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A Sociolinguistic Study of Language Change

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BUKAVU SWAHILI:
A SOCIOLINGUISTIC STUDY OF LANGUAGE CHANGE

By

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ABSTRACT

BUKAVU SWAHILI:
A SOCIOLINGUISTIC STUDY OF LANGUAGE CHANGE

By

Timothy Lloyd Wilt

The primary research concern of this dissertation is how various historical and social factors have influenced the development of Swahili as spoken in Bukavu, Zaire. Hypotheses concerning variation in linguistic structures and social attitudes are tested by statistical analyses of the recorded speech of over one hundred Bukavu residents and of responses to an interview schedule.

The linguistic variables used to focus the analysis are: pronunciation of the class 2 marker (w)a- and the phoneme (j), realization of the copula (ni), and the frequency with which French lexical items are incorporated into one's speech. Implicational scales indicate how interaction of vowel quality, syllable position with regard to stress, and lexicon affect realization of (j). The key independent variables are age and education but also studied are: network strength, degree of church involvement, occupation, sex, ethnic group, and evaluation of the importance of learning standard Swahili.

Explanation of the Bukavu speech situation involves an integration of models of language contact and change: diglossia, koineization, continuum, shift and borrowing. It

is concluded that socioeconomic conditions favored a continuum of Swahili varieties ranging from vernacular to near-standard in pre-independent Zaire but that the greater accessibility of French and resultant lack of socioeconomic prestige associated with standard Swahili in post-independent Zaire have yielded a diglossic relationship between the vernacular--which continues to develop as a koine--and standard varieties.

It is also concluded that: Thomason and Kaufmann (1987) are right to insist that understanding of a language's social setting is a prerequisite for interpretation of its linguistic features, at least in a complex multilingual speech situation such as is found in Bukavu; that two types of prestige--linguistic as well as socioeconomic--should be distinguished in the study of linguistic variation; and that understanding of the relationship between prestige of and exposure to linguistic varieties will facilitate explanation of differences between individuals' speech patterns.

For

my number one (‡language) helper and friend

Rukabuza Uwamaria

ACKNOWLEDGMENTS

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Introduction

This dissertation reports on a field study conducted in
Bukavu, Zaire with regard to the structural features of the
Swahili spoken there and the social framework within which
these features have developed. Basic research questions
were:

      --Is the Swahili spoken in Bukavu converging with a
       standard form of Swahili?

      --How have other languages, especially French, affected
       the vernacular?

      --How does education influence one's Swahili speech
       performance?

      --How are Swahili varieties socially evaluated and how
       do these social evaluations correspond to speech
       performance?

      --Have there been diachronic changes in social
       evaluation of the Swahili varieties?

The two main data bases used to test hypotheses based
on these and related questions are: (1) the recorded and
transcribed speech of over one hundred Bukavu residents and
(2) responses to an interview schedule concerning language
use and social attitudes toward varieties of Swahili speech.

The subjects were selected through a stratificational
sampling approach. That is, subjects were non-randomly
selected according to their fit with various social
categories which, through many sociolinguistic studies, have
been shown to influence linguistic behavior--e.g., level of
education, occupation, and sex.

Analysis of the linguistic data involved the selection of phonological, morphosyntactic, and lexical variables, counting occurrences of the variants, and assigning scores based on the percentage of standard variants used. These scores were then correlated with the selected social variables to test the hypotheses concerning social influences on the diachronic development of Bukavu Swahili.

I have primarily relied on two models of language contact and change to formulate the hypotheses and interpret the results of testing them: the continuum model used in studies of creoles (e.g., DeCamp 1971, Bickerton 1975, and Singler 1983) and koines (Siegel 1985) and the diglossia model originally formulated by Ferguson (1959) and expanded by sociolinguists such as Fishman (1967) and Platt (1977). The study of variables from three different linguistic sub-systems (phonological, morphosyntactic,and lexical) is inspired by Thomason and Kaufman's (1988) argument that focus on one linguistic subsystem may lead to a distorted view of the sociohistorical developments of a language.

The results of testing the hypotheses indicate that pre-Independence conditions favored vernacular speakers' acquisition of Standard Swahili and, perhaps, the gradual convergence of the vernacular with the standard; but, since Independence, the much greater accessibility to French and its almost complete displacement of Swahili as a language of socioeconomic advancement have greatly diminished the motivation for incorporating features of standard Swahili

into one's speech. In terms of the models used, conditions favoring a speech continuum between the vernacular and Standard Swahili varieties have been replaced by those favoring a diglossic relationship of Swahili varieties--and a polyglossic relationship between these varieties and other languages used in Bukavu. The difference between the pre- and post-Independence conditions is reflected in both the linguistic features of recorded subjects' speech and their self-reports on their use, understanding, and evaluation of Swahili varieties.

Before proceeding to the main body of my work, I shall sketch the historical background of Swahili in Bukavu.

1. Swahili

The Bantu language Swahili, the most widely spoken African language, is one of the two official languages of Tanzania and Kenya, one of the four national languages of Zaire and a lingua franca used in at least seven other countries: Mozambique, Zambia, Burundi, Rwanda, Uganda, Somalia, and Southern Sudan.

Originally the language of people living on the northern Kenyan and Somali coast in the ninth century (Nurse and Spear 1985:48-49), Swahili was spread by its trading and fishing speakers southward as far as Mozambique during the next four centuries (ibid:52) and remained the main coastal language up through the twentieth century. During the colonial era, the dialect of Zanzibar, administrative center

for both Arabic and European powers, came to be considered the standard. Swahili's nineteenth and twentieth century spread inland was expedited by traders from the coast seeking ivory and slaves.

Swahili in Zaire dates from the second half of the nineteenth century when Swahili-speaking traders from the Tanzanian Coast established trade networks throughout the eastern Congo. Some linguists seem to believe that these traders spoke a "pure" coastal dialect, nearly equivalent to the one described in grammars based on Zanzibar Swahili, but that the purity was lost as Swahili spread throughout the Congo; the Swahili of the new Congolese speakers, according to this perspective, was simplified in its quick adoption as a lingua franca, and reshaped via influences of local mother tongues (e.g., Goyvaerts and Kabemba 1986:218-226; Haddad 1983:79; Polomé 1969:221-226; Burssens 1954:27; LeCoste 1948). However, I suggest an alternative explanation in section 1.1.

The Swahili as spoken in the Congo came to be known, by outsiders at least, as Kingwana because of its association with the *wangwana*, a term originally referring to a "free, civilized person" from the east coast Swahili culture but later extended in the Congo to anyone working for the Arabo-Swahili traders (Goyvaerts and Kabemba 1986:217). However, there is a confusion in the literature in the use of "Kingwana": some use it to refer to the spoken Swahili in the Congo/Zaire most closely resembling the "good" Swahili

of coastal dialects (e.g., Harries 1955:13; LeCoste:1954) but others use it to refer to the most pidgin-like forms of Swahili (e.g., Nida and Fehdereu (1970:152); Van den Eynde 1944:6). I have never heard even the oldest of speakers spontaneously refer to their language as "Kingwana"; after prolonged probing on my part, one old man did say he spoke Kingwana but that it was the same as Swahili.

Attitudes toward the varieties of Swahili spread throughout the Congo varied from those of the Protestant missionaries who produced literature in a Swahili that was "unique, and embodied local provincialisms and faithfully reproduced grammatical errors and peculiarities of vocabulary" (Deans 1953:79) to of the Catholic missionaries and Belgian administrators who essayed to use only "correct" Swahili, that is, Zanzibar Swahili as represented in grammar books:

> Ce "kingwana" n'est qu'un vil baragouin, ne
> tenant nullement compte des règles essentielles
> d'accord de la vrai langue Swahili.... Nous
> devons nous dresser contre la tendance à
> répandre ce "sabir" dans notre Colonie.
> (Van den Eynde 1944:6)

Between these two extremes were the Protestant missionaries who worked towards synthesizing a "Congo Swahili" from the various areal dialects.[1]

This conflict between what the great majority of the Congo population speaks and what language policy-makers think they should be speaking continues to this day.

Furthermore, the policy-makers themselves remain divided with regard to what the proper forms of Swahili in Zaire should be. The most recent Protestant Bible translation (<u>Habari</u> <u>Njema</u> 1981) is consistent with previous ones that have attempted to make a compromise between the vernacular and "grammatical" Swahili. Catholic priests, on the other hand, continue to incorporate into their publications many morphosyntactic forms that are never used and lexical items that are not understood[2] by vernacular Swahili speakers. A European priest responsible for the recent translation of the Bible into "Zairean Swahili" told me that this translation (to which no Zaireans contributed) was adapted from the Coastal Swahili but was still "correct"--unlike the Protestant translation which was "full of faults," "a bad Swahili," "the Swahili of the market, of the women" (incidentally, study of the variables examined in this dissertation indicates very little difference between women's and men's speech). Further complications are seen in that both the Catholics and Protestants use orthographic forms that <u>are not</u> used in secular publications and do not use vernacular grammatical forms that <u>are</u> recognized in the grammar published by the University of Lubumbashi (Nkiko et al. 1985).

Regardless of conflicts, however, Swahili is one of Zaire's four national languages (the use of each is basically determined on a geographical basis). In the three provinces where it is the dominant lingua franca, it is a

medium of instruction for the first three years of primary
school and is then, in principle, taught as a subject for
the next three years. A standard, or at least non-
vernacular, Swahili is also used extensively for oral and
written religious instruction, on radio broadcasts, and, in
Bukavu, in a two-page section of the otherwise French weekly
newspaper.[3]

2. Bukavu[4]

Bukavu, with a population of about 300,000, is the
fourth biggest city in Zaire. It is the largest city and
capitol of Kivu, Zaire's easternmost province which borders
Uganda, Rwanda, Burundi, and Tanzania.

Originally inhabited by the Shi, the Bukavu area took
on military importance for the Belgian colonizers in the
early twentieth century because of its proximity to the
borders of Rwanda which was controlled by the Germans until
World War Two. With a mile-high altitude and on the
southern edge of a 60-mile long lake surrounded by
mountains, Bukavu's scenery and temperate weather encouraged
increased settlement by foreigners until it became the
administrative center of Eastern Zaire as well as a vacation
center for the colonialists and an educational center for
their children. Coffee plantations, urban construction,
and increased settlement by expatriates drew laborers from
various areas and ethnic groups throughout the Eastern

Congo. The first *centre extra-coutumier* for these laborers
to live in was created in 1935; a second, in 1953. Until
Independence, the Congolese were restricted to these areas,
unable to venture into white areas without permits.

Kadutu, the first *centre extra-coutumier*, remains the
most densely populated area of Bukavu. The majority of
subjects for my study are from this area; most of the rest
are from Nguba, a smaller but still densely populated, low-
income settlement developed since Independence in an area
that once was reserved solely for Europeans. The two
predominant ethnic groups are the Shi, the area's original
inhabitants, and the Rega, originating from south and west
of the Shi territory. However, there is a large number of
inhabitants from other ethnic groups: Goyvaearts et al.
list forty-four ethnic groups in Bukavu (1983:54).

A diversity in ethnic languages and dialects
corresponds with this diversity in ethnic groups. Thus, a
lingua franca is of obvious necessity. Before Independence,
there was little language spread from one ethnic group to
another (Goyvaearts and Kabemba 1986:218ff) and French was
restricted to a very small minority of Congolese educated
within a Europeanized framework. Thus, the Swahili brought
by the coastal traders and used by missionaries and
colonialists became the inter-ethnic group language.

While ethnic mother tongues are still widely used in
rural areas where ethnic groups and geographical areas more
clearly coincide, urbanization has led to decreasing ethnic

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language use and increasing Swahili use. Table 0.1, based on responses to the interview schedule explained in chapter 2, indicates how Swahili is replacing mother tongues in Bukavu.

Born	# of Subjects	EL	EL+Sw	Sw	Sw+Fr	EL+Sw+Fr
Before 1950	28	86%	7%	7%	0%	0%
1950-1969	27	7%	44%	48%	0%	0%
1970-1975	29	3%	14%	72%	7%	3%

Table 0.1 Mother tongue language(s) according to age. EL=Ethnic language, Sw=Swahili, Fr=French. Selected subjects were demographically similar across age-groups. (p < .001)

While the great majority of subjects born before 1950 speak (or spoke) only their ethnic language with their parents, the large majority of those born after 1970 speak only Swahili with their parents. This does not necessarily imply that they learned the Swahili from their parents; rather, that even if the parents would prefer to use the ethnic language, the children prefer to use the inter-ethnic language. One friend's comment on how his young children react when he speaks his ethnic mother tongue--the numerically predominant one in Bukavu--is indicative of future developments: "When I speak Mashi, they laugh at me!"

Notes

1. In 1934 and 1946, two conferences with the goal of synthesizing a Congo Swahili were held for translators. In the first conference, the varying areal dialects were sorted into two types: that which was rudimentary but constantly evolving ("the Ituri dialect") versus that which was "the best spoken in the region" ("the Lualaba dialect") (Deans 1953:80). The New Testament (along with much other religious literature) was later published in each of these two posited dialects but by the time of the second conference, Deans asserted:

> Many differences between the two dialects were found to have practically disappeared. Lualaba was willing to concede that Kingwana should have "d's" and "l's", and to relinquish many of the provincialisms which had divided previously. Ituri granted that it needed a better grammar, incorporating the Lualaba's system of concords. (Deans 1953:81)

The first sentence of this quote suggests a convergence of linguistic dialects but the next sentences indicate that it was more a convergence of translators' attitudes towards the dialects that occurred. This apparent convergence of attitudes ultimately resulted in the publication of the Bible in "Congo Swahili" in 1960.

Nida's observation that "Literary products in the dominant dialect set the norm of usage, and other dialects tend to conform to this usage" was quoted by Deans as support for the hope that "The Scriptures in [Congo Swahili] will prove...to be of great value in encouraging linguistic unity..." (1953:82). However, though Congo Swahli was the dominant dialect in the minds of the missionaries supporting its use against the coastal standard or the "deteriorated" (Deans 1953:78) Kingwana, it was certainly not the dominant dialect spoken by the Congolese. Congo Swahili was, perhaps, less foreign than the coastal standard but it was still foreign.

2. This claim is based on vocabulary tests that I gave to about fifty Bukavu residents. They are not reported on in detail in this dissertation.

3. The Swahili section of the paper has been viewed as a vehicle for reaching the great majority of the population, especially the older people and rural dwellers who do not know French sufficiently (Muganza et al. 1981:368).

4. Much of the historical background given here is based on Kasongo (1985) and Bizuru (1973).

Chapter 1

Perspectives on Language Contact and Change

Since the early part of this century, linguists have
applied a variety of sociolinguistic labels to the Zairean
Swahili vernacular, evaluated it in terms of the coastal
standard, and made predictions about its future development.
In this chapter, I consider these various perspectives in
light of the sociopolitical history of Zaire, suggest how
different models of language contact and change may be
integrated to account for the interaction of the vernacular
and standard Swahili and French, and offer hypotheses that
test the validity of using these models to explain the
Bukavu Swahili speech situation.

The integrated framework which I propose necessitates
viewing sociolinguistic models of di- and poly-glossia, the
creole continuum, koineization, language shift and borrowing
as pertinent to co-existent aspects of a sociohistorically
unified language contact and change situation. Although
the necessity of this integrated approach is implicit in
many sociolinguistic studies, analysts tend to focus on one
model of language contact and change and discuss whether it
is appropriate for the analysis of particular speech
communities. In studies of di-/polyglossia, this focus on
one model to the exclusion of others has led to static
models of language contact situations (e.g., Timm 1981;
Platt 1977; Fishman 1967). In studies of creoles and
koines, it has led to much debate with regard to defining

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the history and linguistic structure of a prototypical creole or koine and to the validity of applying this prototype to other language situations (e.g., Bickerton (1984) v. Singler (1984) and Goodman (1985) on creole origins and articles reviewed by Siegel (1985) on koines).

Studies of Zairean Swahili have paralleled this reliance on an exclusive model of language contact and change. Most studies harmonize with the continuum model of creole studies. Only three (that I know of) consider Zairean Swahili in terms of koineization, and none have discussed it in terms of di-/poly-glossia. The bulk of this chapter is devoted to showing how each of these models of language contact and change are relevant to the Zairean Swahili situation. Most attention is given to the di-/poly-glossic model since this has received so little attention with regard to the Zairean situation, yet has high explanatory value.

1.1 Bukavu Swahili and the creole continuum model

In this section, I first consider why Polomé, the most frequently cited contemporary linguist with regard to Zairean Swahili, classified Lubumbashi Swahili (a variety very similar to Bukavu Swahili; see Appendix A) as a creole. I then consider other linguists' predictions about Zairean Swahili's development with regard to the continuum model. Finally, I indicate which of my hypotheses about the

development of Zairean Swahili are especially relevant to
this model.

The continuum model is particularly useful for
explaining sociolinguistic dynamics of Zaire's pre-
Independence past, especially with regard to the effect of
education on Swahili speech patterns. But, there must be
recourse to other models for explanations of other aspects
of both the pre- and post-Independence eras.

1.1.1 Zairean Swahili varieties as "creoles"

Zairean Swahili varieties have been referred to as
pidgins (Duran 1979:32; Hancock 1971:518; Nida and Fehderau
1970:152) and creoles (Fabian 1986:111; Manessy 1977:129;
Polomé 1971:57). In Bukavu and Lubumbashi (the focus of
Polomé's studies), the use of Swahili as a mother tongue and
in a variety of public situations coupled with its non-
isolating morphosyntactic system immediately rules out the
appropriateness of the label "pidgin".[1]

However, the label "creole" merits more consideration.
I shall consider it in terms of Polomé's use since his
argumentation is the most detailed. Linguistic features
that he considers to indicate Lubumbashi Swahili's status as
"undoubtedly a creole" (1969a:233) are:

1. extensive lexical borrowing from a
   socioeconomically prestigious language that is
   not linguistically related to the languages
   on which the grammar is based;

2. morphosyntactic and phonological features that
   result from local language interference;

> 3. morphosyntactic simplification, especially with regard to the class concord and the tense systems; and

> 4. its use as a first language[2].

He does not claim that the creole developed from a pidginized form of Swahili. Similarly, Fabian (1986:111) says that Lubumbashi Swahili is a creole that did not go through a pidginization stage. However, many creolists believe that only languages which have developed from a pidgin should be considered to be a creole (e.g., Ferraz 1983:120; Woolford 1983[3]; Bickerton 1981:4; Sankoff 1980:198; Givon 1979:23).[4] The social origins of the linguistic system are usually also definitive. Most creolists (e.g., the ones just cited in this paragraph) are concerned with those languages which have developed among enthnolinguistically diverse speakers who were permanently separated from their ethnic homelands to work in plantation colonies. While urban dwellers in the Congo were ethnolinguistically diverse, their displacement was not nearly as extreme as it was for the plantation creole speakers and the urban dwellers were generally able to travel back and forth between their work-sites and their home areas (Polomé 1969b).

If these limitations on the meaning of "creole" are not accepted, the term becomes so broad that its usefulness is questionable. As I point out below, this is a basic problem with Polomé's concept of a creole: though the features he discusses are found in prototypical creoles, they are also

found in languages that have been influenced by other types
of contact situations.

The first two features listed above are typical of
creole situations in which the acrolect (target) language
provides the bulk of the vocabulary and the ethnic languages
of pidgin/creole speakers have greatly influenced the
grammatical structures. However, the parallel between
Zairean Swahili and typical creole situations is not as
evident as Polomé implies.

First, the extensive lexical borrowing from French that
Polomé cites is mainly in reference to cultural or technical
innovations⁵ and thus no more an indication of creole status
of the language than would be Japanese speakers'
incorporation of English words into their language. Even
the use of French words that have a ready Swahili equivalent
(see section 1.3.1.8) would not necessarily indicate creole
status. The same phenomenon of "unnecessary" borrowing
exists in situations where speakers of one language borrow
from the language of another group of higher socioeconomic
status if there is ongoing, heavy social contact between the
two groups (as in, for example, Canadian French borrowings
from English (Mougeon and Beniak 1987), and Ateso
borrowings from Swahili (Scotton and Okeju 1973)). In these
situations, speakers maintain their own distinctive
grammatical systems in spite of the extensive borrowing.

Second, several features of Zairean Swahili that Polomé
ascribes to the influence of local languages were actually

features of coastal dialects that members of the nineteenth century trade caravans--many of whom settled down in Zaire--were probably speaking when they came to Zaire. For example, Polomé claims that the "influence of the local [Zairean] languages is especially obvious in the shape of the class prefixes, as shown by....the replacement of syllabic [m] in classes 1 and 3 by mu-" (1969a:225). However, this was a common feature of all coastal Swahili dialects, according to Sacleux (1939:619). In fact, of nine syllabic or morphemic features claimed by LeCoste (1948) and/or Polomé (1969a) to be the result of local language influence, at least six were features of coastal Swahili dialects (see Appendix B).

Furthermore, even the features that do appear in Zairean Swahili but not in coastal dialects are not necessarily due to local language interference. Considering the heterogeneity of ethnic and geographical origins of those in the large trade caravans, it seems more likely that reshaping of the coastal Swahili would already have been in process before the gradual incursion of the traders into Zaire. Goyvaerts and Kabemba say that the subordinates of the Arabo-Swahili trade caravan chiefs were "*nombreux*" and "*originaires de plusieurs régions de l'Est africain et même du Zaire*" and that it was these people who "*plus que [leurs maîtres],...étaient en relation avec les autochtones*" (1986:225). The caravans were composed of hundreds of support personnel and would take months to cross from the

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coast into Zaire; the expeditions in Zaire would often go on for years (Kajiga 1967:18; Tippu-Tip 1958). Thus, there would be extensive interaction between caravan members speaking diverse Swahili dialects before entry into Zaire and it would be from these auxiliaries more than from the leaders of the caravan that the Zaireans would be learning Swahili.

Simplification of phonological and morphosyntactic features, Polomé's third criterion for calling Zairean Swahili a creole, is often given as a characteristic of creoles but, again, this is a phenomenon that occurs in many other language-change situations, including one which we shall consider below: koineization.

In conclusion to this section, it may be said that Polomé's reasons for calling Lubumbashi (and, by extension, Bukavu) Swahili a creole are not convincing. However, it, like Kampala Swahili, is "creole-like" with regard to general social evaluation of it as not being a "good" or "correct" language like the standard Swahili (Scotton 1968).

However, the negative evaluation is mostly with regard to linguistic form rather than social identity of the speaker; it could not be said of the Zairean situation, as DeCamp says of the Jamaican one, that "The creole is inseparably associated with poverty, ignorance, and lack of moral character" (1971:26). A speaker who borrows extensively from French but uses vernacular Swahili forms will likely be judged as being of higher education and

economic status than the standard Swahili speaker even
though his Swahili is considered to be "bad" (see results of
testing Hypotheses 16 and 17).

1.1.2 Zairean Swahili and the continuum model

Even if the Zairean Swahili vernacular varieties are
not creoles, the continuum model of language contact and
change developed in creole studies (e.g., DeCamp 1971;
Bickerton 1975, Ferguson and DeBose 1977, Singler 1983) may
be used to explain certain aspects of the vernacular's
relationship with the standard. The model posits "a socio-
economically-oriented linguistic continuum" in which there
is "a continuous spectrum of speech varieties whose extremes
are mutually unintelligible but which also includes all
possible intermediate varieties" (DeCamp 1971:28). The
upper extreme is close to the standard language upon which
the majority of the lexicon is based and spoken by "highly-
educated leaders"; the lower extreme is the pidgin or
creole varieties spoken by, for example, uneducated
laborers. As Sankoff (1980) points out, the model is
actually relevant to any language situation in which
speakers of one language attempt to learn a second
language.[6] Siegel (1985:373ff) adapts the continuum model
of creole studies to explain the development of a koine.

Up through the 60's, many linguists concerned with
Swahili in Zaire believed that the vernacular varieties (in
the low and middle ranges of the continuum) would be

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replaced by "grammatical" Swahili (upper range of the continuum) through persistence in institutional use of the "correct" forms (Whitehead 1926:21-22, 1928:iii-iv; Deans 1953:81-82; Harries 1955:14; Hunter 1956:ix; Natalis 1965:221; Kajiga 1967:19).[7] Not until the late 60's were there attestations that the vernacular forms of Swahili, far from disappearing, were "developing quite independently from the East Coast standard" (Polomé 1969:233) and that "a blind puristic adherence to East African forms by teachers and broadcasters will only result in the continued divergence between the Standard and the spoken varieties in Zaire" (Gilman 1976:16).

One reason for this difference in predictions is that most of those in the first group were writing at a time when the socioeconomic and political conditions of Zairean Swahili speakers were quite different from when those in the second group were writing. Thus, they were not in speech situations that equally met the two conditions DeCamp (1971:29) listed as necessary for members of a speech community to move towards the standard:

1) The dominant official language is the same as the creole vocabulary base.

2) The social system provides for sufficient social mobility and sufficient corrective pressures from above.

French has been the official language in both eras (except for the brief stint of Flemish in the early part of the century). However, Swahili was an important administrative language, in both secular and religious

realms, in the pre-Independence era. Now, it is the
national language of eastern Zaire, used as a medium of
teaching in the first three years of school and, officially
at least*, taught as a subject in the following three years.
When the mass media use Swahili, it is usually of the
variety on the continuum's "upper extreme". Religious
institutions also continue to use a form of Swahili that is
in the upper range.

However, probably the most important corrective
pressure mentioned by DeCamp--"the necessity of learning a
more nearly standard variety...in order to get a better
job"--though present in the pre-Independence era is now
rarely exerted on Zaireans as Swahili speakers.

In the pre-Independence era, French was, as it is now,
the language of the socioeconomic elite. But, there was
much less opportunity than there is now for the Congolese to
obtain an educational or occupational level in which French
would be learned and used. Standard Swahili was the marker
of a much more obtainable socioeconomic status; its speakers
had an educational and, often, occupational status that was
intermediate to that of the elite speaking French and that
of the masses speaking ethnic languages and non-Standard
Swahili. This era was one in which the church, upholders of
standard Swahili (especially the numerically and
economically predominant Catholics), had power nearly equal
to the secular administration and business (Young and Turner
1985) and controlled health-care, educational and, often,

agricultural institutions as well as sacred ones. Thus, for

the oldest speakers--and for them alone--there was a

socioeconomic incentive for learning the standard.

Since Independence, however, this pressure is much more

apt to be applied with regard to French, the language of

higher education and inter-regional and international

communication (Hypotheses 5 and 24).

1.1.3 Hypotheses in light of the continuum model

Several of the hypotheses guiding my research predict

that the difference between pre- and post-Independence

corrective pressures to learn the language variety at the

higher extreme of the continuum will result in the continuum

effect being observable only among the older subjects.

Hypotheses 5,6 and 24 were formed with the assumption that

opinions about the importance of learning Swahili in school

would reflect socioeconomic pressures to do so:

> Hypothesis 5: Subjects' positive evaluations of the
> necessity of learning standard Swahili will decrease
> from the oldest to youngest age groups.
>
> Hypothesis 6: Positive evaluation of the necessity of
> learning standard Swahili will positively correlate
> with standard scores.
>
> Hypothesis 27: From the oldest to youngest age groups,
> there will be a decrease in the perceived value of
> learning Standard Swahili.

Paralleling this prediction of differences in attitudes

concerning the importance of learning Swahili was the

prediction of differences in linguistic scores among age groups. It was predicted that while there would be evidence for a continuum effect, mainly due to education, among subjects of the old age group, there would be no such evidence for the middle and young age groups.

The scores of the subjects in the old age group without formal education were assumed to be representative of the Swahili mesolects from which decreolization could take place. It was predicted that the linguistic scores of educated speakers in the old age group would indicate an acquisition of standard speech forms but that those of the middle and young age groups would indicate a maintenance of the mesolect forms of the old age groups speakers without formal education:

> Hypothesis 2: Level of education will positively correlate with standard scores only among those who were educated before Independence, excluding middle and young age group scores of teachers and preachers.

> Hypothesis 3: Among the educated, standard scores will decrease from older to younger speakers, with the same exclusion as in Hypothesis 2.

>> Corollary A: Phonological and grammatical scores of middle and young age group speakers will not be different from the scores of the older, uneducated speakers.

> Hypothesis 4: Higher income will correlate with standard scores only in the old age group of speakers.

> These hypotheses could be summarized as follows:

> a. In general, there will be evidence for a continuum of Swahili speech varieties among those subjects who grew up before Independence but not among those who are younger.

b. Subjects' evaluations of Swahili varieties
will indicate a diachronic decrease in esteem of
Standard Swahili and, thus, a decrease in the socio-·
economic motivation to acquire it that is ecessary to
sustain a continuum effect.

Two groups of people were expected to provide exceptions to
the predictions that those in the middle and young age
groups would not be motivated to incorporate Standard
Swahili into their speech: (1) those whose occupations
encouraged use of the Standard (especially, teachers and
preachers) and (2) those with a high degree of religious
involvement:

Hypothesis 1: Those whose occupation encourages use of
the standard will show signs of movement towards the
standard.

Corollary A: The scores of teachers and
preachers will be higher than the scores of all
other subjects.

Corollary B: Apart from those educated before
Independence, only the scores of teachers and
preachers will suggest a continuum effect by
ranging from the low scores of others towards 100%
use of standard forms.

Hypothesis 14: Those with a high level of church in-
volvement will have standard scores higher than all
other subjects, excluding teachers and preachers.

In view of the diachronic and occupational limitations
on the continuum model's relevance to the Zairean Swahili
situation, we must consider other models of language contact
and change to achieve a comprehensive picture. I have
argued for use of the continuum model while casting doubt on
the appropriateness of the label "creole" for major Zairean

Swahili varieties. I shall now suggest that "koine" is more appropriate.

1.2 Bukavu Swahili as a koine

Siegel (1985) offers an extensive review of the use of "koine" and "koineization" in the sociolinguistic literature. Like "creole", these terms have been loosely used in reference to various kinds of language mixing. He proposes the following, restricted definitions:

> Koineization is the process which leads to mixing of...language varieties which either are mutually intelligible or share the same genetically related superposed language. It occurs in the context of increased interaction...among speakers of these varieties. A koine is the stabilized composite variety which results from this process....
> A regional koine usually develops as the lingua franca of a geographical area in which different dialects are spoken. It often becomes expanded in form and function to become a regional standard or literary language. (p. 376)

Koines, according to Siegel, differ from pidgins/creoles in that the koines stem from language varieties that are much more similar typologically and develop much more slowly than pidgins.

Koines may have three of the four characteristics listed by Polomé in his description of Lubumbashi Swahili (1969a), especially morphosyntactic simplification and use as a first language. Extensive borrowing from a non-genetically related language, the third characteristic given by Polomé, could also characterize "the expansion of function and form...[which] may occur in koineization after

the initial stage" (p. 376).9 Extensive incorporation of local languages' morphosyntactic and phonological features into the Swahili variety would not be consistent with the koine model but I have pointed out the weakness of Polomé's argument that this has occurred.

Siegel quoted a historian's description of the formation of the prototypical koine--koine Greek. With a simple change of geographical and cultural labels, this description could easily be applied to the formation of Zairean Swahili--assuming the validity of my perspective on its formation mentioned in section 1.1.1:

> The Zanzibar dialect spread rapidly as an official/literary/institutional language throughout East Africa, and it was spoken generally by educated Africans, though, probably, they still used their local dialect among themselves. Among the common people, one of the main centers for the growth of a mixed vernacular was, first, the mainland Mrima seaport and the caravans with which many of these speakers travelled inland and, later in Zaire, the cities Kisangani, Lubumbashi, and Bukavu. We hear complaints about the "impurity" of spoken Swahili in the Congo area as early as 1903[10]. In this way the conditions are present for the formation of the Zairean Swahili koine, which was mainly Zanzibar Swahili but included many elements drawn from the coastal/caravan Swahili and some from local Zairean dialects.
> (my adaptation of the G. Thomson quote, in Siegel 1985:358, concerning the formation of koine Greek)[11]

The above description refers mainly to oral speech varieties but the koineization process may result in a recognized standard dialect that is used for literary purposes. There is some evidence that this is occurring--though very slowly--in Zairean Swahili on a literary level.

I shall suggest how this might be so by showing how two grammars, one published about thirty years ago, the other five years ago, have been approaching the grammars underlying Zaireans' oral Swahili use.

