kípáre Kipreerēes.

You've heard of the school called Kiprereres.

kiiísoománēe sōe?

You were studying at Kiprereres weren't you?

12B: kyásoománēe Kipreerēes.

I was studying at Kiprereres.

13A: āāā.

I see.

14B: sukúulínyuun eemáanāan.

That place is my school.

15A: starts to speak but interrupted

16B: koróok ne táay né kyásoománēe kyásoománēe sukúulít
ne kile Mēenkít.

The first place I studied at was a school called Menkit.

17A: Mēenkít.

Menkit.

18B: Mēenkít kó mfi Amaalo ínē.

Menkit is very near to the Amalo (a large river).

19A: laughs.

20B: yāani...

now...

21A: kíikáakas aynāanāan lakíni kótóom māanken ínē...

I've heard of that river but I don't know...

22B: ee

yes.

23A: akópá náatan miisíng' ínē.

very much about it.

24B: kiiwáateet aap Kipsikiisyék ák Máasáéek.

Its the border between the Kipsigis and the Maasai.

25A: ák Máasáéek.

And the Maasai.

26B: ee kíiwáateet aap Kipsikiisyék ák Máasáéek.

Yes its the border between the Kipsigis and the Maasai.

inkūunaan sí aamfi máeelít akēenke.

Now I live one mile...

27A: mm-hm.

mm-hm.

28B: máeeliisyék áēng' keeng'eetee kíiwáato ák ák kāa.

Its two miles from the border to to home.

29A: ák kāa, kót koít Máasāy.

To home and to Maasai land.

30B: koít Máasāy.

To Maasai land.

31A: éucó.

Wow.

32B: kíla inkūunāan kēepāre kée ák Máasáēecóon, píicāan.

We often fight with the Maasai, those people.

33A: o, ec.

oh, yes.

34B: inkūunāan mūréník aap koorenyuun alāk...

Now some of the young men of my area...

35A: laughs

36B: kó íleeté súuméek kóryáki.

are plaiting their hair now.

37A: íleeté súuméek kóryáki.

They are plaiting their hair now.

38B: kooíleeté súumêek murénik. peerík túkul.

The young men are plaiting their hair. They're all tough.

39A: éucó, éucó.

Wow, wow.

40B: kík wáng'e kityo.

Its just amazing.

41A: kík wáng'e kityo. aké eemáanān.

Its just amazing. That country is something else.

42B: aké eemáanān.

That country is something else.

43A: kó ánée ák ánée āameng'úunēe kómósíto pá Peelkuut ínē.

And I myself I live in this part of Belgut.

44B: ímeng'úunēe Peelkuut.

You come from Belgut.

45A: nenyūun eemáaní.

This is my place.

46B: ee.

Yes.

47A: mm

Yes.

48B: starts to speak.

49A: kómósi eep Kāaptapayti rōyu.

This side of Kaptoboiti here.

50B: Kāaptapayti yūtan.

Kaptoboiti right here.

51A: Kāaptapayti yūtan.

Kaptoboiti right here.

52B: áya.

ah.

53A: ee ásoo...kyásoománēen Káaptapayti yútan.

Yes I stu...I studied here at Kaptoboiti.

54B: kiiísoománēen Káaptapayti.

You studied at Kaptoboiti.

55A: mm.

Yes.

56B: sukúullíni míi óorēet yu.

This school which is by the road here.

57A: sukúullíni míi óorēet yu ínkeepēentíi Káapsooít.

This school which is by the road here when one goes to
Kapsóit.

58B: mm.

Yes.

59A: mm akó kii ne táay...kyásoománēen ne táay yútan

Yes but it was the first one...I studied here first
kó tuun aáin né kiipá lét kyáwe olé pa Kēetitūy.
and later on I went to one at Ketituy.

60B: Kēetitūy.

Ketituy.

61A: ee ínkee...ínkeemíi Káapsooít kēepēentíi keetakyi

Yes if one...if one is at Kapsóit one goes in the
kēe óorāaniin pá Aynaapmōy.
direction of that road to Ainamoi.

62B: ee Aynaapmōy.

Yes Ainamoi.

63A: néekít máeeliisyék sómok.

Nearly three miles.

64B: sómok.

Three.

65A: kéeít sukuulít ne kyásoománeen kwák

To reach the school I was learning at.

66B: áya.

Ah.

67A: mm.

Yes.

68B: kó Sāat ák ánée āamwaaúun aaléefin kiikípcēy

koyaap somókú.

And (as for) Sot I tell you it is divided into three.

69A: kiikípcēy...

It is divided...

70B: kiikípcēy koyaap aēng'ú

It is divided into two.

71A: aēng'

Two.

72B: kiikípcēy koyaap...Poomēet,

It is divided into...Bomet,

73A: Poomēet.

Bomet.

74B: ák Ceepálunku.

and Chebalungu.

75A: Ceepálunku.

Chebalungu.

76B: mm Pooméet ák Ceepálunku.

Yes Bomet and Chebalungu.

77A: mm-hm.

mm-hm.

78B: kó inkūunaan kēetínye píik áēng' ce kiikíyáakte kopa

And now we have two people which we've sent over

kómósiin pá Páalyament.

there to Parliament.

79A: kyōoyáakte kopa Páalyament.

You've sent to Parliament.

80B: ee.

Yes.

81A: áynōon āny ne...ne tāay kó ng'āa?

Which one is...who is the first one?

82B: kítínye Áráap Cuuma Cōsep...

We have Mr. Arap Chuma Joseph.

83A: Cōsep Áráap Cuuma.

Mr. Joseph Arap Chuma.

84B: ne káanyítáat.

the Honorable (referring to the above).

85A: mm-hm.

mm-hm.

86B: ák keetínyé ne káanyítáat Tapmāason Parmáleel.

And we have the Hon. Mr. Tapmason Barmalel.

87A: āaá.

I see.

88B: ne pá Ceepálunku.

For Chebalungu.

89A: Ceepálunku nāan.

That one is for Chebalungu.

90B: kó inōni kó pá Poomēet.

And this one (the former) is for Bomet.

91A: āāā.

I see.

92B: ee ák kó éen Sāat korá kó kíikiikiil kēe ínē,

And in Sot, moreover, we've worked hard and have
kíikeecap túkuucu, kíikeetēec túkuucu kíitōrcíin
made these things, we've built these things for
tuuká

dipping cattle.

93A: kyōotēec...

You've built...

94B: máakeename keewiirtáa teetá rá p̄cetuusyēecu.

We no longer rope and throw a cow these days.

95A: ó.

oh.

96B: ee kíikeetēec ce kípáre araampē...

Yes we have built those known as Harambee (cooperative)...

97A: araampē proceksíicu kó kotaa kēe.

These cooperative projects which have recently begun.

98B: ee araampē proceksíicu kó kotaa kēe.

99A: ee.

Yes.

100B: méeswé āyn óo?

Don't you see?

- 101A: kó éen kōoraaninyáan ák ánée kó tōom tōomas ínē keele
 And in this area of ours, we haven't really used
 kípáíisyēe kāasiinoon pá típít kó kípáíisyēe oliin pá
 dips much, but we use (the one at) Kapsoit.
Kāapsóoít.
- 102B: ee.
 Yes.
- 103A: kó lōo éen kooreenyuun kó aaiin aanyōone kōoyumi
 But its far from my home, and the other day when
kēe páíisyek kiimáce kole kotéec típ nenywāan een
 I came (from there) the elders were getting together
Kāaptapayti.
 wanting to build their own dip at Kaptoboiti.
- 104B: yāani pa serkáli nōng'wāang'.
 So yours belongs to the government.
- 105A: ee ne pá serkáli nényāan.
 Yes ours belongs to the government.
- 106B: kílípani atāa múrenaani?
 How much does one pay, man?
- 107A: kílípanii éen teetá ake túkūl éen teetá ake túkūl
 For each cow, for each cow, one pays twenty-five
peesanáani.
 cents.
- 108B: peesanáani.
 Twenty-five cents.
- 109A: peesanáani.
 Twenty-five cents.

110B: peesanāani.

Twenty-five cents.

111A: aní éen oliing'wāang'?

How about over your way?

112B: yāani tóonkílóiisyécu áéng' ák eela tāanu.

That is (i.e. in A's area), these two ten cent pieces and five cents.

113A: tóonkílóiisyék áéng' ák ák eela tāanu.

Two ten cent pieces and five cents.

114B: ee oliinyāan kéelípani tóonkíló.

Yes, in my area ten cents is paid.

115A: tóonkíló.

Ten cents.

116B: kó ma tóot kíiilitē mōoek sáait aké.

And at times calves aren't counted.

117A: áke ányun.

Its different then.

118B: maakíiilité mōoek ák maakíiilité mōoek ák

Calves aren't counted and calves aren't counted

maakíiilité kéecíirék yāan kéetóorci.

and sheep aren't counted when one dips them.

119A: yāan kéetóorci kéecíirék.

When one dips the sheep.

120B: mm túkúuk cé raísi né ya.

Yes, very cheap things.

121A: alá kíikwámēec piicú ēep kooraaninyāan ōo.

Indeed, the people of this place of ours have exploited us.

122B: kíkwámáak. (spoken after piicú above)

They have exploited you.

123A: kíkwámēec āny.

They have really exploited us.

124B: ee kíkwámáak ínē.

Yes they've exploited you very much.

125A: ipwáat ínyee peesanáani ókot kíiilité mooéek cé

Consider, twenty-five cents and a calf born

kokíye ámut.

yesterday is counted.

126B: né kokíyé?

One born?

127A: né kokíyé ámut.

One born yesterday.

128B: kó makíiilité een Sáat.

Well they aren't counted in Sot.

129A: eū aké eemeet ōo?

Indeed the place is different isn't it?

130B: aké eemáanáan. kó inkūunáan ókot kó Máasáéek

That place is different, and now even the Maasai

ák ícéek kó áncaan tēekaanú.

are building (their cattle dips).

131A: kaatēekaanú Máasáéek ák ícéek.

The Maasai are building.

132B: íkeeráanūu iile áncu pwáané piik. (starts with Máasáéek above).

You see these people are developing.

133A: kó ní een típ ínē kó tyáan ínē éen yeep...lōo
 een típít éen eemeeng'wáang'...

And this dip, how much...is it far in your country?...

134B: éemēenyuun-í?

In my country?

135A: anaan ópéentíi...

Or do you go...

136B: makípéentíi máeeliisyék cé caang'ís ínē.

We don't go very many miles.

137A: mm.

Yes.

138B: kīimuucé keepá olé téen yu ák Kāapsóofit.

We can go as from here to Kapsoit.

139A: kípéentíi yé téen yu ák Kāapsóofit.

One goes as from here to Kapsoit.

140B: yāani olé téen Ceeptēenye ák, ák Soosyáat.

That is, as between Cheptenye and, and Sosiot.

141A: ák Soosyáat yu.

And Sosiot here.

142B: kó áké kó mīi olé téen Soosyaat ák iin...

And another is as far as from Sosiot to...mm..

Téltél.

Teldel.

143A: ák Téltél lékēm yu.

And Teldel down here.

144B: ee.

Yes.

145A: áapak kíi mfi...lõo ány ínē. típiisyék inkũunáan
 So we are...really far. The dips we depend on now
 ce kityeen kēe inkũunáan kó nikāan káalēefin mfi
 are the one I was telling you about at Kapsoit
Kāapsóoit-í ák aké ne kípáre Ceemapēy een kómósín
 and and another called Chemabei on that side
 olfin.
 over there.

146B: ee.

Yes.

147A: kó lõo nāatán.

But that one is far away.

148B: mm.

Yes.

149A: ák ni éep Soosyáat irõyu ány.

And this one at Sosiot right here.

150B: ee.

Yes.

151A: kó yu pēentíi piicú cáak.

So our people go here.

152B: mm-hm.

mm-hm.

153A: kó inkũunáan kómáce piicú eep Kāaptapayti kotéec

And now these people of Kaptoboiti want to build

iin típít nenywāan...

their dip.

154B: nenywāan. yāani kópaiisyée araampéfiní kiimwá

Theirs. That is to use this cooperation encouraged
Paayyāat.

by the President.

155A: araampé nenywāan.

Their cooperation.

156B: ni kúursé Paayyāantāaní.

Which the President calls for.

157A: mm kó kīin aanyóoné āny, kó kíikooyūm síling'iisyék

Yes. Well when I came (here) they had collected

élipúut akēenke ák pákal sómok.

one thousand and three hundred shillings.

158B: ee mayáme óo.

Yes but that's not enough.

159A: mayáme.

It's not enough...

160B: mayáme...

It's not enough...

161A: starts speaking.

162B: máce élipuusyék te (shows with hand).

This much is needed (shows with hand).

163A: kiinyó komwāawéec né óo kole máce élipuusyék

An official came to tell us that ten thousand

tāman...(remainder unintelligible)

shillings were needed...

164B: kiimwá né óo.

The official said (31).

165A: ee táman.

Yes ten.

166B: ee táman. tyeen kêe...

Yes ten. It depends...

167A: máanken ány inkūunáan aale kokaayūm ce tyáan inkūunáan.

I don't know how much they've collected now.

168B: intáap kíimfi kíimfi rōyu.

Because we're here now.

169A: ee.

Yes.

170B: ee. kéecáme kêe éen kómósiin pá Sāat ínē.

Yes. We ourselves are fine over there in Sot.

cameet aap kêe kó inōni...rupéet kó...

Things are the same as here...famine is...

171A: rupéet...

Famine.

172B: ípak íkásé ák iinken ák ínyêes...

Indeed you hear of it and you know about it also.

173A: aní paantéek...(remainder unclear)

And the maize...

174B: kíin kéepwáané aáin keekéré sukūul, kó áyni

When we were coming at the closure of school, ploughing

kakítēm, kítémaaté.

was done (and) ploughing is continuing.

175A: kítémaaté.

Ploughing is continuing.

176B: ee kítémaaté. kéemíi kómósín úu keele "sapáana".

Yes ploughing is continuing. We in are that part of the country like what is called "savanna".

177A: "sapáana".

Savanna."

178B: ee "sapáana".

Yes "savanna".

179A: sapáana eemeet.

The country is "savanna."

180B: sapáana eemeet.

The country is "savanna."

181A: éucó...

Amazing...

182B: ee inkūunáan aynoosyék ínē ce kítínye cé yeec kó áēng'.

Yes, now the rivers we have which are large are two.

183A: áēng'.

Two.

184B: finken Kipcooryáan-í?

Do you know the Kipchorian?

185A: ee kyāakas Kipcooryāanínáan.

Yes I've heard of that Kipchorian.

186B: é?

Hm?

187A: míi ókot áke kómósi iréyu.

There is another one here in this side,

188B: ee.

Yes.

189A: né kipáre Kipcooryaan.

Which is called the Kipchorian.

190B: aní Nyaankaarées?

And the Nyankores?

191A: kyáakas Nyaankaaréesínáan. kyaakáse keny ínē.

I've heard of that Nyangores. I heard about it a

inkwāny kfiin aamfi inkwāny kiláasít sómok.

long time ago, perhaps when I was in Standard Three.

192B: sómok.

Three (i.e., third grade).

193A: ee.

Yes.

194B: aní Amaalo?

And the Amalo?

195A: ee kyáakas.

Yes I've heard (of it).

196B: Amaalo āny.

The Amalo...

197A: kó né kīneetfi kēe.

Its the one we are studying about.

198B: ee kōoneetfi kēe.

Yes, you are studying about it.

199A: ee éen kiláasiisyécáatan.

Yes in those classes.

200B: aynāani kó úu nēe āny? yāani ko úu inkūunāan kó

What is this river like? In fact what it is like now

pfiik aap Ceepálunk. kó séreetōos né makímwāae.

is that the people of Chebalungu are in unspeakable trouble.

201A: ee séreetōos.

Yes they are in trouble.

202B: Nyaankaarées, yāani Ceepkúlo,

The Nyangores, that is the Chepkulo,

203A: mm.

Yes.

204B: Ceepkúlo kó kíipun Ceepálunku...kó lōo éen píik

The Chepkulo traverses Chepalungu, but it is far

alák mamii aynóosyek álák.

off from some people (and) there are no other rivers.

205A: mamii aynóosyek.

There are no rivers.

206B: méekásé serkáli ínycce kopáre kfireecún peek

Don't you hear the government saying water is to be

píik aap Ceepálunku?

piped up for the Chebalungu people?

207A: mm.

Yes.

208B: kó intáap mamii peek.

Its because there is no water.

209A: kyāukas ímān keele yaamaat eemānāatan miisíng' ínē.

True I've heard it said that that country is really dry.

210B: yaamaat eemānāatan. inkūunāan máeeliisyeek karípu

That country is dry. Now it is about eighty miles

tamaanfini keeng'ee yu sí keeft Ceepálunku.

from here to Chebalungu.

211A: si keeft Ceepálunku.

To Chebalungu.

212B: cóor cíi, "pyū".

People (there) steal excessively.

213A: laughs.

214B: katār tuuká

The cattle are finished.

215A: laughs.

216B: mm?

Hm?

217A: áca aké eemānāan.

No that place is different.

218B: kirúp kēe ák áké ne kíle Ng'áaynéet.

It is beside another one called Ng'ainet (lit.sand).

219A: Ng'áaynéet.

Ng'ainet.

220B: celcel, celcel, (whistles).

Celcel, celcel (imitating sound of steps on sand).

221A: ko úu éen kooraaní ány kó matámfi ínē cé úu cu

What its like in this place is that there's no such

coorsaaní ēep tuuká ínē koŋa.

thieving of cattle as that.

222B: ee.

Yes.

223A: éen éemāani ínē, nítan nyāan, koik kityo

In this country, this of ours in particular, except

kokaakírekta kiing'irtá kómósi eep ne pa Lúmēecu

when one goes down beyond this side of the Luo where

kó kó ele púnú coorsáani.

this stealing comes from.

224B: ótínye nōo een oli, ómwaakōo nēe píik?

What have you got here, what do you shoot people with?

225A: píik aap éemāani kó máakotinye kárik, pá

The people of this place no longer have weapons;

kéemwāae nēe píicú éep Peelkuut oli túkúl oli?

what can be said of all the people of Belgut here?

226B: ee.

Yes.

227A: si āny ce káykay kó ce kárekta cé kíiriikyí kēe

And then those better off are the ones down this way

ák Lúmček ák Ceepkosópéek éen kómósi rōyu.

who are close to the Luo and Gusii people on this side here...

228B: éceek éceek...éceek kēetinyé ng'wāanoosyék éen olín.

(starts after Lumeek above)

We ourselves...we over there have poisoned arrows (starts speaking after Luo above).

229A: mfi ng'waanóosyék.

There are poisoned arrows.

230B: mfi ng'waanóosyék.

There are poisoned arrows.

231A: ímwaacíní ciita aap pētuousyēcu éen oli ilēēfíní

If you tell a person of nowadays here that there is

iin mfi yu ng'waaneet, ínkén-í?

(i.e. about) a poisoned arrow here will he know?

232B: mánkēn.

He won't know.

233A: ng'wāanéet kó nēe?

What is a poisoned arrow?

234B: ng'wāanéet kó nēe?

What is a poisoned arrow?

235A: ímwááé laakwéet ne...

You speak of a child who...

236B: ng'wāanéet kó nēe ínkeemwáakín ée...

A poisoned arrow is that which when one is shot with it mm,

237A: laughs

238B: ák kopún ókot súuméek párák, kole púc, kópéku

And even if it passes slightly over one's hair, just kole "pyū".

like that, all (of the hair) goes off "pyu".

239A: táraksé suuméek, kyákas, ee.

The hair vanishes. I've heard of it, whew.

240B: táraksé. kó ínkokwér ng'wény kōokuutú kēe.

The hair vanishes, and when it hits the ground the soil oozes.

241A: mm, inkó tōos kíyáéen ng'wāanéet kíy nēe?

Yes, and what kind of thing is a poisoned arrow made of?

242B: tuumíin.

Ceremonies (secret).

243A: tuumíin.

Ceremonies.

244B: ũu keele inkot aamwāauun kō tuumíin korá.

Its like if I tell you it (revealing) ceremonies.

245A: tuumíin.

Ceremonies.

246B: tuumíin lakíni ácaamúun.

Its ceremonies, but I'll whisper it to you.

247A: ícaam...caamwāan kwák, caamwāan.

Whisper...whisper to me right now, whisper to me.

248B: káse ng'aa ínyee?

Who (else) is listening?

249A: ma yá coorwāantíit.

Friendship isn't bad.

250B: makáse cíi.

No one is listening.

251A: ee.

Yes.

252B: kínáme íntáreét,

One takes a snake,

253A: mm-hm.

mm-hm.

254B: ee kípaiisyéen íntáreét ák keetíik...

Yes a snake is used and some trees which...

Footnotes to Chapter II

1. See the Appendix and 2.4 for explanations of these elements.
2. Underlined words contain vowels which are phonetically open (low tongue position relative to a close vowel of the same type) and tense (greater muscular tension along vocal tract and in circumoral region relative to a lax vowel). Non-underlined vowels are close (relatively high tongue position) and lax (relatively less muscular tension).
3. These and following measurements were made from photographs of displays on a Tektronix Model 564 Storage Oscilloscope at the Linguistics Laboratory in the Anthropology Department of the University of Minnesota. Due to the fast sweep rate employed it is only possible to measure a small portion of the signal for each vowel. Examination of numerous high and low tones showed that these remained remarkably constant (level) from beginning to end. With falling tones it is necessary to be very careful to measure beginnings and endings. The figures should be taken as approximate only. Scattered duplicate readings indicate a probable error factor of about ten per cent in measuring. Where oscilloscope measurements are not available the approximate pitches are given in solfège notation (after Tucker and Mpaayei 1955:167ff; see also Tucker 1964b). As the do-re-mi scale is not generally familiar in the United States, conventional letter names for notes have been used (c, d, e, etc.). Hyphens connect slurred notes (i.e. where syllables have more than a single pitch value, as with falling and rising tones). These values have been normalized to a fictive 'tonic' (Tucker 1964b:604) for convenience'

sake (in particular to avoid frequent use of sharp and flat signs) and hence represent only relative pitches (except as noted). The abbreviations AT and VT refer to audio and video tapes in the author's collection (as numbered). In the case of video tapes, additional numbers refer to the dialogue position on the tape and to page and line on the transcription (in that order, following the tape number).

4. The term prominence has never achieved currency in American linguistic usage, but is an extremely useful 'disentangling' concept. Stress is defined by Jones as force of utterance (1967:134) and is considered by him as primarily a subjective notion which is extremely difficult to hear reliably or to measure. Prominence is defined as the standing out of a syllable or syllables in an utterance relative to other nearby syllables (1967:137-144). Prominence is effected by many different means and combinations of means (such as pitch, duration, vowel quality) of which stress is just one. As Jones points out, what is often considered as stress is usually a combination of attributes (in English often pitch and stress) and occasionally has nothing to do with stress at all. The association of pitch and stress in English is also discussed at length in Sarles (1963) where the conclusions reached are in agreement with those of Jones, but not with those of other American linguists (see Trager and Smith 1951:35ff.). In Kipsigis stress contrasts do not occur and such prominences as do occur seem to be of no importance in the functioning of the language.

5. It was long ago noted by Sapir that his phonetics students heard short final vowels as sequences of vowel plus glottal stop (Sapir 1949:58).

6. Mention should be made of a different type of process which is termed 'downstep' and which occurs in Maasai (Tucker and Mpaayei 1955:172-4) as well as in many West African languages where it has been the subject of much discussion.

Downstep involves the lowering of a high tone to a mid level even in the absence of an intervening low tone. This phenomenon is independent of such factors as utterance length, the breath group, and speaker's emotional intensity. It has been argued for West African languages that downstep is due to

1) a latent low tone which may not have a surface realization and 2) a raised non-high tone (Newman 1971). This phenomenon is not present in Kipsigis although some possibly related tonal perturbations are found. Subject to various conditions which are not dealt with here (but which are specifiable) a high tone is lowered to low and a falling tone is raised to high before (in both instances) a following high or falling tone. For example:

a) náan 'that (near person spoken to), nom. case)

naan kó... 'that is (a)...

b) ceepyóoséet 'non-young woman'

ímácé ikēer ceepyóoseet-í? 'Do you want to see

the woman?'

c) ámácé akēer káat 'I want to see the house.' (final

two syllables identical in pitch)

d) mfi lang'at 'He is there in the evening'

míi kāa 'He is at home.'

e) ácáme kēe 'I'm fine.'

ícame kée 'How are you?' (from kēe + -í)

7. The representation of high, falling and low tones here is the same as for Kipsigis. Downstep tones are represented by a vertical tick ('). Open vowels or syllables containing open vowels are underlined. Elided elements are enclosed in parentheses. In material transcribed here and in later chapters phonetic stress is indicated by a colon. This procedure is linguistically unsatisfactory in that 'potential' stress is not indicated, but it is more convenient in the present work to mark only stresses which were actually heard. As transcriptions of the speech material were made from audio copies of the videotapes, the transcriptions are independent of the possible influence of body movements in the perception of stress. Examples without tape reference numbers are from A.N. Tucker (personal communication).

8. For Whiteley, 'radical' is the "irreducible element in a verbal" and 'stem' is the "non-prefix element in a nominal" (1960:2). Note with respect to verbals that post-radical elements are few in number (there are only four, and two of these are monosyllabic) so that in general 'radical prominence' will appear on the penultimate syllable.

9. Whiteley describes a final high tone for Yao, "preceding a pause in lists, catalogues, or pauses for effect (1966:17)."

A very similar intonational feature is found in the Swahili

conversation discussed in 2.5 below. Although the distinction may sometimes be difficult to draw in practice, there is no doubt that the acoustical features which characterize lexical and grammatical tone are at least partly distinct from features pertaining to intonation. Note also Kipsigis where the rising question tone is physically distinct from lexical and (other) grammatical tones.

10. Tone markings are as for Kipsigis (low tone unmarked) but are not necessarily tonemic here. Parentheses enclose segmental elements which are present in isolation form, but which are elided in connected speech.

11. The final high tone here (example b) is phonetically a rising tone from high to higher still, the question particle having been elided and its tone shifted to 60. 60 in this context is raised to 6̄0 (a consequence of the rule discussed in note four above). The underlying shape of 6̄0 is clear from example (a) which contains the question word nēe 'what', but contains no question particle.

12. This conversation took place between a member of the Samburu tribe who was about to become an elder in the tribe and who had been a policeman outside of his tribal area for a number of years, and a young Kikuyu (Bantu) who had lived and worked near Nairobi for many years. Both spoke non-standard Swahili fluently. The Swahili of the Kikuyu speaker is altered slightly in transcription in that the nasal compounds mb, nd, nj, and ng (nyj and ng'g phonetically) which often appear in his speech in place of the corresponding voiced stops b,d,j, and g are not written. The respective pairs of sounds are members of single phonemes in Kikuyu.

13. The abbreviations are for the following terms: S (statement), C (comment), Q (question), A (answer--also a statement but written as A to emphasize its meaningful relation to the question preceding it), I (incomplete utterance).

CHAPTER III

BODY MOVEMENTS IN INTERACTION

3.1 Descriptions of body movements

Apart from gestures (discussed in Chapter 4) and certain fixed expressions of emotional state which have been studied extensively, though in general not in interactional contexts (see Ekman et al 1972), our knowledge of interactional body movement behavior is quite limited.¹ This lack of attention is not surprising in view of the extreme difficulty of studying the phenomena. Because most body movement behavior is both transient and highly context-sensitive (in that it is not freely recallable and reproduceable by interactors) it is only possible to study the behavior from recordings of one sort or another. Moreover body movement behavior falls into a no-man's land with respect to the methods one can profitably employ in studying it. The procedures used by linguists in establishing sound or meaning units (phonemes and morphemes) either cannot be used here or can only be used at greatly reduced efficiency. The investigator cannot, in effect, run dozens of experiments in a single session's work as he can with an informant when doing linguistic analysis. Body movements (excepting gestures) have no stable existence in isolation. In this sense they resemble intonation patterns rather than segmental units.

In the study of intonation patterns, however, the investigator's task is simplified in that 1) he (primarily) need only attend to pitch and 2) all utterances occur with an intonation pattern (in a language which has such). Body movements vary along

many dimensions--body parts used, intensity, rate of movement, etc.--and while few utterances occur without the cooccurrence of discernible body movement, the occurrence or lack of occurrence of particular kinds of body movements is much more variable than is the case with intonation patterns. These two features, extreme variability as to shape and optionality of occurrence, render purely quantitative study difficult, unreliable and misleading.

At the present stage of this research, the grouping of body movements in 'units' is not practically feasible (except as, noted below), nor is the writing of rules governing the actual realizations of body movements possible. The latter goal may be beyond the realm of feasibility for quite some time as there are many factors which appear to govern whether or not a body movement occurs at a given point, and the spelling out of these and the weighting of them will undoubtedly be difficult. However, although the present study operates at a fairly low level of delicacy, there are a large number of highly interesting, albeit tentative conclusions which can be drawn from the careful non-quantitative study of cooccurrences of body movements with linguistic and other elements of interaction. The reader will only rarely encounter statements of the form: x always occurs with y or when y occurs (a non-body movement interaction element), x (a body movement type) is found twenty per cent of the time, etc. Most statements are of the form: when a body movement x occurs, it occurs in the context y or even more loosely, x is often found in the context y.

In the sections which follow the behaviors which are studied are described and simple abbreviatory conventions which are used in transcriptions are given. The contexts in which these behaviors occur are then discussed and where possible functional conclusions are drawn. At numerous points tribal similarities and differences are noted. Finally comparisons are made with Bird-whistell's descriptions of American body movement behavior.

A general characteristic of (probably) all dyadic interactions is the bodily sensitivity of the interactors to each other. Although occurrences are not frequent (because of the alternation of speaker and the generally low activity level of the non-speaker) there are instances of behaviors of two interactors which are absolutely synchronous within the observer's limits of perception (in the case of video data--studies of filmed interactions between English speakers show synchrony to within the time interval between two successive frames of cine film--1/24 or 1/48 second (Sarles 1966a)). The following is a description of one such sequence: (Kipsigis, VT 17-3, two women)

A: éecēek kii pá ciikēet ma maatámfi kaasíit ák íne

we we of kitchen not not-still-is work and it

2h.r./he.t.t. 2h.l./he.t.a. 2h.r.

kipáyáae ínéekēen.

going-to itself.

be done

2h.l. he.t.a.

(The transcription conventions are explained below (p. 89).)

Following A's utterance both individuals raise their left hands

to their faces to groom, and these behaviors are completely synchronous. Examples like this occur so rarely that it is not possible to determine whether or not the synchrony is simply due to chance. My own view at this point however, is that more than chance is involved and that such behavioral synchrony is an indication that interactors are attuned to each other to a very high degree.² This is not, however, to imply that attention lapses, interruptions, etc., do not occur.

During conversational interactions the following kinds of movements were observed in all three tribes³: movements of the head or portions of the head, of the hands and of the entire body. The legs and feet are not a distinctive area for body movement behavior. This is probably because they are utilized in supporting the weight of the body. In cultures where a large amount of time is spent interacting seated on chairs the legs and feet may well either substitute for other body parts in established behavior patterns or come to constitute distinctively significant behaviors. Head movements occur upwards and downwards and from side to side. Portions of the head which may move rather than the whole head are the eyebrows (only up and down), eyelids and the eyes (both up/down and sideways). Lips are involved in one specific kind of behavior only, pointing. Perhaps to be considered as a single complex is the head nod--a quick up and down movement.

Movements of the hands, arms and fingers are morphologically of greater variety than head movements and also are more difficult to describe satisfactorily. Head movements may conveniently be

considered as two-dimensional, but hand, etc., movements nearly always involve motion in all three dimensions. In so far as possible hand movements will be described in terms of their primary component of articulation--movements upwards and downwards and movements from side to side. In all three tribes movements which quite clearly are 'pointing' in nature occur with high frequency. Most commonly the arm is extended (away) from the body (bent at the elbow or straight according to the direction) and the index finger extended with the other fingers tucked against the palm under the thumb. The only other common pointing pattern is with four fingers extended and touching each other with the thumb bent down towards the palm. These movements will be called hand pointing to distinguish them from lip pointing. Movements of the hand or hands which involve the turning of the hands from a palms down to a palms up position in addition to raising and lowering are also common.

The only remaining group of hand movements noted are those which are either specifically illustrative and/or are occurrences of specific gestures. These movements are either simply considered as wholes when their shape is not relevant or they are textually described. Gestures are identified by the numbering under which they are described in Chapter Four.

At various (but never frequent) points in an interaction one or both individuals will make a major alteration of body position involving trunk and leg movements. These movements together are called posture shifts.

In the transcriptions given below the linguistic portion is followed below by a literal translation which makes it possible to identify particular words and morphemes with their English nearest equivalents. Although this makes for awkward reading it has the advantage of making it possible for the reader to know exactly what kind of item a particular movement is associated with. Below the English translation, body movement behaviors are indicated at their approximate points of occurrence (as noted above one of the disadvantages of video equipment is the lack of an underlying time reference base; this, is not a problem in the present analysis, but could arise in more detailed work). The following abbreviations are used:

he.r.	head raised
he.l.	head lowered
e.r.	eyes raised
e.l.	eyes lowered
eb.r.	eyebrows raised
eb.l.	eyebrows lowered
he.t.t.	head turned toward other
he.t.a.	head turned away from other
l.p.	lip pointing
h.r.	hand raised
h.l.	hand lowered
h.s.	hand sweep
h.t.	hand turn (understood to be up).
h.p.	hand pointing (with four fingers extended)
f.p.	finger pointing (index finger extended)

i. illustrative

p.s. posture shift

For all of the hand behaviors the abbreviations r., l., and 2 may be prefixed and mean right, left and both respectively (e.g. l.h.l.: left hand lowered). Items on either side of a slant line (/) are simultaneous, and items separated by a plus (+) are immediately successive. Due to the usually inactive state of the listener, a separate line to indicate his behavior is not given. Where necessary the listener's behavior is indicated parenthetically. In all cases A identifies the individual on 'stage right' and B the individual on 'stage left'.