In the introduction to this dissertation, I mentioned a "Congo Swahili" Bible produced by a group of Protestants. This translation was based on a "Congo Swahili Grammar" whose preface warned the reader that:

> the language spoken just exactly as it is given
> in these lessons is not spoken by the African.
> You are learning a union dialect (and actually a
> literary dialect). (Hunter 1956:4)

In this grammar, the East African Swahili orthography was adjusted to be more representative of the vernacular Swahili phonology, vocabulary adjustments were made (for example, the vernacular numerals were used instead of the coastal arabicized numerals), and the grammar was simplified--but, Hunter assured his readers, still "correct".

The degree of grammar simplification was limited. For example, though most Swahili speakers in the Congo distinguished only between human and non-human references in the class-concord system, Congo Swahili Grammar would use the more complex system of the East Coast. Hunter did not elaborate on the notion of "correctness" but seemed to mean that, in principle, though Congo Swahili Grammar would not contain all grammatical forms of the East Coast Swahili, it would contain only forms found there.[12] For example, Congo Swahili Grammar would use only one of the three possible

coastal standard relative markers; (1) was used but not (2) or (3):

1. m-tu a-na-ye-enda
   cl.1-person s/he-present-who-go

2. m-tu a-enda-ye
   cl.1-person s/he-go-cl.1 relative

3. m-tu   amba-ye   a-na-enda
   cl.1-person rel.marker-cl.1 s/he-present-go

"A person who goes"

Furthermore, Congo Swahili Grammar would not use -enyi (see 4), by far the most common relative marker in Zairean Swahili, since it is not used in standard coastal Swahili to mark relative clauses.

4. m-tu   mw-enyi[13]   a-na-enda
   cl.1-person cl.1-rel.marker s/he-present-go

The Nkiko et al. (1983) grammar ventures even further. They recognize: the vernacular -ak- suffix not only as a marker of habitual behavior when cooccurring with the present tense marker -na-, but also as a marker of distant time when cooccurring with the past tense marker -li- or the future marker -ta-; the possibility of two cooccurring objective ("indirect" and "direct") verbal prefixes (though this is one of the few morphosyntactic features which, apparently, appears in Shaba Swahili but not in Bukavu Swahili); and the diminutive nominal prefixes ka- (singular) and tu- (plural). Both the -ak- tense/aspect markers and the diminutive prefixes are very common in the vernacular but did not appear in grammars before Nkiko et al.

These grammars represent a description of Zairean Swahili that is much closer to the oral varieties than the Zanzibar-based grammars or the oversimplifications presented in various pre-Independence "guides" to Zairean Swahili (Fabian 1986 disparages European cultural biases represented in these guides). However, the gap between oral and written grammars is still wide. It remains to be seen if it shall be further diminished or if it shall continue in a manner describable in terms of the diglossia model to which we now turn.

1.3 Diglossia and polyglossia models

Models of di-/poly-glossia have been overlooked in discussions of Zairean Swahili but may be used to explain much of the linguistic situation not covered by the continuum model. Much of the relationship between the vernacular and standard varieties of Swahili in Zaire may be described in terms of Ferguson's classic definition of diglossia:

> a relatively stable language situation in which, in addition to the primary dialects of the language (which may include a standard or regional standards), there is a very divergent, highly codified (often grammatically more complex) superposed variety, the vehicle of a large and respected body of written literature, either of an earlier period or in another speech community, which is learned largely by formal education and is used for most written and formal spoken purposes but is not used by any sector of the community for ordinary conversation.
> (1972[1959]:245)

However, as already suggested in discussion of the continuum model, the importance of French as Zaire's official language necessitates consideration of its influence on Swahili use as well. As sociolinguists following Ferguson pointed out, concepts which he presented in terms of the relationship between two dialects of one language within one speech community are also relevant to situations in which two or more languages are used by the same speech community.

In this section, we shall first consider expansions on Ferguson's model to provide a general overview of the functional relationships between languages in Zaire and then focus on the relationship between the Bukavu vernacular, standard Swahili, and French, using key points of Ferguson's definition as a guideline. I follow Ferguson's use of "High" (H) to refer to the "superposed" variety and "Low" (L) to refer to the variety of "ordinary conversation".

1.3.1 Fishman's expansion of the diglossia model

Ferguson defined diglossia as pertaining to varieties of the same language. Fishman (1967) expanded the concept of diglossia to include relationships between non-genetically related language varieties within a society. Considering bilingualism to be a "characterization of individual linguistic behavior" and diglossia to be a "characterization of linguistic organization at the sociocultural level" (34), he suggested that the following

language situations relevant to these two dimensions may
exist (examples following each type are his):

> 1. Both diglossia and bilingualism—members of the
> society know two languages, each having communicative
> functions clearly distinct from the other.
>
>> Example: Paraguay, where almost the entire
>> population speaks both Spanish and Guarani.
>
> 2. Bilingualism without diglossia—occurs in
> "circumstances of rapid social change... of widespread
> abandonment of prior norms before the consolidation of
> new ones" (34).
>
>> Example: dislocated immigrants in intragroup
>> communication.
>
> 3. Diglossia without bilingualism—occurs when there
> is political unity but socioeconomic elitism. The
> elite use one language, the masses use a different one.
>
>> Example: Pre-World War 1 European elites speaking
>> French and the masses speaking a different
>> language.
>
> 4. Neither diglossia nor bilingualism—one linguistic
> system is used in all situations.
>
>> Example: Small, isolated and undifferentiated
>> speech communities (no specific example is
>> given).
>>
>> (Fishman 1967:31-36)

On a macro-level, positing a dichotomy between French
and all African languages, the third situation could be
taken as characteristic of the pre-Independence era when the
Belgian colonialists controlled the Congo with the
assistance of a small group of French speaking Congolese
evolues. With the great increase in education since
Independence, though, the first situation is characteristic
of an ever-increasing sector of Zaire's population.

However, Fishman's schema is developed only with regard
to speech situations involving two language varieties. The

typical African situation is much more complex. A speaker
may often choose: between African languages (for example,
between an ethnic tongue and a lingua franca), between
varieties of one African language (for example, between H
and L Swahili), or between an African language and a
European one. We shall now consider two other expansions of
the diglossia model which enable the application of basic
relationships discussed in Ferguson to multilingual
situations.

1.3.2 Timm's expansion of the diglossia model

Timm (1981) points out that Fishman's expansion of the
concept of diglossia considered only complementary
distribution of functions, thereby overlooking other
important aspects of diglossia mentioned by Ferguson such as
the literary heritage and prestige of H and the stability in
the relationship between the H and L varieties. Timm
suggests that the distinction between this new concept of
diglossia as a complementary distribution of languages (D_{cd})
should be kept distinct from full diglossia (D_f) and then
shows how these two different types of diglossia may be
hierarchically related to each other. As well as having the
advantage of keeping the more strictly defined diglossia of
Ferguson, Timm's approach also allows for easier
representation of language relationships in multilingual
situations. Figure 1.1 represents an application of her
framework to the Zairean speech situation.
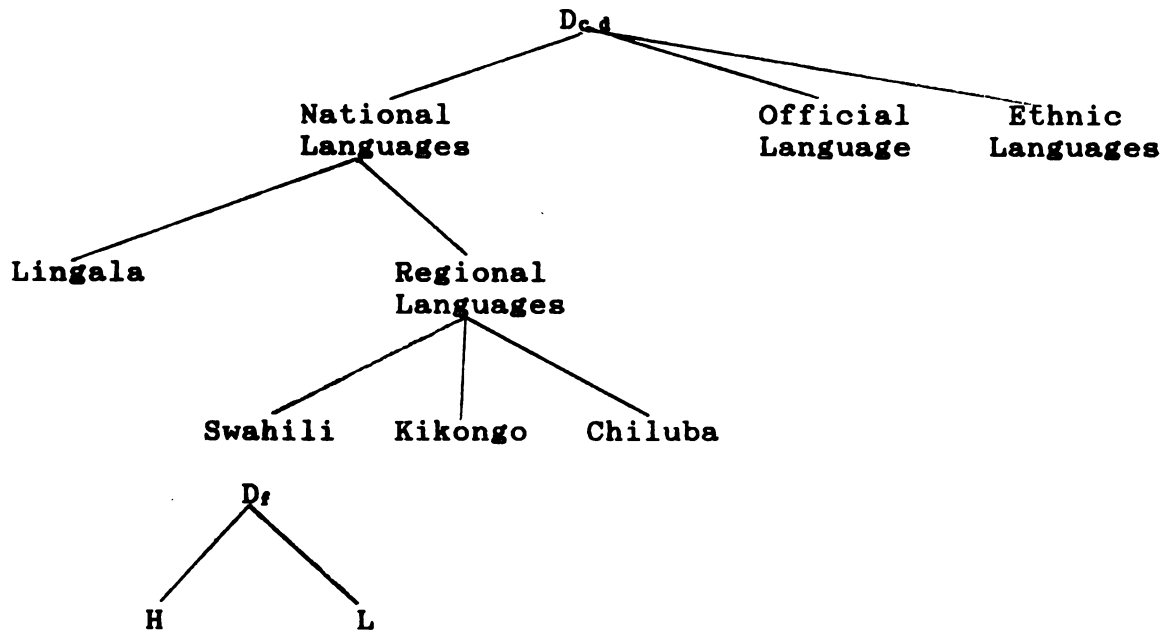
Figure 1.1. Full diglossia and complementary diglossia in Zaire, based on Timm (1981). D_{cd}=Complementary Diglossia; D_f=Full diglossia; H=High language forms; L=Low.

This diagram represents the complementarity of the official language, national languages and ethnic languages on a national scale but then allows for further distinction between varieties of each of these languages on a smaller scale. I represent Lingala as occupying one branch in diglossic complementary distribution to the other national languages, grouped together under the other branch, since the use of Lingala by the Zairean military and musicians extends its use throughout all regions of Zaire much more so than the other languages.

1.3.3 Platt's expansion of the diglossia model

Platt's (1977) reaction to previous work on diglossia was based on his experience in Malaysia. Here, the complex

relationship between several different language varieties is
more parallel to the Zairean situation than those of other
sociolinguists responding to Ferguson's model. Platt argued
that Fishman's model of bilingualism and diglossia could be
expanded to enable a framework for the study of
multilingualism and polyglossia. He suggested that in
complex language situations there are "M(edium)" varieties
as well as H's and L's. The degree of highness, he said,
may be determined by the domains in which the variety is
used and by speakers' attitudes about the varieties;
basically, "the more exclusively a speech variety is
associated with more publicly and formally oriented domains,
the higher would be its status" (370). Thus, as in
Fishman's model of diglossia, the factors involved in
positing di-/polyglossic relationships are not nearly as
restricted as in Ferguson's original definition.

Figuree 1.2 represents an application of Platt's scheme
to the speech situation in eastern Zaire.

Speech Variety	Order of Status								
	H_1	H_2	M_1	M_2	M_3	L_1	L_2	L_3	L-
French	x								
Standard Swahili		x							
"Protestant" Swahili			x						
Vernacular Swahili				x					
Lingala					x				
Mashi						x			
Kirega							x		
Kihavu								x	
Indoubil									x

Figure 1.2. Application of Platt's "multilingualism and polyglossia" scheme to eastern Zaire.

The "L-" in this scheme refers to a language variety with very limited functional use such as a thieves' jargon or a bartering language. "Indoubil", the example I have given of a Zairean L-, is a language for the young, often associated with delinquents, based on Swahili grammar but with extremely high borrowing from other languages (Italian, English, and Chinese as well as languages commonly spoken throughout Zaire) and with reassignment of meaning (often with regard to the domain of sex, money, or illegal activities) to more common words (Kasongo 1985).

1.3.4 Two Highs v. the vernacular Swahili Low

We now return to Ferguson's definition of diglossia but shall consider the H v. L contrast with regard to the two

Highs--French (H-F) and, especially, standard Swahili (H-S).
Although, as indicated in section 1.3.3, the vernacular
Swahili might better be labelled as an "M"--Middle--variety
in consideration of its role in a multilingual situation, I
shall use "L"--Low--to refer to it since this is in keeping
with Ferguson's terminology and since the focus of the
following discussion is on the relationship of the
vernacular Swahili with the High varieties only.

I shall focus on the contemporary Bukavu speech
situation. It shall be seen that although the French H was
more remote than the Swahili H in the pre-Independence era
(section 1.1.3), the opposite is true now.

1.3.4.1   Specialization of function: "in one set of
          situations only H is appropriate and in another
          only L" (p.328[14])

In Bukavu, the H-S is almost exclusively used in
religious literature and meetings, in the mass media and in
school. H-F is also used in these domains but less than H-S
in the religious realm and more than H-S in the secular
domains. The L is used in ordinary conversations and day-
to-day interactions.

Ferguson observed that, in Arab countries, although the
policy is to use only H in class-rooms, L is often used in
explanation of H materials. A similar situation exists in
Zaire in the early primary school years only. At this
level, book lessons are written on the board in H-S
(students usually do not have their own books and thus spend

a good deal of time copying from the blackboard to their notebooks), but the teacher often breaks into L during class presentations--especially if s/he is addressing students for emotive purposes such as reprimands or effective story telling. L expressions may also be used to aid students in the early acquisition stages of French. However, from the fourth year of primary school on, recourse to L is hardly ever made. In many secondary schools, it is against the rules to use Swahili (or any other African language) even during recess, let alone during class.[15]

In church services that I have observed in Bukavu, the leaders use H-S much more consistently than the primary school teachers but, of course, their speech situation is more controllable than in the class-room setting. Editors of the local paper's Swahili section attempt to maintain H-- even "upgrading" the grammar of letters to the editor (Masumbuko: personal communication).

1.3.4.2 Prestige: "There is usually a belief that H is somehow more beautiful, more logical, better able to express important thoughts, and the like." (p. 330)

With regard to the H-S/L distinction, this principle holds true for Bukavu speakers who have been to school but not for those without an education. When subjects, responding to the interview schedule discussed in section 2.5.1, were asked to judge the quality of different speakers' recorded Swahili[16], only eight of seventy-seven (10%) <u>with</u> at least some formal education felt that the L

speaker's Swahili was as good as or better than the H

speakers's; but, fourteen of eighteen (78%) <u>without</u> formal

education felt that the L speaker's was as good or better,

mainly because it was more understandable.

A translation preference test given to about sixty

members (fairly evenly divided according to sex) of a

Protestant church about fifteen miles from Bukavu gave

further evidence that the H is positively evaluated only if

it is understandable. Subjects were given two pairs of

texts. One had the H Catholic translation of a Biblical

text juxtaposed to a Protestant translation of the same

passage which was lexically closer to L (through

circumlocutions and use of local equivalents of H terms[17])

but used H syntax and orthograpy. (I shall refer to this

Protestant translation as "M" for Medium, in keeping with

Platt's scheme discussed in section 1.3.3.) The other had a

different text from the Protestant Bible juxtaposed to my

translation of the same passage using L morphosyntax as well

as L vocabulary (but the same orthography as the Protestant

Bible); this nearly-Low version shall be referred to as L.

The texts used for this test are given in Appendix C.

Subjects were asked:

> "If it was up to you to choose the kind of Swahili
> with which the Bible would be written, indicate
> the passage that has the kind that you would
> choose. We aren't asking you which Swahili is
> correct; we're asking you to choose the kind of
> Swahili that you would prefer to read."

The results, broken down according to educational level, are

given in Table 1.1.

	Number of subjects choosing:			
Education	H	v. M	M	v. L
1-3 years	6	5	6	6
4-6 years	8	14	12	12
7-12 years	4	18	11	12

Table 1.1. Translation preferences according to education.

While there is a clear (p < .001) preference of more educated subjects for M over H (and if the scores of subjects with apparently inconsistent responses are discounted, the 1-3 year educational level group of subjects has a percentage of subjects choosing M over H that is close to that of the other two groups[18]), there is no significant difference in the scores for M and L[19]; however, there are important differences in the subjects' stated reasons for choosing M or L.

The typical reasons given for the M preference over H were that M was more understandable and that it was the Swahili of Zaire. In the words of one subject: "[H] is like Tanzania Swahili; we are Zaireans". Thus, if the H is too High it may be perceived as "foreign" rather than "beautiful" or "more logical".[20]

Although there was no significant numerical difference in the choice between the M and L versions, there was a telling difference in the subjects' explanations of their choices. I focus on the men's explanations since they tended to give more detailed and consistent responses (see footnote 14).

Those who chose M said that it could be understood by
most Zaireans and that it was a better Swahili:

> "It's Kivu Swahili."
> "It's better grammatically."
> "It's the Swahili everyone must understand even
> if they don't understand Swahili."
> "The other is hardly Swahili."
> "It sounds good for reading."

The sentence subject in all of these responses refers to the
text. The focus is on style and how Swahili should be
written more than on how easily the individual himself is
able to read and understand the passage. Of the sixteen men
giving reasons for their M preference, only three answered
saying that for them personally it was easy to understand.

In contrast, eleven of the fourteen who chose the L
version explained their preference in the first person,
reflecting more of a concern for their own interaction
with the text than for stylistic notions about what a text
should be. "I understand it well" was the typical response.
One liked it because "I don't need to have it translated
[into my ethnic mother tongue]" and another because "it is
translated", that is, a foreign Swahili dialect has been
translated into the local Swahili dialect.

In sum, the preference of M over H coupled with the
subjects' explanations of M versus L preferences indicates
that M has made a compromise between H and L so that, for
many, it avoids being perceived as a very foreign dialect at
one extreme or as grammatically crude at the other extreme;
however, the M version's avoidance of many common, wide-
spread L forms results in a lack of accommodation to the

many for whom understandability/readability minimizes
concern for "correct" grammar.

With regard to the H-F versus L distinction, speakers
are not concerned which variety is "more logical" or "more
beautiful" but which one enables a better education and
socioeconomic prestige. Obviously, French is the preferred
language in this respect. Thus, H-F may be opposed to H-S
as well as L; the large majority of present-day students
would prefer that Swahili not be used at all in education so
that the benefits of knowing French could be maximized (see
test of Hypothesis 27 and concluding section of chapter 3).

1.3.4.3 Literary heritage: "There is a sizable body of
         written literature in H which is held in high
         esteem by the speech community." (p. 238)

Considering the whole of Swahili speaking Africa, there
is, of course, a great deal of written literature in
Swahili: recordings of poetry and legends centuries old,
poetry and novels, scientific journals, magazines,
newspapers, and, probably most extensive, religious
literature. But, H Swahili's classical literature is of
little interest to the average Zairean (even the well-
educated one)[21] and little, if any, secular, contemporary
literature is available in Swahili.[22] Contemporary Zairean
literature intended for an (inter-)national audience will be
in French.

Swahili textbooks are scarce for teachers, let alone
students. Thus, the only significant literary material in

Swahili is religious. This results in a psychologically
powerful association between Sunday worship and a Sunday
language and, perhaps, a stage of the process in which "H
fades away and becomes a learned or liturgical
language...not used actively in the community" (Ferguson
1959: 339).[23]

1.3.4.4 Formal acquisiton of H: "L is learned in...the
         'normal' [informal] way.... H is chiefly [learned]
         by the means of formal education." (331)

This is true in Zaire as well, with regard to both H
languages. However, materials for teaching H are much less
available in Zaire than they are in the situations discussed
by Ferguson: at the commencement of the past school year,
the local paper lamented the fact that there were,
regardless of the language in which they were written, only
"*200,000 manuels pour 8 millions d'élèves!*" (Jua 18 Octobre,
1986: 7).

The emphasis on Swahili in the classroom has fluctuated
throughout Zaire's history. Before Independence, Swahili
was the main medium of education with only a a very small
minority having the opportunity to have more than a few
years of schooling and study in French.[24] From 1960 (the
year of Zairean Independence) to 1974, however, only French
was to be used as a medium for education in Zaire. Then,
from 1975 to 1984, an African national language was to be
used in the first two years, with French taught as a
subject. The third year was to be a transitional one in
which much more French was to be used than in the previous

years. From the fourth to sixth year of primary school, Swahili would only be taught as a subject. In 1984, a decision was made to move back towards increasing the use of French from the first year on: Swahili would still be used in most classes in the first two years but French would be taught as a subject from the first year on and could be used as a medium in courses such as mathematics.

Interviews with and observation of primary school teachers in the Bukavu area indicate that there are insufficient educational materials and knowledge of H Swahili grammar for teachers to confidently teach H Swahili in any detail (Masumbuko 1987). Not until one year before the latest policy decision to reduce the use of Swahili in schools did Zairean linguists produce a grammar (Nkiko et al. 1983) intended as an aid in teaching Swahili; the distribution of this grammar was very limited.

1.3.4.5 Standardization: "There is a strong tradition of grammatical study of the H....an established norm for pronunciation, grammar, and vocabulary which allows variation only within certain limits. The orthography is well established and has little variation." (pp. 331-332)

There have been several attempts to write grammars for Congo/Zairean Swahili[2][3] but there is certainly not the uniformity, even in orthography, of the archetypal diglossic situation. Several grammars of "Zairean" Swahili are simply, apart from pedagogical exercises, abridgements of grammars based on Zanzibarean Swahili. Section 1.2

discusses two grammars proposing a standard that differs from the coastal Swahili standard.

H-F, of course, has the "strong tradition of grammatical study". Educators of Bukavu's Pedagogical Institute (post-secondary school), though, lament a continual decline in the quality of their students' French that parallels a steady deterioration of the Zairean public school system.

1.3.4.6 Stability: "Diglossia typically persists at least several centuries.... The communicative tensions which arise...may be resolved by the use of relatively uncodified, unstable, intermediate forms of the language...and repeated borrowing of vocabulary items from H to L. (p. 332)

Stability is the key characteristic distinguishing a diglossic situation from a continuum one. If L speakers do not have adequate motivation or opportunity to use the H in their daily speech, there will not be intermediate varieties between the L and the H; the H/standard will continue as the language of elite groups and/or a special language for formal situations and the L will develop on its own terms. As mentioned above, the question of whether or not this is so in Zairean Swahili has received various answers in the past and is central to my study.

Hypothesis 3 and its corollary A predict that the speech of most middle and young age-group subjects will reflect a movement away from the patterns of older subjects with formal education to those of older subjects without formal education:

Hypothesis 3: Among the educated, standard scores will
decrease from older to younger speakers,
except those of teachers and preachers.

Corollary 3A: Phonological and morphosyntactic
scores among middle-aged and young
speakers will not be significantly
different from the scores of the old,
uneducated speakers.

In other words, it is predicted that the relationship

between H-S and L, though destabilized through pre-

Independence institutional pressures to acquire H-S, is

returning to a stable state in which a diglossic distance

between H-S and L is maintained.

1.3.4.7   Grammar: "H has grammatical categories not present
in L and has an inflectional system of nouns and
verbs which is much reduced or totally absent in
L." (p. 333)

This distinction between H and L is also found between

creoles and their associated target languages (section

1.1.1) and between koines and the varieties from which they

derived (1.2). Appendix A gives an extended list of

grammatical differences between Zairean Swahili H and L.

1.3.4.8   Lexicon: "[There exist] many paired items, one H
one L, referring to fairly common concepts fre-
quently used in both H and L, where the range of
meaning of the two items is roughly the same, and
the use of one or the other immediately stamps the
utterance or written sequence as H or L." (p.334)

The focus here is on words referring to "fairly common

concepts". In the case of specialized terminology, there

would be no L term (except when referring to items

particular to the L's region/culture for which there might

be no H term) and the L speaker would have to either borrow from the H or another language or use a circumlocution. A long list illustrating this paired reference to common concepts in the Zairean Swahili situation could be drawn up but I shall offer just a few examples of words with varying grammatical functions (Table 1.2).

English Equivalent	High	Low
after (temporally)	baada	nyuma
before (")	kabla	mbele
relative clause marker	amba-	-enye
give	-pa	-patia
try	-jaribu	-pima
sell	-uza	-uzisha
buy	-nunua	-uza[26]
village	kijiji	mugini
lake	ziwa	bahari[27]
bicycle	baisikeli	kinga

Table 1.2. Diglossic lexical pairs.

An interesting lexical phenomenon in the Bukavu speech situation (and most other multilingual areas where a world language such as French or English is an official/national language) that cannot be accounted for within the diglossic framework as conceived by Ferguson is the use of words borrowed from the official language for non-specialized references that have L equivalents (Table 1.3).

English Equivalent	French	Low
but	mais	lakini
village	village	mgini
hat	chapeau	kofia
marriage	mariage	ndoa
persevere/endure	supporter	-vumilia
cause trouble	déranger	-fanya fujo
live	vivre	-ishi

Table 1.3. French and L Swahili equivalents commonly used in Bukavu.

The correlation between subjects' use of French, core lexical items and overall incorporation of French into one's Swahili is briefly discussed in section 2.8.3. At this point, I will simply observe that although in many respects French is a co-H with standard Swahili, the use of French words is characteristic of L speech whereas the use of H Swahili words is not. While French words such as those listed above can be used in ordinary conversation without any change in register, H Swahili words cannot.

1.3.4.9   Phonology: "The sound systems of H and L constitute a single phonological structure of which the L phonology is the basic system" and "if 'pure' H items have phonemes not found in 'pure' L items, L phonemes frequently substitute for these in oral use of H" (335,336).

Phonological differences between H and L Bukavu Swahili are given in Appendix A. I will not attempt a theoretical

discussion of whether the H or the L is the basic
phonological system.

There is one H phoneme that is not found in the 'pure'
L of Bukavu: H /h/ is usually not pronounced. A lengthened
vowel occurs instead, as in (1).[28]

(1)   H   L

            hapendi   a:pendi   "he doesn't like to"

This rule in conjunction with L's tendency to have word-
final [-e] in negative verbs, rather than H's [-i], results
in a phonemic contrast occurring in the third person
singular between the short vowels of subjunctives (2) and
lengthened vowels of present negatives (3):

            H   L

(2)   atake   atake   he shall want to

(3)   hataki   a:take   he doesn't want to"

1.4 Language shift and borrowing

So far, I have not given the motivation for the choice
of particular linguistic variables to test the hypotheses.
For example, Hypothesis 3a predicts that morphosyntactic and
phonological scores of the middle and young age group
subjects with formal education will not be significantly
different from the old age group subjects without formal
education; however, Hypothesis 3b predicts that the lexical
scores will be different. Why the comparison of scores for
one linguistic component should work out differently than
for those in another component has not been explained. I

shall now do this in terms of Thomason and Kaufman's (1987[29]; hereon, T&K) models of language contact and change.

T&K discuss language contact and change at a higher level of abstraction than any of the models previously presented. They argue that the two models of "Borrowing" and "Language Shift" may be used to cover any language change situation. The sociohistorical relationships of the speakers of one dialect/language to those of another (or others) will determine which of these changes a language will undergo.

In T&K's model of language shift, a speech community will eventually lose its first language for the sake of acquiring a second language. This shift occurs since knowledge of the second language will offer advantages that could not be had without it. In this shift, the first language's lexicon will only slightly interfere with that of the second language but there may be heavy interference on the phonological and morphosyntactic levels.

The creolists' continuum model is used to account for language shift from a diversity of linguistic backgrounds present in one speech community to the standard. It predicts that this interference would be evident in varying degrees among different speakers: the degree of exposure to the standard and of socioeconomic motivation to incorporate the standard into their speech would be inversely related to the degree of interference.

Thus, the hypotheses predict that evidence for shifting from vernacular to Standard Swahili will be found only among members of the oldest-age group for whom the socioeconomic conditions of the shift were present--except for those whose occupation encourages use of the standard. Furthermore, they predict that evidence of this shift will be found in the phonological and morphosyntactic components where a high degree of variability is expected due to interference from the vernacular. The degree of interference in the old age group of subjects is expected to be inversely proportional to the degree of educational and occupational exposure to the standard.

In a borrowing situation, speakers are influenced by speakers of a different language group but they retain primary loyalty to their first language. The first elements to be borrowed are lexical and this borrowing may be extensive. Borrowing from another language's phonological or morphosyntactic systems is likely to occur only "if there is strong long-term cultural pressure from source-language speakers on the borrowing language group" and there is "extensive bilingualism among borrowing-language speakers over a considerable period of time" (p.56).

If the vernacular Swahili of Bukavu is being changed through borrowing, speakers could be borrowing from one of several sources: French, Lingala, predominant ethnic languages or even English. French would be the most readily available source because of its extensive use in education

and inter-regional communication. Lingala has spread throughout Zaire as the language of popular musicians and the military. English is taught in secondary school and spoken by residents recently come from Tanzania. Swahili speakers could be drawing from the lexicon of these languages but all the while maintaining and perceiving vernacular Swahili as a dialect distinct from standard Swahili.[30] This being the case, one would expect a significant, structural linguistic gap between the local variety and the standard Swahili with little evidence for "a continuous spectrum of speech varieties" (DeCamp 1971:28) between the two.

In the following chapters, I shall analyze only lexical borrowing from French. However, in terms of T&K's principles mentioned above, the "cultural pressure" from French speakers and the increasing number of residents who are bilingual in vernacular Swahili and French suggest that there might also be borrowing of French phonological and morphosyntactic features. Indeed, there is anecdotal evidence that such borrowing is occurring in both components.

Various linguistics students at Bukavu's teaching institute have told me that it is common for secondary school girls to substitute the French back-velar /r/ for the Swahili flapped one.[31] Polomé suggests that there has also been borrowing from French syntax into Zairean Swahili vernaculars[32]:

> ...the practice of literal translation has led to
> the transference of some French patterns into this
> variety of Swahili [in Lubumbashi], especially in
> its written form, e.g. <u>unakuwa katika hatari</u>[33] on
> the model of "tu es en danger" ('you are in
> danger'), <u>fanya ile plaisir na miye</u>, word for word
> 'fais-moi ce plaisir'[34] ('do me this favor'). It
> went even as far as taking over idiosyncracies of
> Belgian French, like the postpositional use of
> 'avec' with certain verbs, e.g. 'du fil pour
> coudre avec' ('thread to sew with'), rendered
> faithfully as <u>uzi ya kushona nayo</u>[35]. (1969a:231)

1.5   Summary

In the pre-Independence era several sociolinguistic
conditions were favorable for a continuum situation in which
speakers would move away from a koine Swahili towards the
standard. Swahili was used extensively in education. The
Catholic church, very influential in secular as well as
religious affairs, supported use of Standard Swahili.
Furthermore, the indigenous population had very limited
access to the relatively high levels of education and the
work that necessitated use of French . Thus, hypotheses
predict that variation in phonological and morphosyntactic
scores along with responses to an interview schedule
concerning language attitudes will give evidence for a
continuum, language shift situation in the old age group.
Figure 1.3 represents this situation.

French (H₁)   Standard Swahili (H₂)

Vernacular Swahili
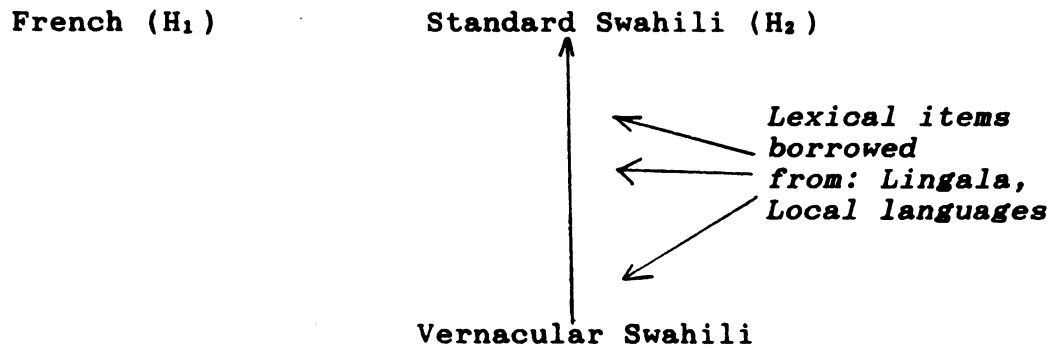
Figure 1.3.   Continuum situation/Language Shift,
              present in pre-Independence era.

With the radical sociopolitical changes stemming from
Independence, though, education has become available to
increasingly higher proportions of the population and at
increasingly higher levels. This has resulted in a
perception of French as being much more accessible than it
was before Independence and as essential for socioeconomic
self-advancement. At the same time, the socioeconomic
importance of Swahili is practically non-existent, except
for the small group of religious leaders and, perhaps,
primary school teachers who must use it as a medium of
instruction. Thus, hypotheses predict that there will not
be a continuum effect evident in the middle and young age
groups; rather, they predict that linguistic scores will
indicate a polyglossic situation in which the structural
gaps between the koine and the standard remain the same for
the middle and young age groups, regardless of educational
level, as they were for the old age subjects without formal

education. The main difference between these groups will be
that the younger subjects have borrowed from French more
extensively because of their greater exposure to it in
school. This situation is represented in Figure 1.4.