3.2 Functions of Body Movements

3.2.1 Association with speech

It was noted in Chapter Two that two characteristic features of the interaction systems of the tribes were 1) that speech alternated regularly between individuals and 2) that for periods comprising several utterances or more, one individual behaved in the role of speaker, providing the bulk of the linguistic material, and the other individual behaved as a listener producing very little linguistic material.

These same features are also characteristic of the occurrence of body movements in interactions. At any given point in time one individual is likely to be making body movements and the other individual is likely to be stationary. The reason for this is simply that nearly all body movements co-occur with speech. This is easily demonstrated covering the heads of interactors on a television, turning off the volume and 'guessing' who is speaking on

the basis of who is making movements (here of course restricted to hand movements).

What is established here is the co-occurrence of body movements and speech. This by itself is not definite evidence of the interrelationship of speech and body movement, although of course it is highly suggestive.

There are even some plausible explanations for the fact of cooccurrence which do not necessitate postulating any interrelationship other than a very rudimentary one. For example, it might be argued that speaking involves the generation of relatively more nervous tension than listening and hence body movements are the release of excess tension (for which the oral region is ill-suited when occupied with speech). Alternatively, since conversational interaction involves close proximity of interactors, it may be argued that there are underlying agonistic features to interactions which are expressed in ritualized form in body movements (accompanied by a one-person-at-a-time convention to prevent the occurrence of actual agonistic behavior). Possibilities such as these should not be dismissed out of hand although to the extent that they are researchable the research would involve procedures beyond the scope of this study.

However, as we shall see below, considerably more than co-occurrence is involved. Even at the gross level at which this study operates it is possible to associate the majority of body movements with either specific lexical items, or with specified structural points of the linguistic portion of the interaction.

In 1.1 it was stated that body movements and speech constituted interrelated elements of a single interactional system. Since the occurrence of speech is a necessary condition for the occurrence of body movements and as the converse of this statement is not in general true (but see below 3.2.4) it may appear possible to view body movements as entirely derived from speech. This view, however, is not tenable as in many cases the meanings and functions which are attributable to body movements are distinct from those found in the verbal material. For example, in Kipsigis there are three degrees of demonstrative distance distinguished in the linguistic system: nearness to speaker, nearness to the individual spoken to and distance from both individuals. In none of these instances and especially not in the case of the distal demonstrative is there any way of telling what direction is involved. While direction words can be used of course, these are not very precise, and the language has no demonstrative-directional forms. Pointing, however, is both efficient (it can cooccur in time with a demonstrative) and accurate. Thus when one says that demonstratives are accompanied by pointing it should be clear that the linguistic and the body movement behavior are conveying slightly different information.

3.2.2 Utterance associated behaviors

In Chapter Two it was noted that there was no invariable way of marking an utterance, acoustically, although certain sentence types such as yes-no questions were distinctively characterized in the sound stream. In all three tribes, however, utterances are nearly always marked by distinguishing body movements. The

head is the main part of the body involved in this behavior, although sometimes only the eyebrows or eyes actually move. In utterance-initial position the head or a part of it is raised, and in utterance-final position the head is lowered. Frequently, but not necessarily, lateral movements of the head are combined with this upward and downward movement. In utterance-initial position one finds head turns toward the listener and in utterance final position the combination head turn toward followed by head turn away or simply a head turn away from the listener. As the other individual, at this point beginning to speak, is likely to make a head turn toward the previous speaker, it is here that most instances of mutual eye contact occur. While in utterance initial position the occurrence of a head turn towards the listener is simply an element of the head raising complex, the occurrence of an utterance-final head turn towards the listener seems to be related to an impending change in the speaker-listener role and as such accompanies questions and ends-of-topics (from the point of view of the speaker--the listener may by asking a question related to the previous topic keep the conversation basically focussed on that topic and the roles unchanged). The following list of behaviors from VT 20-1 (two Luo elders) is limited to beginnings and endings and shows the regularity with which the above elements of body movement behavior are associated with utterances.

utterance-initial

B he.t.t.
 A -
 B he.t.t.
 A he.r.
 B -
 A e.r.
 B he.r.
 A he.t.t.
 B -
 A he.r.
 B e.r.
 A -
 B e.r.
 A he.r.
 B e.r.
 A he.t.t.
 B he.r.
 A he.r.
 B he.r.
 A he.r.
 B he.t.t.
 A he.t.t.
 B he.r.
 A he.r.
 B he.t.t.
 A he.t.t.
 B he.r.
 A he.t.t.
 B he.r.
 A he.r.
 B he.r.
 A he.r.
 B he.r.
 A he.t.t.
 B he.r.
 A he.t.t.
 B he.r.
 A he.r.
 B he.t.t.

utterance-final

ne.t.a
 he.t.t.+he.t.a.
 he.t.t.+he.t.a.
 he.t.t.+he.t.a.
 e.t.t.+he.t.a.
 he.t.a.
 he.t.a.
 he.t.t.+he.t.a.
 he.l.
 he.t.t.+ he.t.a.
 he.t.t.+ he.t.a.
 he.t.t.+ he.t.a.
 e.l.
 he.l.
 he.l.
 he.t.a.
 e.l.
 he.t.t.+ he.t.a.
 e.l.
 he.t.t.+he.t.a.
 e.l.
 he.t.a.
 he.t.t.+ he.t.a.
 he.t.a.
 he.t.a.
 he.t.a.
 he.t.t.+ e.l.
 he.t.a.
 he.l.
 he.t.a.
 he.t.a.
 he.t.a.
 e.l.
 he.t.a.
 e.l.
 he.t.a.
 he.t.a.
 he.l.
 he.t.a.

A head turn toward is normally accompanied by raising of the head or occurs in a raised head position, and a head turn away is normally accompanied by head lowering, occurs in a lowered position or is followed by head lowering. If the initial head lifting is accompanied by a head turn towards it is quite common for the speaker to then turn away at some medial point in the utterance. The exact conditioning factors governing such behavior have not been determined. It is apparently principally at beginnings and endings that head movements are significant. Occasionally at some distance from an initial head raising the speaker may turn toward the listener. This head turn is usually an element of the utterance-final complex occurring in advance of the cessation of speech but indicating an approaching endpoint. Final head turns toward the listener almost always occur with questions. They also may occur with statements, however, so they do not constitute a question marker per se.

The listener's behavior during the speaker's time of utterance is basically quiescent. The hands are normally completely inactive and it is only the head that may be involved in movement patterns. The basic head positions are 1) lowered, 2) raised and looking off, i.e., unfocussed and not looking at the speaker, 3) raised and looking at the speaker. It is unclear what factors govern the occurrence of these three positions. Possibly what the speaker is talking about and its relationship to the listener is relevant.

The above described behavior is common to all three tribes and no significant variation has been noticed between tribes.

As it also occurred in the Swahili conversation and in the Samburu conversations, it may tentatively be considered pan-East African in distribution. Its distribution is, of course, possibly much wider.

Frequently, as in the example below, utterance initial and final head movements are the only body movement behavior accompanying an utterance. In other instances (seen in the examples of the sections below) the head behavior is just part of the total body movement set. If utterances are short and/or speech very rapid the head movements may not occur (also see examples in sections below).

A: kiiménye kooréet aké ne kípáre inkopíc (VT7-1.3-25)

(they-) lived place other which is called Ngobich

he.r

he.l.

3.2.3 Word and phrase associated behavior

3.2.3.1 Markers

Both head and hands are involved in behavioral complexes which are associated with linguistic elements internal to the utterance. These behaviors are sometimes clearly associated with single words and in other instances, by means of the holding of a position which has been moved into, there may be an association with a phrase or other larger linguistic structure. Although it appears that much of this behavior is emphatic in function, rather than use the term 'stress' the more neutral term 'marking behavior' (and 'marker') is used here. Marking behavior is present in nearly all the interactions studied for all of the tribes (the only exception being very young children). Its frequency of occurrence varies

greatly from individual to individual. Tribal differences in the shapes of the behavior and in its occurrences exist and are sometimes fairly major, but it should be emphasized that the behavior is not confined to just one tribe. For convenience the discussion below is broken up by tribe, beginning with Gusii.

There appears to be a higher degree of sameness in Gusii in the form of marking movements than there is with the other tribes. The basic movement here is a raising of one (or commonly both) hand(s) with palms up followed by an immediate lowering, by a hold in raised position with a subsequent lowering, or by a sweep of the hand and subsequent lowering. Hand sweeps seem principally to be associated with verbs. Hands raised, held and lowered sequences coincide with phrases or clauses (raised at beginning, held until end and lowered). If an utterance is uniclasual then this sequence may be coterminous with the utterance delimiting head behavior discussed above. As discussed in Ch. 2, while prominence in Gusii is scarcely noticeable in isolated non-conversational utterances and there is no stress system, in conversation certain syllables are noticeably louder than their neighbors. These syllables to a certain extent appear to be 'centers' for the timing of downward hand movements and the rapidity and length of the movement appear to be related to the intensity of the sound stream. Occasionally also a head nod may accompany this downward movement. In the absence of prominence on a non-final syllable the downward portion of the movement tends to occur with the final syllable or even after it (this statement is true of all three tribes).

The following example (VT-2) is from a conversation between an adult male and his grandmother (the latter speaking). There is a strong tendency to mark every word and in the case of two words, the hand marking is accompanied by a very slight head nod.

B: buna ince nakiinete (A: mm)

as I I-grew up yes

2h.r 2h.l.

B: igo nakiinete no buya obwari bwoka.

and I-grew up with good happiness alone.

2h./ h.l./

2h.r. 2h.l 2h.r he.n.2h.r. he.n. 2h.r+2h.l.

The next example shows marking of clauses. The conversation is between two elderly women (VT2-1)

A: tokaraagera. (B:tokaria)

we ate (porridge) we ate

l.h.r.+s (the right hand swings to the right)

A: tokaraagera obokima tokaigota

we ate porridge we were full

r.h.r. r.h.l. (left hand returns to left

side as right hand is raised)

(B: tokaigota)

we were full.

A: bono gotoigota, tokariera enyama,... (concluding clause unclear)

then we-were fill and-we-ate meat

r.h.r. r.h.l l.h.r. l.h.l.

For Kipsigis it is more difficult to describe typical marking movements. In addition, with the exception of words with

emphatic stress, the speech stream in Kipsigis is not divisible as it is in Gusii (and Luo) into prominent and adjacent non-prominent syllables. The most typical movement patterns are 1) raising of the hand (with subsequent lowering or holding and lowering) as in Gusii but with the palm of the hand usually orthogonally to the ground rather than parallel with the palm facing up, and 2) a movement like the Gusii palm up pattern but beginning (with hands lowered) with palms down and turning while being raised to a palms up position. This latter type of movement is most common with women speakers. It is often very difficult to determine whether there is a 'center' to the upward and downward movements, i.e., a particular syllable within the bounds of which the major part of a movement seems to occur. As in Gusii there is a general tendency for upward movements to occur with word beginnings (occasionally to precede them) and for downward movements to occur with ends of words (and occasionally to follow them). With emphatic stress a downward movement may co-occur and in addition a head nod may co-occur. Apart from this marking head movements occur in complementary distribution with hand marking movements (more precisely these two types of movements are in complementary distribution in that both may not occur in the same context but both are in alternation with the non-occurrence of a body movement). Hand movements are, however, of more extensive occurrence. Head movements occur when for various reasons it is not convenient to move the hands (see example below). Marking movements primarily occur with nouns, but if an utterance has no noun may occur with verbs. Although to an English speaker it may sound as if the question tone discussed

above must be marked in some way, this is not the case, and no marking head or hand movements occur with question tones. Head turns toward the listener and other end of utterance behaviors do of course occur but these are spread out over the utterance and have no special association with the question tone. Kipsigis examples:

In the following example note the marking of syntactic units of word, phrase and clause; and the occurrence of question tones with listing function (with responses by the listener). The speaker is listing clothing and decorations which were worn in the past (VT17-3, two old women).

B: múuywéek aap iitíik-í, (A:ee) iin inkálásít-í,
 leathers of ears, yes uh necklace,
 2h.r. 2h.l. 1.h.r. 1.h.l.

(A: ee) tíláník kong'éetu taarúsyek-í, ko tíntáa
 yes decorations coming initiates, and having
 1.h.r. 1.h.l.1.h.r.1.h.l. 1.h.r.

ínkórafík aap kény/(A:kāa) ce pá kāa, (A:mm)
 clothing of past the home of home, yes
 1.h.l. 1.h.r.1.h.l. 1.h.r. 1.h.l.

ce pá neekā, (A: mm) ce pá tuukā. (A: mm)
 of goats, yes of cattle. yes
 1.h.r+1.h.l. 1.h.r.+1.h.l.

pāas kó paíisyék-í kóolāace mōoéek-í ... (cont'd)
 well as-for the men they-were- calves(skins)...
 wearing
 1.h.r.1.h.l. 1.h.r. 1.h.l.

The following excerpt shows a head nod accompanying a stressed syllable, -nāam 'begin', which has both increased loudness and increased length (VT 17-3)

A: kfin koonāam paíisyek,
 when they-began the men
 he.n.

Question tones, even on long vowels, receive no marking movements: (VT 34-2.2.15)

B: māanāmīn euut-í?
 not-I-take-you('r) hand?
 he.t.t.

A: ínāmāan euut óo?
 you-take-me hand?
 (previous head low position held here)

In the example below the recording was done on a cold, windy day and both speakers were wrapped in heavy cloaks. Hence such marking movements as occurred were done with the head. These are indistinguishable in form from the utterance outlining head movements discussed above: (VT 7-1)

A: ani pa iin lúkēet kii pa Cirimāan iin
 now of uh war was of Germans uh
 he.t.t. 1.p. he.shake
 Máakāari kó kiisēete ipínta aynōon?
 Mogori now was-raiding age-set which?
 he.t.a.

B: kiisēete Māakāari ak Kiptórméséentéet ókót pāapa.
 were-raiding Mogori and Kiptormesendet and even my father.
 he.r. he.l. he.n. he.t.t.+
 he.l.

The above utterances may be glossed for easier reading as follows: A: 'Which age set was of warrior age at the time of the war with the Germans, Mogori?' B: 'Mogori, Kiptormesendet and even my father's age set were warriors.'

The presence of word stress in Luo appears to affect both the forms and the occurrences of marking movements. There does not, however, appear to be any alteration of function. Although there are instances of clear word-stresses which are not accompanied by body movements, many stressed syllables co-occur with a rapid up and down head movement (nod). Perhaps because of the rapidity of the movement there is often a following rebound or slight upward movement after the lowering. Marking movements with the hands also occur but these are not always as clearly centered on a stressed syllable, although often this is the case. The general tendency, noted for both Gusii and Kipsigis, for a downward movement to come at the end of a word seems partly operative here and may account for some of the non-stressed syllable centered movements. Also as in Kipsigis and Gusii there is a tendency for head movements and hand movements to be mutually exclusive of one another.

(VT 26-1, 1.17, two Luo elders)

B: ee ma:g(o) e wece ma wawa:co ka (A: ee)
 yes that (pl)is news which we-say here yes
 he.r. he.t.t/ he.t.a.
 he.n.

kaka wa weg pi:nyini wa jokenya ma pi:nyini
 as we(are)owners of land-this we Kenyans who land-this
 he.t.t. he.n. he.n.

ma nosi:k(o) e pi:ny (A: ma nosi:k(o) e piny) mocwe:re
 who have-stayed in land who have-stayed in land forever
 he.t.t. he.t.a he.n. he.r.

(A: mm) ee.

yes yes

he.n.

(VT 26-1.2.3)

A: To pi:ny pi:nyini wa Kajulu ne:ne Ka:no
 But land land-this our Kajulu past Kano
 he.n. he.n. he.n. he.n.

oriwonwa gi Lang'o to gi ee (B: gi Kisu:mu) Kis:mu.
 it-united-us with Kalenjin and with uh with Kisumu Kisumu
 against
 he.r. he.t.t. he.t.a. he.n.

Note the head nod with the assentive, ee 'yes'. This is very common in Luo but not found in Kipsigis or Gusii. In the following example the first speaker uses only hand marking movements while the second speaker uses only head movements. In addition to words, head raising and lowering marks clauses.

(VT 20-1.1.1, two elders)

B: aa wuod wuora pimna siga:na kaka ing'eyo
 um son of father-my measure-me story how you-know
 he.t.t. r.h.p. 2h.m.

ni nene wabuoro e thurwa Kajuluka.
 thatpast we-came in loc- ion-our Kajulu-here.

r.h.r.+r.h.l.

hands folded, he.t.a. p.s.