Standard Swahili (H₂)

French (H₁)   Lingala (M)   Local languages (L)
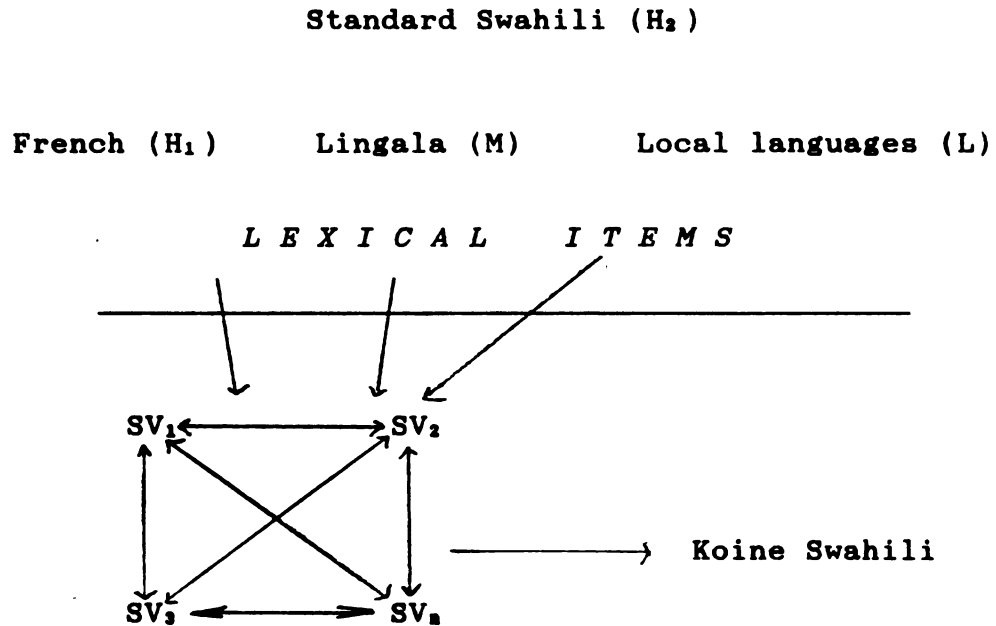
Figure 1.4.   Diglossia with standard opposed to
koineization. SV=Swahili vernacular.

Notes

1. Duran (1979:148) contrasts standard Swahili structures
with the isolating morphosyntactic constructions typical of
pidgin Swahili in west-Central Kenya. To his list of
examples, I add the equivalent, typical Bukavu constructions
(morpheme by morpheme glosses are mine):

a. Standard: si-mw-on-i
              1sg.neg-him-see-pres.neg.concord

   Bukavu: si-mw-on-e
              1sg.neg-him-see-pres.neg.concord

   Pidgin: mimi hapana ona yeye
              I/me no   see he/him

              "I do not see him."

b. Standard: si-ja-mw-ona
               1s.neg.-neg.impf-him-see

   Bukavu: si-ya-mw-ona
               1s.neg.-neg.impf-him-see

   Pidgin: mimi bado   ona yeye
               I/me not.yet see he/him

               "I have not yet seen him."

c. Standard: u-si-je
               you-not-come

   Bukavu: u-si-kuye
               you-not-come

   Pidgin: hapana kuja
               no   come

               "Don't come."

Duran claims that "an equally characteristic feature of pidgin form is the use of the invariable predicative particle *iko*, derived from the Standard Swahili locative particle *-ko*, to form locative, predicate adjectival, and possessive constructions" (p. 148). However, all his examples are in the third person, singular with animate subjects. Thus, they do not illustrate the invariability of this morpheme. In Bukavu, -ko has the same functions as those mentioned by Duran but it is conjugated according to person, number, and certain classes.

2. This last criterion is given in a different article: (Polomé 1969b:912).

3. Although she does not explicitly make this claim, her whole discussion concerning the conditions under which a pidgin will creolize implies that all creoles develop from pidgins.

4. Not all creolists hold to this restriction. Gilman states:

> There has been a tendency to consider that JC [Jamaican Creole] is more complex than West African varieties of recent origin, and to believe that the first creole spoken in Jamaica was very pidgin-like... No evidence has ever been adduced to support this view, which directly contradicts the findings of the present study, nor are early citations of creole notably more pidgin-like than the present varieties. The idea is probably a carry-over of the old doctrine (inherited from the 19th century when there had been little

systematic study of any pidgin or creole) that creoles
result when populations adopt pidgins as their native
language.

Muhlhausler suggests that, though most creoles have
developed from pidgins, there are some that have developed
from jargons. In this situation, "repair is needed at all
levels, i.e., there is need for a natural phonetological and
semantactic systems as well as a possible pragmatic system"
(1980:32). He gives as examples of this: West Indian
English Creole (1980:32), Hawaiian Pidgin English, and
Unserdeutsch of former German New Guinea (1986:8).
    Similarly, Thomason and Kaufman, in discussing
languages "in which the availability of the [Target
Language] is so limited that the shifting speakers have
successfully acquired only the vocabulary of the [Target
Language], but little or none of its grammar" gives as
examples:

> those creole languages that did not develop directly
> from fully crystallized pidgins. Some creolists do not
> believe that such languages exist; but certainly, as we
> will argue, there are a number of creoles for which a
> definite pidgin stage is not attested, and whose
> structure can be accounted for under a hypothesis of
> extreme [sic] unsuccessful acquisition of a [Target
> Language]. Hawaiian Creole English, Mauritian Creole,
> Seychelles Creole, and most of the Caribbean creoles
> fall into this category. We call this 'abrupt
> creolization', and its products correspond to what
> Bickerton has termed 'early-creolized creoles'...
> (MS(published 1988):71)

5. After stating that "Obviously [the French loanwords] are
mostly related with the effects of the colonial
administration and the partial Westernization of urban
life", Polomé gives as examples of loans the words for
"hospital," "bill" (or "receipt"), "hat," and "matches"
either in the French orthography or in a orthography that
represents Swahiliized pronunciation (1969a:15-16).

6. Sankoff observes:

> The problems posed for linguistic analysis by the
> variable linguistic materials we deal with as creolists
> are not, by their nature, different in degree or kind
> from the linguistic data encountered in other speech
> communities. (1980:139)

and, citing several references in support, claims:

> That learners' productions come to resemble a scale of
> increasingly closer approximations to the target code
> has been demonstrated in studies of the efforts of

foreign workers to learn German...and Dutch... of
English traders to learn Navajo...and of Spanish
immigrants to learn English in the United States.
(1980:142)

7. In this era, various labels were applied to the
vernacular forms. They mostly always were negative,
viewing the variety as an illegitimate dialect with no
rules: "mutilated form [of Swahili]" (Stapleton 1903:s) "[a
language in which there is a] *disparition des regles*" (anon.
n.d: 6); "*un langage qui emprunte au Kiswahili la majeure
partie de son vocabulaire et la plupart de ses formes*"
(Labeye 1928:3); *une langue relachée* (van de Weyer and Quets
1929:3); "*un kiswahili impur....simplifié...assez abatardie*"
(anon. 1938: 9); "*...une langue mixte...un mélange
dialectal*" (Verbeken 1944:3); "related more closely to
'kitchen' Swahili or 'KiSettla' than to genuine dialects"
(Harries 1956: 50); developed from coastal Swahili speakers'
"constant necessity for speaking down to the
people...[which] inevitably resulted in a deterioration of
the Swahili language" (Harries 1955:12).

8. When I asked the principal of one of Bukavu's leading
schools to take me to classes beyond third grade in which
Swahili was being used, he took me to one room where,
according to the official schedule, Swahili was being
taught. The teacher, however, excused herself saying that
she wasn't capable of teaching it. We went to another class
where the teacher, scheduled to be teaching religion in
Swahili, said it would be okay to observe. It was obvious,
upon entering, that he had not been teaching the religion
class, but a different course in French. However, he pulled
out a religion text book and began reading from it and
asking mechanical questions.

10. This would be Stapletons's reference to the "mutilated
form" of Swahili spoken in the Congo (1903:s).

11. The actual quote is:

> the Attic dialect spread rapidly as an official
> language throughout the Aegean, and it was spoken
> generally by educated Greeks, though they still used
> their local dialect among themselves. Among the common
> people, one of the main centres for the growth of a
> mixed vernacular was the Peiraieus, the seaport of
> Athens, inhabited by Greeks from all parts of the
> Mediterranean. We hear complaints about the "impurity"
> of spoken Attic as early as the fifth century B.C...
> In this way the conditions were created for the
> formation of the Hellenistic Koine, which was mainly
> Attic but included many elements drawn from Ionic and
> some other dialects. (G. Thomson quoted in (Siegel
> 1985:358))

12.   One exception to this apparent principle is the use of
the -ak- verbal suffix rather than the standard hu- prefix
to mark habitual aspect (Hunter 1956:xx; this also appears
in English-Swahili Grammar 1985 which stems from the Hunter
work).   However, I have found no instance of the use of this
suffix in the Congo Swahili Bible.

13.   [i] varies with [e] in the final vowel position.

14.   The page number at the end of each quote which follows
the sub-headings in 1.3.4.1ff refers to the page in the
Ferguson 1958 article from which the quote was taken.

15.   This ban is regardless of whether the variety is High
or Low.

16.   The question asked concerning each variety was simply
"Do you think this person's Swahili is good, bad, or
average?".

17.   However, the M Protestant version also differed from
the H Version in that it attempted to make explicit some
ideas that its translators felt were implicit in the
original Biblical texts.   The degree to which subjects
evaluations were affected by this difference in
translational approach is not known.   The assumption of the
test is that they were positively evaluating the Protestant
text more than the other because it used lexical items and
morphosyntactic features that were more comprehensible to
those accustomed to the vernacular.

18.   A puzzling aspect of these figures is that the choice
of H decreases as educational level increases.   I believe
that the reason for this is due to the fact that the L text
is several lines longer than the H text rather than to the
degree of highness variable since 8 subjects (all women: 4
with 1-3 years of education, 3 with 4-6 years, and 1 with 8
years) who chose H over M all chose L over M because, they
said, the L was more easily understood.   For all other
subjects, the choice of H over M correlated with the choice
of M over L.   Furthermore, a separate vocabulary test (not
given to these subjects) indicated that the H would be less
understandable because of its lexical choices.
      I believe these 8 subjects may have indicated a
preference for the H versions simply because it was seven
lines shorter than the M version.   For those who had
already labored over comparing the disguised Mark passage
(the two versions being of practically identical length) and
who probably had domestic chores waiting to be done, the
shortness of the H version may have made it seem more
preferable.
      If the choices of these eight subjects are discounted,
the indication of M over H preference is even more marked

than in Table 1.2 and the inverse ratio between education
and preference for M is not so extreme:

	Number of subjects choosing:		
Education	H	v.	M
1-3 years	2 (29%)		5 (71%)
4-6 years	5 (26%)		14 (74%)
7-12 years	3 (14%)		18 (86%)

19. Choices could have been biased by some subjects'
recognition of the Protestant text as being in the style
that they were most accustomed to. In a test given to a
group of women in a Catholic Bible study, most chose the
Catholic version. However, I attempted to compensate for
this bias by disguising the New Testament passage; I changed
personal and geographical names and modified the plot to
make the story read like a narrative taking place in
contemporary Bukavu. Subjects could not have seen the
Protestant Old Testament text since it has not yet been
published and they would have been very unlikely to have
read the same text in the new Catholic Bible.

20. This situation seems to contrast with that described in
Ferguson in which

> many speakers of a language involved in diglossia
> characteristically prefer to hear a political
> speech or an expository lecture or a recitation of
> poetry in H even though it may be less
> intelligible to them than it would be in L.
> (1959:330)

However, there may be a greater concern for
understandability with regard to the Bible than in the
situations mentioned in this quote: test results concerning
Hypothesis 28 indicate that understanding of church Swahili
is higher than of radio Swahili.

To know if there is really a contrast between the
situation described by Ferguson and the Bukavu Swahili
situation, one would also have to know if the "many people"
Ferguson refers to is regardless of: educational level,
frequency of exposure to H, and domain in which the H is
used.

21. This is probably due to the average Zairean's lack of
empathy with the cultural history and values represented by
the literature as well as the lack of exposure to the
literature in school.

22. I could find no secular books written in Swahili, in
any of Bukavu's book stores.

23. It is unsurprising, in this light, that, in Bukavu's leading school the only course apart from Swahili Grammar taught in Swahili after the third grade is Religion.

24. Kaplan reports on the small numbers educated before Indepence and the steady increase in those having a secondary education since Independence:

> During the colonial period education was the province of the religious missions... Among them the Roman Catholics were the most important. The primary aim of education was to train Africans for tasks that would be useful to European enterprises. Usually these were positions of a clerical or lower level administrative nature. Secondary education was limited to Africans who were to serve as clergymen, teachers, or army petty officers. No Africans attended universities or studied in Europe until the 1950's.... In the mid-1970's secondary education.... had doubled since the mid-1960's. (1978:176-77)

25. Van Spaandonck (1965) lists ten grammars dating from 1902 to 1965 and six "guides" to conversation written within that time period. An update of this list would include Natalis (1965), Annicq (1967), Kajiga (1967), Taabu (1975), Heylen (1977), Nkiko et al. (1983). Rwanika et al.(1986).

26. Note how L -uza has taken on the opposite meaning of H -uza.

27. In H, bahari means "ocean; sea".

28. The lengthening of vowels may also be accompanied by a rise in tone, in forming the negative at least.

29. The page numbers I use are based on a pre-publication manuscript, not on the recently published book to which I have not had access.

30. Subjects' explanations of their evaluations of the standard and vernacular Swahili varieties (chapter 3, discussion of Hypotheses 16-19) indicate that, generally, they do indeed perceive the Standard as a variety distinct from the one they are accustomed to.

31. I have recordings of two school girls who do so. I also witnessed this practice in the speech of a sixth grade neighbor girl; her parents did not speak French in the home--and rarely outside it--but she has been going to "l'école des Belges", where no Swahili is used, since first grade. There are no Bantu languages, in the Bukavu area at least, which could be a source of this sound.
   Also with regard to this borrowing, the story is told of a Bukavu priest called Père Muzuri "Father Good" not

because of his righteous deeds but because of his using the French /r/ in Swahili words such as the one for "good".

32. T&K suggest that morphosyntactic borrowings are likely if phonological ones are made and, perhaps, to the same degree.

33. The literal gloss, not provided by Polomé, of this expression is:

> u-na-kuwa   katika hatari
> you-pres.-become in   danger
> "You become in danger."

34. However, contrary to Polomé's claim, the second example is not a "word for word" transference:

> Fanya ile plaisir na   miye.
> Fais ce   plaisir avec moi
> do   that favor   with me
>
> "Fais-moi ce plaisir."
> "Do me this favor."

35. The literal gloss, not provided by Polomé, is:

> uzi   ya ku-shona na-yo
> thread of to-sew   with-it

Chapter 2

Methodology and Preliminary Analysis

The main question underlying my field research was a diachronic one: is the Bukavu vernacular Swahili converging with or diverging from the standard?

In order to address this question, the primary methodological concern was gathering tape-recorded speech from subjects belonging to different age groups. Within these age groups, subjects were classified according to other variables commonly considered in sociolinguistic research: education, occupation (which will indicate income level and socioeconomic prestige), ethnic group, and sex. They were also classified according to variables that have received less attention: subjective evaluation of Swahili speech varieties, opinion of the necessity of knowing the standard, network strength, and degree of involvement with a church.

With an interest in getting an overview of the linguistic aspects of the Swahili speech situation, I studied phonological, morphosyntactic, and lexical variables. This choice was made giving special heed to Thomason and Kaufman's observation that different components of the linguistic system may be affected in different ways depending upon the type of contact situation speakers of a language are involved in (section 1.4).

The following sections describe aspects of my research methodology, explain the choice and subdivision of various

independent variables, offer further hypotheses to be tested
with regard to the influence of these independent variables
on linguistic behavior, give an overview of the dependent
variables selected, and briefly describe computational
procedures used to test the hypotheses.

2.1 The interview

All analyzed speech was recorded in interview
situations with the interviewee told in general terms that
the interviewer was interested in having stories and
discussions in Swahili concerning the way of life in Bukavu.
As in most sociolinguistic research of this type, the
interviewer's ideal was, generally, to "divert attention
away from speech, and allow the vernacular to emerge" (Labov
1972:209) since the vernacular is assumed to be the truest
indicator of language development (Rickford 1987:150ff).
The unnatural speech situation of recorded interviews makes
the eliciting of natural speech somewhat difficult but the
interviewer tries to compensate for this by involving the
interviewee in discussions or stories that interest the
speaker enough to concentrate on the ideas rather than the
speech.

The setting of the interview also can influence the
naturalness of the speech. Most of the interviews for this
study were conducted in the interviewee's home, generally
with other family members or friends in attendance. Labov
1972 and others, e.g., Bickerton 1975, Singler 1983, have
found this group setting to be effective in eliciting

natural speech. The Zairean interviewers, all long-time residents of the Bukavu area, used the vernacular to conduct the interview and asked questions that encouraged lengthy responses by the interviewees. Since the interview setting was generally constant, I assume that the scoring of linguistic behavior is valid on a relative basis though it may not be an absolute indication of natural linguistic performance. That is, I assume that if Subject A has a phonological score that is 10% higher than what it would have been without the tape-recorder in front of him, Subject B will also have a score 10% higher, all other factors being equal. Of course, other factors will not always be equal. For example, subjects educated before Independence may be more prone to use Standard forms while being interviewed than subjects educated after Independence. But even if this is so, the greater propensity to monitor one's speech will indicate that a greater value is placed on the use of Standard forms.

Questions were asked about matters to which the subjects could be expected to respond with ease. Elderly interviewees were often asked to compare life as it is today with how it was when they were young (physical changes in Bukavu, the youth, material welfare, customs, etc.). For old age-group subjects and the older ones of the middle age-group, a good question for eliciting a lengthy narrative concerned what happened in Bukavu when two different rebel armies fought there. This was a politically safe question

since one of the few, fairly legitimate claims to glory of the present "president" (who allegedly wins nearly 100% of the votes in elections which pit him against no one) in Zaire is that, under him, peace came to a country that was being ruined by political divisions in the 60's, the time of these rebellions. Questions to the younger interviewees often concerned school and entertainment.

Different questions were asked to different age groups to encourage spontaneity and ease of conversation. However, this creates a problem in dealing with lexical variation since the topic of a discussion or narrative will affect the lexical choices made. While I assume that the lexical scores (explained in section 2.8.3) used for testing the hypotheses offer a reliable, though approximate, figure, my future analyses of the data will involve studying how test results will be affected by more rigid control of topic.

2.2 The interviewer

In twenty-six interviews, the speech situation was made less natural by the presence of a person who differed from the others in attendance by nationality, race, and, usually, socioeconomic status: myself. I was interested in whether or not my presence would significantly affect the speech patterns of the interviewees. If incorporation of standard features into one's speech is positively evaluated by subjects, one would expect them to attempt to make their speech more standard to favorably impress the outsider (such

"upgrading" of one's speech has been commonly reported:

e.g., Labov 1972:43ff, Russell 1980, Rickford 1987)[1]. The

following hypotheses will be tested before the main

hypotheses listed in section 1.5.

HYPOTHESIS 7: The absence or presence of a
foreign interviewer will be a weak predictor of
linguistic performance if a Zairean is present to co-
conduct the interview.

HYPOTHESIS 8: The absense or presence of a foreign
interviewer will be a weak predictor of linguistic
performance even if a Zairean is not present to co-
conduct the interview.

HYPOTHESIS 9: If either hypothesis 7 or 8 is false,
the foreigner's presence will significantly affect only
those whose occupation would encourage use of the
standard and those who were educated before 1960.

2.3   The interviewee

A random sample of Bukavu residents that would enable

efficient testing of my primary hypotheses was impossible,

at least with my resources. Thus, I asked research

assistants to seek out people according to various criteria.

For example, I would ask an assistant to find one person

each who met the following criteria:

1. Age: born before 1940
    Ethnic group: Shi
    Education: at least 3 years

2. Age: born around 1955
    Ethnic group: Rega
    Education: university graduate

3. Age: born after 1960
    Ethnic group: not Shi or Rega
    Occupation: teacher

The assistant would find people corresponding to the descriptions, come back to me with a list of the people he found, and then, after discussion of the various ones on the list, go back to interview the one(s) I selected.

With this sampling method, of course, the conclusions drawn from my analyses technically apply only to the selected subjects. But, they may, I believe, also be taken as a rough indicator of sociolinguistic tendencies in Bukavu and, perhaps, in other urban Zairean Swahili areas as well.

2.4 Recording the data

107 interviews, averaging around forty-five minutes each, were transcribed by Zairean Swahili speakers. Every transcription was double checked by an assistant specially instructed with regard to how to check the transcriptions. The transcription work was by far the most demanding task of the research, time-wise, financially, and mentally. It took six to ten hours to transcribe a forty-five minute tape[2].

After the transcription, another assistant and I typed the texts onto computer diskettes. We coded all French words so that they could be easily isolated for the study of lexical borrowing. A program giving frequency counts of all words in each text greatly facilitated the accurate, efficient scoring of each linguistic variable.

2.5 Independent variables

The following variables are listed in the order of the importance that I attributed to them from the outset of the

study. The variable listed last--level of church
involvement (section 2.3.6)--was one that I had not
considered at the outset; but, while recording the data, I
came to believe that it might have more influence on scores
than most of the other variables.

2.5.1 Age group

Since diachronic trends in Bukavu Swahili are of
special interest in my research, a key independent variable
is age. Since there are no reliable records of Swahili as
spoken in the early part of the century in Bukavu (or Zaire,
in general), we must rely on apparent time analyses in which
differences in the linguistic performance of the speakers of
different age levels are assumed to reflect actual
linguistic changes that have occurred through time.

Labov's Martha's Vineyard and New York City studies
(1966;1972), are the most well-known sociolinguistic works
with apparent time used as an analytical tool. Rickford
says that "Unfortunately,...distributions or correlations
involving different *age* groups are rarely presented in
studies of variation in pidgin-creole-speaking communities"
(1980:176; his emphasis) but approvingly notes Gillian
Sankoff's work on Tok Pisin as an exception.

Sankoff (1980:69-70) observed, for example, changes in
stress and morphosyntactic function of a Tok Pisin lexical
item indicating future tense by comparing linguistic
behavior of children who were native speakers of Tok Pisin

with adults who were not. The historical situation of her
subjects was similar to that of those in my sample. Most of
those in the oldest age group grew up knowing an ethnic
tongue as a first language and the lingua franca as a
second. However, for those in the younger age groups, the
lingua franca became a mother tongue. Sankoff says:

> Though not many languages are presently undergoing a
> change toward being, for the first time, native
> languages, the kinds of intergenerational differences
> observable among these speakers can be seen in other
> speech communities, and differences among groups need
> not be categorical to be signficant (1980:71).

Rickford (1969) and Bickerton (1981) are other
creolists that have looked to subjects of different
generations for evidence of diachronic changes[3].

In her study of Mombasa Swahili, Russell (1980) also
found linguistic behavior to be different between age
groups. She then broadened the perspective on this factor
by showing how differences in educational level and sense of
in-group security were associated with the differences in
age of her subjects (1980:134ff).

In my study, the speakers of the transcribed interviews
were assigned to one of three age groups (Table 2.1):

		Number of
Group	Born	Interviewees
Oldest	before 1950	34
Middle	1950-68	45
Youngest	1969-76	27

Table 2.1. Transcribed interviewees according to
age.

Although several in the O(ldest) age group were born
outside of the Bukavu area (this to reflect the influx of
workers from various geographical regions and ethnic
backgrounds to the *centres extra-coutumiers* (see
introduction)) during the first half of the century, all but
one of those in the M(iddle) and Y(oung) groups were born in
Bukavu[4].

There were two main considerations in grouping the
ages as in Table 2.1: population movement patterns and use
of Swahili in education.

Apart from members of the original ethnic group of the
Bukavu area, most of the O subjects were not born in Bukavu.
They were either brought at a young age by their parents or
came as young men to work or look for work. Though there
were relatively large population increases in Bukavu after
the second world war (Kasongo 1985:12), the migration was
controlled by the Belgian authorities who, in principle,
would not allow people to move to Bukavu unless they either
had work there or could find it within a short period of
time.

In contrast, those of the M age group were brought up
and learned their Swahili during a time when the population
of Bukavu exploded due, mainly, to migration from rural
areas of eastern Zaire:

> *Avec l'accession de notre pays a l'indépendance, en*
> *1960, toutes les plantations sont abandonnées, les*
> *forces vives des collectivités affluent en masse vers*
> *la ville dans l'espoir de faire fortune et d'acquérir*
> *les biens laissés par le colonisateur suite aux*
> *promesses fallacieuses leur faites par les politiciens*

*de l'époque.... Bukavu qui, en 1958, était peuplée de
48,263 habitants va voir sa population passer a 134,861
habitants en 1970, soit un accroissement démographique
de 170% en 12 ans.*
<div align="right">(Mpenda 1983: 118,119; my emph.)</div>

Those in the Y group are of school age.

2.5.2 Education

The general policy concerning use of Swahili as a
medium of education was different for each of these age
groups. Until 1962, Swahili was the main medium of
education for the first three years of primary school. In
1962 (the approximate time from which most of those in the M
group would be starting school[5]), the policy changed to
exclusive use of French as a medium. From 1975 on (the time
when the oldest of the Y group were starting school), the
policy reverted back to using Swahili as a medium. Thus, we
may look for the effects of education on the speech of the
subjects with regard to Swahili as a medium of instruction.
(More information on use of Swahili for instruction is in
sections 1.3.1.4.)

The age groups subdivided according to educational
level are given in Table 2.2.

Age Group	Years of education						
	0	1-3	4-6	7-9	10-12	13-15	16+
O	15	4	8	2	4	1	1
M	3	2	6	10	18	4	3
Y	1	1	12	11	3	-	-

Table 2.2. Number of subjects at various levels of education. Secondary school begins in the seventh year and ends in the twelfth. Undergraduate studies are for three years after secondary school.[6] Years given are in terms of highest level achieved; thus, one who took 14 years to finish secondary school would still be considered in the "10-12" group.

The educational level of the M and Y subjects is concentrated in the middle levels more than for the O age group for three reasons. First, two of the five major hypotheses directly concern the effect of advanced levels of education on Swahili speech habits and two other major hypotheses, concerning occupation, indirectly concern this. Second, education is highly valued (Young and Turner 1985) and one can expect increasingly higher proportions of residents to have a high school education. Using statistics found in Kabanga et al. (1983) and Nzongola (1983), one can estimate (quite roughly) that at least 70% of the secondary school age residents in Bukavu were going to high school in 1976[7]. Third, as my field research progressed, it became evident that not until one reached the secondary level of education did lexical borrowing from French proliferate. Since this borrowing was of special interest to me, I wanted

to have a sizable sample of speakers from this educational category.

Although the role of Swahili in the curriculum has received much attention (for example, articles in Whiteley 1974⁸ and Poloméand Hill 1980), the effect of exposure to Standard Swahili in education on vernacular speech patterns has received little attention. Russell (1980) found that subjects with formal education, in comparison with those without, would make a "greater shift [from the vernacular] towards 'Standard' Swahili" when talking with her. However, she does not give much attention to the influence of education on normal vernacular speech.

2.5.3 Occupation

According to Labov, "It appears that a person's own occupation is more closely correlated with his linguistic behavior--for those working actively--than any other single social characteristic" (1972:45). The main reason for this is the obvious link between occupation and socioeconomic prestige/class; it is the speech behavior of the socioeconomic elite which is commonly considered the standard variety and, thus, on which those of lower socioeconomic status may attempt to model their linguistic behavior with varying degrees of success (for example, with regard to English sociolects in the United States and

England: Labov 1966; Trudgill 1974: 34-56; with movement
from Creole to standard varieties: DeCamp 1971; Bickerton
1975; Samarin 1980; with regard to choice between English,
representing socioeconomic prestige, Swahili and ethnic
languages: Scotton 1972,1977; Parkin 1974; Barton 1980).[9]
At the same time, non-standard varieties may be maintained
as an expression of in-group loyalty and/or socioeconomic
isolation from groups speaking the (near-)standard variety.
(for example, with regard to English dialects: Labov 1980;
Milroy and Margrain 1980; with regard to Creoles: Wurm 1977;
Craig 1980; d'Offay de Rieux 1980; with regard to Swahili-
speaking areas: Russell 1980; Scotton 1982).

Since accessibility to French has greatly increased
since Independence and since it is French, not Swahili, that
now represents socioeconomic prestige, my hypotheses predict
that socioeconomic status, as represented by occupation,
will not correlate with incorporation of Standard Swahili
features into one's speech.   They predict that occupation
will correlate with linguistic scores only with regard to a
classificatory dichotomy between jobs which encourage use of
Standard Swahili (teaching and preaching) and those which do
not (all others held by subjects who were tested):

> Hypothesis 1: Only those whose occupation encourages
> use of the standard will show signs of movement towards
> the standard. That is,
>
> a. the standard scores of teachers and preachers will
> be higher than the scores of all other subjects.
>
> b. the phonological and morphosyntactic scores of all
> other subjects will be clustered at a relatively low
> level.

c. only the scores of teachers and preachers will be spread from the low levels of others to the high, near-standard levels.

Subjects other than students were classified as belonging to one of four occupational categories:

1. Manual labor and other low income occupations

2. Teachers

3. Skilled labor

4. Administrative

5. Preachers

Included in the first group were: soldiers, manual laborers (such as house workers and night watchmen), an *animatrice* (one who is paid, very little, to dance in support of governmental policies and alleged accomplishments), a machinist, taxi or truck drivers, vendors, craftsmen, mechanics, and a hairdresser. Though those in the second group would be no more economically advanced than those in the first group, their work might encourage them to use a nearer-to-standard Swahili. Those in the third group included: nurses and mid-wives with no more than a secondary school education, a pharmacist, an inspector of hospitals, a notary, and governmental secretaries. Those in the fourth group included a technical supervisor, a highly educated executive secretary and a highly educated nurse in private (and thus economically advanced) industry, a banker, and a wealthy business person. The two members of the fifth group

were both Protestant preachers. The number of subjects
assigned to each category are given in Table 2.3.

Occupational Category

		ManL 1	Tch 2	SklL 2	Adm 4	Prch 5
A g e	O	29	2	4	3	1
G r o u p	M	19	7	9	2	1
	Y	–	–	–	–	

Table 2.3. Subjects according to occupation and
age group.

The concentration of subjects in the first category
reflects the lop-sided economic structure of Bukavu where,
according to one survey, the unemployed outnumber the
employed (Nzongola 1983:302) and the large majority of
employments are of low-paying manual labor and "*micro-
commerces [qui]...permettent a ceux qui en pratiquent de ne
pas mourir de faim*" (Nzongola 1983:300).

There were two main difficulties in having
representatives of the higher occupational cells. One was
the lack of contacts that my assistants, of lower
socioeconomic background, had with those of higher
socioeconomic background. A second was the difficulty of
arranging interviews even when contacts were made. This was
due in part to the busy schedules of the potential subjects;
but it also seemed to be due to the fear that a recorded

interview might somehow be used against them. Mobutu has been very successful in causing a general fear of rocking the political boat and those of the socioeconomically higher class are especially aware of the precariousness of their positions, often corruptly obtained (Young and Turner 1985 discuss this phenomenon in detail); Mutamba and Kabemba (1983), professors at the Bukavu Teachers' College discuss similar problems of conducting interviews with those of higher socioeconomic class.

2.5.4 Sex

Anecdotal observations that secondary school girls often replace the Swahili flapped /r/ with the French back velar one raise the question of whether women's behavior differs from men's in other respects. Their reputation for incorporating the French back velar /r/ of the prestigious French language suggests the possibility that the same may hold true for women in Bukavu as holds true for women in Britain and America:

> [In] urban dialect surveys carried out in Britain
> and America....allowing for other factors such as
> social class, ethnic group and age, women
> constantly use forms which more closely approach
> those of the standard variety or the prestige
> accent than those used by men. (Trudgill 1974:91)

This would probably be true only for those who have sufficient exposure to French through education or frequent contact with formally educated people. One would not expect older women with no formal education to attempt to emulate

the French accent or incorporate French core lexical items
into their speech.

Thus, the following hypotheses are to be tested:

HYPOTHESIS 10: When educational levels are similar,
M and Y women will have a higher rate of borrowing
from the French lexicon than men.

HYPOTHESIS 11: M and Y women will not have a
higher rate of standard Swahili pronunciations and
morphosyntactic structures than men, of similar
educational level.

Hypothesis 11 is made with the assumption that Swahili is
not associated with socioeconomic prestige in the Middle and
Young age-groups and, thus, there will not be the motivation
to incorporate Standard Swahili features into one's speech
that there is to incorporate French features.

These hypotheses do not concern women from the O group
since only an extremely small minority from that group had
the same educational opportunities as men. The breakdown of
subjects according to sex is given in Table 2.4.

Age Group	Sex Male	Female
O	34	4
M	29	19
Y	12	15

Table 2.4. Number of subjects according to age
and sex.

2.5.5 Ethnic group

With the exception of mother tongue interference in the Swahili of those in the O group (the majority of whom, unlike those in the M and Y groups, did not have Swahili as a second--or first--mother tongue) and a few lexical borrowings from the numerically predominant group, there was no reason to believe that ethnic background of the urban dwellers would significantly affect their linguistic behavior in speaking the language adopted for inter-ethnic communication.

With regard to ethnic language parallels to the Swahili variables considered in this study (to be explained in section 2.8), the languages that I know of have much in common. In all languages studied, the consonant in the class 2 morpheme, which marks plural references to humans, is [-sonorant] [ba-] or [ba-]. Their cognate equivalent of (j) is [-sonorant] (in the following examples of Table s are left where there are not clear cognates):

	"water"	reflexive	"name"	"come"	"not.yet"	"be.full"
Swahili	maji	-ji-	jina	-ja	-ja-	-jala
Mashi	amishi	-ci-	izina	-isha	-ci-	-yunjula
Rega	mazi	- i-	izina			-izala
Rwanda	amazi	- i-	izina	-uza		-uzura

Table 2.5 Local language cognates.

Comparisons between ethnic languages with regard to the (ni) variable will be discussed in section 2.9.2.3. Incorporation of French into Swahili would most likely be related to

ethnic group only if there was an imbalance among ethnic

groups in their average educational levels.[10]

Thus, the following hypothesis:

HYPOTHESIS 12: Ethnic group membership will be a very
weak predictor of scores for all examined linguistic
variables.

Subjects were coded as belonging to one of three groups

(Table 2.5):

Code	Corresponding Ethnic group	Number of subjects			Explanation
		O	M	Y	
1	Shi	17	16	13	Members of the ethnic group that is numerically predominant and lived in the Bukavu area before the incursion of non-regional traders, missionaries, and colonialists
2	Rega	9	10	7	The second most populous ethnic group
3	Others	14	15	13	Includes at least twenty-two other ethnic groups

Table 2.6. Number of subjects according to ethnic group
and age group.

2.5.6 Network Strength

Recent work by British linguists (e.g., Milroy and

Milroy 1985 and Russell 1980) has linked the degree of

strength of social networks to the likelihood of the

maintenance of vernacular norms: the denser the social

networks of an individual the more likely s/he is to

maintain the vernacular. A simple method for scaling

network strength is given in Milroy and Margrain (1980:51):

Each informant is assigned a score on a scale ranging from 0-5. One point is assigned for each of the following conditions he or she fulfills:

1. Membership of a high density, territorially based cluster.

2. Having substantial ties of kinship in the neighbourhood. (More than one household, in addition to her or his own nuclear family).

3. Working at the same place as at least two others from the same area.

4. The same place of work as at least two others of the same sex from the area.

5. Voluntary association with work-mates in leisure hours. This applies in practice only when conditions three and four are satisfied.

Milroy and Margrain concluded their paper by suggesting that their hypothesis that strong social networks will positively correlate with the preservation of vernacular norms should be tested in urban settings of different world areas[11]. Accordingly, the following hypothesis is made:

HYPOTHESIS 13: Subjects Network Strength scores will negatively correlate with the phonological and morpho-syntactic scores and positively with the lexical scores.

Scores for testing this hypothesis were based on responses to an interview schedule in which questions were asked to see how much the subject met the five criteria given above. The interview schedule was generally given much later than the taped interview with the result that only sixty-seven of the 106 transcribed subjects were scaled for network strength. Only twenty-five of these sixty-seven had network strength scales of less than 5.

2.5.7 Level of church involvement

Before doing the field research, I had expected pastors' Swahili to be much closer to the standard than the average speaker's because of the pastors' professional use of near-standard Swahili in both study of Christian literature and occuational communication with the laity. I did not expect this church Swahili to affect anyone else. Thus, my HYPOTHESIS 1 mentioned only pastors with regard to the religious domain. However, while recording the data of interviews on the field, I came to believe that this hypothesis was too narrow. Thus the following hypotheses were to be tested also:

> HYPOTHESIS 14: Those with a high level of church involvement will have standard scores significantly higher than all other subjects, excluding teachers and preachers.

I considered a person to have a "high level of church involvement" if s/he attended church more than once a week. Those who went once a week or less would represent the typical layperson while the one who went more often would probably have a position(s) of responsibility in the church or at least above average participation in the church and thus be more prone to adopt aspects of linguistic behavior associated with the church. The majority of those rated as having a high level of involvement were Protestants.

2.6 Secondary studies of Bukavu Swahili

While recording and transcribing the speech of a variety of Bukavu residents was the main focus of my field

research activity, supplementary studies were done that concerned: subjects' reports on language attitudes and use, use of Swahili in the schools, and comprehension of the standard versus the vernacular. Only the first of these studies will be discussed in any detail in this dissertation. The study of language attitudes and use was based on an interview schedule which is discussed in the next section.

2.7 Sociolinguistic interview schedule

The sociolinguistic interview schedule was composed of three main parts: (1) evaluation of three different oral Swahili varieties, (2) questions concerning the subject's use and understanding of Swahili, and (3) questions about the subject's social networks and language choice in various social relationships. The interview schedule and the transcription of the recordings on which the evaluations of part 1 were based are given, along with translations, in Appendix D.

The administration of the interview schedule took about forty-five minutes. Ninety-eight interviews were done, 67 of the subjects having been already interviewed for the purpose of having their speech recorded. All but a few of the interview schedules were administered by my research assitants; I was the sole interviewer for only two interviews. Vernacular Swahili was always used by the interviewer.

2.7.1 Evaluation of Swahili varieties

The procedures used to elicit evaluation of oral Swahili varieties was very close in both methodology and substance to that briefly reported on in Scotton's (1973) study of Ugandan Swahili.

Three texts were written concerning the description of a post-card which had four different scenes from Bukavu (these texts are given in Appendix D). I had intended to have the only significant differences between the three texts be non-referential, formal ones: phonological, morphosyntactic, and lexical. The first text was in the typically Bukavu vernacular but without any French words. The second was in standard Swahili structures without any French. The third had the same linguistic structures as the first except that there were many French words (the frequency of French words was higher than most, but not all, of the transcribed interviews of Bukavu speakers).

After having returned from the field research, it was pointed out that the vernacular speaker incorporating little French was the only one whose text called for him to say that he did not know the location of one of the pictured scenes. It is conceivable that such a discrepancy could have influenced subjects' evaluations of the speaker. It might have been taken as an indication that he was not from the Bukavu area; but, he, more than any of the speakers, was rated as being from the Bukavu area. It might also have

been considered an indication that he was not as well educated, though the likelihood of linking recognition of a certain location with educational level is questionable. However, it is a weakness of the test that this discrepancy did exist.

The texts, each read by a different male speaker after practice runs, were recorded--and later played to subjects-- in the order presented in the previous paragraph. In none of the subjects' evaluations was there a response such as "this person's speech sounds unnatural".

Subjects were instructed about the testing procedure, were assured that only their opinion--not a "correct answer"--was desired, listened to the first text, and were then asked five questions about the speaker and the Swahili of the text. The playing of a text and asking of questions was repeated for the next two texts. The questions (given in Appendix D) elicited the subjects' opinions on each speaker's Swahili quality, personality[12], salary, level of education, and origin. Hypotheses underlying the questions were:

> HYPOTHESIS 15: All groups will evaluate the standard speaker as speaking the best Swahili and the one who mixes in French as having the worst Swahili.

> HYPOTHESIS 16: There will be a decline in the number of subjects positively evaluating the quality of standard speaker's Swahili, from the oldest to youngest age groups.

> HYPOTHESIS 17: The one who mixes in French will not be as negatively evaluated by the young-age group as he is by the old-age group.

HYPOTHESIS 18: Evaluation of the vernacular speaker not incorporating much French will be the same for each age group.

HYPOTHESIS 19: In all age groups, the vernacular speaker borrowing from the French lexicon will be most positively evaluated with regard to level of salary and level of education.

HYPOTHESIS 20: From the old to young age group, there will be a significant increase in the number of subjects who positively evaluate the speaker who borrows from the French lexicon, with regard to level of salary and level of education.

HYPOTHESIS 21: There will be no significant difference between evaluations of the standard speaker and the vernacular speaker who does not borrow from French with regard to level of income and level of education, except in the old-age group where the standard speaker will receive more positive evaluation.

HYPOTHESIS 22: The standard speaker will be evaluated as an outsider more often by the middle and young-age groups than by the old-age group.

HYPOTHESIS 23: All groups will judge the two vernacular speakers to be from the Bukavu area.

HYPOTHESIS 24: In the old-age group, positive personality evaluation will be highest for the standard speaker.

HYPOTHESIS 25: In the M and Y group, positive personality evaluation will be highest for the vernacular speaker who does not borrow from the French.

Support of hypotheses 16, 20, 21, 24, and 25 would indicate that the prestige attached to the standard has diminished and, thus, that there is less motivation to learn and speak the standard than there used to be among speakers educated before Independence. Support of hypotheses 22 and 23 would indicate that a standard speaker would be considered as geographically distanced from the Bukavu

resident; this, along with dense social network ties would
reenforce adherence to the vernacular norms. Support of
hypotheses 17, 19 and 20 would indicate that the borrowing
of French lexical items is perceived of as a socioeconomic
prestige marker more so than speaking standard Swahili.
Support of hypothesis 25 would indicate that French
borrowing is perceived as reflecting a speaker's quest of
prestige more than as a necessity stemming from lack of
corresponding terms in the vernacular Swahili.

2.7.2 Questions concerning use and understanding of Swahili

Subjects were asked: which language(s) they thought
should be used in the primary school education; if they
thought it necessary to know standard Swahili; if they could
easily use Swahili whenever they wished to; and how they
rated their understanding of Swahili when speaking with
their friends, when at work, when listening to the radio,
and when in church.

Answers to these questions were to test the following
hypotheses:

> HYPOTHESIS 26: From the O to Y groups, there will
> be a decrease in the perceived value of learning
> Standard Swahili.
>
> HYPOTHESIS 27: In the M and Y groups, selfevaluation
> of the understanding of the standard will be lower
> than in the O group.
>
> HYPOTHESIS 28: Self-evaluation of the ability to
> use Swahili will not differ among age groups.

Support of Hypothesis 26 (along with Hypothesis 5) would
indicate that only French is perceived as important enough
to motivate the effort necessary to learn a language well.
Support of the last two hypotheses would indicate
satisfaction with the vernacular variety of Swahili and,
thus, lack of motivation to acquire the standard.

Trudgill's (1974:96ff) study of Norwich subjects' self-
reports on linguistic behavior indicated that subjects may
over-estimate their use of standard forms if they favorably
accept general social/institutional norms but under-estimate
their use if they do not. The former situation would
reflect the overt prestige of the standard form while the
latter situation would reflect the covert prestige of the
vernacular. If the vernacular-standard situation in Bukavu
parallels that of Norwich and if Hypotheses 5, 26, and 27
are true, Hypothesis 27 could actually be a corollary of
Hypothesis 26. Middle and young age group subjects could
self-report themselves as having a lower understanding of
the standard because of the lower prestige attached to it.

2.7.3 Questions concerning social patterns

In the last section of the interview schedule,
questions were asked which would enable scaling subjects'
Network Strength according to the criteria given in 2.5.6.
Subjects were also asked which language they used with:
their parents, children, friends, and work or school mates.

This information enabled testing of the following
hypothesis:

> HYPOTHESIS 29: Swahili is replacing ethnic
> languages as the mother tongue
> of the great majority of Bukavu
> residents.

Table 0.1 in the introduction to this dissertation shows
that this hypothesis was supported.

2.8 Dependent variables

Hypotheses 1-15 were all tested by doing statistical
analyses of the effect of the independent variables
discussed above on selected phonological, morphosyntactic,
and lexical variables present in the subjects' recorded
speech. Sociolinguists studying inherent variation have
generally accepted Labov's criteria for selection of the
linguistic variables. The variables, he stated, should:
occur frequently, be structurally integrated into a larger
system of functioning units, have asymmetric distribution
over a wide range of social strata, and be salient but
fairly immune from conscious distortion (1972:8). The
variables I have selected easily meet the first three of
these criteria; whether or not they meet the fourth vaguely
stated criterion is more questionable but they at least are
not conscious to a degree that would invalidate the study.[13]

The dependent linguistic variables selected are
discussed in this section. Tests of the first 15

hypotheses, done with regard to these variables, are discussed in chapter 3.

Following Labov, I use parentheses rather than slash marks in reference to a linguistic variable: for example, (j) rather than /j/. "Whereas // means that internal variation is to be disregarded as insignificant, () indicates that this variation is the prime focus of study" since the variants "show significant differences in their distribution and carry sociolinguistic information" (Labov 1972:11).

Temporal and financial limitations on a study such as this necessitate focusing attention on a few variables with the assumption that the same sociohistorical factors affecting these variables may account for variation patterns in other variables.

The two phonological variables that I have chosen--(w) in the class 2 (human, plural) morpheme and (j)--differ in that the former occurs in a only one morpheme while the other occurs in several. I chose to study pronunciation of the class 2 morpheme (w)a- because I knew that for clergymen this variable was almost exclusively realized with standard pronunciation in the social setting and frequently by them in a secular setting. Also, residents employed by foreigners would often use the standard pronunciations. However, I also knew that the non-standard pronunciation was very common. Just how common--and the effect of various social groupings on its realization--was a matter for study.

The (j) variable was chosen mainly because it was obvious from the outset that its pronunciation varied in several different segmental and lexical environments and, thus, enable a study of more complex interaction between phonological and social environments.

The morphosyntactic variable--the copula (ni) is of interest because of its presence as a variable throughout Swahili-speaking Africa (reported in, e.g., Duran 1979 and Scotton n.d.) and because it affords study of the interaction of substratal (ethnic languages) versus innate/universal linguistic influences.

Study of the lexical variable--incorporation of French into one's speech--is relevant to an area of much contemporary sociolinguistic research, the study of social influences and linguistic restrictions on borrowing from and code-switching to a second language. I do not consider incorporation of Standard Swahili lexical items into vernacular Swahili since it is obvious from cursory inspection of the texts that this is a much less dynamic source of lexical items than French.

2.8.1 Phonological variables

For the study of phonological variation, I analyzed pronunciation of the class 2 marker (w)a- and of the sound represented in Standard Swahili orthography by j. For both variables, sonorance is the key feature in question. The first is [+sonorant] in Standard pronunciation but commonly

[-sonorant] in the Bukavu (and, generally, Zairean) vernacular; on the other hand, (j) is [-sonorant] in Standard pronunciation but frequently [+sonorant] in the vernacular.

2.8.1.1   The class 2 marker (w)a-

The class 2 morpheme (w)a- of Swahili marks plurality of human or anthropomorphized referents. It, like other class markers, is prefixed to nominals, as in (1) and (2) and to adjectives modifying a class 2 nominal, as in (3). It may also occur in either the subject or object prefix slot, as in (4). In each of the following examples, other class markers are also used to illustrate the structure of the Swahili (Bantu) class system. Orthography of the illustrations represents common vernacular pronunciations (thus, I write (w)a- as ba-.

(1) mu-tu   "man"
    ba-tu   "men"
    ki-tu   "thing"
    bi-tu   "things"

(2) u-le   "that person"
    ba-le   "those persons"

(3) mu-toto mu-dogo "young child"
    ba-toto ba-dogo "young children"
    ka-toto ka-dogo "small child"
    tu-toto tu-dogo "small children"

(4) ba-zazi   ba-li-ba-ach-i-ak-a
    cl.2-parent   cl.2-past-cl.2-leave-applicative-
                  -remote(?)-indicative

    "The parents left them there."

In (4) the first class 2 marker prefixed to the verb is co-referential with the subject <u>bazazi</u>. The second class 2 marker refers to a different group of human subjects (the children of the parents); a reflexive marker would have been used if the referents in the object slot were the same as the those in the subject slot.

The [-sonorant] consonant, [b] or [ƀ], of the vernacular class 2 morpheme alternates with the standard's [+sonorant] [w]. Although the vernacular [-sonorant] may be either a stop or a fricative, I, for ease of reference, will use <u>b</u> to refer to it. Though [wa-] occurs in all written literature, is used almost categorically by media professionals, and is taught in the schools as correct, [ba-] remains a salient marker of vernacular speech.

The <u>(w)a-</u> scores were the easiest, most straightforward to calculate of any of the variables studied. In recording the data, it could be seen that there was rarely a switch in form within the same clause.[14] Thus, counts could be based simply on the form of the mandatory subject prefix of a clause's main verb.[15] I counted the prefix only when attached to a verb in the present tense since this was generally the most frequently occurring tense and would practically always occur with (w)a- at least 30 times per each subject's text.

2.8.1.2 (j)

In Bukavu, the standard [-sonorant] (j) is generally pronounced as a voiced, alveopalatal affricate, [d];

sometimes the friction after the stop gives way to a near semi-vocalic quality--[dʸ]. The non-standard [+sonorant] variant is pronounced as the high, unrounded semi-vowel [y]. For purposes of scoring, I have counted elided consonants as [+sonorant] since they apparently represent the end of a weakening process ([dⁱ] → [dʸ] → [y] → [∅]) occuring in some of the (j) environments.

The scoring of the variable (j) was more complicated than that for (w)a- since various lexical as well as phonological environments affect the form. In this section, I present a general analysis of the environments and frequencies of the various forms and variation between age groups. It will be seen that an implicational scale can be constructed to relate the various environments.

From this analysis, it becomes evident that focus on mo(j)a "one" and (j)ua "know" may be fruitful for purposes of the more detailed analyses that will be involved in testing the various hypotheses. Each of these words: (1) occur/s frequently, (2) has a high degree of variability in its pronunciation, (3) differs from the other in phonological environment, and (4) has developed differently diachronically.

Before we consider the data, I shall sketch the theoretical background to use of implicational scales in the study of variation.

2.8.1.2.1 Two approaches to variation

Linguistic variation may be studied with focus on social groups (as in, for example, Labov (1972), Cedergren and Sankoff (1974), Sankoff (1980), and Guy (1980)) or on the individual (as in, for example, DeCamp (1971), Bickerton 1971, DeCamp (1971), and Bailey (1973) and LePage (1980)). The working assumptions of these two groups of researchers are quite different. Those who focus on the social group assume that individuals within a speech community share a "group grammar" which enables them to know the probability of a certain variant's occurrence in various environments. There may be rules that have persisted for centuries since variation is an inherent part of any grammatical system.

Those who focus on the individual argue that there is no group grammar but only individual grammars which stem from one person's daily interaction with others. One individual in a speech community may have a set of rules hat is different from another in the same speech community. Variation is not a stable part of a grammatical system. Mental calculation of the probability of a certain variable's use is viewed as an absurdity (Bickerton 1971; similarly, Trudgill 1981:160)[16]. So, instead of variation being represented as part of the grammatical system, it is viewed as a transition between categorical rules. Thus, rather than probabilistic rules, implicational scales are developed:

> Insofar as lects differ in terms of phenomena which can
> be placed on an implicational scale, they can be

uniquely designated by the point at which they occur
on such scales. The phenomena whose presence or
absence characterizes them implies the presence or
absence of other phenomena lower on the scale and is
implied by, but does not imply, phenomena located
higher up on the scale.

(Bailey 1973:28)

I construct rough-grained implicational scales for the
(j) phonological variable in section 2.8.1.2.3. In this
section, it is shown how the implicational scale may be
useful in sorting data and grouping environments which
affect the frequency of a variant's occurrence.
Furthermore, a study of Appendices F and G indicates that
over-all variation in several environments is the reflex of
variation in grouped individuals' speech but that the speech
of each individual shows variation in only a few
environments; however, the limited number of occurrences in
some environments for individual subjects prohibits a firm
conclusion.

Guy (1980:12) says that linguistic behavior which can
be described by implicational scales is to be expected in
situations "where there is independent evidence of
historical or ongoing change" and not in more stable
linguistic situations such as in American English where
final stop deletion has persisted for a long period of time
(he does not say how long) for a wide range of social
groups. This points to perhaps the most important
difference between the two approaches to the study of
variation. Those who focus on the individual have focused
on heterogeneous speech communities where there has been, or

is, intensive contact between speakers of different language and socio-cultural backgrounds. Those who have focused on the group have focused on much more homogeneous situations in which long-term, clear-cut social stratification is involved and there is much less linguistic diversity between groups.

2.8.1.2.2 Phonological environments and frequencies

The two basic segmental environments affecting sonorance of the (j) variant are: the vowel before which it occurs and its syllabic position in the word. (j) occurs only in the initial position of CV syllables. The occurrence of (j) after a syllabic nasal consonant (as in n\$ji\$a "road") is not considered in the following analysis since it is categorically pronounced as [-sonorant].

In Swahili, the penultimate syllabe of a word always receives primary stress. For brevity's sake, I will state (j) environments in terms of whether (j) occurs before, after, or in "stress(-ed position)" to indicate the position of the syllable in which (j) occurs with reference to the stressed syllable.

Two other factors affecting the sonorancy of (j) are the morphological function and, especially, the frequency of occurrence of the lexical item containing the variable.

During my frequency counts of the variants, it became evident that a quite misleading picture of the variation

would result if only the segmental environments were considered. For example, if all lexical items in which (j) occurs before /i/ word finally are lumped together, the [-sonorant] variant occurs 50% percent of the time. However, this would obscure the much higher [-sonorant] frequency if ma(j)i is not counted: in words other than maji it occurs 96% of the time but in ma(j)i it occurs only 20% of the time. Several other examples of this type of distinction will be seen below. Thus, in setting up environments, I often counted specific, frequently occuring words or morphemes as separate environments while grouping together less frequent words or morphemes in which (j) occurs in segmentally identical environments.[17] The environments that were ultimately distinguished are given in Table 2.7. In the next section (2.8.1.2.3), I construct an implicational scale which suggests how these environments should be grouped and offer an explanation of what has determined the shape of the scale.

Environment	Total oc-currences	% realized as [-sonorant]
(j)i before stress ex. -jifunza "study (vb.)" -ji- reflexive vb. prf.	1209	100
(j)i in stressed position ex. -jibu "answer"	376	98
(j)i after stress maji "water" all other occurrences[18] ex. mubeleji "Belgian" mukaaji "resident" kijiji "village"	385 245	20 96%
(j)e in stressed position[19] jembe "hoe" -jenga "build"	39 236	77% 42%
-(j)a word or Aux finally[20] -ja- "negative imperfect" (verb stem prefix, unstressed) -kuja "come" -ngoja "wait (-)moja "one"	550 2472 188 3096	7 8 15 16
(j)a before stress ex. jamaa "family"	252	99
(j)a in stressed position ki/vi-(j)ana "youth(s)" ma(j)ani "grass; leaves" -(j)ala/-jaza "be full/fill" all other occurrences ex. ajabu "amazing phenomenon"	349 151 87 139	61 20 8 89
(j)u in stressed position[21] -jua "know"	2636	38%
(j)o before stress ex. jogoo "rooster"	4	100%
(j)o stressed ex. mujomba "uncle" -koyola "urinate"[22]	61	18%
(j)o after stress fujo[23] "problem; disturbance"	237	74%

Table 2.7. Environments considered in analysis of (j).

2.8.1.2.3 Constructing an implicational scale

The first step in constructing an implicational scale was to arrange in ascending order the environments according to percentage of [-sonorant] realizations of the variant. Since a basic concern of my research is to look for diachronic developments in Bukavu residents' speech, I grouped subjects according to age, as discussed in section 2.5.1, and constructed the scales based on the overall percentages for each age group.

It will be seen in the following discussion that the scales for the middle and youngest-age groups are more similar to each other than to the oldest-age group's scale. This is not necessarily due to age differences alone. The subjects in the oldest-age group were fairly evenly split between those without any formal education and those with at least some. Also, most oldest-age group subjects who were not Shi were not born in Bukavu. In contrast, the large majority of subjects in the middle and youngest-age groups were born in Bukavu (regardless of ethnic group membership) and have some formal education. The reasons for these disparities are discussed in sections 2.5.1 and 2.5.2. There may have been greater similarity between the oldest and other age groups' scales if the disparities had been factored out. However, since the implicational scales are used primarily as a heuristic tool rather than a means of testing the major hypotheses and since I assume that social

conditions encouraged greater heterogeneity of Swahili varieties among pre-Independence Bukavu Swahili residents than among Bukavu natives growing up around Independence and later, I settle for this rough comparison between age groups. In the testing of Hypotheses reported on in chapter 3, the handling of these disparities is much more refined.

It was assumed that building an implicational scale according to age group would facilitate constructing scales for individuals within those groups as well as provide a general impression of whether or not the scales were similar between age groups. This assumption proved to be valid for each age group.

The percentages of [-sonorant] occurrences for each environment were arranged in ascending order. The resulting scales were then compared. The results are given in Table 2.8.

YOUNG		MIDDLE		OLD	
1. -jala	(0)	-ja- "not yet"	(09)	-kuja	(6)
2. -ja- "not yet"	(2)	-jala	(11)	-ja- "not yet"	(7)
3. -kuja	(5)	-kuja	(11)	majani	(10)
4. (-)moja	(8)	(-)moja	(14)	maji	(10)
5. -ngoja	(11)	-ngoja	(16)	-ngoja	(15)
6. maji	(11)	-jo- stressed	(17)	-jenga	(21)
7. -jua	(56)	majani	(26)	moja	(26)
8. fujo	(78)	maji	(38)	-jua	(29)
9. ja/stress	(97)	-jua	(38)	kijana	(52)
10. ja/__stress	(100)	-jenga	(65)	fujo	(72)
11. ji/stress	(100)	kijana	(69)	ja/stress	(77)
12. ji/__stress	(100)	fujo	(72)	ji/stress	(95)
13.		ja/stress	(93)	ji/stress__	(96)
14.		ji/stress__	(97)	ja/__stress	(97)
15.		ja/__stress	(99)	ji/__stress	(98)
16.		ji/stress	(100)		
17.		ji/__stress	(100)		

Table 2.8. Implicational scales based on percentage of [-sonorant] forms of the (j) variable (percentage is given in parentheses). Environments were not listed for an age group if they occurred less than 30 times in that age group.

When the order of environments is compared between age groups, based on Table 2.8, there are several ordering discrepancies as can be seen in Figure 2.1 in which lines connect identical environments. For example, -jala is #1 for the youngest-age group's ordering of environments but #2 for the middle-age group; thus, in Figure 2.1, a line connects the "Young" #1 with "Middle" #2. This line crosses over the line connecting the "Young" #2-- -ja- --with "Middle" #1-- -ja-. Each line crossing over

```
Young:    1 2 3 4 5      6 7        8 9      10 11 12
```

```
Middle:   1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17
```

```
Old:      1 2 3 4 5 6 7 8      9 10 11 12 13 14 15
```

Figure 2.1. Relative sequences of environments. Numbers correspond with environment listed in row of Table 2.7 for relevant age group. Lines connect identical environments.

another represents a sequential disagreement between age groups. However, when differences between environmental occurences of the [-sonorant] variant are checked for significance (chi-square tests at .05 level), the sequences between age groups can be seen to be much more parallel if one age group's ordering of environments with insignificant differences between them is rearranged to parallel another age group's ordering in which the differences are significant (Figure 2.2). For example, in Figure 2.1 there

```
Young:    1 2 3 4 5       6 7        8 9 10      11 12
```

```
Middle:   2 1 3 4 5 7 6²⁴   8 9 10 11 12 13 15 14 16 17
```

```
Old:      2 1 4 5 3 7 6 8      9 10 11 14 13 12 15
```

Figure 2.2. Sequences rearranged for greater parallelism if differences between occurrences within age groups are not significant.

is a cross-over between environments 1 (-(j)ala) and 2

(-(j)a-) for the Young and Middle age groups. But, since there is not a significant difference between the scores of the two environments in the Middle age group, the ordering of the two environments may be reversed. As a result, there are no cross-overs involving these environments between any of the age groups.

With this revision, there are no cross-overs between the young and middle age groups but their orderings contrast with that of the old age group's. Already this indicates justification for hypotheses which predicted that significant differences in linguistic behavior would be found mainly in the old age group as opposed to the other two.

The environments between which cross-overs occur and percentage of the [-sonorant] realizations for each age group are given in Table 2.9.

Old	Middle	Young
maji (10)	(-)moja (14)	(-)moja (8)
-ngoja (15)	-ngoja (16)	-ngoja (11)
majani (10)	majani (26)	
(-)moja (26)	jo/stress (17)	
	maji (38)	maji (11)
-jenga (21)	-jua (38)	-jua (56)
-jua (29)	-jenga (65)	

Table 2.9. Revised cross-over environments specified. (percentage of [-sonorant] pronunciations are in parentheses.)

Two aspects of Table 2.9, in conjunction with Figure 2.2, are particularly noteworthy. First, the lack of cross-overs occuring on the extreme edges of the percentile.

ranges indicates a long-term stability in these areas: the non-standard [+sonorant] variant of (j) has long been preferred in -(j)ala, -(j)a-, and -ku(j)a and the Standard [-sonorant] variant has long been preferred before /i/ except in maji.

Second, the young age group's scores continue in the diachronic direction of change apparent in the old and middle age group switch-overs concerning the two most frequently used words -mo(j)a and -(j)ua. This observation then leads to the notice of an apparent "great divide" in the diachronic development of (j). The line connecting the Older and Middle-age groups' -mo(j)a scores represents a diachronic *de*crease in standard, [-sonorant] scores for mo(j)a and all words beneath it on the middle age group's implicational scale; however, the line connecting these age groups' -jua scores represents a diachronic *in*crease in [-sonorant] scores for -(j)ua and all words above it on the middle-age group's implicational scale (Table 2.10).

Environment	Old	Age Group Middle	Young	Is difference Significant (.05)?
Upper end				
ji/__stress	98	100	100	No
ji/stress	95	100	100	Yes
ja/__stress	97	99	100	Yes
ja/stress	77	93	97	Yes
fujo	72	72	78	No
jua	29	38	56	Yes
Lower end				
moja	26	14	8	Yes
kuja	6	11ᵃˢ	5	Yes
-ja- (neg.)	7	9ᵃᵉ	2	Yes
-jala	11	0		No

Table 2.10 Percentage of [-sonorant] pronunciations by
age group on lower and upper ends of the implicational
scale. "Lower end" has lowest [-sonorant] scores;
"Higher end" has highest [-sonorant] scores.

So far, the implicational scale has been discussed only
in terms of overall scores for each age group. Analysis of
the tables in Appendix G indicates that the overall scores
offer a good summary of individual subject's scores as
arranged by environment on an implicational scale. However,
the correlation between individual's implicational scales
with their corresponding age group's general implicational
scale is inversely related to age. That is, a parallel
between an individual's and an age group's sequencing of
environments is most likely to occur for young age group
subjects and least likely to occur for subjects of the
oldest age group. Moreover, the percentage of variants
within one environment also decreases with each generation.