A: an ee sigana ok anyal pimo:ni ne mar, a kial

I uh story not I-able tell-you

eb.r.

he.n. he.r.

sigana to donjo Kajuluka ne odonji higni matho:th

story but entering Kajulu here it entered years many

he.n. he.r.

he.l.

e.l. he.l./he.t.a.

ma ok ng'ato nyal fwe:nyo mak mana Ago:ro e

which not person able reveal but only Agoro are

he.r.

weg lowo, Bu:rwon e weg lowo. an ajadak

owners of land, Burwon are owners of land. I-inhabitant

he.l. he.r./he.t.t.

he.l. he.r. he.l./he.t.a.

to inini:ga ibir(o) abi:ra ka koro iyu:da ni

but Niga came-came(just came)as now you-find-me that

he.r./he.t.t.

he.l.

he.n.

he.n.

nyame:ra mago e sigana.

sister that is story.

he.t.t.

he.n.

A following head turn away coincides with B's head turn toward A and B's beginning to speak. Note also that prior to B's utterance given above (the first of the conversation) both A and B made posture shifts together (see below 3.2.4).

3.2.3.2 Pointing

As indicated in the grammatical sketches all three languages have extensive systems of demonstrative particles and suffixes. In conversation in all three tribes the use of these items is often accompanied by directional pointing. In addition, nouns

which are place names or which may be associated with a location (e.g. a personal name may be identified by a pointing reference to the individual's home) frequently occur with pointing. In most instances it is possible to distinguish pointing movements from marking movements as only the pointing movement is done with an extended finger except as described below.

If, however, the pointing is both done very casually and with four fingers extended it may be indistinguishable from a marking movement. More rarely, a pointing movement may be executed with the index finger and then a marking movement made with the index finger alone (while the arm is still extended). Lip pointing is also common and clearly distinctive. In many instances there appears to be a pejorative connotation. Lip pointing and hand pointing do not occur together (another instance of the interchangeability but non-cooccurability of hand and head movements). Informants regard lip pointing as essentially 'unobtrusive'.

(VT 1-1.10.6, two Kipsigis elders)

B: le kípáre kokírút éen lekēm oliin

hey, it-is said were innoculated below yonder

he.t.a.+he.r./l.p.

kópek tuuká kapísa né yá

died cattle completely badly.

he.l.

(VT 20-1.1.10, two Luo elders)

B: To koro koso di be:di ni aa Agorogi

But if-so is-it if : -it that uh Agoro-they

r.h.r. r.o.l. r.h.r. r.h.p.(1)

ne ok okedo matek kinde ma ne Kajulu

past not they-fight hard time which past Kajulu

r.h.s.a.(2) r.h.m. r.h.r. r.h.l.

kedo gi Kisumu kata ma ne okedo kod Ka:no

fought with Kisumu or which past they fought with Kano

r.f.p. r.f.n. l.h.s.a. l.h.p.

kata ma n(e) okedo kod Na:ndi e momiyo

or which past they-fought with Nandi therefore

r.h.r. r.f.p./h.l. 2h.t./2h.r.

wadwokogi cien kama.

we-reply-to-them behind like this (i.e. degrade them).

2h.l. e.t.t.+he.t.a.

(1) to in front of the listener.

(2) to in front of self.

3.2.3.3 Illustrative movements

Illustrative movements occupy a position midway between gestures, which generally have lexical meaning, and the various movements discussed above (which do not).

(VT7-2.3.16, Kipsigis, an old woman and a young woman)

A: éen eúut ís ák mókóompéet né kikírát.

by hand with hoe which is-tied.

i(1) i(2).....

(1) The hands, put together with palms touching and fingers extended, are lowered showing hoeing action.

(2) The left hand is extended palm up and fingers close together and extended; right hand encircles the left hand fingers from underneath showing how the metal head of the hoe is attached to the handle.

3.2.4 Posture Shifts

Major alteration of the center of gravity of the body occurred only rarely in the taped interactions. The most typical and very often the only context for occurrence was immediately prior to speaking at the beginning of the conversation (i.e. after the author or a co-worker had started the camera recording and had left the scene). In this context shifting position was done by both participants in the interaction. Within an interaction mutual posture shifts sometimes followed external interruptions. In these contexts it appears that the posture shift accompanies, and perhaps helps to define a spatial 'arena' within which the interaction takes place.

The only other context in which a posture shift takes place is internal to the conversation and is made by an individual after he has finished speaking. If the other individual has nothing to say he may participate in the movement, but if he has started speaking he does not move.

3.3 Comparison with American English

In this section comparison is made with the anthropologist Birdwhistell's descriptions of body movements accompanying spoken American English. It should be noted that only a portion of Birdwhistell's work is comprised by the descriptions summarized below. In much of his work, Birdwhistell does not distinguish between speech related and other kinds of body movement, but he has isolated and described two sets of behaviors which are speech related: kinesic markers and kinesic stress. In addition, although Birdwhistell does not describe them as being speech related, we will also consider

here behaviors which are elements of units he calls 'junctures'.

Kinesic markers are 'units' of body movement behavior which are regularly associated with classes of lexical items (1970:120). Five classes are described: pronominal, pluralization, verboid, area and manner. Pronominal markers are movements of the "head, a finger, the hands, or a glance" (1970:121) in two contrastive directions: distal and proximal. Distal movements are associated with the lexical items: 'he', 'she', 'it', 'those', 'they', 'that', 'then', 'there', 'any', and 'some', while proximal movements are associated with the lexical items: 'I', 'me', 'we', 'us', 'this', 'here' and 'now' (1970:121).

Pluralization is marked by "a slight sweep of the moved member over" those forms which are plural (1970:122). Verboid markers are in part associated with past and future time respectively. Apparently other types of movement are involved, but it is not clear what these are: "/The dog is barking/ requires no markers, while /He's barking/ has the characteristic distal movement followed by a continuous move (1970:123)." No descriptions are given of behaviors comprising area and manner markers, but area markers are stated to be in association with locative prepositions ('on', 'over', 'under', etc.) and manner markers to occur with time and manner adverbs ('slowly', 'jerkily', etc.; 1970:124-125).

It is evident that the pointing behaviors described above for the three African tribes are the most similar both morphologically and functionally to the kinesic markers of American English, but the similarities are not extensive. All three of the African languages have self-standing pronominal forms (which are of frequent

occurrence in conversation) as well as pronominal subject and object forms affixed for verbals. While third person forms may be accompanied by pointing this is not common and it is principally locative nominals and locative-associated nominals (and demonstratives) with which pointing occurs. Demonstratives in all three languages are often accompanied by pointing and apparently the same is the case in English. However, it is quite clearly actual location which is identified rather than simply supporting the linguistic contrast of here (near speaker) and there (away from speaker) which is what is implied by Birdwhistell's terms proximal and distal for English. A demonstrative glossed 'here' may be accompanied by either a proximal or a distal movement. What matters is where the location being referred to actually is and what its contrastive relationship is to other locations being discussed.

There are no body behaviors which indicate pluralization in any of the African systems (either of the type described by Birdwhistell involving sweep movements or of some other type such as the use of one hand when speaking in singular and two hands in plural). There are also no anterior-posterior movements connected with tense. Sweeping movements occur with non-copulative verbs, but not commonly. Perhaps these may be similar to the 'continuous move' described by Birdwhistell in the barking dog example quoted above.

In addition to the kinesic markers, Birdwhistell describes four stress kinemes which operate in accompanying American English. The behaviors which make up these kinemes are listed as: "head

nods and sweeps, lid blinks, small chin and lip movements, variations in shoulder and thorax adjustment, hand, arm and foot activity as well as foot and leg nods and sweeps (1970:118)."

The stress kinemes themselves are not defined with reference to these behaviors but rather in terms of contrastive level or degree of movement involved in making the behaviors. Thus primary stress is "a relatively strong movement normally concurrent with loudest linguistic stress. One occurrence for each spoken English sentence." Secondary stress is "a relatively weaker movement...", unstressed is "the normal flow of movement associated with speech...", and destressed "involves the reduction of activity below normal over portions of a syntactic sentence (1970:104)." These four stress kinemes combine with one another in forming elements of 'kinemorphemes'. These are listed (1970:135,245) and their functions (as a total class) described: "the marking of special combinations of adjectivals plus nominals and adverbials plus action words, ... (assisting) in the organization of clauses, phrases and syntactic sentences, and, finally to connect specially related clauses in complex and extended utterances (1970:118)."

In function, although only to a limited extent in morphology, the stress kinemes of American English are similar to the behaviors called markers here. The range of behaviors which function in marking in the African systems is smaller than the set of behaviors comprising the stress kinemes in American English. Lid blinks, small chin and lip movements, variations in shoulder and thorax adjustments, foot and leg nods and sweeps (all taken from the listing above) either do not occur in interactions or give no evidence

of occurring in regular association with speech items. Head nods are principally confined to Luo where their occurrence is associated with linguistic stress. As indicated above, although each Luo word has a stress (when spoken in isolation), in actual utterances only a small portion of these occur with stress. Beyond noting a general tendency for a strong stress to occur at the end of a sentence and for series of stresses to occur in listing, the factors characterizing the actual occurrence of stresses have not been worked out. What is important to note here is that when major linguistic stresses occur body movements tend to be structured in terms of them. Nods on the part of the speaker and lowering movements occur in Luo with an abruptness which is distinct from lowering movements in Kipsigis and which may be attributed to the effects of the Luo stress system.

Birdwhistell gives two descriptions of junctural kinemes. Only the more recent is taken here. Three of the junctures are terminal (with respect to a 'string' of body movements). These are 'double cross', 'double bar' and 'triple cross' (the names refer to the typographical symbols used). Double cross is an inferior (downward) movement of a body part plus a pause, double bar is a superior (upward) movement of a body part plus a pause and triple cross is a "major shift in body activity (relative to customary performance 1970:239)." The other three junctural kinemes are apparently non-terminal. The 'hold' is the arresting of movement in a given body part "while other junctural activity continues in other body areas." The 'single bar' is a "projected held position followed by a 'pause'." The 'tie', of infrequent occurrence,

is a "continuation of movement" occurring in displacement of primary stress (1970: 239).

Although double cross junctures are defined with reference to final position in a series of body movements, and the various lowering behaviors discussed in 3.2.2 above are associated with the end of speech, there are probably definite similarities of form and function here. Behaviors characteristic of double bar, however, are not found in any of the three African languages in utterance final position. Birdwhistell mentions a homomorph (a behavior identical in shape with but different in meaning from another behavior) of double bar found in initial, medial and parallel position which he says "may be a kinemorpheme which permits double cross in terminal position (1970:239)." This behavior, at least in initial position would be similar then to the class of raised behaviors discussed above in 3.2.2. It is not clear if it is as regular in occurrence as are those behaviors found in the African systems.

Triple cross appears to be identical with what are here called posture shifts. For American English, Birdwhistell gives a distributional statement and an apparently distinct functional statement concerning triple crosses: "...normally terminates strings marked by two or more double crosses or double bars. However, in certain instances triple cross may mark termination of a single item kinic construction, e.g. in auditor responses, may exclude further discussion or initiate subject or activity change (1970:239). With the exception of not following single utterances (the 'single i' kinic construction' of above) the

occurrences of posture shifts in the African interactions are not inconsonant with the above picture, but it should be emphasized that posture shifts occur quite rarely here and hence (except in conversation-initial position) would typically follow more than two utterances (identifying Birdwhistell's double crosses and double bars with utterance ends for the sake of comparison).

In sum it appears, although it is difficult to render the two systems comparable, that all of the major kinds of body movements described for the African interaction systems not only have morphologically similar counterparts in American English, but that there also exists some degree of functional similarity as well. As Birdwhistell for methodological reasons has chosen to study body movements as a system independently of speech it is difficult to find an appraisal of the overall relationship between speech and body movements in English. However, observations reported in Sarles (1966b) suggest that even if listener body movements are more frequent in American English than in the African interactions, they are still markedly infrequent compared to those of the speaker. It should be noted that assentive nodding (which is definitely part of the investigator's own listener body movement in American English) is either non-existent (Kipsigis, Gusii) or confined to co-occurrence with spoken ee (Luo). Finally it is important to note that the behavior called kinesic stress by Birdwhistell also occurs in stress-less languages such as Kipsigis, but its morphology is characteristically different.

Footnotes to Chapter III

1. For over twenty years Birdwhistell has remained almost the only worker in the field, and his work has been confined to English.

2. My thinking is based on the following considerations: behavioral synchrony almost always occurs in intervals following the finish of an utterance by one interactor and preceding the beginning of an utterance by the other interactor (or at times, the first interactor). The situation is usually one where neither interactor is inclined to continue immediately with an utterance. There is thus a pause in the behavioral stream of relatively long duration. If we arbitrarily assume the pause to be of one second's duration (probably a very generous underestimate of average pause length), divide this interval into 50 parts (corresponding roughly to the cine camera's 1/48 sec. frame to frame duration), assume each interactor will initiate a major body movement at some point in the interval (in actual fact this probability may almost certainly be better estimated by a value less than one), and assume that each interactor is equally likely to initiate his behavior in any of the fifty intervals, then the probability that both interactors will initiate their behavior in the same interval is .0004 which is quite small. That is, if behavioral synchrony is due to chance alone, examination of 10,000 potential intervals should disclose only four instances of synchrony. The above argument also ignores the equally striking apparent sameness of rates of movement and the synchrony of endpoints as well as beginnings.

3. One class of behaviors is noted but not studied here: grass-pulling, self-preening and grooming. As a class these behaviors are unique in that they are the only behaviors which occur with any frequency on the part of non-speakers. The movements are of much more frequent occurrence with women and children (both sexes) than with men and are also more frequent when an individual is not in the role of speaker than when he is.

CHAPTER IV

GESTURES

4.1 Introduction

The gestures described below are those which have associated with them a 'meaning' which may be used in their elicitation and which have morphological shapes which are sufficiently non-context sensitive (non-variable in context) and standardized (high agreement among informants) that they can be reliably reproduced by informants in non-interactive contexts. This latter characterization of gestures has not been noted or emphasized previously, but in the investigator's experience, the degree of morphological 'rigidity' is at least as important a factor in determining whether or not a gesture is isolable in performance by an informant as is the explicitness of the meaning involved. While the analogy between gestures and words is oft-drawn, it is not out of place as some words also exhibit a similar context-independent combination of form and meaning. Note further that as with words, the term 'meaning' requires the inclusion of functional notions as well as 'naming' ones. In many (not all) languages demonstratives, prepositions, etc., are definitely words despite the fact that they don't 'stand for' anything. Similarly a movement such as lip-pointing has no 'nominal' characteristics but is readily elicited by stating its functional characteristics. Provided that it satisfy the dual criteria of form and meaning rigidity or constancy, the difference between a gesture with a clear 'lexical' meaning such as the 'full' gesture described below (IVB-15) and lip point-

ing (IVC-1) is neither more nor less than that between a noun and a demonstrative.

Dictionary definitions of gesture are commonly divided into two parts: a motion of the body 1) intended to express an idea or 'passion', or 2) intended to emphasize an argument, assertion or opinion. This twofold division is exactly that made in the study of Efron (1941:69-70): "A gestural movement may be 'meaningful' by (a) the emphasis it lends to the content of the verbal and vocal behavior it accompanies, (b) the connotation (whether deictic, pictorial or symbolic) it possesses independently from the speech of which it may, or may not, be an adjunct." A major conclusion of Efron's study was that the gestural movements of Jewish immigrants from Eastern Europe consisted primarily of movements of type (a) while those of Southern Italian immigrants consisted largely of movements of type (b).

A more recent classification which makes use of some of Efron's terminology but with altered definitions is that of Ekman and Friesen (1969). Two of the major categories proposed by them are of relevance here: emblems and illustrators. Emblems are "those non-verbal acts which have a direct verbal translation, or dictionary definition, usually consisting of a word or two, or perhaps a phrase (1969:63)." Illustrators "are movements which are directly tied to speech serving to illustrate what is being said verbally (1969:68)." It is clear that these categories are not mutually exclusive (and this is intended by the authors). That is, a movement

can both qualify as an emblem and function as an illustrator.

A non-interactional characterization of gestures was adopted here because of its convenience for field work and because of its operational explicitness, but there is substantial agreement behind the terminological and procedural differences. All of the items described here as gestures fall into Efron's category (b), while many of the behaviors described in Chapter Three are of Efron's type (a). Many of the gestures described below would be considered as emblems in the system of Ekman and Friesen.

The gestures are grouped below into four categories: interaction initiators and finalizers, imperatives, responses, and qualifiers. The first category includes greetings and leave takings. The category of imperatives includes commands, polite requests and admonitions. Qualifiers are grouped into the following types: size, quantity, direction, self-feeling and intention, and illustration. Following the descriptions is a discussion of the usages and occurrence of the gestures. In this section the question of whether gestures have 'explicit and invariable meanings' (Birdwhistell 1970:80) is dealt with. The relationship of gestures to speech is also discussed. Finally a comparative section examines inter-tribal and other similarities in gestural 'inventory.'

4.2 Description of Gestures

I Interaction initiators and finalizers

1. Handshake with left hand loosely grasping right (shaking) arm of self above, at, or just below the elbow.

connotation: respect while greeting.

2. Handshake alternated with putting hand around upright thumb of other person.

conn: respect; used only by elderly people.

3. Handshake with left hand of each person grasping right (shaking) hand of the other.

conn: affection and respect.

4. Handshake preceded by right hands slapping each other with palms flat.

conn: friendship (used principally by girls and young women greeting each other after a relatively long absence).