Tables 2.11 and 2.12 exemplify how this count was done.
In Table 2.11, the exact counts of (j) variants are given

for three subjects, each from a different age group[27].
Here, for

S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Y	-	0-1	0-11	0-31	0-2	-	0-11	9-4	-	-	2-0	1-0	-	-	3-0	18-0
M	0-1	0-10	0-13	0-53	1-0	-	-	5-31	-	-	1-1	-	-	-	2-0	16-0
O	-	2-2	3-1	46-8	-	-	1-0	9-1	4-0	23-0	-	8-0	6-0	11-0	41-0	29-0

Table 2.11. Total of [-sonorant] (before dash) v. [+sonorant] (after dash) occurrences of (j) for three individuals. S= Subject; Y=from Young age group; M=from Middle age group; O=from Oldest age group. Underlined numbers represent a particular environment.

example, the Y subject did not use the word -(j)ala "be
full" (Environment #1), used -ku(j)a "come" (Environment
#3) eleven times, pronouncing (j) as [+sonorant] each time,
and used -(j)ua "know" (Environment #8) thirteen times,
pronouncing (j) as [-sonorant] nine times and as
[+sonorant] four times.

These numerical scores were then coded: "C" if there
was a categorical realization of one variant and the variant
occurred more than five times; and "M" if there was "mixing"
of variants--more than one variant was used (no minimal
frequency limit). Thus, scores were assigned as in Table
2.12.

S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A			C+	C+			C+	M-								C-
I	C+	C+	C+	M+	C+		C+	M+				C-			C-	C-
P			M+	M+			M+	C-							C-	C-

Table 2.12   Coding of individual subjects' (j) scores.
C=Categorical(only one variant used; M=Mixed (both variants occur); + = [+sonorant] realization is favored;
- = [-sonorant] realization is favored.

Blank spaces indicate that there were not enough occurrences

of the variants in the environment to be considered for the

tally.

Scores for each age were then gained by totalling the

numbers of C's and M's for each age group. The result is

given in Table 2.13.

	Old	Middle	Young
Both variants (M)	112 (41%)	125 (36%)	43 (29%)
One variant only (C)	163 (59%)	227 (64%)	103 (71%)

Table 2.13. Occurrence of variants within environments specified in Table 2.6, by age group. p < .001.

Table 2.13 indicates that there has been a decrease in

mixing of variants from the oldest to youngest generation.

Another tally of those in the old age group was done to see

if there was a significant difference between the scores of

those with formal education and those without. There was

not (p > .50). Also, scores of only subjects with formal

education were compared cross-generationally. There was no

significant difference between this tally and that

represented in Table 2.13 .

Another tally was done to consider environments only if there were 10 or more chances and to count an environment as "categorical" if there were 5% or less realizations of one variant.

These limitations were made in view of comments elsewhere in the sociolinguistic literature concerning representativeness of samples and percentage of errors in real speech. Guy (1980:20) concluded that "above 10 tokens [in a factor group] there is 90% conformity with expected pattern, whereas below 10 tokens only 63% of the relationships are as expected". A statement four sentences later suggests that, in this quote, he meant to say "10 tokens or more" rather than "above 10 tokens". The limitation "5%" accords with the margin of error frequently accepted in statistical studies. It is also close to the average of the two percentage figures Labov (1972:203) cited in his argument against the "myth" of "the ungrammaticality of everyday speech":

> When rules of ellipsis are applied, and certain universal editing rules to take care of stammering and false starts, the proportion of truly ungrammatical and ill-formed sentences falls to less than two percent (Labov 1966b). When nonacademic speakers are talking about subjects they know well--narratives of personal experience--the proportion of sentences that need any editing at all in order to be well-formed drops to about ten percent. I have received confirmation of this general view from a great many other linguists who have worked with ordinary conversation.

With this adjustment, the gross scores showed no significant difference (p > .50) between the Old and Middle age groups. The Young age group's score is lower than the

Middle's (p< .05) but less than the Old with the probability only less than .20. However, when the difference between scores of those with and without education in the Old age group are considered, there is evidence of decline in percentage of environments in which variation occurs from the Old to the Young educated subjects.

Within the Old-age group, both variants are found in 44K% of the cells for those with formal education but in only 19% of the cells for those without formal education (p< .01). Thus, among subjects with formal education, as Table 2.14 shows, there seems to be a steady decrease in the occurrence of both variants within a cell from the old to young age groups such that the young age group's categorization of rules approaches that of the old age group's subjects who had no formal education.

	Old (+ED)	Middle (+ED)	Young (+ED)	Old (-ED)
< 5% variation	30 (44%)	68 (37%)	23 (25%)	10 (19%)
> 5% variation	38 (56%)	114 (63%)	70 (75%)	42 (81%)

Table 2.14   Variation in environments specified in Table 2.6, by age group. Cells counted only if 10 or more chances. p < .001, whether or not scores of Old subjects without formal education are counted.

It is also of interest to note how close the percentages of Table 2.13 are to those in Table 2.14, where cells were counted with much fewer entries and no percentage restriction on mixing. However, the greater restriction on what should be counted for Table 2.14 results in observation of the split between educated and non-educated subjects'

scores in the old age group (a difference between these two sub-groups' linguistic behavior was predicted in several of the hypotheses). In contrast to what Guy's observation, quoted above, would lead us to expect, there is no significant difference between the overall totals of the two tables even though the one is based on counts of cells with fewer environments. Furthermore, restriction to consideration of environments in which there are 10 or more chances results in less environments exhibiting variation rather than more.

The decrease from the old to young age groups in mixing of variants within specific environments and in the irregularity of scaling patterns suggests that the phonological variation is part of a process of historical change leading to categorical rules. The differences in scores between groups indicates that the middle and younger generations had to choose between the more stable patterns of those without formal education and the less stable patterns of those with formal education. Although Table 2.14 indicates a degree of categorization of rules for the Young that approaches that of the Old without formal education, Table 2.10 indicates that the choice of variant has moved towards the [+sonorant] favored by the Old without formal education in one set of environments but towards the [-sonorant] favored by the Old with formal education in another set of environments.

Apart from considerations of social evaluation of speech varieties, why does the split occur in this way? Segmental environment, stress, and lexical environment may all have an in influence.

The segmental environment of (j) may be taken as the starting point for an explanation of (j)'s realizations. Table 2.15, based on the conglomerated scores of all subjects, indicates the likelihood of (j) being [-sonorant] (standard pronunciation) when segmental environment alone is considered.

Environment	% of [-sonorant] occurrences	Total (j) occurrences
__i	85	2215
__o	63	302
__e	47	275
__u	38	2636
__a	19	7284

Table 2.15. [-sonorant] realizations of (j), according to segmental environment. Figures are based on conglomerated scores of all subjects. Environments are in descending order of % of [-sonorant] occurrences.

Only one natural grouping of environments listed in Table 2.15 is possible when the frequencies are considered: (j) is much less likely to be [-sonorant] when followed by a [+low] vowel than when followed by a [-low] vowel. The percentage of [-sonorant] occurrences gives no evidence for a [+front] versus [-front] distinction or a [+high] versus [-high, -low] distinction.

The most extreme difference in segmental scores is that
between the "__i" and "__a" environments. Perhaps an
explanation of this could be construed in terms of the
common Swahili CV pattern (Appendix A, section 1.3 gives
examples where standard non-CV patterns are commonly
realized as CV in Zairean Swahili vernaculars). The
sonorization of (j) before /i/ would result in near-
acoustical identity of the two segments. This could lead to
the CV pattern [yi] becoming V only, through the elipsis of
[y]. This in turn would lead to homonymony of previously
distinct morphemes as illustrated in 1 and 2.

<p>1. a-na-<u>ji</u>-ona   a-na-<u>yi</u>-ona   a-na-<u>i</u>-ona
      he-pres.-<u>himself</u>-see
      "He sees himself."</p>

<p>2. a-na-<u> i</u>-ona
      he-pres.-<u>it</u>-see
      "He sees it."</p>

In the sonorization of (j) before /a/, however, an
acoustical difference between the segments is maintained
and, thus, the CV syllable pattern is protected.

However, when (j) scores are broken down as in Tables
2.8 and 2.10 above, it is clear that factors other than
segmental environment must be considered. For example, (j)
is [+sonorant] more frequently when it occurs before /i/ in
<u>ma(j)i</u> "water" than when it occurs before /a/ if the
syllable is in pre-stress position. Furthermore, there is a
great difference in (j) scores within the segmental
environment "__a". If (j) occurs before /a/ in word or Aux
final position, its <u>highest</u> [-sonorant] score is 26% in the

oldest age group, 16% in the middle, and 11% in the

youngest. Before stress, though, the <u>lowest</u> score of any

age group is 97%.

This indicates that the weakening process ([d^z]→ [d^y]

[y]→ [∅]) is most apt to occur in the syllabically weak

post-stress position. This is the syllable position in

which vowels are commonly elided when followed by a word

beginning with a vowel, not only in Bukavu Swahili (5) but

in other Bantu languages such as Kinyarwanda (6).

```
(5) kweny'       unaneda
    (kwenye      unaenda)
    place.where you.are.going
    "where you are going"
```

```
(6) Umugab' arway' umutwe.
    (Umugabo arwaye umutwe)
    man      is.sick head
    "The man has a headache."
```

In Bukavu Swahili, the elision of a final syllable[28] is

fairly common in fast speech. In verbs, the final syllable

[-ka] , a tense/aspect marker[29], is frequently dropped and

apparently evident only by the maintenance of stress in the

preceding syllable as illustrated in (7).[30]

```
(7) ye'  aliisha kufa njoo mwe'   alinifundisha'
    (yeye aliisha kufa njoo mwenye alinifundishaka
    he    already die  so  who    he.taught.me

    kazi ya mbabula.
    work of heater

    "He already died; it's him who taught me how
    to make charcoal heaters."
```

On the other hand, the [-sonorant] variant is more likely to

be retained in stressed or pre-stress positions.

Further evidence for the weakness of syllable final
position may be found in consideration of the difference
between (j) scores for maji "water" and the scores for other
environments in which (j) occurs before /i/. The post-
stress (j) in maji is, for any age group, [-sonorant] at
least 62% less frequently than is (j) before /i/ in stressed
or pre-stress position (footnote 19 suggested an explanation
for the discrepancy in (j) scores between maji and other
words in which (j) occurs before /i/ in post-stress
position.

Finally, with regard to stress, whether (j) occurs
before /i/ or /a/, it always has the highest [-sonorant]
(standard) score in pre-stress position than in any other
environment. Table 2.16 indicates whether the differences
are significant, according to environment and age group.

	Significant difference ($p < .05$) from pre-stress (j) score?		
Environment	*Oldest*	*Middle*	*Youngest*
stressed (j)i	No*	No	--
post-stress (j)i	No	Yes	--
other (j)i	Yes	Yes	--
stressed (j)a	Yes	No*	No
post-stress (j)a	Yes	Yes	Yes
othe (j)a	Yes	Yes	Yes

Table 2.16. Significance of difference between pre-
stress (j) scores and scores in other environments with
regard to stress. * = $p < .10$

The third major influence on sonorance is lexical
environment. Apart from kijana "youth", majani "leaf;
grass", and -jala "fill", the (j) before /a/ in stressed

position is [+sonorant] in 93% of the middle age group's
occurrences and 97% of the youngest age group's (Table 2.8,
above). In the stressed position of -jala, however, it is
[+sonorant] in only 11% of the middle-age group's
occurrences and 0% in the youngest-age group's. The other
two isolated lexical items with (j) in stressed position are
between these extremes.

Frequency of a lexical item's occurrence in discourse
may have some effect on these differences: the isolated
lexical environments occur much more frequently (at least,
in my data base) than any one word in the environments that
group words according to stress. In harmony with this
suggestion, are the observations (based on Table 2.7 above)
that: maji "water" occurs much more frequently than any
other word having (j) before /i/ in post-stress position;
and, of the two words counted for the "(j)e in stressed
position", the most frequently occuring word is the one in
which (j) is most frequently [+sonorant]. However,
inspection of lexical items having (j) occur before other
vowels and in different stress positions shows that the
factor of frequency by itself cannot account for the
differences in realization of (j). For example, moja "one"
occurs much more frequently than kuja "come" but (j) is
[-sonorant] more frequently in the former than the latter.

The relative strength of the influences of segmental
environment, stress, lexical item, and frequency of
occurrence is difficult to determine because of the uneven

frequencies with which the various environments occur. For example, the occurrence of (j) only in stressed position before /u/ and the relatively low occurrences and limited environments of (j) followed by mid vowels seems to prohibit conclusive findings with regard to the influence of stress and how particular lexical items affect sonorance.

However, based solely on study of (j)'s realizations before /i/ and /a/, the interplay of the various influences might be represented as in Figure 2.3.

Likelihood of
[-sonorant] realization

Greatest

Postion relative to stress		Quality of following vowel
Pre-stress	L e	High, Front
	x	
Stressed	i c	
	o	
Post-stress	n	Low

Least
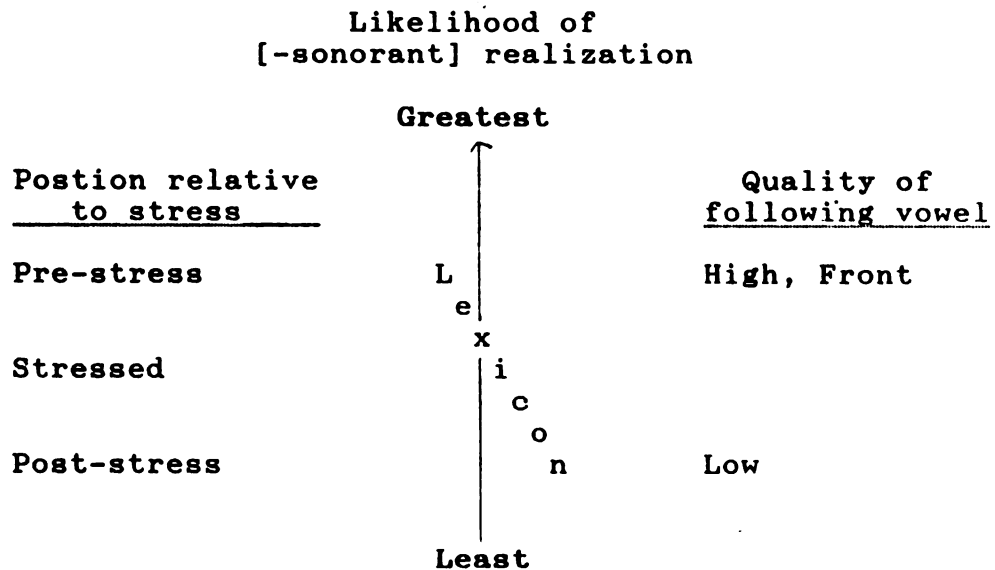
Figure 2.3   Likelihood of [-sonorant] realization of (j).

The middle range [-sonorant] scores for (j) in -jua "know" (29% in the oldest-age group, 38% in the middle, and 56% in the youngest) are consistent with this scheme since (j) is in stressed position, high, but not fronted. Similarly, combined score for jembe "hoe" and -jenga "build", the two words in which (j) realizations were counted before /e/ is

in the middle range--47%; the (j) occurs in stressed
position and the vowel is [+front] but not [+high].

A question rising from this analysis is: is it in
environments with these middle range scores--where
linguistic environment does not have as clear-cut an effect
on realization of the variable--that social evaluation of
language varieties may have the most effect on its
realization?

2.8.2 Morphosyntactic variable

For testing the hypotheses on a morphosyntactic level,
I concentrated on the variation between the use of ni and
-ko as copulas. Very little attention has been given to
this variation though differences between vernacular and
standard uses of these copulas are found throughout Swahili
speaking Africa (Gilman 1979; Duran 1979; Scotton MS).

In Standard Swahili, -ko is one of three copula forms
used only in locative references. Use of the three forms is
determined, as 1-3 illustrate, by how precisely the speaker
refers to the location of the referent in subject position.
Both -po and -mo (the latter always used to refer to an
entity enclosed within a larger entity) are used to refer to
locations that are more precisely designated than that
referred to by -ko.

(1) Kitabu ki-po hapa mezani.
    "The book is right here on the table."

(2) Kitabu ki-ko huku mezani.
    "The book is somewhere here on the table."

(3) Kitabu ki-*mo* mfukoni.
    "The book is in the bag."

The copula <u>ni</u> is used in non-locative environments:

(4) Kile ni kitabu changu.   "That is my book."

(5) Kile kitabu ni kizuri.   "That book is good."

(6) Furaha ni mwalimu.   "Furaha is a teacher."

In the Bukavu vernacular, <u>-ko</u> is generally used as the sole "locative" form but it may be used in more than a locative sense as examples given in the discussion below will show. If one asks a Bukavu resident about the difference between the two copulas <u>-ko</u> and <u>ni</u>, he will likely be told that they are used interchangably. Based on my two years of residence in Bukavu before doing field research for this dissertation, I had accepted this. layperson's analysis and felt that <u>-ko</u> occurred much more frequently than <u>ni</u>. I would probably have accepted Gilman's claim that "all types of ZS [Zairean Swahili] use a single copula [<u>-ko</u>] with both noun and locative" (1979:103), dismissing exceptions as code switches to the standard. However, it is clear that both the lay analysis and Gilman's claim are false: there are two forms of the copula and the choice of copula is affected by the environment in which it occurs.

I have yet to arrive at an accurate, economical, and comprehensive statement of the environments affecting which form is used. For this dissertation, I will consider their

occurrences in three environments which, my preliminary
analysis has indicated, represent low, middle, and high
range Standard scores. Before discussing these
environments, though, I shall mention environments in which
there is nearly categorical use of non-standard -ko, in
Bukavu Swahili.

2.8.2.1 Environments with nearly categorical use of -ko

From the outset of my analysis of Bukavu Swahili, it
was clear that there were certain environments in which -ko
was used almost exclusively: locative predications (7a),
first or second person subject (8a,9a), positive possession
(10a; standard forms are used in the negative counterparts),
and negated copula (11a). (The last two structures are
illustrated, even though the standard form does not have ni
in it, since, in Bukavu Swahili, the copula -ko is used
rather than the standard form.) The standard forms (the
"b" counterparts in 7 to 12) would be heard in these
environments very rarely.

(7) a. Furaha i-ko   mu nyumba.
        Furaha 3sg.-be in house

    b. Furaha yu-mo   nyumba-ni.
        Furaha 3sg.-be house-in

        "Furaha is in the house."

(8) a. Ni-ko muzee sana.
        I-be old   very.

    b. Mimi ni mzee sana
        I   be old very

        "I am very old" or "I am a very old man".

(9) a. Tu-ko barega.
    We-are Rega.

   b. Sisi ni Warega
     We be Rega

     "We are Rega."

(10) a. Bi-ko   na   batoto   tano.
     They-be with children five

   b. Ba-na   watoto   tano.
     They-with children five

     "They have five children."

(11) a. Ha-i-ko   muzuri zaidi
     Neg.-it-is good   more

   b. Si nzuri zaidi
     Not good more

     "It isn't better."

(12) a. Ha-i-ko   bibi yangu
     Neg.-she-is wife my

   b. Yeye si mke   wangu
     She not wife my

     "She is not my wife."

Apart from these environments, though, the rules governing selection of ni vs. -ko are far from clear. Furthermore, there are several examples of variation in nearly identical environments--at a clausal level or lower, at least (there may be discourse restraints on their use). For example, one person said both 13 and 14[31] and another said both 15 and 16.

(13)   baba   na mama   ni bakristu.
      father and mother be Christians
      "Father and Mother are Christians."

(14) *Maman i-ko*   mukristu kabisa.
      Mother she-be Christian completely
      "Mother is a real Christian."

(15) batu   balikimbia kwa juu   ni kitu kyenyi
      people they.ran   for reason be thing which

      kilifika, ni kitu kigeni.
      arrived   be thing foreign

      "People ran since it was something which had
      arrived, it was something foreign."

(16) watu   walijua kwamba barebelle biko
      people knew   that   rebels   they-be

      kwa juu   iko   kitu   kyenyi kilijulikana
      for reason it-be something which it.was.known

      depuis lors.
      since   that.time

      "People knew that the rebels were around since
      it was something that had been known for a
      that time."

2.8.2.2 Environments used in hypothesis testing

The environments selected to test the hypotheses in
chapter 3 were done so on the basis of a preliminary
analysis which indicated that -ko is much more likely to be
used than ni when the complement is not a Noun Phrase but
that a simple [-NP] vs. [+NP] dichotomy between complements
would be too general, especially with regard to the range of
environments that could fall within the [+NP complement]
category; here, Lexical, syntactic, and/or semantic
differences between structures correlate with a wide range
in frequencies of use of the copula in its standard form.
So, while keeping [-NP complement] as the environment
representing low range ni scores, I have chosen two
environments that involve nominal complements that represent

middle and high range <u>ni</u> scores. (These environments do not include all occurrences of a copula with a nominal complement.)

The middle-range scores occur in environments in which the subject is [+Human] and the complement refers to the occupation, ethnic group, nationality, or religious commitment of the subject. Both the subject and complement are filled by a simple NP (pronoun or noun not modified by a relative clause though it may be modified by an adjective or prepositional phrase). I will refer to this environment as "[$_{NP}$Simple]".

The high-range scores occur in environments which are more syntactically complex than those of the middle-range scores. The copula is preceded or followed by a NP modified by a relative clause (17-19) or is preceded or followed by an untensed clause (20).

(17) <u>Ni</u> inchi   ingine yenye ilikuwa ilibatuma.
     be country other which it.was sending.them
     "It is an other country which was sending them."

(18) Ile   yote ilikuwa inapitikana tu   ni mafungu
     that all it.was happening   only be vacation

     tu.
     only

     "The time when all that was happening was vacation."

(19) Maisha ni mtu   mwenye kuyua fulani huyu.
     life   be person who   know someone this.one
     "The one with a good position in life is the person who knows a certain someone."

(20) Kazi yangu tu   <u>ni</u> kushinda   nazunguruka.
     work my   only be to.conquer going.around
     "My work is just going from here to there."

For the sake of testing the hypotheses, these structures
shall be lumped together and considered as one environment
which shall be referred to as "[NPComplex]".[32]

There is no overlap between the middle and high-range
environments but there could be overlap between the high-
range and low-range environments. (21), for example, is

(21) ile imbo yenye aliimba ni muzuri.
that song that he.sang be good
"That song he sang is pretty."

[NPComplex] since the subject noun is modified by a relative
clause but it is also [-Nom Comp] since the complement is an
adjective. In such cases, the complement was scored as
occurring in both environments.

2.8.2.3 Ethnic language influence on realiztion of the variable

The influence of ethnic languages on the distribution
of (ni) variants in Bukavu Swahili is worth investigating
because of the many parallels between ethnic language and
vernacular Swahili uses of the copula. Furthermore, though,
as noted above, linguists have pointed out the vernacular
use of -ko in non-standard ways, none have considered how
ethnic languages may have affected this extension. Here, I
shall indicate some of the parallels but an in-depth study
shall remain for another time. Many languages spoken in
Eastern Zaire use a copula that is parallel in structure to
the Swahili -ko and somewhat parallel in function: the
copula is prefixed by a class marker agreeing with the

subject and it is used in both locative and non-locative references. However, it is difficult to find ethnic language structural and functional parallels to the Swahili <u>ni</u>,

In the introduction to this section, four environments which have practically categorical realization of the <u>-ko</u> variant were given. The first was when the reference to the subject is with regard to its location. 1-5, below, show verb forms of languages spoken in Eastern Zaire that parallel the <u>-ko</u> structure and are used in locative reference; all have a class marker prefixed to the copula morpheme.

<div>

1. SS: Wa-tu   wa-ko   nyumbani.
           cl.2-entity cl.2-be at.house
           "People are at the house."

2. BS: Ba-tu   bi-ko   ku nyuma
           cl.2-entity cl.2.be at house
           "People are at the house."

3. Mashi: Aba-tu   ba-ali   omu buarho
           cl.2-entity cl.2-be in   canoe
           "People are in the canoe."

4. Rwanda: Aba-ntu   ba-ri   mu nzu.
           cl.2-entity cl.2-be in house
           "People are in the house."

5. Rega: Ki-tabo   ki-li   mu numba
           cl.7-book cl.7-be in house
           "The book is in the house."

</div>

In the other three environments, as 6-16 show, the ethnic languages have a structure which parallels the Bukavu Swahili form, ungrammatical in Standard Swahili:

First and Second Person

6. SS: Mimi ni mzee sana.
               *Ni-ko
               I   be old   very
               *1sg.-be
               "I am very old."

7. BVS: Ni-ko muzee sana.
               1sg-be old   very
               "I am very old."

8. Kirega: Ni-li mwigisya.
               1sg-be teacher
               "I am a teacher."

9. Kibembe: U-le   m'mikeca.
               2sg-be teacher
               "You are a teacher."

10. Mashi: Rhu-li banji.
               1pl-be many.
               "We are many."

Possession

11. BVS: Baba   leo   i-ko   na   franga.
               Father today 3s-be with money
               "Father has money today."

12. Kirega: muntu e-li   na   matuzi
               man   3s-be with ears
               "a man has ears"

13. Kibembe: A-le   na   Wamwitu
               3s-be with spirits
               "He has evil spirits"

Negated copula

14. BVS: Ha-i-ko   bibi yangu.
               neg-3s-be wife my
               "She isn't my wife."

15. Kirega: Kasongo nt-eli mwigisya
               Kasongo neg-be teacher
               "Kasongo isn't a teacher."

16. Kibembe: Kasongo ta-le   m'mikeca.
               Kasongo neg-be teacher.
               "Kasongo isn't a teacher."

Another non-standard use of _-ko_ is in forming the
present continuative. This was not mentioned in the
introduction since it would vary with the use of a Standard
verb affix, not with _ni_.   This use of _-ko_ as an aspect
marker also has parallels in the local ethnic languages (17-
19):

Present continuative

17. BSV: Ni-ko naenda
                Is-be going
                "I am going."

18. Kibembe: Ni-le miuiya
                Is-be going
                "I am going."

19. Mashi: ba-li bakweeba orhueeshe omu   miishi.
                3p-be throwing nets   into water
                "They are casting their nets into the
                water."

Ethnic language equivalents of _-ko_ are also found in
environments where the vernacular Swahili varies between _ni_
and _-ko_ forms. For example:

Before modifiers

18. BVS: Maisha ya leo   i-ko ngufu.
                life   of today 3s-be hard.
                "Today's life is hard."

19. Kirega: Kalamo ka lelo   ke-li kabibo.
                Life   of today 3s-be hard.
                "Today's life is hard."

20. Kibembe: Hukyo   a-le wasona.[33]
                That.person 3s-be bad
                "That person is bad."

Before a Noun

21. BVS: I-ko   mwalimu.
               3s-be teacher
               "He is a teacher.

22. Kirega: e-li mwigisya
               3s-be teacher
               "He is a teacher."

23. Kibembe: a-le m'mikeca
               3s-be teacher
               "He is a teacher."

24. Mashi: Ogu gu-li mukoo gwaani
               this 3s-be blood mine
               "This is my blood."

However, in languages close to the Bukavu area it is difficult to find forms that parallel the Swahili <u>ni</u> which, unlike <u>-ko</u>, does not have an agreeing class marker prefixed to it (8).

25.   SS: Mu-alimu   w-angu   ni Maria.
               cl.1-teacher cl.1-poss. be Maria
               "My teacher is Maria."

26.   BS: Mu-alimu   w-angu   ni Maria.
               cl.1-Teacher cl.1-poss. be Maria.
               "My teacher is Maria."

The only obvious parallel that I know of is the Kinyarwanda <u>ni</u> that is restricted to use in the third person, as in 27 and 28.

(27)   Umu-alimu   w-angye   ni   Maria.
                                   *ya-ri
          cl.1(3sg.)-teacher cl.1-poss. be   Maria
                               *cl.1-be
          "My teacher is Maria."

(28)   Wowe u-ri   Maria.
             *ni
          You 2sg.-be Maria.
             *be
          "You are Maria.

It may be that linguistic universals also affect realization of the (ni) variants. Bickerton (e.g., 1981) has argued that in prototypical creole languages innate linguistic tendencies are most likely to be realized in speech since the speakers for whom a pidgin became a mother tongue had no clear grammatical paradigms as models for acquisition and thus made many grammatical distinctions based on innate linguistic tendencies. In an expansion of Bickerton's approach, Scotton (n.d.) argues that universal linguistic tendencies are likely to surface not only in creoles but "in any situation in which the language learner is not constrained by already existing rules" (p.21) and that:

> It seems likely second language situations can be considered alongside creole development as instances of such situations, as well as cases of dialect divergence from a standard if the socio-psychological conditions do not favor the standard as a prescriptive force. (p.21)

The main source of data for her argument is from the speech of Nairobi non-standard Swahili speakers who extend -ko beyond its standard use as a locative copula and use it in "expressing a state--and especially a temporary or acquired state" (p.5). But she also points to similar uses of locative copulas in both creole and non-creole languages and suggests that the reason for this extended use may be due to universal linguistic tendencies.

Scotton cites many examples of this extension that are similar to those I have given in section 2.8.2.1. Most of

her examples have [-Nominal] complements. This accords with the statistical distribution of -ko versus ni forms in Bukavu Swahili.

However, before developing her arguments that the extension of -ko's function reflects a universal tendency, she dismissed the influence of substratal (ethnic) languages on the vernacular Swahili uses:

> There is no evidence [for sub-stratal influences]. Further, since these speakers have different first languages, even if one of their languages showed such a construction, it would be an unlikely source. (p. 11)

As shown by the examples in this section of parallels between the Bukavu Swahili -ko and local ethnic languages' copula, such a statement could not be made in the Zairean Swahili situation. However, the ease of finding substratal parallels to -ko but difficulty of finding parallels to ni raises the question of why the ni vs. -ko distinction should be realized as it is in Bukavu Swahili.

It could be that a paradigm was brought to the Bukavu area by outside speakers and is being variably assimilated by Bukavu residents. It would be interesting to see if there are Tanzanian ethnic languages, as well as Zairean ones, in which this distinction is made and which could have influenced the development of the ni/-ko distinction in the nineteenth century during the westward movement of Swahili. In want of such evidence, one could argue in support of Scotton's approach.

2.8.3 Lexical variable -- French frequencies

The lexical scores assigned to subjects were based on how much they used French in their Swahili discourse. High scores represented relatively low use of French and vice versa. The scores were calculated by dividing the total number of characters (key strokes) in the transcribed text of a subject by the number of unique French words (a word would not be counted more than once) used and then dividing this by 10 so that the scores would range between 1 and 100. This resulted in scores ranging from a minimum of 6 to a maximum of 99[34]. It is recognized that this is a very gross score that does not distinguish between lexical borrowings (such as <u>ville</u> "city" or <u>président/prezidanti</u> "president" for which most Bukavu residents have no ready equivalent in Swahili[35]) and code-switches (in which the speaker uses a French term, phrase, or sentence even though s/he could have used a Swahili equivalent) and that does not allow for differences in topics which could affect the lexical items being used. I have not attempted to do this because of the great amount of time it would have consumed. But, of course, a future, more fine-grained analysis would be of interest.

The high correlation between the scores based on this formula and scores based on switches between the Swahili and French equivalents of "but" indicate that this formula results in a good ball-park figure, at least: the Spearman correlation coefficient was .7596 (p=.000).

1. In his study concerning the Guyanese creole continuum
Rickford found that:

>   The effect of the expatriate interlocutors is
>   particularly marked; not only are two of the
>   four subcategories in sample D significantly
>   different...from their counterparts..., but
>   the remaining two represent categorical non-
>   usage, giving us the misleading impression
>   that Ustad *never* uses the basilectal forms
>   therein. (1987:159, his emphasis)

2. I paid the equivalent of about twenty dollars per forty-
five minutes of transcribed tape. My main transcribers were
able to earn as much as the equivalent of one hundred
dollars a week -- quite an incentive considering the fact
that the one with the highest regular salary was earning the
equivalent of about fifty dollars a month.

3. Rickford reports:

>   My own recent research on the Guyanese continuum
>   (Rickford 1979) supports the view that the relationship
>   between variation and change is not necessarily nor
>   always symmetric, at least not if variation is
>   interpreted as indicating ongoing change. With respect
>   to morphological variation in the pronouns..., the age
>   distributions suggest that change is in progress for
>   the two main social classes, in *some* subcategories...
>   But the situation across the different generations is
>   also fairly stable in other subcategories. (1980:176)

Similarly, my findings indicate that, diachronically, (j) is
being pronounced more as [-sonorant] in some environments,
as [+sonorant] in others, and has been fairly stable in
others.