5. Handshake with fingers of right hand pressing into palm of other person's hand as hands twist apart.

conn: peer greeting.

6. Two-handed handshake with hands crossed.

conn: respect (used by elderly women).

7. Child puts arms around or grasps clothing of adult with each hand and bows down.

conn: children greeting parents or other elders (respect).

8. Handshake of short duration and little squeezing pressure.

conn: ordinary politeness; often used when being introduced by third person, in group meetings and departures, etc.

9. Hand lifted vertically to face height at side of body with

palm facing out. Hand waves from side to side or fingers wiggle.

conn: goodbye

II Imperatives

1. Right hand stretched out with fingers extended and palm down; fingers lowered to contact heel of palm.

conn: come here! (non-close distances).

2. Hand held up in front of body with palm towards body; fingers wiggle loosely.

conn: come here! (close distances).

3. Hand held up in front of body with palm towards body; index finger extended and wiggling; other fingers closed.

conn: same as for II-3; used only for beckoning dogs in Samburu.

4. Arm outstretched with fingers in loose fist; fingers open out together with palm down.

conn: go away!

5. Hand outstretched with palm down; arm moves from up to down.

conn: sit down (here)!

6. Hand outstretched with palm down; arm and hand wave up and down bending at elbow and wrist.

conn: stop here!

7. Hand held up in front of or at side of body with palm out; hand moves as against imaginary wall.

conn: be quiet! ; hold on with what you are doing!

8. Wink.

conn: stop what you are doing! (disapproval).

9. Index finger shakes from side to side.

conn: be careful! (not used, however, with negative imperative as is a similar North American gesture).

10. Poking someone lightly on arm or in stomach with index finger.

conn: pay attention! change whatever you are doing!

III Responses

1. Head shakes from side to side.

conn: negation.

2. Hand lifted vertically in front of breast with palm out; hand waves from side to side.

conn: refusal.

3. Head nods.

conn: affirmation.

4. Hands held outstretched symmetrically in front of body turn from palms down to palms up position.

conn: "I don't know"; may also occur in conjunction with or substituting for question words (where, what, who) and along with a negative question with a mandatory affirmative response (is it not like that?).

IV Qualifiers

A. Size

1. Right hand held flat or slightly cupped parallel to ground with palm down.

conn: height of animal or child.

2. Hand held up in front of body with palm facing face or orthogonal to it and elbow bent at right angles.

conn: height of children and other long objects such as spears or sticks; height measured from ground to fingertips.

3. Right arm extended with left hand encircling it at desired point.

conn: length.

4. One hand grasps other (not further back than the wrist) which is held palm up with fingers extended and close together.

conn: size of small, split fish.

5. Both hands put together in front of body with fingers outstretched and palms touching.

conn: size of small, whole fish.

6. Hands held in front of body with palms parallel to and facing each other.

conn: size of medium-sized, roundish object such as a gourd.

7. Hands held in front of body with palms closer at bottom than at top.

conn: a quantity of something (e.g., meat).

B. Quantity

1. Index finger extended while other fingers are kept close to heel of palm.

conn: one (quantity of something).

2. Index and middle fingers extended and rubbed against one another while the remaining fingers are kept close to palm.

conn: two.

3. a. Index and middle fingers touch thumb pad just below nail or first segment of index finger rests pad down on nail of thumb and tip of middle finger touches first joint of index

finger; remaining fingers touch heel of palm.

b. Thumb and index finger brought together in circle with pad of thumb resting on side of first joint of index finger; the remaining three fingers are stretched out but kept separate from one another.

c. Thumb and little finger are brought together over palm; remaining fingers extended.

conn: three

4. a. All (four) fingers extended with index and middle close together and ring and little close together; the latter two fingers may be bent at right angles to palm.

b. Four fingers extended and equally spaced one from another; thumb touches palm.

c. Index and middle fingers extended and crossed; ring and little fingers extended together.

d. Index and middle fingers extended; ring and little fingers brought in toward palm and covered by first segment of thumb.

conn: four.

5. Hand makes fist with thumb inserted between index and middle finger so that tip is visible.

conn: five.

6. a. Little finger and thumb nails clicked together several times; other fingers loosely curled.

b. Right hand opened with fingers together and thumb extended up away from these; little finger of left hand is hooked around inside of thumb while remaining left hand fingers are curled toward left hand palm.

c. Left hand outstretched with little finger touched by right

hand fingers.

d. Right hand makes fist while left hand makes gesture for one.

conn: six.

7. a. Pad of right hand thumb rubbed against side of first segment of first finger, other fingers being loosely curled.

b. Same as 6b, but ring and little finger of left hand are together brought to right hand thumb.

c. Same as 6c, but ring and little fingers of left hand are touched by right hand fingers.

d. Same as 6d, but left hand makes gesture for two.

conn: seven.

8. a. Fingers of right hand are outstretched and separated. Hand shakes up and down with palm orthogonal to ground.

b. Same as 6b but little, ring and middle fingers of left hand are brought together to right hand thumb.

c. Same as 6c but with three fingers of left hand being touched.

d. Same as 6d but left hand makes gesture for three.

conn: eight.

9. a. Tip of first finger touches pad of thumb, other fingers being loosely outstretched.

b. Same as 6b but all four fingers of left hand placed against right hand thumb.

c. Fingers of right hand wrap around extended fingers of left hand.

d. Left hand makes gesture 4c (for four) and little and ring

fingers of left hand together touch right hand fist.

conn: nine.

10. a. Nail of index finger is brought against pad of thumb and then flicks out; other fingers remain in towards palm.

b. Same as 10a except that index finger flicks out and strikes extended middle finger producing a noise.

c. Right and left hands make fists and are brought together.

conn: ten.

11. a. Fingers of open right hand slap against heel of palm (number of times not significant).

b. Right and left hands make fists and open out and close twice.

c. Same as 10c but fists are brought together twice.

conn: twenty (thirty, forty, etc. in variants b and c are produced in similar fashion and are not listed below).

12. Same as 1, but hand rotates at wrist.

conn: thirty.

13. Same as 4a but fingers are always parallel to one another; hand shakes slightly (rotates at wrist).

conn: forty.

14. Same as 5 but thumb inserted between middle and ring fingers.

conn: fifty.

15. Flat right hand palm strikes top of left hand fist.

conn: full, no more room.

16. Right hand (palm down) contacts left hand (palm up) orthogonally with fingers of both hands extended and close

together and slides across it.

conn: there isn't any; its finished (i.e., there is no more).

17. Index finger touches lips and then brushes across them as air is expelled.

conn: same as 16 but with 'disastrous' implication, e.g., the food supply is exhausted, the animals all died.

18. Right hand thumb or finger (s) hook or close over fingers of left hand: little, little and ring, etc.

conn: listing (i.e., first, second, etc.).

C. Directions

1. Lip pointing (eversion of lips).

conn: reference to human beings or their places of residence, usually with a pejorative tone.

2. Extended index finger with other fingers closed under thumb.

conn: direction and location; may be pointed to self for self-reference.

3. Index finger and thumb make circle and index finger flicks away from thumb.

conn: direction; illustration of movement of single object such as leopard jumping or arrow in flight.

4. Hand in loose fist opens out and fingers flick away with palm down.

conn: direction; showing movement of many things, e.g., cattle scattering.

D. Self-feelings and intentions

1. Flat palm touches chest.

conn: pride

2. Thumb and middle finger of right hand are brought together and then struck by index finger as hand is snapped; a loud noise is produced.

conn: beating (e.g. 'I'll beat you.', 'I wish I was at that fight.').

3. Index finger raised to mouth and bitten.

conn: annoyance or pain; often occurs following IVD-2.

4. Lower lip placed between teeth and bitten.

conn: annoyance.

5. Hand covers ear while head is inclined in direction of hand or both hands cover ears while individual sits with elbows on knees.

conn: sorrow or sadness, e.g., at death of relative, on being hungry (child) or after being beaten.

6. Hand covers mouth.

conn: surprise and sympathy when coming upon an injured or sick person.

7. Head shakes from side to side; accompanied by a velar click.

conn: surprise and sympathy when hearing about an accident.

8. Elbows brought to sides and hands raised in front of body with fingers closed into loose fists.

conn: fear of something on ground (e.g., snake or mad dog); women only.

9. Nose wrinkles

conn: something (not necessarily smell) disliked or disagreeable.

10. Lower lip pushes upper lip to cover nostrils.

conn: a disagreeable smell.

11. Hands raised just above and parallel to shoulders pointing towards neck with palms down; hands shake.

conn: "What shall I do" (used by women, e.g., after breaking something important or of husband's).

12. Open hands placed over breasts or just below them.

conn: shock (used only by women).

13. Head tilted to one side and open hand brought near to it;

conn: to go to sleep.

14. Hands raised to chest height and slapped against thighs (if standing) or knees (if sitting).

conn: something forgotten.

15. Head shakes from side to side while air is blown out of mouth with a soft falling-rising whistle.

conn: wonder.

16. Tongue tip stuck out of corner of mouth.

conn: indicates trick is being played on third person or that third person shouldn't hear what is being said (third person need not, however, be present).

E. Illustration

1. Head nodding with outward thrusting of chin.

conn: people walking.

2. Two fists make pedalling motion in front of body.

conn: people running.

3. Hands parallel with palms down and fingers outstretched move in front of body back and forth parallel to ground.

conn: threshing (finger motion).

4.3 Usage and Occurrence

Birdwhistell has, in effect, dealt a blow to systematic treatments of gestures (and this may in part be responsible for the paucity of gestural descriptions in the literature) by claiming that "in the American and English movement system... 'gestures' not only do not stand alone as behavioral isolates but they also do not have explicit and invariable meanings. Under analysis, those aspects of body motion which are commonly called gestures turn out to be like stem forms in language... Like/couth/ they cannot stand alone (1970:80)." While Birdwhistell's probable intentions in making this statement (e.g. to point to the existence of a more complex patterning than is evident at first look) are laudable, the statement itself is highly misleading, if not false.

In large measure the confusion results from an unwarranted consideration of all gestures as being of the same sort. Partly confusion results from (implicitly) treating all interaction contexts as being the same, and finally there seems to be a confusion with respect to levels of communication. In the African systems considered here, certain types of gestures not only do occur as behavioral isolates, but this is their most typical form of occurrence. All of the gestures grouped under the category of imperatives may and do occur without additional meaning-modifying body movements and with or without accompanying verbal imperatives. This is a fairly large class of gestures. In addition other gestures such as the 'refusal' gesture (III2) or the 'full' gesture (IVB-11) also frequently occur as isolates.

The important point should be made here that there are numerous kinds of distinct interaction contexts and while it is true that these gestures do not commonly occur as isolates in ordinary conversational interaction (the sort of context Birdwhistell possibly had in mind), there are other culturally viable contexts in which they do occur. Interactions characterized by imperatives, verbal or otherwise, would seem to constitute a class unto themselves with an interaction period of very short duration (as might be expected since an imperative form elicits a behavioral compliance and is normally followed by that compliance or by an indication of intent to comply (or possibly to not comply)). Imperatives, and in addition gestures such as the 'refusal' and 'full' ones mentioned above also commonly occur in another kind of context: as asides to a third party within an ordinary conversational interaction. For example, in a group meeting with a discussion going on, if some one is going around filling up tea cups, the 'full' gesture may be used to indicate that no more is required or desired without disturbing the principal interaction.

Birdwhistell's statement that gestures do not have explicit and invariable meanings appears odd when paired with the fact (which Birdwhistell does not dispute) that gestures are associated with explicit meanings (i.e. given the meaning an investigator can elicit the gesture, and vice versa) in the minds of members of a given culture. In another article Birdwhistell gives an example of the kind of evidence which (presumably) led him to this conclusion. The military salute, "could without occasioning a

court martial, be performed in a manner which could satisfy, please, or enrage the most demanding officer (1970:79)."

This example, however, in no way countermands the notion of an explicit, invariable meaning associated with the salute. The reason that the soldier saluting the officer is not court martialed is precisely because it is agreed, in their common subculture, that the salute is a means of conveying respect towards a superior. It is, of course, highly interesting that the soldier is able to convey something else along with the primary meaning. What the soldier is able to do is to superimpose a comment 'from himself' upon the gesture. One may, with legitimacy, speak of two levels of communication here, but the salute still retains its primary meaning.

Birdwhistell's statement must then be reinterpreted as meaning that all gestures occur with secondary meanings as well as primary ones. The use of gestures in the three tribes does not, however, provide support for this interpretation.

The interactions studied were between individuals who were often close acquaintances of one another and when not closely acquainted were at least social equals. In dyadic conversational interactions between individuals of this sort, the gestural behavior appeared to be almost entirely literal (i.e., the primary meanings were the ones intended, and only these were intended). Occasionally a gesture may indicate a comment which is distinct from or supplementary to the verbal material at that point (although usually the verbal material later makes clear the appropriateness of the gesture). This is often the case with lip

pointing (C-1) and tongue protrusion (D-16). In both of these instances it is clearly (as indicated by informants) a part of the meaning of the gesture to function in this way (that is, the gesture is a comment on the verbal material). It should be noted that third party reference is involved here. It is suggested that those instances where gestures occur with secondary meanings are principally confined to the following types of situation: ones involving status differences (e.g. soldier and officer, teacher and student, therapist and patient) and ones involving reference to a third party. Perhaps what is significant about the first situation is that each of the participants has a different reference group. The African material cannot be used to study these hypotheses, but it is sufficient to enable one to state that here, at least, non-literal use of gestures is rare.

The following remarks concern the usage of gestures in the various categories. First, the same gesture which is appropriate for a greeting is also appropriate and the one generally used in leave-taking. Imperative gestures do not occur in typical dyadic conversational interactions; their occurrence is restricted largely to the contexts described above. All of the gestures categorized as responses and qualifiers can and do occur in conversational interaction. In all three of the systems studied the occurrence of a gesture in conversational interaction nearly always means that it has two functions: 1) it bears its 'meaning' (often made clear in addition by association with a verbal item) and 2) it is incorporated into the system of marking and outlining movements

discussed in Chapter Three which are tied in terms of timing and function to the speech stream.² The following examples show this duality of function (as well as showing the 'literal' use of gestures):

III-4

a) A: míi áno

(they)are where? (VT5-2b.5.11, Kipsigis student, male)

Here the right hand is raised with the first word (palm up); on the second syllable of áno 'where' the hand is lowered a few inches and raised again slightly. Following this it is put to the waist palm out.

b) A: ínkēn ng'aa?

knows who? (VT 7-2; Kipsigis woman)

Here both hands are opened out with palms up and parallel to each (position held through utterance).

IVB-2, IVB-5

B: ...ako ni Juliana an no:no to pe:sa ma

I-say that Juliana I'm without except money which

r.h.r,h.l. he.t.t. he.n.he.t.a. (1)

nyoca awaco kande adwaro ni mondo

a few days ago I-talked about I-want that

imiya siling' lakini tic ariyo ikelna

you-give-me shillings but day two(Tuesday) you-bring-me

r.h.r.(2)

(3)

siling' e

shillings (no meaning, accompanies gesture only)

(4) h.n.

(1) to brush away a fly; (2) bent at elbow; (3) IVB-2;

(4) IVB-5

Note here that the first number gesture is accompanied by the corresponding word (two), but that the second, indicating the amount of five shillings is not. (from VT 24-1.4.22, Luo woman)

IVB-15

A: sí kíintáy púsyēek konyí kole

so is-put-in flour to-fill that ... (speaking of filling a pot with millet meal)

(1)

(1) IVB-15 (VT7-2.5.8, Kipsigis woman)

IVB-16

A: ... tinga ma biro ringe pi to onge

tractor which goes may run water but lacking

(1)

2hr (2)

gweng'gwa ka onge pi tek ka yath

plot-our here lacking water hard as tree

2hr 2hl(3)

2hl(4)

(1) a previous he.t.t. had been made.

(2) hands brought together to begin IVB-16 (referring to there being no water).

(3) hands still held together, palm to palm.

(4) hands brush across one another and separate to complete gesture; following this the speaker's head is lowered and he turns away. Here the gesture is begun with the speech item most closely associated with it, but is held until the end of the utterance (VT 20-1.4.7, Luo elder).

IVB-18

B: kiikĩpcey koyaap Poomēet (A: Poomēet) ak Ceepālũngu

its divided into Bomet Bomet and Chebalungu

(1)

(2)

(1) Right hand index finger hooked around left hand little finger.

(2) Right hand index finger hooked around little and ring fingers of left hand. (VT 5-2a, utterances 72-74 in transcription in Chapter Two.)

4.4 Comparisons

In sharp contrast to the high degree of non-comparability among the languages of the three tribes and also in contrast to the tribally specific (in form) marking movements, gestures are shared inter-tribally to a high degree. There are only two kinds of gestures which are not found in all of the tribes. The gestures used for indicating the size of fish are only found among the Luo, who live around Lake Victoria and for whom fish constitute an important dietary item. The counting gestures (IVB) are not found among the Gusii and in their most complicated form are not found among the Luo. They are found in essentially identical form among the Kipsigis, Maasai, Samburu, Barabaig and Nandi (Hollis 1909). These tribes all belong to one linguistic grouping, Paraniotic (Tucker and Bryan 1956). It is not known if the same gestures occur among Cushitic peoples (many Paraniotic languages have borrowed Cushitic numerals), nor is it known if any Bantu groups outside of the Paraniotic areas have any similar counting systems.