Bickerton argues that the pidgin of older speakers may
be somewhat different from how they spoke it in their youth
but that, if there is change, it would be towards more
complex forms:

>   Although it is widely held that an individual's
>   speech changes little after maturity has been reached,
>   this may not necessarily be true of second languages or

contact languages. Pidginization is a process, not a
state, and it is therefore possible that at least some
of our subjects may now speak differently from the way
they spoke when they first arrived in Hawaii, even
though the vast majority were already adults at that
time. However, one thing is certain. If their version
of HPE [Hawaiian Pidgin English] has changed in those
intervening years, then it must be more complex in
structure and less subject to idiosyncratic or ethnic-
group variation than it was in the years that
immediately followed their arrival. It is unthinkable
that after several decades of life in a community that
was steadily becoming more integrated their version of
HPE should have grown less complex or more
idiosyncratic. We must therefore assume that either
their HPE now adequately represents the HPE of the
early pidginization period, or that the latter was even
more primitive and more unstable than the versions they
use today. (1981:8)

4. The one exception, in the M group, arrived in Bukavu
when he was four years old.

5. The reason for including the oldest of the M group (born
1950-1953) in this group rather than the O group is that
those with high education still received their education in
a post-colonial context, unlike almost all of those in the O
group.

6. All subjects who had more than 12 years of education
achieved this after Independence. At the time of
Independence there were only very few Zaireans with a post-
secondary education.

7. Kabanga et al. (1983:349) say that 67,470 students were
in secondary school in the Kivu province in 1976 and that
49% of these (=33,060) were in Bukavu. According to
statistics cited in Nzongola (1983:291), there were, at that
time, 100,170 residents in Bukavu of the age 0-19. Taking
eight-nineteenths of this figure as roughly representative
of those of secondary school age (12-19), we have a total of
42,176. Thus, the 33,060 enrolled students would be 78% of
the secondary school aged residents. This might have to be
diminished to allow for students who had come from other
areas of Kivu to study only. Whether or not this group was
counted in the study cited by Nzongola is unknown.

8. Hemphill found that there were several problems in
teaching Swahili in Kenyan primary schools: lack of interest
in teaching it, lack of materials and effective methodology,
and "a great difference" between the regional, vernacular
forms of Swahli and the "more or less literary variety that
is found in textbooks" (1980:463). These parallel problems

mentioned in Masumbuko (1987) concerning teaching Swahili in Zaire.

9. Another important reason for the correlation between occupation and linguistic behavior is due to the extent to which an occupation puts one into contact with others from different socioeconomic backgrounds. Studies of British and American dialects have indicate that the more diverse one's occupational contacts are, the less likely one is to hold to a particular sub-group's vernacular norms (Labov 1972:433-69; Labov 1980; Milroy and Milroy 1985).

10. Scotton found this to be true with regard to language attitudes and use in Kampala (1972:75).

11. "One scholar (Lewis 1973) has pointed out that [dense] network structure has been reported as characteristic of the urban poor in Africa, the Americas and Europe. he suggests that it is universal because its basis is economic; the maintenance of strong solidary relationships is necessary for survival. It should certainly be possible to test out these results by replicating the study in other speech communities." (Milroy and Margrain 1980:69)

12. Only this, of the five areas listed here, was not asked about in Scotton's (1973) study.

13. Of course, whether or not a variable meets the fourth criterion "fairly immune from conscious distortion" seems to be a quite subjective judgement. To my knowlege, no one has tried to make this criterion more precise. Discussions with Bukavu residents indicate that the main--perhaps the most conscious difference between the vernacular and standard varieties of Swahili--are lexical ones: the *safi* "clean" aspect of the standard speaker is his use of Swahili words which the vernacular speaker seldom uses; the vernacular speech will consist of either alternative Swahili forms (e.g., *jambo*, never standard *hujambo*, for a greeting) or French borrowings (e.g., *magasain* or *magazini*, never standard *duka* for "store").
    However, relative immunity from conscious distortion may be inferred by seeing which variables are changed the most in response to a less natural speech situation. A Kruskal-Wallis one-way ANOVA test of the significance of my presence at an interview indicated that the pronunciation of the class 2 prefix was affected much more than pronunciation of (j) or the amount of French borrowings or code switches. Significance of my presence was at the .1054 level with regard to pronunciation of the second class prefix but only .4517 and .4108, respectively, with regard to the other two.

14. In the two examples of intra-clausal switches that I have found (though the search was not comprehensive), the

referent referred to by <u>ba-</u> is different from that referred
to by <u>wa-</u>:

        ba-nachukia   wa-tu
        cl.2,they-hate cl.2-entity
        "they hate people" (subject 38)

        ...juu   kuko   ba-zazi   mingi ba-nazala
           since there.are cl.2-parent many cl.2,they-bear

            wa-toto   ya-bo,   ba-toto   ya-bo
            cl.2-child poss.-cl.2, cl.2-child poss.-cl.2

            ba-nakuya huku.
            cl.2-come hear.
        "since there are many parents who bear their children
        and then their children come here." (subject 99)

15. I did contrast scores based on counts of the verb
subject prefixes with those of nominal prefixes. Though the
scores for the nominal prefixes would almost always be
higher than, if not equal to, those for the verbal prefix,
the correlation between the two scores was so high that it
did not seem necessary to consider both (Kendall correlation
was .7391 and Spearman correlation was .8508; correlation
between other closely related variables, such as the
pronunciation of (j) in <u>moja</u> and in <u>jua</u> were not nearly as
high). Why would there be a difference at all if there was
rarely an intra-clausal switch? Mainly because of the
nominals appearance in the object position with a non-third
person plural subject.

16. However, there is evidence from cognitive psychology
for such mental calculation of frequency (Hasher and Zacks
1984; Sampson 1987).
17. I did not make such a distinction if it was clear from
the transcription of texts that there was little variation
regardless of frequency. So, for example, the much more
frequently occuring <u>-jifunza</u> "study" was included in the
same environments as <u>jirani</u> "neighbor" since there was
nearly categorical pronunciation of (j) as [-sonorant] when
it occurred before /i/ in pre-stress position.

18. Note that the second example involves a suffix used to
form a noun from a verb:

        mu-kaa-ji
        class 1-reside-er
        "resident"

The second is the high form of the word for "village"; the
more common, vernacular form is <u>mugini</u>. Thus, just the fact

that the speaker uses the high lexical item would predict that the high pronunciation of (j) would be used.

Most occurrences of (j)i in post-stress position were either as nominalizers or in the word kijiji.

19. The two words listed in this environment are the only ones that occurred frequently enough in the texts to be worth counting.

20. I consider the negative, imperfect marker -ja- "not yet" as AUX-final in keeping with Barrett-Keach's analysis of the Swahili verb "as having a bipartite internal structure [in which] Aux, or perhaps its successor, Infl, constitutes a morphological unit" (1986: 560). She has two main arguments. First, "all o-form [pronominal clitics] appear in the same position with respect to their hosts-- consitutent finally" (e.g., kwacho "with it" and amba-cho "relative marker-it") (p. 560). Second, analyzing the verb as consisting of two morphological units does away with the necessity of having two stress rules, one assigning primary stress to the word's penultimate syllabe and another, more complex, rule assigning secondary stress near the beginning of the word.

The syntactic positioning of -(j)a- gives further support to her argument: it is always the final element in what she calls the Aux constitutent (as in 1) and the syllable before it always receives stress (as in 2).

    (1) a. kisu [$_{Aux}$ki-si-cho-][$_v$-kate]
          knife [cl.7-neg.-rel.] [cut]
          "a knife which does not cut"

        b. *kisu [$_{Aux}$ki-si-ja-cho-][$_v$-kata]
        * "   " " -cho-ja-   "
          knife [cl.7-neg.-neg.imprf.-rel.-] [cut]
            "   " -rel.-neg.imperf.-   "

        c. kisu amba-cho   [$_{Aux}$ha-ki-ja-][$_v$-kata]
          knife rel.-cl.7   neg-cl.7-neg.impfr. cut

    (2) a. si-ja-enda
          1s.neg.-neg.imprf.-go
          "I have not yet gone"

        b. ha-tu-ja-enda
          neg.-1pl.-neg.imprf-go
          "we have not yet gone"

It can be seen from the examples used in (2) that the ungrammaticality of (1b) is not due to the redundancy of cooccuring negation markers but, rather, to the consecutive occurrence of two Aux final morphemes in post-stress position.

My statistical analysis indicates an additional argument for Barrett-Keach's approach: the low occurrence of [-sonorant] pronunciations of -(j)a- statistically groups it with other words that contain constituent final -ja and distinguishes it from the words in which ja occurs before the primary stress--but must be analyzed as part of the same morphological unit that contains that stress.

21.   Except for juu "because; concerning", -jua "know" is the only word in this environment that occurred in the conversation of the subjects frequently enough to be considered for analysis.   See footnote __ for discussion of the juu/yulu variant; it was not counted in this analysis since the computer program I was using did not enable me to tell whether one of these forms was a phonological variant of the other or a homonym with the other.

22.   The Standard form is -kojoa but this form never occurred in any of the texts.

23.   This is practically the only word in the texts that contained (j)o in the post-stress environment.

24.   The middle age group's 6th and 7th row environments are switched not in consideration of other age group's orderings but so that there will not be an interruption of the consecutive ordering of environments concerning (j) before /a/.

25.   Here there is a significant increase from the old age group's score to the middle age group's but from the old age group to the young age group there is a significant decrease.

26.   The difference between the old and middle age groups' scores is not significant.

27.   The subjects chosen for the examples are simply the first (and, thus, youngest) within each age group as listed in the Table in Appendix G.

28.   Or, at least, elision of the final consonant. The elision often occurs in words in which there is vowel harmony between the final and penultimate vowel. Of my two main transcribers, one would represent the elision as applying to the whole final syllable; the other as applying to the final consonant.

29.   Nkiko et al. (1983) claim that this morpheme is used in reference to distant tense. But I have not found this to sufficiently explain its distribution in the subjects' texts.

30. An elision process somewhat parallel to this occurs in Kinyarwanda. When someone is calling out another person's name, stress may be placed on the first syllable and the last syllable is dropped. Fore example, one may call out to a person whose name is normally pronounced [ka-i-'te-si] by saying ['ka-i-te].

31. This speaker uses ni the five times the subject is plural "Christians" and iko the three times the subject is singular. However, that this is not a rule that can be generalized for other speakers is seen, for example, in the speech of another subject who uses ni in both contexts:

        a. Ndiyo naye ni mukristu vile vile.
          "Yes, and she is a Christian also."

        b. Sisi sote ni wakristu.
          "We all are Christians."

32. The question of why ni should be used much more frequently in this environment than in the [+Simple NP] environment is yet to be resolved. Of special interest in considering this problem is the observation that semantic restrictions on the lexical items in the subject and complement positions seem to affect the frequency with which ni is used. A hypothesis to be tested in further research is: if the relationship between the subject and complement is definitive/essential/permanent, ni is more likely to be used than if the relationship is accidental/possibly temporary. If this is validated, it would indicate that the reason structures which I have called "[+Complex NP]" usually have ni as the copula is not simply because of their syntactic structure but because these structures are most apt to be used when statements of permanent identity, relationship, and/or definition are being made.

    Apparent support for this hypothesis stems from observation of how the frequency of ni varied according to environments isolated in my preliminary analysis. For example, the frequency of ni was even higher than in the [+NP complex] environment (92%; in this footnote, percentage marks after a stated environment will refer to the frequency with which ni, rather than -ko was used) when the copula occurred before the interrogative pronouns nini and nani (95%) and in identity statements of the type "An X is an X" (94%). In a and b, typical examples of the former environment, the question of definitive identity of the subject referent is in focus rather than accidental attributes that would be asked for by questions such as "How (Namna gani) may the phenomenon in question be realized in a particular setting?" or "When (Wakati gani) has this phenomenon been realized?"

(a) Kuogopa ni nini?
To.fear be what
"To be afraid is what?" or "What does it mean to be afraid?"

(b) Siyasikia   kabisa   ile hamu   ya
I.haven't.yet.felt completely that desire of

kusema--ya kujua   kama Mungu ni nini.
to.say of to.know that God   be what

"I haven't yet really felt the desire to say--
to know what God is is."

In c and d, examples of the latter environment, the equation
of subject and complement is most obvious as the subjects
use tautologies:

(c) Tabu   ni tabu.
problem be problem
"Problems are problems."

(d) Mutu   ni mutu.
person be person.
"A person is a person."

In e, there is a near-tautology, though the complement
restricts the meaning of the subject:

(e) Yangu ni yangu mi' peke...ma'ake byako byote
mine be mine   me alone meaning yours all

ni byako we' peke.
be yours you alone

"My things are mine alone...in other words, your
things are yours alone.

Based on the use of ni in these environments, one may
explain the predominance of ni realizations in sentences
such as f and g which have structures included in the
[NPComplex] environment and in sentences such as h where the
action referred to in the main clause is dependent on the
identity of the referent in the conditional clause.

(f) Maisha ni mtu   mwenye kuyua fulani huyu.
life   be person who   know   certain this.person
"The means of making a living is by a person
knowing a certain someone."

(g)   Kitu   kinapiga batu *surtout*   ni namna ya
         thing it.hits people above.all be way   of

         maisha.
         life

         "The thing which affects people most of all is
         their way of making a living."

(h)   Kama ni mwizi wa busiku banamupiga'   mipanga
         if   be thief of night they.hit.him machetes
         "If it is a thief in the night, they beat him
         with machetes."

The permanent/definitive vs. temporary/non-definitive/accidental distinction also accounts for why there is also a high realization of the copula as ni when the copula occurs before references to a familial relationship (87%) or before a proper name (89%). When people say of another person that "He is my father" or "She is my aunt", they are talking of essential, permanent relationships that only under unusual circumstances can be altered. Likewise, when one gives the name of himself or another ("My/his name is __"), there is, generally, an essential, permanent identity between the clause's subject and complement.

The complement is realized as ni much less frequently when it links the subject with his occupation (35%)--a relatively accidental/temporary/non-essential attribute of the subject. The person is identified in terms of what position or occupation they now hold; but it would be easy to conceive of him as having a different one or having this one for a relatively short period of time.

The higher frequency of ni realizations when referring one's ethnic group or nationality (69%) than in environments when referring to one's occupation is consistant with the previous observations based on the permanent/essential vs. non-permanent/accidental distinction. Nationality and, especially, ethnic group, are, generally, permanent aspects of one's identity--unlike one's occupation.

Assuming the validity of this semantic distinction, one may explain why the same speaker uses ni in *i* but -ko in *j*.

(i) Kusema akiwa   mwanamuke anatumika ni
to.say if.she.be woman   she.works be

comptable tu.   Lakini banamuke habakuwa
accountant only   but   women   they.weren't

na   makazi mingi mingi ile   wakati ya kibeleji.
with jobs   many many that time   of Belgian

"That is to say, if a woman worked, it was only
as an accountant, but women didn't have a lot of
jobs during the Belgian period."

(j) Moya iko   ingénieur pilote, mwengine iko
one he.be engineer pilot   other   he.be

inspecteur.
inspector

"One is a pilot's engineer; another is an
inspector."

In both i and j, the complement refers to an occupation.
However, in _i_ the occupation is equated with, or defining,
"a woman's work" whereas in _j_ the occupation is given as an
accidental attribute of the persons being talked about.

_k_ and _l_, from the same speaker,   give an even clearer
contrast between the definitive/permanent vs. non-
definitive/temporary contrast.

(k) <u>Fasi   nilizaliwa ni apa   apa</u>   Bukavu.
place I.was.born be here here Bukavu
<u>"The place where I was born is right here</u>,
Bukavu."

(l) Sawa awa   waloko   ile   tano benyi biko
like these little.ones that five <u>who   they.are</u>

<u>apa</u> badogo   badogo... Niko _un peu_
here small.ones small.ones I.be a little

condamné ku_vivre_ nao   vile   mpaka
condemned to.live with.them like.that until

banakuwa nafika   ku ile âge yenye iko   yulu
they.are arriving at that age which it.be high

kiloko na   pale banatoka.
little and there they.leave

"Like these five little ones <u>who are here</u>, very
young... I'm rather condemned to live with

them until they arrive at the somewhat higher
age where they can leave."

In *k*, the locative complement defines the subject. The link
betweeen the subject and complement is regardless of time--
thirty years ago and thirty years from now the "place where
I was born" will always be "right here, Bukavu". In *l*,
though, the locative complement refers to a temporary
location of the subjects (little children) that was
different before they moved in with the speaker and will be
different again when the children are older.

The effect of the accidental/temporary vs.
essential/permanent distinction on choice of copula is
similar to that in Spanish where <u>estar</u> is used "with an
adjective to indicate a state or condition of the subject,
which may be temporary, accidental, or variable" but <u>ser</u> is
used "with an adjective to express an essential quality or
characteristic of the subject that is relatively permanent"
(Turk and Espinosa 1983:50-51). However, in Spanish this
distinction is generally relevant only when the complement
is an adjective; in Bukavu Swahili, the distinction is also
relevant when the complements are nominal.

33. In Kimbembe, the copula is often omitted. I do not
know what rules govern whether or not it is explicitly
realized.

34. The scores of "99" are the only ones that don't
represent the exact figure (rounded to the nearest 1)
derived from the given formula. They would have been even
higher but it was not necessary to represent these in a more
precise way since the subjects with these scores can be
easily categorized: three are among the oldest of the old
age group and have no formal education. The other is a
pastor.

35.   I make this claim on the basis of a translation test
that I gave to about thirty people of varying age and
educational levels (including no formal education). Whereas
some French words that are often used in Swahili discourse
were very easy for them to translate (for example, <u>mais</u>
"but"), <u>ville</u> and <u>rais</u> were seldom correctly translated to
their Swahili equivalents.

CHAPTER 3

TESTING OF HYPOTHESES

Introduction

In this chapter, each hypothesis mentioned in chapters 1 and 2 is tested. First, the method used to test the hypothesis is described, then the results are given. Since the results concerning one hypothesis often relate to those of other hypotheses, discussion of the results is postponed until the end of the chapter except with regard to Hypotheses 7-9, concerning the effect of my presence at interviews. These are discussed first since the results indicate which scores should be discounted in testing the other hypotheses.

While .05 or less is most frequently the level of significance set in testing hypotheses, I do not automatically dismiss results with a higher level of significance. This is especially true when testing involves the use of correlation ratios (in which "if X and Y have some sort of curvilinear relationship, the value of r will underestimate the true degree of relationship") (Glass and Hopkins 1974:83) or a Scheffe Range test (making two-way comparisons of scores between each of three or more groups) in which the smaller number of scores and method of calculation often result in probabilities larger than .05 though the overall probability of contrast in scores between groups may be much less than .05. Since the phonological

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and lexical scores were evaluated with the same testing
measures, they are often grouped together in the discussion
of results.

Test results concerning linguistic variables indicate
that:

--*phonological scores* are most affected by differences
  in education and age group and by degree of
  church involvement;

--*morphosyntactic scores* are most affected by ethnic
  group membership; and

--*lexical scores* are most affected by level of
  education, regardless of age.

--*Network strength* affects morphosyntactic and lexical
  scores.

--*Sex* makes no difference in scores.

Concerning language attitudes, it is found that:

--there is a positive correlation between attitudes
  about the necessity of learning standard Swahili and
  phonological scores.

--Both the belief that learning Standard is important
  and the phonological scores have decreased
  diachronically.

--There is a diachronic increase in the perception of
  French as essential, and Swahili as irrelevant, to
  academic and socioeconomic advancement. Nevertheless,

--The great majority of subjects of all age groups
  rated the speaker who incorporated French words into
  his Swahili as "arrogant"; this is in harmony with
  the finding that those with the highest Network
  Strength scores incorporate less French into their
  speech than those with lower Network Strength scores.

Discussion of how the test results affect evaluation of
the models mentioned in chapter 1 is, for the most part,
kept for the final chapter.

Because of the sampling methods used, the results of the following tests cannot be claimed to be valid for any more than the group of subjects whose scores are used. Furthermore, it is possible that the lack of strict correspondence of educational levels between subjects of the various age groups and the greater heterogeneity of oldest-age group subjects' geographical origins could interfere with the accuracy of conclusions drawn from tests concerning the relationship between age and other factors. However, it is believed that the reasons for having these differences, discussed in chapter 2, are legitimate and that the results, in keeping with the pilot-project nature of this research, may at least be considered to be indicative of general trends in the Bukavu speech situation and of interesting areas for future research.

3.1 Hypotheses concerning linguistic variables

In this section, all hypotheses concern factors which affect the scores of the dependent variables presented in section 2.8.

3.1.1 HYPOTHESES 7-9

Hypothesis 7: *The absence or presence of a foreign interviewer will not affect a subject's linguistic performance if a Zairean is present to co-conduct the interview.*

Hypothesis 8: *The absence or presence of a foreign interviewer will not affect a subject's linguistic performance even if a Zairean is not present to co-conduct the interview.*

Hypothesis 9: *If either hypothesis 7 or 8 is false, the foreigner's presence will affect only those whose occupation would encourage use of the standard or those who were educated before 1960.*

Test: Linguistic scores were correlated with the interviewer variable. The values were: (1) only a Zairean present to conduct the interview; (2) both a Zairean and myself present to conduct the interview; or (3) only myself present to conduct the interview.

Result: At the .10 significance level in testing phonological scores, my presence did correlate with an increase in the (w)a- score (that is, an increase in the frequency of standard [+sonorant] pronunciations) if I was not present with another Zairean:

Interviewer	Mean (wa-) score
1. Zairean only	12
2. Zairean + me	13
3. Only me	35

Since two of the seven subjects I interviewed alone were teachers and since other hypotheses had predicted that teachers' and preachers' scores would be higher than those of others, the test was redone to exclude the teachers. The result indicated that my being the sole interviewer did not significantly affect the scores of the five other subjects.

So, tests of all variables were done again within the occupational group of teachers. Table 3.1 indicates that my being alone could significantly alter their speech patterns.

Interviewer	Mean (wa-) score (.001)	Mean mo(j)a score (.0000)	Mean -(j)ua score (.0000)	Mean French score (.0072)
Zairean present	12	4	9	15
Me only	91	83	97	25

Table 3.1. Effect of my presence on teachers' scores. Numbers in parentheses indicate probability.

With regard to (ni), the scores of those interviewed by a Zairean and me were significantly (p=.05) different from the other groups with regard to the [-Nominal] and [ɴ‚Simple] environments. However, unlike the (w)a- scores, the percentage of standard usages was actually lower than in the other groups (Table 3.2).

Enviroment	Zairean only	Zairean + me	Me only
-Nominal	36	27	32
ɴ‚Simple	59	30	67

Table 3.2. Percentage of (ni) variants according to interviewer.

There was also a significant difference (.05) between the scores of those for whom I was the sole interviewer and the scores of the others in the [ɴ‚Complex] environment, the former being higher. However, as with the (w)a- scores, the scores of the two teachers whom I interviewed alone were significantly (.001) higher than those of the teachers I did not interview by myself. Discounting the two teachers' scores, there was no significant difference between groups in this environment.

My presence had no significant effect on the lexical scores.

Conclusion. The large gap between the scores of teachers who were interviewed by me alone and of those who were not indicates a qualitative switch from a low to high variety. While other subjects may have somewhat modified their linguistic behavior if I was the sole intervewer (see, for example, the discussion of the (wa-) variable plotted according to occupation) the modification was not nearly as extreme as that of the two teachers. This is probably due to the fact that the teachers could achieve the high variety with more ease than the other subjects who would occasionally use high forms, probably at more self-conscious moments, but most frequently use the low forms.

Since the presence of an expatriate would not be typical of most speech situations and since we want the speech behavior we analyze to be as normal as possible, I exclude the scores of the two teachers I interviewed by myself for the testing of the hypotheses, except in Hypothesis 1b and 1c where the analysis of a histogram enables easy isolation of their scores. The (ni) scores of those interviewed by a Zairean and myself are also discounted in the [-Nominal] and [NP Simple] environments.

3.1.2   HYPOTHESIS 1:   *Only those whose occupation encourages use of the standard will show signs of movement towards the standard. That is,*

      a.   *the standard scores of teachers and preachers will be higher than the scores of all other subjects.*

b.   *apart from those educated before Independence,
the scores of all other subjects will be clustered
around a comparatively low score.*

c.   *apart from those educated before Independence,
only the scores of teachers and preachers will
suggest a continuum affect by ranging from the low
scores of other subjects towards 100% use of Standard
forms.*

Test of 1a. The dependent variable scores were
correlated with the five occupational groups: (1) manual
laborers, (2) teachers, (3) skilled laborers, (4)
administrators, and (5) preachers. Teachers were subdivided
according to level at which they teach to see how this
affected scores.

Results. This hypothesis was stated too generally. As
Table 3.3 shows, of teachers and preachers, only the latter
group's scores are significantly higher than other groups
scores with regard to both pronunciation and rate of
borrowing. With regard to pronunciation, the preachers are
in a high-scoring group and the other four occupations are
in a low-scoring group. With regard to the French score,
the preachers are grouped with manual laborers in contrast
to the group of teachers, skilled laborers, and
administrators.

	Occupational Group				
Variable	ML	T	SL	A	P
(wa-)		14*	12*	13*	3*	96
mo(j)a		17*	4*	15*	6*	93
-(j)ua		32*	9*	41	30	95
French		45	15*	14**	6**	75

Table 3.3. Mean score (of possible 100) of phonological and lexical variables correlated with occupation. ML=manual laborer, T=teacher, SL=skilled laborer, A=administrator, P=preacher. *=score significantly different from preachers' score; **=score significantly different from preachers' and manual laborers' scores. P=.05 except for italicized scores which are at .10 level.

The (ni) scores show similar results with regard to the pastors; they have the highest scores in each of the three environments. However, it can again be seen that the hypothesis was wrong in lumping together teachers and preachers since the two groups are actually on opposite ends of the scoring range (Table 3.4).

	Occupational Group				
Environment	ML	T	SL	A	P
[-Nominal]	34	22	33	39	84
[NP Simple]	62	25			73
[NP Complex]	90	85	94	84	98

Table 3.4. Percentage of ni variants according to occupation. Scores are not given if there were not at least 10 chances. Explanation of code given in Table 3.3.

In testing Hypothesis 1a, teachers were not subdivided according to the level at which they taught. It might be

expected that since the primary school teachers use Swahili
as a medium and teach it as a subject, they would have
higher scores in pronunciation than the high school
teachers. This was not the case, however, as Table 3.5
indicates.

Teaching level	Subject	Variable Score (of 100)		
		(wa-)	mo(j)a	-(j)ua
Primary	41	3	3	8
	40	0	0	14
	85	3	0	4
Mean:		*2*	*1*	*9*
Secondary	39	37	8	11
	3	18	10	6
Mean:		*23*	*9*	*9*

Table 3.5. Teachers' pronunciation scores.

There was no significant difference between these two groups
with regard to the morphosyntactic scores. The use of
French, though, is less among the primary teachers
(mean=19). This could be due to the fact that they use
French less in their occupation than do the secondary
teachers (mean=9[1]), who use it to teach all classes.

HYPOTHESIS 1b and 1c

    Test. Scores of dependent variables were plotted
according to occupational groups at 2.5 point intervals
(Appendix I). Those with scores above a low cut-off point
were further categorized according to whether or not I was
the sole interviewer and their age, educational level, and

religious orientation. Some chi-square analyses were done
to test for significance of how these subjects were grouped
according to this additional categorization in contrast to
the subjects with low scores.

Plots were not done for the (ni) variants since the
scores do not vary as widely within a specified environment
as they do for the other variables and there are not as many
individual scores with sufficient entries for each
environment as there are for the other variables.

Results. The plotting of the phonological scores were
very similar for each variable so only the plot for the
(wa-) variable will be discussed here. The plot of the
French scores will not be discussed in much detail since the
key independent variable affecting the range of French
scores is education rather than occupation.

Plot of (w)a- scores (shown in Appendix I)

66% of the subjects have a (wa-) score of 6% or less
and the median score is approximately 1. Obviously, there
is a large cluster around "a comparatively low score" as the
hypothesis predicts. However another attempt to generalize
about the twenty-six subjects whose scores are in this
continuum-like range must be made since only four are
teachers--two having been interviewed by me alone--and two
are preachers.

The three major factors that I have isolated are: my
being the sole interviewer, education for those in the Old-

age group, and religious orientation. First of all, four of
the five people whom I interviewed one-on-one are here: for
example, the administrator with a score of 13 (the only
administrator scoring over 1).

Secondly, ten of the eleven subjects who scored over 6
and are in the old-age group had formal education; the only
one without formal education had the lowest score (8) of the
eleven. Table 3.6 breaks down scores in the old-age group
with respect to those with education and those without.

	(wa-) score	
Education	Above 6	Below 6
Some	11	5
None	1	11

Table 3.6. (wa-) scores in the old-age group
according to education (p=.01).

Finally, at least seven of the 13 in the middle-age
group scoring above six had a high degree of involvement in
a Christian church[2]; information on church involvement was
not obtained from four of these subjects. Table 3.7 breaks
down scores of all subjects from whom information on the
degree of church involvement was obtained. 55% of those

Church involvement	(wa-) score	
	Above 6	Below 6
High	12	10
Low	13	31

Table 3.7.   (wa-) scores according to level of
church involvement. (p < .05)

with high church involvement scored above 6 whereas only 29%
of those with average or less involvement scored over 6.   A
chi-square test shows this to be significant at the .05
level.

The only subject with a score over 65 that is not a
teacher or preacher is the only Moslem in the old-age group
who was interviewed.   As preachers are stereotyped as
speaking safi "clean" Swahili so too are the small group of
Moslems in the Bukavu area.   One of the middle-age group
speakers with a comparatively high (wa-) score was asked
several weeks after his recorded interview if he could say
why his Swahili incorporated more standard forms than most
speakers.   He attributed his speech patterns to his frequent
association with Moslem friends.

If we discount subjects who may be categorized as being
interviewed by me alone, both old and educated, and/or
influenced by patterns of speech associated with religion,
only 4 of the 26 subjects scoring above 6 remain[3].

Plot of French scores

The plot of incorporation of French into conversational Swahili indicates that the pastors and manual laborers have the highest scores; that is, they incorporate French into their speech less than those of the other occupations. However, the only ones who scored over 40 and who had more than a primary school education are the pastors.

3.1.3   HYPOTHESIS 2:   *Level of education will positively correlate with standard scores only among those who were educated before Independence.*

Test.   For each age group, phonological and lexical scores were correlated (Pearson Correlation) with educational level. Rather than grouping subjects together within three-year time slots (e.g, rather than putting one subject with one year of education, another with two years, and a third with three into the same group and coding it as "1") as was necessary for some other tests, the highest level in number of years for each subject was correlated with the scores; thus, the correlation could be much more precise.   Preachers' scores were excluded since the tests done for Hypothesis 1 indicated that the effect of their occupation overrode the effects of education.   However, teachers scores were kept (except those for whom I was the sole interviewer).

Results.   As Table 3.8 indicates, this hypothesis received only limited support at a .10 signifcance level.

Variable	Old Coef.	Prob.	Middle Coef.	Prob.	Young Coef.	Prob.
(wa-)	.2623	.081	.1021	.263	.1686	.205
mo(j)a	.1617	.188	.0387	.405	.1436	.242
-(j)ua	.2570	.078	.0966	.274	.1331	.258
French	-.7533	.000	-.7529	.000	-.4420	.013

Table 3.8. Correlation of scores with educational level, according to age.

For the phonological scores, there is a significant, positive correlation between (w)a- and -(j)ua scores and education only in the old-age group. This gives further support to the validity of the observation made in the discussion of Hypothesis 1 that formal education of subjects in the old-age group was a key contributor to the apparent continuum effect of the phonological score plots.

With regard to (ni), the old-age group was the only one in which educated subjects had significantly higher scores than non-educated subjects and even this difference was only in the [-Nominal] environment; the scores among uneducated speakers was 15% (of 84 total occurrences) as opposed to the educated speakers' 40% (of 88 total occurrences).

The negative correlation between education and lexical scores is very high for all subjects: the higher the education, the more likely one is to incorporate lexical items from French, the main language of education, into his Swahili.

3.1.4 HYPOTHESIS 3: *Among the educated, standard scores will decrease from older to younger speakers.*

Corollaries:
a. *Phonological and morphosyntactic scores among middle and young-age group educated speakers will not be different from the scores of the old, uneducated speakers.*

b. *Lexical scores among the middle and young-age group speakers will decrease from the scores of the old, whether uneducated or educated, in favor of French.*

Test. First, the median phonological and lexical scores of subjects with at least one year of formal education were compared according to age groups. Then the scores of those with at least one year of formal education in the middle and young-age groups were compared with those with no education in the old-age group. Preachers and teachers whom I alone interviewed were not counted.