The chart, 4-1, is a six-way inventory for the gestures described in 4.2. In addition to the Kipsigis, Luo and Gusii, it was possible to obtain data for the Samburu, a Maasai-related tribe of Northern Kenya which has had relatively less contact with the Western world than the other three tribes. While in general there are no significant differences between the Samburu and the other African groups, the head nod (III-3) as an affirmative response is absent. This absence, together with the virtual absence of head nodding in the videotaped conversations (except for Luo where it is associated with the verbal item, ee 'yes') suggests that this gesture is of recent adoption here.

The other two categories in 4-1 are for North America and Latin America (specifically for the United States and Columbia). The entries have been taken from the excellent study of Saitz and Cervenka (1962). The entries are Africa-oriented in that when there is not a form-meaning correspondence with the African gesture there is no entry. For example the wink in North America is similar in form to II-8 but in usage most closely resembles IVD-16 (to which it has no physical relationship). The numbers and letter in the North and Latin American columns are those of Saitz and Cervenka. A question mark in the Latin American column means that the item is not listed by Saitz and Cervenka but is familiar to the investigator for North America.

While the African tribes' gestures are shared to a high degree among themselves, they are not shared 'cross-continentally'. Only 13 out of 69 gestures are found in both Africa and North America and only 18 out of 69 in both Latin America and Africa.

One gesture which is unique to Africa is interesting in that while it is not in use in America it was clearly described and (presumably understood and used at the time) by Shakespeare: the biting of the finger to indicate anger and intention to strike (IVD-3). In *Romeo and Juliet* (I.i.41-42) Samson says, "I will bite my thumb at them which is a disgrace to them if they bear." The morphologically complicated and associated in meaning finger snap (IVD-2) occurs in Latin America but with the meaning "chagrin" (Saitz and Cervenka 1962:39).

Not apparent from the table is the relative size of the inventory for Africa. While undoubtedly incomplete, it is unlikely to be increased another order of magnitude with further search, yet it is approximately that much smaller than the Latin American inventory. This relative paucity is perhaps related to the generally low frequency of occurrence of gestures in interaction (not to be equated, however, with a low frequency of body movements in interaction). Emphatic body movements occur with great frequency.

Handshake usage in the three tribes resembles that described for Columbia by Saitz and Cervenka (1962). Handshakes are mandatory in dyadic interactions where the participants have not seen each other recently and (in leave taking) when they will not see each other again shortly. Handshakes are frequently used between neighbors and close friends (where they would not be used by North Americans). The common handshake (I-8) differs from its Latin American counterpart in being of short duration and in being relatively lax.

Table 4-1

	Kipsigis	Luo	Gusii	Samburu	N.A.	L.A.
I-1	x	x	x	-	-	-
2	x	-	x	-	-	-
3	x	x	x	-	-	-
4	x	x	x	-	-	-
5	x	-	-	-	-	-
6	x	-	-	-	-	-
7	-	-	-	x	-	-
8	x	x	x	x	1A	1A
9	x	x	x	x	29B	29C
II-1	x	x	x	x	-	14A,C
2	x	x	x	-	14B	14B
3	x	-	-	x	14D	14D
4	x	x	x	x	-	-
5	x	x	x	x	22	22
6	x	x	x	x	-	125A
7	x	x	x	x	-	-
8	x	-	-	-	-	-
9	x	-	x	-	(6A)	(6B)
10	-	x	-	x	(21)	(21)
III-1	x	x	x	x	29B	29B
2	x	x	x	x	-	29A
3	x	x	x	-	28	28
4	x	x	x	x	-	35C
IVA-1	x	x	x	x	62B	62B
2	x	x	-	x	-	-
3	-	x	-	-	-	-
4	-	x	-	-	-	-
5	-	x	-	-	-	-
6	x	x	x	x	x	?
7	x	-	x	x	x	?
B-1	x	x	x	x	x	?
2	x	x	-	x	-	-
3	a,b	b	-	c	-	-
4	a,b	c	-	a	-	-
5	x	x	-	x	-	-

	Kipsigis	Luo	Gusii	Samburu	N.A.	L.A.
6	a,b,c	d	-	a	-	-
7	b,c	d	-	a	-	-
8	a,b,c	d	-	a	-	-
9	b,c	d	-	a	-	-
10	a	c	-	b	-	-
11	b	c	-	x	-	-
12	-	-	-	x	-	-
13	-	-	-	x	-	-
14	-	-	-	x	-	-
15	x	-	x	x	-	-
16	x	x	x	x	-	-
17	x	x	x	x	-	-
18	x	x	x	x	-	-
C-1	x	x	x	x	-	124B
2	x	x	x	x	124A	124A
3	x	-	-	x	-	-
4	x	-	-	x	-	-
D-1	x	x	x	x	46B	46B
2	x	x	x	x	-	-
3	x	x	x	x	-	-
4	x	x	x	x	-	-
5	x	x	x	x	-	-
6	x	-	-	x	-	-
7	x	x	-	-	-	-
8	x	x	x	x	-	-
9	x	x	x	-	x	?
10	-	-	-	x	-	-
11	-	x	-	-	-	-
12	-	-	x	-	-	-
13	x	x	x	x	53B	53B
14	-	x	-	-	-	-
15	x	x	-	x	-	-
16	x	x	x	x	-	-
E-1	-	-	-	x	-	-
2	x	x	x	-	-	-
3	x	x	x	-	-	-

Footnotes to Chapter IV

1. The limited familiarity of the investigator with the cultures precludes the making of a more definite statement.
2. It is possible here to call gestures, in their occurrence in context, 'bound forms', but two important provisos must be made:
 - 1) the gestures are elicitable and performable as isolates out of context (this is not true of what are considered 'bound forms' in linguistics, e.g. -ish (as in boyish, etc)), and 2) the gestures are not acquiring additional kinesic behavior 'to achieve identity' (Birdwhistell 1970:119). Rather they are serving an additional function besides bearing their 'meaning'.

CHAPTER V

Factors Affecting Body Movements in Interaction

5.1 Mechanical Factors

The material in this section differs markedly from that of previous chapters. Here the concern is not the characteristics and functions of particular kinds of movements but the effect of certain background factors on body movements taken as a single, undifferentiated class of behaviors.

To evaluate these factors a number of small 'experiments' were run holding constant as many factors as possible and systematically varying one factor (per experiment). In all cases the individuals who were recorded were male secondary school students (varying in age from about fourteen years to twenty years). Unless otherwise noted they were Kipsigis. Students from other tribes were recorded at schools within their own tribal areas. In all cases the conclusions implied by the data should be taken as tentative: the number of individuals and number of behaviors involved is usually quite small and because the statistical decision procedures used to evaluate the data were sensitive to these factors it is possible that there are valid relationships which were not uncovered due to the small frequencies involved.

5.1.1 Effects of sitting and standing.

Table 5 presents data from three dyads who were recorded in both sitting on chair and standing positions. The numbers represent the total number of hand or head movements (for both interactors) during a three minute period (for each dyad in each

position). The order of position was randomized for each dyad. The hypothesis of no difference between sitting and standing positions was tested using a test for the difference of two means, and was not rejected at the .05 level.

5.1.2 Effects of sitting and lying on ground and sitting in chairs.

Table 5-2 gives data and statistical analysis on the relative frequencies of body movements for three dyads recorded in each of three positions: sitting on the ground, lying on the ground and sitting in a chair. The numbers represent the numbers of body movements occurring in one minute periods (for each dyad in each position). The order of positions was randomized for each dyad. As in 5.1.2. there is no evidence that differences in basic conversational posture affect the frequency of interactional body movement behavior. It should be noted that these modes of sitting and lying are all in common use among the Kipsigis, particularly in this age group.

5.1.3 Effects of distance

Using the same experimental arrangements as above though with different interactors, the effect of distance on frequencies of body movements was studied. As was the case with postural position, no significant differences were found. The data and analysis are given in Table 5-3. Note that in this experiment the presumed 'favorite' degree of proximity between interactors (quite clearly the closest position judging from other interactions where the individuals involved were free to choose the degree of closeness to each other with which they sat) was violated in two of the distances without significant effect.

5.1.4 Effects of mutual postural orientations

An attempt was made to study the effects of three different postural configurations--parallel (facing the recorder), facing (facing each other) and angled (facing each other after turning approximately 45 degrees towards each other from parallel position). The numbers given in Table 5-4 were obtained by sampling at five second intervals and recording the presence or absence of hand movements on the part of the speaker. Fifty sample points per dyad were obtained. The differences between postural orientations were not significant.

While, as mentioned above, it is possible that due to the small size of these studies real relationships are obscured, the entire set taken as a whole give no support for the idea that culturally favored or 'typical' interactional positions and distances and non-typical distances and positions result in interactional differences (at least such as would be reflected in differing body movement frequencies). As Sarles (1966:66) has noted, in numerous real-life situations the ideal-typical distances cannot be maintained, yet interaction is still carried on. Hence the above results (which also include postures as well as distances) are not surprising (perhaps even reassuring).

5.2 Social Factors

5.2.1. Age

Beyond childhood there do not seem to be any differences in the interaction systems of individuals of the same sex but different ages. Despite the fact that in each tribe, increased age carried with it increased respect (an oft spoken of value),

this does not seem to entail any alteration of interaction style. In Kipsigis, which has particles which seem to be related in use to the degree of casualness and relaxedness of the conversation (see 2.4), the same particles are used between older and younger individuals as well as individuals of the same age.

The study of the development of an interaction system in children is a specialized study. It is of great interest, but also extremely difficult to carry out as children are highly mobile and highly restrained in the presence of strange equipment. The recordings which were made and observations made of children interacting when no recording equipment was present suggest that children learn to use language verbally before they make use of marking movements. It is possible that these movements give a cohesiveness and sense of ongoingness (as well as effectively shutting out the outside) which is one of the reasons why the interactions of adults can often show utterances of much longer duration than those of children.

5.2.2 Sex

There are differences of posture and differences in the range of the voice between sexes (see above 2.3) but there do not appear to be differences in the frequency or use of body movements. Two basic postures are used by women when conversing. The first, which tends to be used by young women and girls, is sitting with the legs folded together and out to one side with the body supported by an arm to the other side. The second is sitting with both legs together and directly in front (unbent). While never sitting in these ways, men sat and squatted in a

variety of positions, the commonest being with the legs spread and bent up in front so that the arms could rest on the knees. There were no tribal differences observed.

Table 5-1

	Sitting	Standing
dyad 1	85	121
2	124	133
3	114	101
mean frequency	107.67	118.33
t	.712	
t _{.975} ⁽⁴⁾	2.78	

Table 5-2

	Lying	Sitting	Sitting in chair	
dyad 1	23	26	25	
2	23	24	24	
3	27	31	28	
Category means	Sum of squares 10.67	Degrees of freedom 2	Mean squares 5.33	F ratio F= .70
within	45.67	6	7.61	F _{.95} ^(2,6)
total	56.34	8		=5.14

Table 5-3

		distance (feet)			
		2	4	7	
dyad	1	36	26	21	
	2	26	26	23	
	3	30	37	31	
		Sum of squares	Degrees of freedom	Mean squares	F ratio
Category means		54.89	2	27.45	F = .879
within		187.33	6	31.22	F _{.95} (2,6)
total		242.22	8		=5.14

Table 5-4

tribe	dyad	parallel	facing	angled	
Luo	1	32	37	42	
	2	25	31	23	
	3	16	14	18	
Kipsigis	4	5	13	10	
	5	17	6	19	
	6	13	16	22	
Gusii	7	35	36	31	
	8	26	26	23	
	9	12	20	41	
		Sum of squares	Degrees of freedom	Mean square	F ratio
tribe		1128.66	2	564.33	F = 6.77
position		130.67	2	65.33	F = .783 n.s.
interaction		28.00	4	7.00	F = .083 n.s.
within groups		1501.34	18	83.41	

CHAPTER VI

Summary and Comments

This investigation combines a number of innovative features. Besides making extensive use of videotape recording equipment in the study of body motion, it more importantly deals throughout almost entirely with spontaneous, unelicited behavior. In addition, it is based on the examination of interactions of numerous individuals. While studies of body movement of this type are almost non-existent (Efron's (1941) work in some ways being an exception) linguistic studies which attempt to deal with the realization of linguistic structure in actual interactions are also rare. An important African exception is the careful study of Swahili by Joan Maw (1969)--based almost entirely on spontaneously recorded material. In Maw's study, as here, elicited examples were always identified as such. The distinction may seem trivial but it is not.

The dynamic use of language involves many factors and the linguistic structure which is discoverable by the analysis of isolated, elicited forms is only part of the picture. The other parts--how linguistic structures are combined in sentences and utterances, how conversation is organized, how the voice is used in actual interaction, how various body parts move in interaction--can only be studied by carefully observing actual behavior. These factors cannot be elicited out of context and by their nature cannot be found in a linguist's field notes. The holistic emphasis in this work is thus deliberate (although it was not possible to carry it far enough) and it is hoped that the work itself constitutes

a demonstration that such emphasis is both feasible and fruitful.

In the discussion in this section the principal conclusions presented above will be summarized, and areas which could not be dealt with, but which seem to be interesting in the light of the work which has been done, will be discussed and their possibilities briefly sketched. Chapter II, plus the notes in the appendix, deals with the verbal components of interaction. Extensive listening and instrumental analysis have made it clear that on the whole the tones of these languages, which are discoverable in the analysis of isolated forms, are 'realized' in interactional speech. An area which could not be investigated because of the detail involved (and worthy of a separate study) is the contexts and ways in which phonological features (of which tone is only one) are altered in speech. In Kipsigis, to mention just a few alterations, c may be realized as y, the sequence Vy may be realized as VV, VV may be realized V, g as w, ng' as k, a falling tone as high, the tonal assimilation and dissimilation rules (discussed in footnote 9 in Chapter II) may not operate, etc. All of these changes are not just features of the idiolects of particular individuals, but general features of the way the language is used. They appear to be most immediately governable by rate of articulation and are unquestionably studiable.

Although the basic features characterizing the 'isolation' tones are present in interactions, there are three important additional ways in which pitch is utilized in interaction. The first is by the manipulation, through widening of pitch intervals and suspension and partial suspension of tonal lowering, of the

general tendency, termed downdrift, for the pitch of non-low tones to fall throughout relatively long grammatical units (sentences, utterances). This manipulation appears to have a definite expressive function indicating the relative degree of emotional intensity on the part of the speaker. The second is by raising or lowering the 'base' (low) tone level of an utterance or utterance portion. This phenomenon is here termed a register shift. The third way is by the use of extra-high pitch, often combined with increased length and loudness on a single syllable, for emphatic purposes. It is not possible to state whether the first two features are characteristic of Luo and Gusii in addition to Kipsigis, but the third definitely is. Kipsigis has the additional phenomenon of a special tone which is specifically tied to a characteristic grammatical structure (although a higher level one): the rising question tone.

The items discussed in section 2.4 under the term 'semi-words' constitute a very interesting set of forms whose occurrence is almost entirely confined to actual interaction. Although it cannot be proved, I believe that had I done a purely linguistic study of Kipsigis, they would never have been discovered, with the exception of the forms for 'yes' and 'no'. As it was I had gone quite far in purely linguistic research and already operated the language reasonably well when it became clear that there were forms occurring in the interactions which neither I nor my co-workers (native speakers) were noting. More careful listening uncovered these forms (I am reasonably sure now that there aren't many, if any, more) whose occurrence is very frequent in interactional contexts.

My co-workers in going from spoken interactions (in which they were not participants) to written transcripts had almost entirely omitted (unconsciously) these forms as they were so tied to the actual interactional situations that they had no 'independent' existence.

The higher-level linguistic organization exhibited in conversational interaction is another area deserving of more extensive treatment than it receives here. The basic point I have tried to make is that linguistic structure, per se, plays a relatively small role. This appears to be a by-product of the fact that what is occurring is a process, the ongoingness of which is dependent on the steady introduction of new 'meaningful' material. This material is introduced primarily by linguistic means (it is here that the great efficiency of spoken language in communication is most clear), but the speaker and the listener in his active role of 'commentator' have and actually display very great freedom in the ways they break their speech up into bits and pieces. The principal requirement served by this breaking up is not the production of grammatical units or items of structure but the production of items which bear meanings appropriate to their point of introduction into the conversation. Higher level linguistic structure is thus subservient to the ongoingness of interaction. Speakers' utterances may consist variously of semi-words, single words, short phrases, incomplete sentences, sentences, strings of sentences, etc.

The complex structures of what is sometimes called the morphology of a language--loosely speaking, items which contrast in

series such as demonstratives, tenses, actor and object markers, cases, etc.--are present in interactional contexts in the same forms as in elicited speech. However there may be differences in usage which imply changes in the meanings associated with the forms. For example, in the Kipsigis series of possessive suffixes singular and plural possessor are formally distinguished as in English, but it is the first person plural which is used in contexts where languages with an inclusive-exclusive contrast use exclusive forms (and where English uses the first person singular). Whereas in English one says, 'let's go over to my house,' in Kipsigis (and in many other East African languages) one says 'inkeepe oliinyāan' ('let's go to our house').

In the conversational interaction systems of all three tribes there is a very clear separation of the roles of 'speaker' and 'listener.' This separation is clear from a linguistic transcript of a conversation but is even more striking when the interaction is viewed by means of the videotape recording. Here, because of the close association of body movements and speech, on a gross level the individual in the role of speaker is the one who is actively in motion and who is in sharp contrast to the more quiescent listener. On a finer level it was observed in all of the tribes that the initiation of speech was associated with the raising of the head or a portion of it (such as the eyes) and a turning toward the listener, while the cessation of speech was associated with a lowering of the head or eyes and a turning away. Within an utterance speakers of all three tribes 'outlined' and

'marked', by means of raising at the beginning, holding, and finally lowering a body part (most often a hand or hands), segments of speech which were variously words, phrases, clauses, etc. These behaviors were often combined over single words, particularly when items were being listed. In all three tribes emphatically pronounced syllables were sometimes accompanied by 'nodding' movements (up, down, and a slight rebound up again) of the head or hand. In Luo, which has word stress these movements were much more frequent and not confined to occurrence with emphatic stress. In Luo the downward portion of the movement usually coincided with the stressed syllable (whether emphatic or no). In Gusii this timing was found with the particular intonation pattern discussed in 2.3.5. Otherwise in Gusii and Kipsigis these marking movements were not specifically associated with single syllables in the speech stream. There was no association of specific 'tones' and body movements in any system. In particular the very high Kipsigis question tone was not associated with any movement.

Although all interactors used body movements when speaking there was a very high degree of individual variation in the frequency and extensiveness of movements. This variation did not appear to have a geographical or other dialectal base. Within moderate limits the frequency and kind of body movement did not appear to change with changes in distances between interactors, with changes in body positioning (sitting, standing), or with changes in postural orientation between interactors (facing, parallel).

Gestures, defined here as body movements characterized (1) by a relative rigidity of form and (2) by being associated with specific meanings, were elicited in non-interactional contexts. Their occurrence in interaction, however, was fairly common, and was 'literal'. That is they conveyed their associated meanings. In addition they were usually incorporated into the system of marking and outlining movements. Gestures were shared to a high degree among the three tribes, but only to a low degree with areas outside of Africa. While there may possibly be some basis for a 'universal' set of meanings which have gestural realizations in different cultures, the specific realizations appear to vary across culture areas.

In the course of this investigation numerous topics arose which seemed deserving of study but which could not be dealt with for reasons of time and resources. The following is a selection of what I feel are some of the more interesting of these areas for further work.

Although pitch variation has been dealt with extensively here, there were other dimensions of vocal variation utilized by speakers of the three tribes. Two of these may be singled out: 1) voice quality and 2) tempo. While in part both of these features are characteristics of individuals and variable as such, there appears also to be shared variation so that one may justifiably speak of the utilization of these features in the communicative systems of interactors. The investigator's own impression is that these matters can only be dealt with by instrumental study (and even with the help of instruments it will not be easy). However, their

utilization appears to be every bit as important as that of the more easily studied phenomena of pitch.

In languages which have word-stress it appears that body movements often occur in association with them. In English, which has a stress system realized (often) by loudness and pitch variations, Birdwhistell has implied that there is extensive association of body movements with stress. Although the association is perhaps not so strong the same general finding may be stated for Luo which has a stress system in which a primary component is vowel length. On the other hand there is no association of body movement and tone in Luo (or Kipsigis or Gusii). A linguistic type not thus far studied in this context is the pitch accent system characteristic of Japanese and some American Indian languages where pitch variation is apparently the basis for stress. It would be extremely interesting to see if there is any association of body movement and pitch in languages of this type.

The association of upward movements with beginnings and downward movements with ends suggests that it is possible that these movements are connected in some way with inspiration and expiration (i.e. with breath groups). The relationship, if it exists, needs to be studied experimentally.

In the introduction it was noted that conversations with more than two individuals appeared to be organized differently from dyadic conversations. In triadic, etc., conversations the regularity of interchange between speaker and listener breaks down because there is more than one listener who may respond actively, making it unclear to whom (if any) the speaker is to orient. The very

high (in some cases) incidence of two or more interactors speaking and moving simultaneously (which is unusual in dyadic interactions), makes transcribing these interactions very difficult. However with practice, just as the musician can learn to hear one line out of several, it is usually possible to distinguish the separate voices.

These non-dyadic conversational interactions give an initial impression of being 'derived' from the dyadic ones. That is, the basic features of the dyadic systems are there but are modified because of the effects of the presence of more individuals. The same 'derivative' characteristic is present in the specialized types of interaction found in story-telling, speech making, public discussion, etc. Here the procedures for alternation of speaker and listener are more formalized than with triadic or quadratic conversational interaction, and, because the situation in these instances is that of one individual relating to many, there are numerous special features in each instance whereby speakers elicit and maintain a relationship.

Finally, the study of the development of interactive systems in children would be a highly interesting endeavor. In particular the appearance of outlining and marking movements seemed to come after basic fluency in the language had been achieved and may be related to a characteristic shortness of both interaction duration and utterance duration.

APPENDIX

Grammatical Sketch of Kipsigis

1. Phonology¹

1.1 Consonants

BiLab.	Alv.	AlPal.	Vel.
p	t,s	c	k
m	n	ny	ng'
w	r,l	y	

P and k are voiced when occurring between vowels and after nasals and r and l. Nasals assimilate to following consonants in articulatory position, but this is only noted for m in transcription.

1.2 Vowels

	close		open	
	front	back	front	back
high	i,ii	u,uu	<u>i,ii</u>	<u>u,uu</u>
mid	e,ee	o,oo	<u>e,ee</u>	<u>o,oo</u>
low		a,aa		<u>a,aa</u>

Close a and aa are normally phonetically 'open o' (Cardinal 6).

The other vowels have their usual phonetic values.

In indicating vowel quality the entire word containing open vowels is underlined. In general Kipsigis words have vowels of only one quality. Some affixes are of variable quality agreeing with the quality of the vowels in the word to which they are attached (these are written below with capital vowel letters). Other affixes have close vowels which affect the quality of the vowels in the word to which they are attached. This type of

vowel harmony is unidirectional in that an open vowel may become close, but a close vowel never becomes open. The two types of affixes are termed weak and strong in Tucker and Bryan (1964).

Examples:

kʌ- (past tense prefix)

+ keekás 'to hear' (open vowels): kakás 'he heard'

+ keekéer 'to see' (close vowels): kakéer 'he saw'

-e (continuative suffix)

+ keekás : káse 'he is hearing'

+ keekeer : kéere 'he is seeing'

1.3 Tones

High, low and falling tones occur and are of particular importance in indicating distinctions of case and tense.

2. Nominal System

2.1 Nouns

Nouns occur in two forms, primary and secondary. The secondary form is the commonest and is formed from the primary by means of suffixes. All nouns in all forms are distinguished tonally for case (nominative and accusative) and by separate suffixes for singular and plural (both primary and secondary forms). In usage primary forms emphasize lack of specificity: cfi 'some person, any person' (accusative primary form); ciitá 'a person, the person' (acc. secondary form). Secondary singular nouns have a 't' present as part of their suffix, and secondary plural nouns have a 'k'. Beyond that it is difficult to generalize: the tonal and morphological classes do not coincide, nor, in general, do singular and plural classes (i.e., the plural of nouns cannot

usually be predicted from the singular). Nouns may be derived from verbs and adjectives.

2.1.1 Secondary suffixes ²

Singular:

- VVt kéméúut (keméuut) 'drought'
- tVt kípsikiisiintét (kípsikiisiintét)
 ' a Kipsigis person'
- yVt kēeciiryét (keeciiryet) 'sheep'
- tV kwāantá (kwāanta) 'father'
- Vt kéríinkét (keríinket) 'hole'

Plural:

- VVk keetfik (keetiik) 'trees'
- yVk kípsikiisyék (kípsikiisyék) 'Kipsigis people'
- wVVK pesenwēek (pesénweek) 'debts'
- kV tuuká (tuuka) 'cattle'
- Vk/-k píik (piik) 'people'

2.1.2 Derived forms have regular singulars and plurals.

Deverbative: temfintét, temfik 'plougher (s)'

(from keetém 'to plough')

Deverbative: siréet, sírúutík 'writing(s)' (from keesír
'to write')

Deadjectival: karaararíntá, karaararínwēek 'beauty'

(from káráarān 'beautiful')

Deadjectival: kiimnatēet, kíimnatoosyéek 'strength'

(from kíim 'strong')

2.1.3 There are three formative prefixes, two of which are gender-like.

kÍp-(kÍp) 'male' (see Kipsigis above)

cĒEp-(cĒEp-) 'female' ceepyóoséet (céepyóoséet)

'a not young woman'

kaap (tonal shape not invariable) 'place of'

Káapsóofit (Káapsoofit) 'name of a town'

2.2 Pronouns

Primary form

Secondary form

<u>ánēe</u>	(ánēe)	<u>ánēentet</u>	(anēentet)	'I'
<u>ínyēe</u>	(ínyēe)	<u>ínyēentet</u>	(inyēentet)	'you(sg.)'
<u>ínēe</u>	(ínēe)	<u>ínēentet</u>	(inēentet)	'he'
<u>éecēek</u>	(ēeceeek)	<u>éecēeket</u>	(eecēeket)	'we'
<u>óokwēek</u>	(óokweek)	<u>óokwēeket</u>	(ookwēeket)	'you(pl.)'
<u>ícēek</u>	(íceek)	<u>ícēeket</u>	(icēeket)	'they'

2.3 Possessives

Possessives occur as suffixes attached to nouns, and, following the particles nE and cE, as free forms. Agreement is both for possessor (singular and plural) and possessed (singular and plural). All nominative tones are high. Suffixes are invariant as regards vowel quality.

Singular possessed object

<u>-nyuun</u>	-nyaan	'my, our'
<u>-ng'uung'</u>	-ng'waang'	'your (sg. and pl.)'
<u>-nyiin</u>	-nywaan	'his, their'

Plural possessed object

<u>-kyuuk</u>	-kyaak	'my, our'
<u>-kuuk</u>	-kwaak	'your (sg. and pl.)'
<u>-kyiik</u>	-kywaak	'his, their'

2.4 Demonstratives

Demonstratives occur as suffixes in three forms: one for distance, one for distance and reference combined, and one for time reference. Each form has three or four degrees and plurality and case are distinguished. All forms also occur as pronominals.

2.4.1 Distance

	Accusative		Nominative	
	Sg.	Pl.	Sg.	Pl.
near speaker	ni	cu	ní	cú
near person spoken to	nāan	cāan	nāan	cāan
away from both	nīin	cūun	nfin	cūun

2.4.2 Distance and reference

The second member of this series has a purely referential function while the other members have combined referential and emphatic spatial usage.

	Accusative		Nominative	
	Sg.	Pl.	Sg.	Pl.
Primary				
near to speaker	nítan	cútan	nitán	cután
aforementioned	nāatan	cāatan	nāatán	cāatán
near person spoken to	naanítan	caanítan	nāanitán	cāanitán
away from both	niinítan	cuunítan	nfinítan	cūunitán

Secondary

near to speaker	<u>nítéet</u>	<u>cutéet</u>	<u>nitéet</u>	<u>cutéet</u>
-----------------	---------------	---------------	---------------	---------------

(etc. as above for primary forms)

2.4.3 Time reference

Members of this series follow the other demonstratives and are themselves invariant in both vowel quality and tone.

	Singular	Plural
of today	<u>kāan</u>	<u>kāan</u>
of yesterday	<u>kōonye</u>	<u>kóoce</u>
of more distant time	<u>kfinye</u>	<u>kfice</u>

2.5 Interrogatives

ata 'how many'

ng'āa (ng'aa) 'who'

au 'when'

āno 'where'

inkoró 'where (nearby)'

nēe 'what'

anyōon, ancōon 'which (sg. and pl.)'

3. Adjectives

Adjectives occur as an independent and (unlike nouns) relatively homogeneous class. Most adjectives are bisyllabic (often being reduplicated forms) and have distinct singular and plural forms. These may be distinguished by vowel quality (usually open in the singular and close in the plural) and/or by a suffix -EEñ. Case is again distinguished tonally, there being a number of tonal subclasses. In some of these subclasses a third case is present, the absolute. The following are the various forms which occur for the adjective glossed 'tasty': ányiny (abs.sg.), ányiny (acc.sg.), ányiny (abs./acc. pl.),

anyíny (nom.pl.).

4. Verbal System

4.1 Morphological classes and derivational suffixes

4.1.1 There are two major morphological classes, one without an initial I in the stem (Class I) and one with (Class II).

Within each of these two classes simple verbs fall into various subclasses, dependent upon their phonological shape, which vary in conjugational behavior.

4.1.2 The following types of derived verb occur. The shape given to the suffix is not invariant and depends on person and tense-aspect combination.

1. motion towards	-U
2. motion away	-tA
3. associative	-y,-toos
4. dative	-ci
5. stative	-Ak
6. intransitive 1	-s
7. intransitive 2	-IIs
8. ambulative towards	-AAAnU
9. ambulative away	-AAAt
10. instrumental	-EEEn
11. causative	-sI (also placement into Cl.II)
12. inceptive	-IIIt (adjective stems only)

4.2 Person reference

Subject reference is indicated by prefixes which immediately precede the verb stem. Only first and second person are distinguished for number. Vowel length and tone are dependent on

tense-aspect combination. Class II verbs, however, have long vowels in subject prefixes in all forms.

	Singular	Plural
1	A(A)-	kI-,kEE
2	I(I)-	O(O)-
	kO-,∅ (zero prefix)	

Object reference is made with the following suffixes:

1	-A(A)n	-EEc
2	-I(I)n	-AAk

For nearly all verbs, third person reference is unmarked but 'understood'. For example āakātii (from kiikāt 'to greet) means 'I am greeting him (or her or them)'. Reflexive reference is indicated by a particle kēe which follows the verb: āakātii kēe 'I am greeting myself'.

4.3 Aspect, tense and mood

4.3.1 There are two binary aspect distinctions, non-continuous/continuous and non-complete/complete. The continuous aspect contrast runs through the entire set of verbal forms, while the complete aspect is more restricted. Continuous forms are distinguished from non-continuous forms by having a suffix, -e (sometimes -ii or -i) which changes the quality of the stem vowels of the verb if they are open. Thus all continuous forms have only close vowels. In addition the tone of stem vowels is generally high in continuous forms. The non-complete aspect is distinguished from the complete by the tone of the subject prefix (high in the former and low in the latter).

4.3.2 There are three past tense prefixes which mark the periods of today, yesterday and before yesterday. These are, respectively, kA(A)-, kOO, kII-. The tense prefixes precede and are the tonal opposites of the subject prefixes. I.e., where the subject prefix has a low tone the tense prefix has a high tone and vice versa. Today's past tense prefix is short (kA) with incomplete and long with complete forms. When short it combines with following subject prefixes which consist only of a vowel.

4.3.3 In non-past forms there are three moods: actual/potential, subsequent, and subjunctive.

4.3.4 The interaction of tone, vowel length and vowel quality is best seen in the display given below for a typical (Class I) verb, keekás 'to hear':

		Non-continuous	Coninuous
Actual	1 Sg	<u>ákas</u>	ákásé
	2 Sg	<u>íkas</u>	íkásé
	3	<u>kás</u>	kásé
	1 Pl	<u>kíkas</u>	kíkásé
	2 Pl	<u>ókas</u>	ókásé
Subjunctive		<u>akás</u>	aakásé
		<u>iikas</u>	iikásé
		<u>kokás</u>	kokase
		<u>keekás</u>	keekásé
		<u>ookas</u>	ookásé

	Non-complete	Complete	Non-complete	Complete
Subsequent	<u>āakas</u>	<u>aakas</u>	āakāsé	aakāsé
	<u>īikas</u>	<u>iikas</u>	īikāsé	iikāsé
	<u>kōkās</u>	<u>kokās</u>	kōkāsé	kokāsé
	<u>kēekas</u>	<u>keekas</u>	kēekāsé	keekāsé
	<u>ōokas</u>	<u>ookas</u>	ōokāsé	ookāsé
Distant Past	<u>kiiākas</u>	<u>kīiaakas</u>	kiiākāsé	kīiaakāsé
	<u>kiiīkas</u>	<u>kīiīikas</u>	kiiīkāsé	kīiīikāsé
	<u>kiikās</u>	<u>kīikokās</u>	kiikāsé	kīikokāsé
	<u>kiikīkas</u>	kīikeekas	kiikīkāsé	kīikeekāsé
	<u>kiiōkas</u>	<u>kīiookas</u>	kiiōkāsé	kīiookāsé

4.4 Negative forms are made with a prefix mA(A)- which occurs between the tense prefix and the subject prefix.

4.5 Simple predication is done by juxtaposing the attributee and the attribute, with or without an interposed kō in the case of adjectives. Without kō the adjective is in the absolute case and the noun in the nominative case; the predication is specific. With kō both elements are in the accusative case and the predication is general: yā muryāat 'the rat (a particular one) is bad.', muryāat kō yā 'a rat (i.e. in general) is bad.'