Results. There is support for the hypothesis and its corollaries with regard to phonological scores but not for the morphosyntactic or lexical scores.

Table 3.9 indicates that there is a decline among educated speakers between the old-age group's phonological scores and either the middle or young-age group's scores at a probability of Scheffe score differences no greater than .15. The middle and young-age groups' scores are always much closer to each other than to the old-age group.

		Mean Score		
Variable	Probability	Old	Middle	Young
(w)a-	.15	21	12	7*
mo(j)a	.10	24	12	9*
(j)ua	.05	58	42*	41

Table 3.9. Phonological scores for educated speakers, according to age group. *=score is significantly different from the old-age group score at stated level.

Corollary (a) was supported by the (w)a- and mo(j)a scores at a .10 significance level; that is, there was no significant difference between the scores of middle and young-age group educated speakers and old-age group uneducated speakers. However, there was not support for this from the scores for the -(j)ua variable (Table 3.10).

Age Group	Mean -(j)ua score
Old, uneducated	14
Middle, educated	42*
Young, educated	41*

Table 3.10. Mean -(j)ua score according to age group and education. *=score is significantly different from old, uneducated group's score (p=.05).

The young, educated speakers' pronunciation of -(j)ua was significantly different from that of the old-age group's uneducated speakers (Table 3.10) but not from that of the old-age group's educated speakers (Table 3.9). However, the opposite is true with regard to pronunciation of mo(j)a: the young, uneducated speakers' pronunciation was significantly different from the old-age group's educated speakers but not the uneducated speakers.

The hypothesis was not supported with regard to (ni).

Only in the [_NSimple] environment was there a significant decrease in the educated subjects' scores from the old to younger age groups[4] but even here there was no significant difference between the old and young-age groups' scores. Also, with regard to educated subjects only, there was no significant difference in scores in the [-Nominal] environment and an increase in scores in the [_NComplex] environment.

In all three environments, there were, contrary to the prediction of Corollary (a), significant increases in ni scores from the old uneducated group to the groups of middle and young educated speakers (Table 3.11).

Environment	-Educated Old	+Educated Middle	+Educated Young
[-Nominal]	15 (84)	35 (389)	37 (134)
[_NSimple]	36 (14)	56 (84)	65 (31)
[_NComplex]	90 (122)	90 (711)	96 (120)

Table 3.11. Percentage of ni occurrences by age group and educational level (total number of chances given in parentheses).

Corollary (b) falsely predicted that there would be a significant increase in the educated subjects' incoporation of French from the old to the younger age groups but correctly predicted that there wold be a significant (.05 level) increase from the old, uneducated speakers to the middle and young-age groups' educated speakers.

3.1.5 HYPOTHESIS 4: *Higher income will correlate with standard scores only in the old-age group of speakers.*

Test. For both the old and middle-age groups, mean phonological and lexical scores of the five different occupational groups (see discussion of Hypothesis 2) were compared. The scores of the adminstrators, by far the most affluent subjects, were then compared with the other subjects lumped together into one group. Finally, the occupational groups were compared discounting the scores of those with high church involvement.

The hypothesis could not be adequately tested with regard to (ni) since there were not sufficient chances in the higher income level values for satisfactory testing. However, tests were done in the middle-age group to compare the high salaried administrators' scores with those of the other subjects in the two environments for which there were sufficient chances.

Results. The test in which the scores of subjects with non-administrative jobs were lumped together and compared with those having administrative jobs produced the same results as the other tests. Apart from the scores for preachers, already discussed, there was no significant difference in scores except with regard to the French scores which showed that the administrators incorporated more French lexical items than those in the other group (p=.08 and .05 in the old and middle-age groups, respectively; see

discussion of the plotting of scores for testing Hypothesis 1). Thus, for the phonological scores, education, age and religious orientation had more effect on the outcome than level of income.

Tests of the (ni) variants indicated that the adminstrators' scores in the middle-age group were significantly higher (p=.05) in the [-Nominal] environment but not in the [$_{NP}$Complex] environment. There are not enough chances to enable comparison in the [$_{NP}$Simple] environment. Thus, there is not solid support for the hypothesis with regard to the morphosyntactic variable.

3.1.6 HYPOTHESIS 5: *Speakers' positive evaluations of the necessity of learning standard Swahili will decrease from the old to young age groups.*

Test. A comparison was made of each age group's mean response to the interview schedule's question:

Unawaza ni lazima kwa mtu kujua kiswahili bora?
"Do you think it is necessary for a person to know standard Swahili?"

1. Hapana, hata kidogo.
   No, not at all.

2. Si lazima lakini ni muzuri.
   It's not necessary but it is good.

3. Lazima kabisa.
   It's very necessary.

Results. The hypothesis was supported by a decline in scores in which the young-age group's score significantly differed from the old-age group's score at the .05 level (Table 3.12).

Age group	Mean score
Old	2.7917
Middle	2.5556
Young	2.2500*

Table 3.12. Evaluation of necessity of learning standard Swahili correlated with age group. *=score is significantly different from that of the old-age group.

3.1.7 HYPOTHESIS 6: *Positive evaluation of the necessity of learning standard Swahili will positively correlate with standard scores.*

Test. Phonological and lexical scores were correlated (Pearson) with the subjects' opinion on the necessity of learning standard Swahili (based on same question and scale as given with regard to Hypothesis 5).

Results. As Table 3.13 indicates, the hypothesis was supported with regard to the phonological variables.

Variable	Correlation Coefficient	Probability
(w)a-	.2069	.05
mo(j)a	.2479	.02
-(j)ua	.1945	.06

Table 3.13. Correlation between phonological scores and subjects' positive evaluation of the necessity of learning standard Swahili.

However, the correlation between lexical scores and attitude about the necessity of learning standard Swahili was not significant (probability was greater than .20). The difference between groups in the use of ni had a .10

probability in the [NₚComplex] environment but was insignificant in the others.

3.1.8 Hypotheses 10 and 11

HYPOTHESIS 10: *When educational levels are similar, middle and young-age group women⁵ will have a higher rate of borrowing from the French lexicon than men.*

HYPOTHESIS 11: *Middle and young-age group women will have a higher rate of standard phonological and morphosyntactic forms than men.*

Test. An initial correlation test indicated that there were no signifcant imbalances between male and female subjects with regard to educational level. So, an overall correlation test was first done. Then educational levels were grouped according to whether the subjects' educational level was nil, primary, secondary or university. Correlations were done considering each educational level. Tests were then done for all educated speakers with those having a high level of church involvement factored out. Finally, a correlation between sex and opinion on the necessity of learning standard Swhaili was done since the hypotheses were formed with regard to the perceived prestige of the standard.

Results. Hypothesis 10 was not supported but Hypothesis 11 was. As Table 3.14 indicate, the women's phonological scores were actually lower than those of the men and there was no significant difference in the lexical scores. However, at

Variable	Probability	Male scores			Female scores		
		Mean	Min.	Max.	Mean	Min.	Max.
(w)a-	.0835	12	0	92	5	0	47
mo(j)a	.0562	14	0	84	6	0	47
-(j)ua	.6812	44	0	100	48	0	100
French	.6043	28	4	99	31	5	77

Table 3.14. Scores according to sex.

less than a .10 probability there is a difference in the scores for (w)a- and mo(j)a.

When there was a breakdown according to educational level for these to variables, though, it was found that the only group in which there was a significant difference between sexes was the secondary school one (p=.013 for (w)a- and .026 for mo(j)a. There was no significant difference between sexes if the subjects had either more or less than a secondary school education.

Difference between sexes with secondary education was also found in two of the (ni) environments. As in the phonological scores, there was no significant difference among the other groups in any of the environments. However, in the secondary group, there was in the [-Nominal] and [ʁ⸳Complex] environments (p=.05 and .02, respectively). Again, the women's scores were lower than those of the men.

When scores were redone to discount those with a high level of church involvement, the probability of the difference in (w)a- scores increased almost 10 percent but that of the mo(j)a score remained nearly the same, dropping a little (Table 3.15). Again, the women's scores are lower than the men's.

Variable	Significance level	Male scores			Female scores		
		Mean	Min.	Max.	Mean	Min.	Max.
(w)a-	.1781	9	0	58	4	0	47
mo(j)a	.0490	11	0	84	3	0	21

Table 3.15. Phonological variables correlated with sex, discounting those with a high level of church involvement.

The influence of church involvement was even clearer with regard to the (ni) scores. When those at a "4" level of church involvement were discounted, no environment showed a significant difference between male and female subjects-- whether only those with a secondary school education or all educated speakers grouped together were considered.

The correlation between sex and evaluation of the necessity of learning Swahili was not significant (probability was .7209).

3.1.9 HYPOTHESIS 12: *Ethnic group membership will not effect subjects' scores.*

Test. First, a check was done to see if there were imbalances in the distribution of ethnic group membership with regard to other independent variables. Ethnic group scores were then analyzed (one-way) with regard to the dependent variables.

Results. This null hypothesis was clearly supported with regard to the phonological variables (no correlation having less than a .30 probability).

However, there are significant (.001) differences
between groups in all (ni) environments (Table 3.16).

Environment	Shi	Rega	Others
[-Nominal]	39 (319)	25 (142)	36 (288)
[NP Simple]	69 (70)	40 (30)	57 (61)
[NP Complex]	94 (559)	91 (271)	88 (424)

Table 3.16. Percentage of ni (v. -ko) by
ethnic group (total chances are in parentheses).

The Shi speakers' scores are consistently higher than the
Rega speakers.

As mentioned above, there was an imbalance of
educational levels among the three groups. Tests for
Hypothesis 3 showed that there was a significant difference
between the scores of old, uneducated speakers and middle
and young educated speakers. Thus, the tests for ethnic
group differences were redone first to compare only the
scores of old, uneducated speakers and then to discount the
scores of those without formal education. In both tests,
significant differences between groups remained in all
environments.[6]

If the influence of ethnic language is key to the
differences here, one might expect the uneducated speakers
to reflect this most clearly. However, as Table 3.17
indicates, this is not so. Another interesting aspect of

Environment	Shi +ED	-ED	Rega +ED	-ED	Others +ED	-ED
[-Nominal]	42	13	25	25 ·	40	13
[N P Complex]	94	95	90	94	88	84

Table 3.17. Percentage of <u>ni</u> (v. <u>-ko</u>) variant by ethnic group, with regard to education. Chances in the [-Nominal] environment averaged about 222 for educated speakers and 28 for uneducated. Chances in the [N P Complex] environment averaged about 377 for educated and 41 for uneducated.

this table is that, while the [-Nominal] scores of the Shi and "Other" speakers remain basically the same in both the uneducated and educated groups, there is a score increase of more than 25% from the latter to the former.

The testing of Hypothesis 11 indicated that apparent differences between sexes in the (ni) environments among those with no more or less than a secondary education were eliminated when differences in degree of church involvement were taken into consideration. So, the (ni) tests concerning ethnic groups were redone to allow for this factor. First, the level of church involvement was held constant, counting only scores of those with average church attendance (once a week). Differences between groups remained in both the [-Nominal] and [N P Complex] environments ([N P Simple] could not be tested because of insufficient chances).[7] Then the scores were retallied with those of above average attendance excluded. Differences between groups remained (p=.001) but differences between the Shi and Rega subjects diminished.[8]

Thus, the differences between ethnic group scores are diminished but still exist even when differences in sex, church involvement, and education are factored out.

The difference in lexical scores was significant at a .009 level. However, the correlation with other independent variables showed an imbalance in the distribution of ethnic groups with regard to education and occupation. The effect of both, especially education, on the lexical variable is so clear from the tests of Hypotheses 1-3 that it can be assumed that it is this imbalance rather than sociocultural attributes of various ethnic groups to which the difference in lexical scores may be attributed.

3.1.10 HYPOTHESIS 13: *Subjects' Network Strength scores will correlate negatively with the phonological and morphosyntactic scores and positively with the lexical scores.*

Test. The basis of assigning network strength scores is given in section 2.5.6. Phonological and lexical scores were correlated (Pearson) with the linguistic variables.

Results. The correlation between network strength and the phonological variables' scores was not significant but the correlation with the morphosyntactic and lexical scores was significant at the .10 level[9]. Factors that we have considered already have more of an effect.[10]

3.1.11 HYPOTHESIS 14: *Those with a high level of church involvement will have higher scores than other subjects.*

Tests. First, scores of the linguistic variables were correlated (Pearson) with degree of church involvement. Then Scheffe tests concerning the linguistic variables which had significantly correlated with church involvement were done to see at what probability the scores of those with the highest degree of church involvement were shown to be significantly different from others.   The tests were done including all subjects for whom there was information on their degree of church involvement (except for the two teachers I interviewed by myself), then redone to first exclude the only person with a score of "0" for church involvement[11] and then exclude his score and the scores of the two preachers.

Results.   The initial correlation test indicated that there was no significant correlation of either the phonological or the lexical scores with the degree of church involvement. However, the test was redone to exclude the effect of the sole subject in the "0" group. This resulted in a significant positive correlation of all three phonological scores, but not the lexical score, with degree of church involvement (Table 3.18).

Variable	Correlation Coefficient	Number of subjects	Probability
(w)a-	.3115	63	.006
mo(j)a	.3338	65	.003
-(j)ua	.2136	65	.044
French	.0346	65	.392

Table 3.18. Linguistic scores correlated with degree of church involvement.

Table 3.19 shows how the median scores reflected this positive correlation. The two preachers' scores were

Variable	Median score			
	1(2)	2(6)	3(35)	4(22)
(w)a-	3	5	9*	25
mo(j)a	6	3*	12*	28
-(j)ua	23	33	37	52

Table 3.19. Median scores according to degree of church involvement with 4 highest (numbers in parentheses indicate the number of subjects in each category). *=score is significantly different from group 4's score at .15 level.

included in those given for Table 3.18 and 3.19 because of the obvious link between their occupation and degree of church involvement. However, the tests were redone to see how strong an effect their presence had on the correlation ratios and Scheffe tests. The mean scores for group 4 dropped to 17 for (w)a-, 21 for mo(j)a, and 48 for (j)ua. The correlation coefficients were lower for all phonological scores but still within the .10 significance level range. However, even at a .25 level, the Scheffe test showed a significant difference between 4 and another group's score

only for mo(j)a where the contrast was between it and the lowest scoring group.

Finally, the scores were done to discount both uneducated and educated subjects of the old-age group for -(j)ua, and old, uneducated subjects for mo(j)a and (w)a- since the testing of Hypothesis 3 had shown these groups to be significantly different from the middle and young educated subjects in the respective environments. If there were, for example, more old, educated speakers among those with higher church attendance than in the lower attendance groups, the apparent correlation between linguistic scores and church attendance might actually be due to this imbalance of age and education distribution. The result of this retest was that the correlation of church attendance with -(j)ua fell below the .10 probability level but remained low with (w)a- and mo(j)a (Table 3.20).

Environment	Correlation Coefficient	Probability	# of Subjects
(w)a-	.3600	.006	49
mo(j)a	.3453	.007	51
-(j)ua	.2033	.107	39

Table 3..20. Church attendance correlated with phonological scores. Scores of pastors and age/education groups that affected scores in Hypothesis 3 tests were factored out.

The hypothesis was also supported by the (ni) results. results. There is no significant difference between groups in the [NPComplex] environment (the presence of the two pastors' scores does not make a difference). However, there

is a significant difference in the two other environments
with scores positively correlating with degree of church
involvement, even if the pastors' scores are excluded
(Table 3.21). In the [N₽Simple] environment, a

	Degree of Church Involvement			
Environment	0-2	3	4	Pastors
[-Nominal]	11 (28)	33 (269)	40 (209)	84 (25)
[N₽Simple]	45 (11)	53 (38)	62 (39)	73 (15)
[N₽Complex]	91 (74)	92 (358)	91 (432)	98 (52)

Table 3.21. Percentage of ni (v. -ko) uses by degree of
church involvement (numbers in parentheses refer to
total chances). The two pastors' scores are not
included in the group 4 scores.

one-to-one comparison of scores (such as the scores of those
in the 4--above average--group to those in the 2--below
average--group) do not reveal significant differences. In
the   [-Nominal] environment, such a comparison reveals a
significant difference only if the subjects with 0-2 levels
are grouped together and their scores opposed to those with
3-4 (or 3,4, and pastors') grouped together.

When ethnic group is kept constant and pastors' scores
are excluded, there is little evidence that church
attendance significantly affects the morphosyntactic scores.
For the Rega and "Other" ethnic groups, there is no
significant difference between scores when level 4 of church
attendance is opposed to level 3, in either the [-Nominal]
or [N₽Simple] environment. In the Shi group, there is a
significant difference in the [-Nominal] but not in the

[NP Simple] environment. There were insufficient occurrences to compare level 3 and/or 4 scores with level 1 and/or 2 scores..

Thus, the hypothesis was valid with regard to phonological scores, has only weak support from the morphosyntactic score and was not valid with regard to the lexical score.

3.2 *Testing of Hypotheses 15 to 28*

All of the tests for hypotheses 15 to 28 are based on tallies of subjects' responses to the interview schedule (section 2.4ff) with chi-square tests of association done to check the level of significance. Each subject was classified as being in one of the three age groups used to test several of the preceding hypohteses. The assigned significance level is p=.10.

3.2.1 Hypotheses 15-18

HYPOTHESIS 15: *All groups will evaluate the standard speaker as speaking the best Swahili and the one who mixes in French as having the worst Swahili. However,*

HYPOTHESIS 16: *There will be a decline in the proportion of subjects positively evaluating the quality of the standard speaker's Swahili from the oldest to youngest age groups.*

HYPOTHESIS 17: *The one who mixes in French will not be as negatively evaluated by the young-age group as he is by the old-age group.*

HYPOTHESIS 18: *Evaluation of the vernacular speaker incorporating little French will be the same for each age group.*

Test. Scores for testing these hypotheses are based on the subjects' responses to the question asked for each taped Swahili speaker:

Kiswahili yake ni namna gani?
How is the Swahili of this speaker?

1. mbaya sana "very bad"
2. mbaya "bad"
3. kadiri "okay"
4. mzuri "good"
5. mzuri sana "very good"

The subjects' responses were counted to see how many times each speaker received the lowest score of the three and how many times he received the highest score. Ties were not counted.

Results. Table 3.22 gives the result of this tally.

| | Speaker | | |
Evaluation	1	2	3
Young-age group			
Highest score	3ª	22	2
Lowest score	12	1ᵇ	20
Middle-age group			
Highest score	0	27	1
Lowest score	9	0	17
Oldest-age group			
Highest score	7ᶜ	18	0
Lowest score	2	3ᵈ	24

Table 3.22. Evaluation of Swahili varieties by age group. Speakers: 1=Vernacular without French, 2=Standard Swahili, 3=Vernacular with French. a: one had no education and two had the lowest level of those who had been in school (four years, primary school). b: no education. c: six of seven had no education. d: two had no education.

Hypothesis 15 is clearly supported since, combining the totals of all age groups, the standard Swahili speaker is most positively evaluated by 67 of 71 subjects and the speaker who mixes in a lot of French is most negatively evaluated by 61 of 64 subjects.

However, Hypothesis 16 is not supported. There is no significant difference between the age groups' evaluations of the standard speaker. In fact, the group with the highest percent of negative evaluations were in the oldest age group. Two of these negative evaluators, like the one in the young-age group, had no formal education; one of these dismissed it as "like the Swahili of one who has studied a lot" and the other said that it was "very

difficult to understand." In general, though, subjects positively evaluated the Swahili as _safi_ "clean" or _ya sarufi_ "according to the grammar".

The contrast between the groups' evaluations of the vernacular speaker who mixed French was significant with p= .001. Whereas none of the sujbects in the old-age group gave the speaker a positive rating, one in the middle-age group and two in the young-age group did. Two of these subjects explained their choice by saying that the one mixing in French was speaking Swahili in the contemporary manner: _kiswahili yote ya sasa ni ya kuchanga na francais ao anglais_ "all Swahili nowadays is one of mixing in _francais_ or _anglais_".[12] Thus, Hypothesis 17 is supported.

Hypothesis 18 is not supported because of the significantly high proportion of older speakers who evaluated the vernacular speaker as speaking the best Swahili. All of the speakers in this group giving a high rating were over 60 years old and six of the seven had no formal education. Even the educated one (five years of primary school) explained his choice in terms of understandability rather grammaticality: the standard speaker, he said, spoke a Swahili that was _nguvu sana_ "very difficult" which "the one hasn't studied wouldn't be able to understand" but the vernacular speaker who did not mix in French spoke a Swahili which _kusikilika_ "is understandable". His comments reflect the perspectives of the other subjects in this group. If the scores of these subjects were not

counted, there would be no significant difference between groups' responses.

3.2.2 Hypotheses 19-21

HYPOTHESIS 19: *In all age groups, the vernacular speaker borrowing from the French lexicon will be most positively evaluated with regard to level of salary and level of education.*

HYPOTHESIS 20: *From the old to young age group, there will be an increase in the number of subjects who positively evaluate the speaker who borrows from the French lexicon, with regard to level of salary and level of education.*

HYPOTHESIS 21: *There will be no difference between evaluations of the standard speaker and the vernacular speaker who does not borrow from French with regard to level of income and level of education, except in the old-age group where the standard speaker will receive more positive evaluation.*

Tests. Scores were based on subjects' responses to the following questions.

What salary do you think [the recorded speaker] receives per month?

1. 0-1999 zaires (@$0-20)
2. 2-3999 " (@$20-40)
3. 4-6999 " (@$41-70)
4. 7-11,999 " (@$70-120)
5. 12,000+ " (@$120+)

What level of education do you think he has?

1. primary school, 1-3 years
2. " " 4-6 years
3. secondary school, 1-4 years
4. " " 5-6 years
5. university

Total scores for each speaker represented the amount of times that he was given a higher or lower score than any of the other speakers. Ties were not counted.

Results. As the tallies in Table 3.23 indicate, Hypothesis 19 is clearly supported. However,

| Evaluation | Age Group | | |
	Oldest	Middle	Youngest
Re: salary level			
V/-F H	0	0	0
L	25	23	31
StS H	2	2	2
L	2	0	1
V/+F H	24	22	22
L	1	1	1
Re: educational level			
V/-F H	0	0	0
L	25	23	31
StS H	2	2	2
L	2	0	1
V/+F H	24	22	22
L	1	1	1

Table 3.23. Evaluation of speakers' educational and salary level according to age groups. H= number of times speaker was evaluated as having the highest level; L=number of times he was evaluated as having the lowest level. Speakers: V/-F=vernacular without French, StS=standard Swahili, F/+F=vernacular with French.

Hypothesis 20 is not supported since there is no significant difference between age groups in the proportion of subjects who evaluated speaker 3 most highly.

Hypothesis 21 is not supported with regard to both the main prediction and expected exception. It predicts that among the middle and young aged subjects there will be no significant difference in their evaluations of the two speakers who do not use French. However, the great majority of both groups believed that the vernacular speaker had the

lowest level of salary and education. This is evident from Table 3.23; also, in a count of scoring that excluded speaker 3, highest scores were given to the standard speaker by 41 (87%) of 47 subjects with regard to salary and by 100% of 54 subjects with regard to education. Thus, there was no significant difference between the responses of subjects in these age groups and those of the old-age group who also rated the standard speaker highest (73% of 22 subjects with regard to salary and 93% of 27 subjects with regard to education).

3.2.3 Hypotheses 22 and 23

HYPOTHESIS 22: *The standard speaker will be evaluated as an outsider more often by the middle and young- age groups than by the old-age group.*

HYPOTHESIS 23: *All groups will judge the two vernacular speakers to be from the Bukavu area.*

Test. Scores were based on subjects' responses to the question:

> Where does the speaker come from?
> 1. Outside of the Kivu province
> 2. From Kivu, but not Bukavu
> 3. Bukavu

To test hypothesis 22, responses (1) and (2) were grouped together to signify the standard speaker's being evaluated as an "outsider" and opposed to (3) which would signify his being evaluated as an "insider". However, the differences between age groups in their choices between (1) and (2) if they considered the speaker to be an outsider were also found to be of interest and are discussed below.

Result. The hypothesis were unsupported, not because there was no significant difference between the groups but because a much higher proportion (p=.02) of the old-age group viewed the standard speaker as an outsider (Table 3.24).

Age group	Outside of Kivu	Kivu but not Bukavu	Bukavu
Young	9(26%)	9(26%)	16(48%)
Middle	0(00%)	10(31%)	22(69%)
Old	3(09%)	18(56%)	11(35%)

Table 3.24. Number of times standard speaker was considered as being from a certain area, by age group.

Also of interest in the subjects' evaluations is the difference in age groups with regard to just how much of an outsider the standard speaker was considered if he was not thought to be from Bukavu. The majority of both the old and middle-age group subjects (no significant difference) believed that the speaker was probably from the southern area of Kivu where people are stereotyped as speaking a "Swahili of the Arabs"--a more standard Swahili. However, half of the younger subjects (a difference from the other groups significant at the .001 level) perceiving the speaker as an outsider felt that he must be even farther removed from the Kivu scene. While some of them guessed that the speaker was from Shaba, others felt, in the words of one subject, "inaonekana hakuzaliwa mu Zaire (it's obvious that he wasn't born in Zaire)". Such subjects, then, seem to

perceive the standard speaker as speaking a foreign dialect, not just a diglossic church variety or a dialect particular to a different region in the country.

As Table 3.25 indicates, Hypothesis 23 is also unsupported. The majority of those in the young and

	Percent of subjects evaluating speaker as from Bukavu		
Speaker	Old	Middle	Young
1	81	44	38
3	16	44	44

Table 3.25. Vernacular speakers evaluated as to origin. Number of subjects: old=31, middle=32, young=34.

middle-age groups believed the vernacular speaker who did not use French to be from outside of Bukavu while the large majority of those in the old-age group guessed the opposite. On the other hand, the majority of all groups guessed that the third speaker was not from Bukavu with the number of those in the old group significantly larger than those in the other groups. Several subjects stated that the first speaker sounded like someone from the numerically predominant local ethnic group (he was) and guessed that he was from one of the outlying villages of Bukavu. There were also several subjects who claimed that the third speaker who mixed in French did not sound like someone who grew up near Bukavu. They were correct. Though the speaker had lived in Bukavu for several years, he was born and raised in Lubumbashi.

Just what effect this recognition of accents had on subjects' responses to other questions cannot be known for sure. With regard to the one who mixed in French, there would seem to be little effect since few, if any, subjects identified him as being from Lubumbashi and explanations of their evaluations generally focused on his use of French. The recognition of the *villageois* accent of the other vernacular speaker, though, could have been a key reason for subjects' rating him relatively low in education and salary. A follow-up study would, of course, need to address this problem; the best way to do this would be to record the same speaker, born and brought up in Bukavu, giving the text in each of the three varieties, play one variety only to one large group of subjects, then compare results with each of two other, socially similar, groups of subjects each of which hear one of the two other varieties. This would also be a much more time-consuming and expensive test.

3.2.4 Hypotheses 24 and 25

HYPOTHESIS 24: *In the old-age group, positive personality evaluation will be highest for the standard speaker.*

HYPOTHESIS 25: *In the middle and young-age groups, positive personality evaluation will be highest for the vernacular speaker who does not borrow from the French.*

Test. Scores were based on subjects' responses to the question:

> Do you think this person:
> 1. is arrogant?
> 2. is average?
> 3. is humble?

Results. Table 3.26 indicates that the majority of subjects in each age group chose the vernacular speaker not using French as having the most pleasing personality.

Rating by Age group	Speaker 1	2	3
Old			
Most pleasing	10	6	0
Least pleasing	0	2	25
Middle			
Most pleasing	16	7	0
Least pleasing	0	1	23
Young			
Most pleasing	18	6	0
Least pleasing	1	2	29

Table 3.26. Evaluation of speakers' personality.

However, the numerical differences between the subjects' evaluations of him and the standard speaker are not significant, either within groups or between groups. Thus, neither hypothesis is supported.

The most clear-cut aspect of the subjects' evaluations is their very low rating of the speaker who mixed in French.

3.2.5 HYPOTHESIS 26: *From the oldest to youngest age groups, there will be a decrease in the perceived value of learning standard Swahili.*

Scores used to test this hypothesis were based on subjects' answers to the questions:

Do you think it is necessary for a person to know
standard Swahili?

    1. No, not at all.
    2. It's not necessary but is good.
    3. Very necessary.

Here in Bukavu teachers use much Swahili in the
first two years of school. They then teach
Swahili grammar for the next four years. Do
you think it is good like that? Or do you think
it wold be better to use and to teach French only
from the very beginning? Or do you think it would
be better to use and to teach Swahili more?

    1. Continue as is done now.
    2. French from the beginning.
    3. More Swahili.

Responses to the first question have already been
discussed with regard to the testing of Hypothesis 5; it was
found that there was indeed a significant decrease from the
old to young subjects in the evaluation of the necessity of
learning standard Swahili. Here, I focus on responses to
the second question. Before testing for the significance of
differences between age groups, I tested to see if, in the
old-age group, educated subjects chose choice (3) more than
uneducated subjects or if those with a high level of church
involvement chose (3) more than those with average or less
involvement. Neither of these variables made a significant
difference in the responses. So, the chi-square test
included the responses of all subjects.

    Results. Responses to this question gave further
support to Hypothesis 27 (p=.001). As Table 3.27 shows,
the

	Language option		
Age Group	1	2	3
Old	5 (16%)	8 (25%)	19 (59%)
Middle	3 (09%)	18 (56%)	11 (34%)
Young	2 (06%)	31 (94%)	0 (00%)

Table 3.27. Preferred educational language by age group. Language options: 1=Continue as is now, 2=French only, 3=More Swahili. Percentage figures represent proportion of subjects within an age group found in the particular column (these are not the percentages on which the significance test are based).

majority of older subjects felt that there should be even greater use of Swahili in the educational system but the majority of the middle and young-age groups feel just the opposite--that Swahili should be dropped and only French should be used. Moreover, this opinion is increasingly prevalent: the large proportion of young subjects believing this is significantly larger than that of the middle-age group.

3.2.6 HYPOTHESIS 27: *In the middle and young-age groups, self-evaluation of the understanding of the standard will be lower than in the oldest age group.*

Test. Scores were based on subjects' responses to the question:

Are you able to understand kiswahili without problem:

a. when you are with friends?
b. at work?
c. on the radio?
d. in church?

Responses were marked on a scale of one to four: (1) only a little, (2) a fair amount (kadiri), (3) much, or

(4) everything. For testing of this hypothesis, the subjects' evaluations of their understanding of Swahili on the radio and in church were of particular interest.

Results. The hypothesis as stated is not supported since there is no significance difference between the old and middle-age groups' responses. There is, though, a difference (p=.001) between the young-age group's responses and those of the other groups.

As Table 3.28 indicates, the majority of subjects in each age group evaluated themselves as being on the low end of the understanding scale with regard to the radio. However, the proportion of the youngest group is much smaller than that of the other groups in the highest category and is larger than the other groups in the second from lowest category.

Age Group	Little 1	Some 2	Much 3	All 4
Oldest	4 (13%)	13 (42%)	9 (29%)	5 (16%)
Middle	4 (13%)	15 (47%)	8 (25%)	5 (16%)
Youngest	4 (12%)	19 (56%)	10 (29%)	1 (3%)

Table 3.28. Comprehension of radio Swahili by age group. Percentages refer to portion of subjects within an age group (not the percentages that were used to calculate significance level).

Even if the scores of those who are not yet in their teen years are discounted, thus elimininating two of the lowest scores and seven of the next to lowest scores, there is still a significant difference between the youngest and

other age groups due mainly to the low number of youths

claiming the highest level of understanding.

The hypothesis is also unsupported with regard to

church Swahili. Here, as Table 3.29 indicates, there are

Age group	1 Little	2 Some	3 Much	4 All
Young	1 (3%)	5 (15%)	12 (35%)	16 (47%)
Middle	1 (3%)	0 (0%)	11 (33%)	21 (64%)
Old	0 (0%)	2 (6%)	15 (48%)	14 (46%)

Table 3.29. Understanding of church Swahili by age group (percentages represent proportions within an age group.

actually more young and middle aged speakers who rate

themselves in the highest category than older speakers.

Still, though, more youngsters rate themselves on the lower

half of the scale than do subjects from the other groups

combined. Tallies were done counting the scores of only the

eighty-six subjects with average church attendance but the

results were basically the same.