4.6 Relative constructions occur with the particles ne (né) and ce (cé), singular and plural respectively.

5. Word order is typically Verb-Subject-Object. This may be altered to Verb-Object-Subject for emphasis.

Grammatical Sketch of Luo

1. Phonology

1.1 Consonants

Bil.	Lab.Dent.	Alv.	Al.Pal.	Vel.
p	th	t	c	k
b	dh	d	j	g
		s		h
m		n	ny	ng'
w		r,l	y	

Note the presence of five points of articulation and of a voicing contrast for stops.

1.2 Vowels

	Close		Open	
	front	back	front	back
high	i	u	<u>i</u>	<u>u</u>
mid	e	o	<u>e</u>	<u>o</u>
low	a		<u>a</u>	

Open vowels occur with a 'breathy' or 'hollow' voice quality and close vowels with a non-breathy or 'creaky' voice quality (Tucker 1936,1970). Close a is extremely infrequent. Lengthened vowels appear in stressed syllables, but within stems, length is not distinctive.

1.3 Tone and Stress

High, mid, low and falling tones occur and are of great importance lexically and especially grammatically. Downstep and downdrift (and associated variety of tonal phenomena) are prominent and make the tonal study of Luo extremely complicated.

Luo words generally occur with a single, stressed syllable. Perhaps because tone is already so highly utilized at a word level (and because the feature intensity is difficult to dissociate from pitch), the primary phonetic characteristic of stress in Luo is not loudness but length. For that reason, stress is here symbolized by a lengthening symbol (:). Stress is discussed above in more detail (2.3.4).

1.4 Phonological processes

1.4.1 Vowel harmony

As in Kipsigis there is a strong tendency for vowels (except a) in a word to agree in quality (i.e. be all open or all close). Change in vowel quality is a grammatically significant device indicating, e.g. singular/plural contrasts in nouns and transitive/intransitive contrasts in verbs:

lwé:dō, lue:te 'hand(s)'; so:mo 'to read (tr.)', sō:mō
'to read or study (intr.)'

1.4.2 Change of final consonant

This is found in singular/plural contrasts and in possessive formations. Typical changes are nasal or l to corresponding nasal compound, voiced stops to voiceless stops (and vice versa):

mátí:n, mátí:ndo 'small (sg. and pl.)'; puo:dhó, púó:thē
'garden(s)'; guo:k, gúó:gī 'dog'.

2. Nominals

2.1 Nouns occur in singular and plural forms, with the form of the plural not usually predictable from the singular. Nouns also fall into tonal classes (which cross-cut number classes),

but there are no case distinctions (cf. Kipsigis where case is tonally distinguished).

2.2 Derived nouns also occur: ɟapúónj 'teacher' (puo:njo 'to teach'); nyá:kō 'girl' (cf. dhá:kō 'woman, wife'); wá:c 'word' (wa:co 'to say').

2.3 Self-standing pronouns

	Sg.	Pl.		
1	<u>án</u>	<u>wán</u>	I	we
2	<u>ín</u>	<u>ún</u>	you	
3	<u>én</u>	<u>gín</u>	he	they

2.4 Possessives

2.4.1 Possessive adjectives are formed by suffixing a shortened form of the pronouns above (made by removing the final n) to the noun, which also often undergoes some change: pa:ndá 'my knife' (pa:la 'knife').

2.4.2 Possessive pronouns are made by suffixing the shortened pronominal forms to forms constructed with the relative pronoun má.

Sg.	Pl.	
<u>má:ra</u>	<u>má:ga</u> , me:ká	mine
<u>má:ri</u>	<u>má:gi</u> , me:kí	yours (sg.)
<u>má:re</u>	<u>má:ge</u> , me:ké	his
<u>má:rwá</u>	<u>má(g)wá</u> , me:kwá	our
<u>má:rú</u>	<u>má(g)ú</u> , me:kú	yours (pl)
<u>márgí</u>	<u>má:gí</u> , me:kgí	theirs'

2.4.3 Genitive

Two nouns stand in the order possessed-possessor with the first noun usually undergoing final consonant change:

dhó:lúō 'the Luo language' (dhó:k 'mouth, language').

2.5 Demonstratives

near	<u>-ni</u>	<u>-gi</u>	this, these
not near	<u>-no</u>	<u>-go</u>	that, those
far	<u>-ca</u>	<u>-ka</u>	yonder

The middle set function as reference forms and also may be reduplicated as emphatic reference forms: -no:go, -go:go 'this or that very, these or those very'.

Demonstrative pronouns are formed with the relative má.

E.g., má:ní, má:gí 'this, these'.

2.6 Interrogatives

ng'a, ng'a gi:rí 'who (sg. and pl.)'

ang'ō 'what'

má:né, má:gé 'which (sg.,pl.)'

é:rē 'where'

ká:nyé, ku:re 'where (sg.,pl.)'

adí 'how many'

3. Verbals

3.1 Person affixes

'N-less' versions of the self-standing pronouns occur as subject markers in pre-stem position and as object markers in post-stem position. Subject prefixes: a-, i-, o-/o-, wa-, u-, gi-. Object suffixes: -i, -e/-e, -wa-, -u-, -gi/-gi.

E.g. áne:ne' 'I see him' (ne:no 'to see')

3.2 Stem extensions, unlike Kipsigis and Gusii, do not occur.

3.3 Aspect and Mood

3.3.1 There is a single aspect contrast distinguishing between complete and incomplete actions. There is no continuous aspect as in Kipsigis. In most cases the aspects are distinguished only tonally.

3.3.2 A subjunctive is formed in the complete aspect only, by (in most cases) removing the final vowel which the verb has in most other forms.

Indicative Mood

Sg.1	<u>áne'no</u> pa:la	<u>áne'no</u> pa:la
2	<u>í'nenó</u> pa:la	<u>í'nenó</u> pa:la
3	<u>ó'nenó</u> pa:la	<u>ó'nenó</u> pa:la
Pl.1	<u>wáne'no</u> pa:la	<u>wáne'no</u> pa:la
2	<u>ú'nenó</u> pa:la	<u>ú'nenó</u> pa:la
3	<u>gí'nenó</u> pa:la	<u>gí'nenó</u> pa:la

Subjunctive Mood

Sg.1	<u>anén</u> pa:la
2	<u>inén</u> pa:la
3	<u>onén</u> pa:la
Pl.1	<u>wanén</u> pa:la
2	<u>únén</u> pa:la
3	<u>gínén</u> pa:la

(Incomplete: 'I see the knife,' etc.; Complete: 'I've seen the knife,' etc.; Subjunctive: 'May I see the knife,' etc.)

3.4 Time reference

3.51 A number of time particles are used with the verb in either aspect to give definiteness of time reference. In some cases the degree of interaction of the particle with the verb form is such that the resultant forms may be considered tenses. Some of the particles are: *né:nde* (*nē:*) 'today', *nyō:ro* (*nyō:*) 'yesterday', *nyō:ca* 'day before yesterday', *né:né* (*nē:*) 'more distant past'.

3.52 In the complete aspect only, forms are found with *-se:-* infixes between the subject prefix and the verb stem and emphasizing completedness.

3.53 A future tense is formed by prefixing *n-* to the subjunctive form of the verb (with subject prefixes).

4. Sentence order is Subject-Verb-Object.

5. Miscellaneous words:

ee 'yes'

oó:yó, *da* 'no'

ko:só yes-no question tag

kámá:no assentive response

Grammatical Sketch of Gusii

Gusii is a Bantu language and like other languages in this group is characterized by two series of prefixes, one of which is attached to nominal and nominal-like roots and another to verbal and pronominal roots. Unlike most other Kenyan Bantu languages the nominal prefix series in Gusii has bisyllabic prefixes. The only published work on Gusii is Whiteley (1964) which includes notes on phonology as well as an account of the verbal system. The account which follows is patterned after Whiteley where possible.

1. Phonology

1.1 Consonants

Bilabial	Alveolar	Alveopalatal	Velar
	t	c	k
b	s		g
m	n	ny	ng'
w	r	y	

notes: 1) b and g are fricatives.

2) all of the non-nasal consonants except w may occur with a homorganic nasal preceding. The compound nr is realized as nd and ny plus y as nj.

3) all of the consonants except w and all of the nasal compounds except nj may occur with a following w.

4) double consonants nn and mm (arising from n plus m) occur.

5) Dahl's Law: k followed by a syllable with a voiceless consonant becomes g (there are some exceptions due

to the loss of an earlier h). E.g. ekegusii 'Gusii language'
but egetoŋo 'pot'

1.2 Vowels

front	back
i, ii	u, uu
e, ee	o, oo
<u>e</u> , <u>ee</u>	<u>o</u> , <u>oo</u>

notes: only long vowels occur before nasal compounds and following w compounds; these are written with a single vowel letter.

1.3 Tones

High and low tones occur, as well as (infrequently) mid and falling tones. The material given here is not marked for tone.

2. Nominal System

2.1 Prefix series (where two forms are given the second occurs before a vowel; the class numbers are those in use by Bantuists)

	Singular	Plural	Example	
Cl 1/2	omo-,omw-	aba-	omonto, abanto	'person'
Cl 3/4	omo-,omw-	eme-	omote, emete	'tree'
Cl 5/6	rii-	ama-	riing'ana, amang'ana	'word'
Cl 7/8	eke-	ebi-	egento, ebinto	'thing'
Cl 9/10	e-	ci-	embori, cimbori	'goat'
Cl 11/10a	oro-	cin-	qrogendo, cingendo	'journey'
Cl 12/8	aka-	ebi-	akaana, ebiana	'small child'
Cl 14/6	obo-	na-	obokombe, amakombe	'hoe'

Cl 15/6	oko-	ama-	<u>okoboko</u> , <u>amaboko</u>	'arm'
			okoruga	'cooking'
Cl 16	aase			'place'

To a certain extent the members of each class have definable features in common (there are, however, many exceptions):

- 1/2 human beings
- 3/4 large living and non-living beings (e.g. trees)
- 5/6 body parts, ceremonial objects
- 7/8 non-living objects, often man-made
- 9/10 animals
- 11/10a long, wavy objects (e.g. fence, journey, river)
- 12/8 diminutives
- 14/6 abstract nouns
- 15/6 verbal nouns
- 16 place (only one member)

2.2 Self-standing pronouns

ince	1 person	sg.
aye	2	" "
<u>ere</u>	3	" "
intwe	1 person	pl.
inwe	2 person	pl.
barabwo	3 person	pl.

3. Verbal system

3.1 Verbal prefixes

Whereas the nominal prefixes are for the most part bisyllabic the verbal prefixes are all monosyllabic:

Class	Verbal Prefix
1a/ 2a (1p)	n-, ny-, ng'-/ to-, tw-
1b/ 2b (2p)	o-, kw-/ mo-, mw-
1c/ 2c (3p)	a-, o-/ ba-
3/4	o-/ e-, y-
5/6	ri-/ a-
7/8	ki-/ bi
9/10	e-, y-/ ci-
11/10a	ro-, rw-/ ci-
12/8	ka-/ bi-
14/6	bo-, bw-/ a-
15/6	ko-, kw-/ a
16	a-

The infinitive of a verb is formed with the Class 15 prefix ko-.

3.2 Demonstratives

As in Swahili there are three degrees of demonstrative: two of distance (this, that) and one of reference (that previously mentioned). All are formed with the verbal prefix. The proximate demonstrative is formed by prefixing the vowel of the appropriate verbal prefix to the prefix itself. If the prefix consists of a vowel only an epenthetic y is inserted. The distal demonstrative is formed with the suffix -io. The sequence VCVO where the second vowel is a or o becomes VCWo.

Class	Proximate	Distal	Reference
1/2	oyo/aba	oria/baria	oyio/abwo
3/4	oyo/eye	oria/eria	oyio/eyio

5/6	eri/aya	riria/aria	erio/ayio
7/8	eke/ebi	keria/biria	ekio/ebio
9/10	eye/eci	eria/ciria	eyio/ecio
11/10a	oro/eci	roria/ciria	orwo/ecio
12/8	aka/ebi	karia/biria	akwo/ebio
14/6	obo/aya	boria/aria	obwo/ayio
15/6	oko/aya	koria/aria	okwo/ayio
16	aa	aaria	agwo

3.3 Possessives

Possessives are formed by adding the following suffixes to the verbal prefixes:

-(a)ne	my	-aito	our
-(a)o	your (sg.)	-aino	your (pl.)
-aye	his, etc.	-abo	their, etc.

e.g. eng'ombe eciane my cattle

3.4 Verbal Derivation

The simple root may be extended by the addition of one or more derivational suffixes:

-e(r)	dative or prepositional
-i-	causative
-ek-	stative
-w-	passive
-an-	reciprocal
-or-	reversive

3.5 Tense system

The most complicated part of the language is the tense system. There is an extraordinarily large number of tenses (94

according to Whiteley(1960) and many of these are distinguished only by tone. In addition many tenses have alternative forms with and without an initial n. It is difficult to give any kind of overall picture of the tense system (such as may be done for Luo and Kipsigis) showing how tense signs and meanings interact. Perhaps the most interesting characteristic of the system is the occurrence of four degrees of differentiation of past time. The tenses used here occur in two pairs, with the members of each distinguished solely by tone. One pair distinguishes between very near (today) and not far (yesterday or the day before) and the other between not so near (today or yesterday) and very far (greater than two or three days) times. Full conjugations are given below using the verb kokora 'to do'

	Positive	Negative
very near	<u>nakora</u>	tinaa <u>kor</u> a
	<u>gwakora</u>	tigwa <u>kor</u> a
	<u>okora</u>	taa <u>kor</u> a
	<u>twakora</u>	titwa <u>kor</u> a
	<u>mwakora</u>	timwa <u>kor</u> a
	<u>baakora</u>	tibaa <u>kor</u> a
not so far	<u>nakora</u>	tinaa <u>kor</u> a
	<u>gwakora</u>	tigwa <u>kor</u> a
	<u>okora</u>	taa <u>kor</u> a
	<u>twakora</u>	titwa <u>kor</u> a
	<u>mwakora</u>	timwa <u>kor</u> a
	<u>baakora</u>	tibaa <u>kor</u> a

not so near	<u>nakorete</u>	<u>tinaakorete</u>
	<u>gwakorete</u>	<u>tingwakorete</u>
	<u>okorete</u>	<u>taakorete</u>
	<u>twakorete</u>	<u>titwakorete</u>
	<u>mwakorete</u>	<u>timwakorete</u>
	<u>baakorete</u>	<u>tibakorete</u>
very far	<u>nakorete</u>	<u>tinaakorete</u>
	<u>gwakorete</u>	<u>tigwakorete</u>
	<u>okorete</u>	<u>taakorete</u>
	<u>twakorete</u>	<u>titwakorete</u>
	<u>mwakorete</u>	<u>timwakorete</u>
	<u>baakorete</u>	<u>tibakorete</u>

The following tenses are also given for purposes of illustration; although each of these occurs with a corresponding negative it should not be assumed that this is always the case.

1) present continuous formed with the verb 'to be' which follows the principal verb in the case of the positive tense and precedes it in the negative tense.

<u>ngokora</u> nde	tindi <u>gokora</u>
<u>ngokora</u> ore	tori <u>gokora</u>
<u>ngokora</u> are	tari <u>gokora</u>
<u>ngokora</u> tore	titori <u>gokora</u>
<u>ngokora</u> more	timori <u>gokora</u>
<u>ngokora</u> bare	tibari <u>gokora</u>

2) present perfect and negative 'not yet' tense

<u>nakorire</u>	tinda <u>akora</u>
-----------------	--------------------

gwakorire	toraakora
okorire	taraakora
twakorire	titoraakora
mwakorire	timoraakora
baakorire	tibaraakora

3) subjunctive

nkore	tinkora
okore	tokora
akore	takora
tokore	titokora
mokore	timokora
bakore	tibakora

4) future--it is a curious coincidence that the future in Gusii is based upon the subjunctive and utilizes an initial consonant exactly as in Luo.

ninkore	tingokora
nokore	togokora
nakore	tagokora
natokore	titogokora
namokore	timogokora
nabakore	tibagokora

4. Miscellaneous

4.1 Interrogatives

ing'o	who?
-renga	how many?
inki	what?

ririri

when?

araari

where?

-r-i

which? (hyphen stands for variable part which
depends on class referred to)

Footnotes to Appendix

1. Although details of transcription differ, there are no differences of any importance between sections 1. and 2.1 below and Tucker (1964) and Tucker and Bryan (1964, 1965). The remaining sections are based on the author's own work.

2. In the forms cited below accusative case is always given first and nominative case follows in brackets. The tonal processes involved in case changes are in large part predictable, but only on a complicated basis not dealt with here. The examples below should not be taken as typical with respect to tonal shape--there is a great deal of variety.

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