3.2.7 HYPOTHESIS 28: *Self-evaluation of the ability to use Swahili will not differ among groups.*

Scores for testing this hypothesis were based on the

question:

Can you use Swahili in a way that pleases you--
to say anything, anytime you want to use it?

1. many times, no.
2. many times, yes.
3. always, yes.

The difference between groups' responses was significant at

the .001 level.

Results. The hypothesis was unsupported because of the oldest group's comparatively low self-evaluation! While the majority of those in both the middle and young-age groups evaluated themselves at the highest level, only a small minority of the oldest age group did (Table 3.30).

Age group	1 Many times,no	2 Many times, yes	3 Always
Oldest	5 (16%)	17 (55%)	9 (29%)
Middle	1 (3%)	11 (33%)	21 (64%)
Young	0 (0%)	15 (44%)	19 (56%)

Table 3.30. Self-evaluation of ability to use Swahili. Percentages refere to proportion of subjects within an age group.

In the testing of Hypotheses 2 and 3 correlating scores of linguistic variables with age and educational level, it was seen that the phonological scores of those in the oldest age group who had formal education were significantly higher than those of subjects in the other age groups. Thus, the testing of Hypothesis 25 was redone to consider only those with a formal education. The retest did not affect the significance of the difference among groups: a majority of those educated in the oldest age group evaluated themselves as not being able to use Swahili in a way that pleased them, at least some of the time.

3.3 *Discussion*

The most basic assumption underlying my methodology and formation of hypotheses was that age would make a difference in Bukavu residents' linguistic performance and language

attitudes--that one may observe diachronic developments in
the Swahili spoken there. The testing of hypotheses has
shown this to be a legitimate assumption and that, together,
age and education are key variables in accounting for
differences among Bukavu native residents in both linguistic
patterns and language attitudes. However, the differences
between the speech of subjects educated before Independence
and those educated after Independence are not as clear cut
as the hypotheses had predicted.

Phonologically, as the hypotheses predicted: (1) there
is a positive correlation between linguistic scores and
level of education only in the old-age group, (2) the scores
decrease (that is, the pronunciations become less standard)
from the old, educated subjects to the young educated
subjects and (3) in two environments mo(j)a and (w)a-, the
scores of the middle and young aged educated subjects were
not significantly different from those of the old,
uneducated subjects.

However, scores in the -(j)ua environment do not accord
with the hypotheses' predictions. Though the middle and
young-age educated subjects' scores were less than the old,
educated subjects', they were greater than the old,
uneducated subjects'. This is in keeping with the
observation made in section 2.9.1.2.2 that there is an
apparent split in the diachronic development of the variable
(j); in one set of environments there is increasing

[+sonorant] pronunciation and in other environments there is increasing [-sonorant] pronunciation, perhaps after an initial period of oscillation between the standard pronunciation of old, educated speakers and the non-standard pronunciation of old, uneducated speakers.

While the hypotheses concerning the effects of age and education were fairly accurate concerning the phonological variables, they had little validity with regard to the morphosyntactic variable. It was true, as hypothesis 2 had predicted, that the level of education correlated positively with standard scores in, and only in, the old-age group. However, the educated subjects of the youngest age group had scores as high or higher than those of the oldest age group and, thus, their scores also represented a divergence from the old, uneducated speakers rather than, as predicted in the hypotheses and true of the phonological scores, an equality with them. Thus, with regard to morphosyntax, the younger subjects might seem to be influenced in the direction of the standard, by example of their educated elders and/or by instruction.

However, it is important to realize that the only environment in which the young, educated subjects' scores were **significantly** higher than those of the old, educated speakers is the ni [NP Complex] environment. This is an environment on the side of the semantic/syntactic scale that most favors use of ni regardless of age group, regardless of education. Since the young subjects have moved beyond the

old, educated subjects only in this environment, it cannot
be firmly concluded that their scores reflect a movement
resulting from exposure to the standard. Rather, it could
reflect ongoing clarification of the morphosyntactic and
semantic distinctions between environments mentioned in
section 2.9.2. The fact that there is an increase in
standard scores from the old, uneducated to the middle and
young educated may reflect a bridging of the gap between
differences between speakers stemming from ethnic mother
tongue influence and differences stemming from an educated-
uneducated dichotomy. Here, it may be recalled that when
the ethnic groups' use of (ni) in the [-Nominal] environment
was measured in terms of education (Hypothesis 12), the
scores of the Shi and "Others" were relatively the same for
both the educated and uneducated; but, in each of these
groups, there was a sharp increase from the scores of the
uneducated to those of the educated.

Lexically, level of education was clearly a key factor
in predicting subjects' incorporation of French into
Swahili. Only two other factors, occupation and network
strength, were found to significantly affect the lexical
scores.

Pastors and manual laborers incorporated French into
their speech less than the other occupational groups. The
manual laborers also had a lower average level of education
than the other groups so their low French use could be

attributed to their relative lack of exposure to French in school. This is not so for the pastors, though.

The pastors had a secondary school education, thus as much exposure to French as the other subjects, but they incorporated French into their speech much less than those with similar levels of education. Their avoidance of French, then, need not be stated negatively (lack of higher education). It may be stated positively in two respects.

First, they are loyal to safi Swahili--a Swahili as free as possible from "contamination" by French. This loyalty is evident in their relatively high phonological and morphosyntactic scores as well as lexical scores.

Second, Swahili is for the pastors, more than any other occupational group, their occupational language. The sermons and the literary tools of their trade--the Bible and theological literature--are in Swahili. Thus, they are apt to have a much larger, active Swahili vocabulary than other groups who are more likely to switch between French and Swahili (see Fabian (1985) for discussion of manual laborers' switching between French and Swahili) or use French almost exclusively in their occupations.

Network strength scores correlated negatively with lexical scores. That is, as the density of one's local social ties diminishes, the likelihood of incorporation of French into one's speech increases. This may be explained in part by the test results concerning Hypotheses 24-25: the speaker who mixed French words in with his Swahili was

evaluated as "arrogant" by the large majority of subjects in all age groups. Those with close social ties would stand to lose favorable personality evaluation by their peers if they appeared to be using French more than necessary. However, those with less dense social ties may feel that they have less to lose in terms of personality evaluation and more to gain in terms of being perceived as being of a higher academic, if not financial, status than those who use French less (the concept of making language code choices in terms of social costs and benefits to the speaker is discussed in detail by Scotton (1972)).

The connection between education, occupation, network strength and lexical scores is clearly evident in consideration of the administrators. Since their educational level is so high they are prime candidates for elite occupational positions. These positions involve frequent travel and/or contact with people from outside the Swahili speaking area of Zaire—a lessening of local network strength. This necessitates their use of French in work-related oral communication as well as in their paper work. Thus, education, occupation, and social contacts that supercede dense, local networks all necessitate the administrators' thinking in French; Swahili plays a relatively insignificant role. It is little wonder, then, that the French lexicon is so readily available and used when they converse in Swahili.

Church attendance and ethnic group membership are two other variables that influenced linguistic choices. The former affected phonological and morphosyntactic scores; the latter affected only morphosyntactic scores.

Church attendance was found to positively correlate with scores in two of the three phonological environments and in two of the three (ni) environments. This was true whether or not the pastors were included in the scores of the most frequently attending group and when signficant differences between age and educational levels were factored out. Apparent differences between sex in linguistic scores were eliminated when those with the highest level of church involvement were factored out.[13]

As mentioned in section 1.1.2, DeCamp pointed out that for decreolization--movement away from a vernacular to the standard dialect--to occur, there needs to be sufficient institutional pressure. The key institution for providing this pressure is the school. But, the results of the preceding tests indicate that, though the schools did influence students to incoporate Standard features into their speech in the pre-Independence era, this influence has greatly diminished. In contemporary life, this pressure has dropped off, leaving only the church as a source of significant institutional pressure.

Frequency of attendance at church correlates with higher phonological and morphosyntactic scores in certain environments but it does not correlate with lexical choice

between French and Swahili alternatives. The vocabulary of the sacred generally does not carry over into the secular; the educated subject with higher church attendance is thus as prone to resort to French as the one with lower church attendance. The secular-sacred distinction is indicated in the results of testing Hypothesis 27, based on responses to the interview schedule. In all age groups, the large majority of subjects (82-97%) claimed a high understanding of Swahili in church but only a minority (32-45%) of each group claimed the same with regard to Swahili used on the radio.

The effect of ethnic group was evident only in the morphosyntactic component. The effect remained even after differences of age, education, and level of church involvement were factored out. Thus, it might seem reasonable to assume that the effect of ethnic languages has persisted in the morphosyntactic component. However, as pointed out in section 2.9.2.3, a comparison of ethnic languages' use of the copula does not clearly show this to be the case.

For example, both Mashi and Kirega, the languages of the numerically predominant ethnic groups, have a form paralleling -ko that is used before adjectives so it is unclear why the Shi speakers would use ni more frequently than the Rega speakers. The two languages form relative clauses differently: Mashi by word order, Kirega by use of an unconjugatable verb somewhat similar to the vernacular ni

(exemplified in 2.9.2.3). If the ethnic language influence
was to be manifested in the vernacular Swahili morphosyntax,
it would seem most likely that the Rega speakers would use
ni more often than the Shi speakers since there is a
morphological parallel in their language. However, the
opposite is true. An in-depth study of this problem is
beyond the scope of this dissertation.

Tests of Hypothesis 11 indicated that there is no
significant difference between sexes with regard to any of
the variables except for pronunciation of mo(j)a in which
female subjects' scores are lower than those of the male
subjects. This may indicate that female speakers are no
more concerned with standardizing their Swahili speech than
male speakers. It may also indicate that since it is not
socioeconomically advantageous to know Swahili (except,
perhaps, for those with a high level of church involvement),
the question of prestige is irrelevant to the contemporary
Swahili speech situation. Testing for the degree of
standardness in French linguistic structures might produce
quite different results. As mentioned in section 2.5.4, it
is school girls who have been stereotyped as bringing the
back velar French /r/ into their speech. It might seem that
this apparent phonological innovation would be paralleled by
differences in lexical incorporation of French into Swahili;
but this was not found to be the case.

Responses to the interview schedule concerning language attitudes and use indicated that, diachronically, there is decreasing importance placed on learning standard Swahili but increasingly conficent self-evaluation of ability to use Swahili; however, evaluation of different Swahili varieties has remained relatively stable with regard to their signalling of educational and economic status.

Perhaps the most important diachronic change in language attitudes concerns the importance of knowing standard Swahili. From the oldest to youngest age groups there is a steady decline in the percentage of subjects who believe that it is necessary to know standard Swahili. Accordingly, while the majority of old subjects felt that more standard Swahili should be used in the classroom, the majority of middle and young-age groups--with a sharp increase from the former (56%) to the latter (94%) felt that only French should be used in the classroom. The reasons subjects gave for their opinions reflect how the socioeconomic circumstances have changed over the generations.

Subjects in the oldest age group believed that it was important to learn and use Swahili in school for the sake of communication with Swahili speakers of other areas and in situations other than personal interaction:

Ni vema kusikiwa na kila ye yote asemaye kiswahili.	"It's good to be under- stood by whoever speaks Swahili."

Tusionekane kama watu wenye kupima Swahili. Lakini tuki- juwe kabisa.	"[So that] we won't be seen as people who dabble with Swahili but as ones who know it completely."
Ni vizuri kujua luga mingi.	"It's good to know many languages."
Wanafunzi wangekuwa na akili zaidi.	"Students would be more intelligent."

However, the youngsters' explanations of their choice

of "French only" for education indicate their perception of

French as essential, and of Swahili as irrelevant, to future

prosperity and the possibility of wide-spread communication-

-with non-Africans as well as Africans from different

areas:[14]

Juu nitajifunza kiswahili hata nyumbani.	"I can learn Swahili at home."
Kiswahili tunakijua tangu kuzaliwa...	"We know Swahili from birth..."
Kiswahili haina mafaa kwa masomo.	"Swahili has no value for studies."
Tunapashwa kuendelea mbele sasa. Swahili si luga ya progre.	"We need to advance. Swahili isn't a lan- guage of progress."
Hatuna lazima ya kujifunza Swahili bora sababu hatuna kazi nayo.	"We don't need to study standard Swahili be- cause we don't need it for anything."
Wakati tunaona watoto wa wakubwa wa inchi wanasema Français tangu mwanzo wa masomo, tunafurahi sana na tunaona kama ile njo maendeleo.	"When we see that the country's leaders' speak French from the beginning of their studies, we are very happy and see that that is progress."[15]
Ni lugha ya lazima sana.	"[French] is essential"

Ingesaidia kwa kujifunza masomo.	"[Knowing French] would help out in our studies."
Hatupashwe kubakia hapa Buka-vu tu fasi ya Swahili. Tuna-ombwa kujua Francais zaidi juu ya maisha.	"We don't need to just stay here in Bukavu, a Swahili area. We need to know French more to get along in life."
Sababu ya kusoma vitabu na kusumulia na wageni.	"[We need French] to read books and speak with foreigners."[16]
Kama unasumulia na bazungu ni français tu.	"It's French only if you talk with foreigners."
Kiswahli kitapotea mu inchi yetu. Ni Français njo itaba-kia luga ya eshima.	Swahili will disappear in our country. It's French which will remain as the prestige language.

As predicted, all age groups evaluated the vernacular speakers who borrowed from French as having a higher level of education and income than the vernacular speaker who did not and the standard speaker. However, counter to the prediction of Hypothesis 20, there was no significant increase in this positive evaluation of the French borrower from the old to young-age groups.

When these results are compared with those concerning the importance of learning Standard, it can be seen that, while the access to French signals intellectual and economic prosperity to all subjects, only the old subjects felt that standard Swahili was important to know.

Though the old subjects' reasons for this opinion, quoted above, refer mainly to greater communication abilities, there is also a socioeconomic reason for their

perception of standard as essential. In the era of their
youth, French was, as it is now, the language of the
socioeconomic elite. But, there was then much less
opportunity for the positions held by French speakers to be
obtained. Standard Swahili represented a much more
obtainable socioeconomic status intermediate to the French
elite and the masses who generally spoke an ethnic language.
Their era was one in which the church (especially the
numerically and economically predominant Catholics),
upholder of Standard Swahili, had power nearly equal to the
secular political administration and business (Young and
Turner 1985) and controlled health-care, educational, and
often agricultural institutions as well as the sacred
ones.[17] Thus, for the oldest speakers--and for them alone--
there was a socioeconomic incentive for learning the
standard; the middle and young speakers realize how much the
times have changed and how little they will benefit
socioeconomically from knowledge of the standard.

Though the old subjects considered standard Swahili
worth learning, they, less than any other age group believed
that the taped speaker using the standard could be from
Bukavu; the majority felt that he must be from the area in
south Kivu stereotyped as a place where inhabitants speak a
more nearly standard Swahili variety. The middle and young-
age groups evaluated the standard speaker as from Bukavu
more frequently. Some said that he spoke in a way that one
could hear in Bukavu but more of the subjects believed that

he learned to speak Swahili either by frequently travelling
to areas where the standard is spoken or by making an
unusual effort to learn the standard. While some guessed
that the speaker was from Shaba, others felt, in the words
of one subject, "inaonekana hakuzaliwa mu Zaire" "it's
obvious that he wasn't born in Zaire". Such subjects, then,
seem to perceive the standard speaker as speaking a foreign
dialect, not just a diglossic church variety or a dialect
particular to a different region in the country.

The final aspect of the testing to be commented on here
is the subjects' self-evaluations of their ability to
understand and use Swahili. Hypothesis 27 predicted that
old-age group subjects would rate themselves higher than the
others with regard to understanding the standard.
Hypothesis 28 predicted there would be no significant
difference between age groups' evaluation of their ability
to use Swahili as they pleased. Both hypotheses were wrong.
The self-evaluation of the old-age group subjects was
basically the same as that of the middle-aged subjects with
regard to understanding Swahili on the radio (both groups
had higher self-evaluations than the young subjects) but it
was lower than that of the middle-aged and young-aged
subjects with regard to understanding Swahili in church.
Furthermore, the old subjects evaluated themselves lower
than the middle-aged and young-aged subjects with regard to
their ability "to use Swahili in a way that pleases you--to
say any thing, any time you want to use it". The results

were the same even if, in the old-age group, only the scores
of those with formal education were considered.

This outcome indicates that those who were educated
before Independence, when much more importance was placed on
the learning of Swahili, may have felt, to some degree at
least, the "desparate linguistic anxiety" which DeCamp
(1971a:26) says is typical of those on the higher end of a
creole continuum situation "proclaiming the superiority of
their own 'standard'...while nursing inward doubts about
whether [the variety they use] is really sufficiently
standard".

Though the old subjects did not claim that they speak
in a superior way, their belief in the necessity of learning
standard Swahili and using it in the classroom does give
witness to the importance they place on knowing the
standard. Their perception of the gap between their
linguistic performance and desired competence causes them to
rate themselves more negatively than the younger subjects
who realize that they do not speak the standard but are not
bothered since they can use Swahli for the situations in
which they need it--situations which are irrelevant to
intellectual or economic status.

Notes

1. Note how close this score is to that of the
administrators'. One might take this as indicating the
teachers' attempt to imitate the administrators' prestigious

incorporation of French into the Swahili. I believe, though, that it is simply a reflection of the necessity of using French in the day-to-day work world much more so than in the other occupations.

2. A subject was considered to have a high degree of involvement in the church if, in the interview schedule discussed in section 2.6, he reported himself as attending church more than once a week.

3. One of these frequently visits, for extended periods of time, close relatives who live along Lake Tanganika in a region stereotyped, at least, as an area where _safi_ Swahili is spoken.

4. Old--71% (17 occurrences); Middle--56% (84 occurrences); Young--65% (31 occurrences).

5. As stated in section 2.5.4, the hypotheses do not concern women from the old-age group since only an extremely small minority from that group had the same educational opportunities as men.

6. Tests of educated speakers only were also done within age groups. Significant differences remained in the [-Nominal] environment for the middle and young-age group subjects and in the [$_{NP}$Complex] environment for all age groups. Only the middle-age group had enough chances to test with regard to the [$_{NP}$Simple] environment. There was no significant difference between ethnic groups.

Environment	Shi	Rega	Others
Old			
[-Nominal]	37 (76)	25 (12)	30 (26)
[$_{NP}$Complex]	92 (104)	95 (22)	64 (31)
Middle			
[-Nominal]	35 (120)	25 (85)	43 (195)
[$_{NP}$Simple]	57 (35)	45 (20)	56 (41)
[$_{NP}$Complex]	92 (241)	90 (195)	85 (207)
Young			
[-Nominal]	45 (72)	24 (25)	30 (27)
[$_{NP}$Complex]	95 (99)	89 (19)	96 (28)

Percent of _ni_ occurrences (total chances in parentheses).

7. In the [$_{NP}$Complex] environment, the difference between Shi and Rega subjects disappeared. Both had 94% _ni_ scores (130 chances for the Shi subjects; 16 for the Rega).

8.

Environment	Shi		Rega		Others	
	All	-HCA	All	-HCA	All	-HCA
[-Nominal]	39	30	25	25	36	34
[NP Simple]	69	62	40	36	57	57
[NP Complex]	94	93	91	95	88	88

Percent of ni variants by ethnic group. Scores with all subjects counted compared with scores when High Church Attenders (HCA) are excluded.

9. Correlation coefficient equals .1689; p=.091.

10. While there is no significant difference between groups in the [-Nominal] environment, those with a Network Strength Score (NSS) of "3" have the highest ni scores (p=.001) in the two other environments.

Environment	Network Strength Score				
	1	2	3	4	5
[-Nominal]	45 (11)	40 (53)	41 (49)	36 (84)	38 (318)
[NP Simple]	50 (2)	56 (9)	89 (19)	50 (16)	57 (60)
[NP Complex]	86 (14)	94 (69)	97 (115)	91 (127)	92 (602)

Percentage of ni (v. -ko) by Network Strength Score (explained in section 2.5.6. (Numbers in parentheses refer to total chances.)

Those with NSS of "1" (only one subject) and "2" have lower ni scores than those at the "3" level but, when the scores of subjects with NSS of 1-3 are contrasted with those with scores of 4-5, the lower level NSS still have significantly higher scores (p = .02 in the [NP Simple] environment and .10 in the [NP Complex] environment.

11. The subject was an educated member of the oldest age group. His high scores put the average for the "0" church involvement group--of which he was the only member--way above the average scores of the other groups (63 v. the next highest 25 for (w)a- and 71 v. the next highest 28 for mo(j)a.

12. The social factors associated with each of these three subjects are quite diverse, though each has at least a primary school education. The middle-aged one is a college graduate who teaches math and physics in high school. The young ones are a girl who is a senior in high school and a boy-chauffeur "truck-driver's assistant".

13. Comparing scores by sex (and keeping educational levels constant), differences were found among those with a secondary school education in the three (ni) environments and the (w)a- and mo(j)a phonological environments. Differences were eliminated in all but the mo(j)a environment when the high church attenders were factored out.

14. The following quotes are not necessarily in the exact grammatical/lexical forms that the subjects used. The interviews were not recorded; rather, the interviewer wrote down the subject's comments as the interview progressed.

15. This is a fascinating observation, perhaps stated cynically, in that it underscores the typical hypocrisy of Zairean policy makers who produce regulations for the masses that they have no intention of keeping for themselves since it would interfere with their socioeconomic self-advancement; a national language should be used in the early education of all Zairean children, it is decreed, and the decreers send their children to French-only schools, preferably in another country:

> By the 1970's schools became much more uneven in quality as they grew in number; opportunities for the child increasingly depended on access to the best schools... The top segment of the politico-commercial class began sending its off-spring to Europe for education, guaranteeing that their technical qualifications would be far superior to the sons and duaghters of humble strata. (Young and Turner 1985: 135)

16. Note here the implication that if you are going to read, the books are going to be in French. This goes along with our observation in section 1.3.4.3 that religious literature is practically the only literature available in Swahili.

17. Young and Turner (1985:112) point out how status was often determined by one's association with the church:

> It was the missionaries, especially the Catholics, who through the school, their multiplex social connections with Zairians, and their function as moral custodians of "civilization," who often played the decisive role in conferring status.

Chapter 4

Conclusion

4.1 *General conclusions*

In light of the historical context of the development

of Swahili in Zaire, models of language contact and change,

and the results of testing the hypotheses, we may conclude

that any potential for shift away from the vernacular

towards standard Swahili that was present in the pre-

Independence situation has given way to a situation which

encourages the maintenance of a diglossic gap between the

standard and vernacular varieties.

Ferguson's diglossia model was developed with regard to

language varieties that had coexisted for "several

centuries" (1959:332). Later expansions of his model often

referred to language contact situations of relatively short

duration such as those resulting from large-scale

immigration or urbanization. In these expansions, focus was

on the functional relationships of languages in these di-

/polyglossic situations. Little attention was given to the

linguistic repercussions. In this study of Bukavu Swahili,

we have been able to observe linguistic repercussions as

well as social functional allocations. The linguistic

variables studied, though few, have enabled an initial

perspective on how features of different linguistic

components have been affected by social forces in Bukavu's

complex speech situation.

We have seen that the Low variety (Bukavu Swahili vernacular) has gone from a relationship to the genetically-related High form (Standard Swahili) that could be appropriately described within the continuum model to a polyglossic relationship in which the Low variety of Swahili continues to develop in terms of the koine model but, in general, without its speakers attempting to model their speech on the High variety. This is due to the greatly increased accessibility of a High non-genetically related language which is associated with greater socio-economic and intellectual prestige than the High genetically related variety.

The decrease of the institutional pressure for advancement towards the standard is seen in the decrease from old to young age groups of both the percentage of subjects who believe that it is necessary to know standard Swahili and the percentage of subjects who believe that standard Swahili should be used as a medium of instruction.

The linguistic components most clearly reflecting this decrease in motivation to acquire the standard are the phonological and the lexical. In the phonological scores, there was a significant positive correlation between value placed on learning standard Swahili (a value which decreased diachronically) and the standard scores.

However, even here it may be seen that the decrease in socioeconomic motivation to know and use standard Swahili has not resulted in a complete abandonment of the pre-

Independence speakers' advance along the continuum towards
the standard. In the mo(j)a environment, the [-sonorant]
(standard) scores of the middle and young educated subjects
decreased from those of the oldest-age group who had formal
education and were not significantly different from those of
the oldest, uneducated subjects. However, in the -(j)ua
environment, the scores of the middle and young educated
subjects, though lower than those of the oldest, educated
subjects, have increased from those of the oldest subjects
without formal education.

With regard to the lexicon, borrowing from French
continues now as it did before Independence: level of
education correlates positively with the quantity of French
borrowings. The spread of education will result in the
increased use of French lexical items in vernacular Swahili.
The incorporation of French into the vernacular is somewhat
slowed, though, by social restraints. The one who borrows
heavily from French is perceived as arrogant, and those with
high network density--those whose behavior is subject to the
close scrutiny of family and peers living in proximity--will
borrow from French less frequently than those with lower
network density.

In the morphosyntactic scores, while ethnic group has
the most clear-cut effect, the effect of education is also
apparent. In two environments, the ni scores are not
significantly different between the oldest and youngest
educated subjects but the scores of the middle and youngest-

age groups' educated subjects are significantly higher than the scores of the old subjects without formal education. In the third environment, the middle and youngest-aged educated subjects' scores are even higher than the old, educated subjects'; but it is not clear whether this is due to the continued effect of education or to a tendency to make categorical semantic distinctions between environments that would continue regardless of education.

Thus, the _(ni)_ and _-(j)ua_ scores indicate that waves of change favoring the Standard that were set in motion in the pre-Independence era continue to have an effect, in spite of the decrease in institutional pressures which initially set off those waves.

Even though there is now a lack of socioeconomic motivation to acquire the standard, the standard continues to be respected as "good" Swahili. The use of Swahili in the church coupled with sporadic use of standard in the classroom provides a pressure to maintain a passive knowledge of standard if only within limited domains. Subjects perceive church Swahili as easier to understand than the standard Swahili used by the media; the content of religious Swahili is more limited and the exposure to it more frequent.

The lack of sufficient pressure to move from the vernacular to the standard encourages continuation of the koineization process. A koine variety may result from resolutions of educated versus non-educated differences in

speech that developed in pre-Independence (e.g., (j)
realized as [-sonorant] in certain environments and
[+sonorant] in others). It may also result from increased
contact, stemming from greater mobility since Independence,
between people of neighboring ethnic groups (whose mother
tongues seem to have influenced the degree to which one of
the (ni) variants is used) and between speakers of different
Swahili speaking regions.

Part of the koineization process is also reflected in
the grammar books discussed in section 1.2. Their
incorporation of wide-spread vernacular elements into their
descriptions reflects a process opposite to that represented
by the continuum model in which language development is from
low forms to the H maintained by grammars: in the two
Zairean grammars language development is from the H
maintained by Zanzibar-based grammars toward the prevalent L
forms.

4.2 *Theoretical implications*

To study language variation and change in Bukavu
Swahili, I have relied on models taken from studies of
creoles, koines, and di-/poly-glossia. If there is any
originality involved in this respect, it is not in the
invention of a new model or the radical revision of an
existent one. Rather, it is in the integration of various
models to provide for a comprehensive perspective on a
complex but sociohistorically unified language situation.

As I noted in chapter 1, there is often an attempt to explain the sociolinguistic relationships of language varieties in terms of one model exclusively. While there do seem to be paradigmatic instances of a speech situation which can most efficiently be described in terms of one model only, those, such as the one described in this dissertation, involving complex relationships between language varieties may benefit from integrated references to several paradigms.

My argument that a pre-Independence continuum relationship between the Bukavu Swahili vernacular and Standard Swahili has given way to a diglossic situation has been supported by reference to the diachronic change in subjects' evaluation of the importance of knowing Standard Swahili and having it used in school. This is in harmony with Thomason and Kaufman's (n.d./1988) argument that "we must investigate the social setting before we can predict, or interpret historically, the areal diffusion of linguistic features" (p.61). My interpretation of the social setting of Swahili use in Bukavu is that, in Thomason and Kaufman's terms, a "language shift" situation has given way to a "borrowing" situation. Each situation, they argue, is always manifested by the same pattern: a borrowing language may have a strong influx of lexical items but structural interference from the language borrowed from will be relatively weak. The opposite is true in the language shift situation.

If analysis of the Bukavu speech situation were based solely on the study of linguistic structures, it would be hard to draw any conclusion from this scheme. One could argue that the many non-standard features of the Swahili vernacular provide evidence that trends to incorporate Standard features (such as [-sonorant] (j) in certain environments) are only matters of borrowing from the Standard. However, one could also argue that the many non-standard features are the result of strong interference of vernacular patterns while the Standard is being acquired and that the observed trends to incorporate Standard features are actually indications that a shift is going on. The Swahili speakers' resort to French, rather than Standard Swahili, might seem to indicate that there is no shift; but, it might also be argued that there is really a hybrid language that speakers are shifting towards--a language that is characterized by Standard Swahili structures but extensive French lexical items.

The tangled nature of such an assessment based soley on consideration of linguistic features gives evidence that Thomason and Kaufman are right to insist that understanding of the social setting of a language situation is a prerequisite for intepreting its linguistic features.

Apart from direct questioning of subjects about their evaluation and use of Standard and vernacular Swahili forms, the social setting of Bukavu Swahili has been studied by analyzing differences in linguistic performance in terms of

differences in social groupings. Though this approach is
not new, some of the findings may be of contemporary
interest.

First of all, it seems that exposure to a linguistic
variety influences language variety as much as--if not more
than--one's assessment of a language variety's prestige, of
of the most common explanations in sociolinguistic
literature of language choice. The great majority of
subjects who evaluated taped Swahili varieties considered
the vernacular speaker who frequently used French lexical
items to be at a higher educational and salary level than
the speakers who spoke the vernacular without French or the
standard Swahili variety. This indicates that the prestige
associated with French is high. However, the key factors
indicating the extent to which speakers will incorporate
French into their speech are those which indicate the extent
to which they have been exposed to French--education and
occupation--rather than how much prestige they place on it.

The importance of exposure may be illustrated by
considering the two subjects who were pastors. Both rated
the vernacular speaker using French as highest in
educational level and as high, if not higher, than the
others in salary level but the pastors' use of French
lexical items was much lower than those of similar
educational levels. This may be explained in part by the
fact that their jobs necessitate both written and oral use

of Swahili much more than, say, a company secretary or a
banker who must constantly use French during the work day.

Similarly, all three primary school teachers evaluated
the vernacular speaker who frequently used French lexical
items in his speech as having a higher economic status than
the other speakers and having as high, if not higher,
educational status. However, their own use of French
lexical items was considerably less than that of the two
secondary school teachers who, unlike the primary school
teachers, use French categorically in the class-room. The
secondary school teachers also had a higher average level of
education (and thus more exposure to French) than the
primary school teachers.

The factor of "sheer exposure" is considered briefly by
R. A. Hudson (1980:71) with regard to the effect of mass
media on one's speech. He laments the fact that little
study has been done in this area. C. M. Scotton (personal
communication) is presently doing research that is concerned
with how borrowing (and code-switching) is affected by the
speaker's exposure to the language borrowed from.

Exposure to various linguistic varieties is obviously
related to one's social network. The less dense one's
social network ties, the more likely it is that one will be
exposed to different linguistic varieties--as well as
influenced by them. Though my study of the effect of
network strength has depended solely on individuals' self-
reports, the results are consistent with those predicted by

Milroy and Margrain (1980) in the morphosyntactic and lexical components: those with the highest Network Strength Scores (NSS) have less frequent use of both standard morphosyntactic forms and French lexical items than those with lower NSS.

However, there is no significant correlation between network density and phonological performance--the linguistic component with which Milroy and Margrain's 1980 study is primarily concerned. In their study, the Belfast residents with lower NSS were likely to have more frequent day-to-day encounters with speakers having standard pronunciation associated with overt socioeconomic prestige. This would not be so for the Bukavu resident, though, who, no matter how loose his network ties in the Bukavu area, would not be likely to hear standard Swahili pronunciations unless in a religious setting or with a church person who has above-average church involvement.

The reason for this is not that there is insufficient prestige associated with the Standard but that the prestige associated with the Standard is--for want of a better word--*diglossic* rather than *socioeconomic*. That is, the prestige of Standard Swahili is based on evaluations of how language should be spoken with regard to notions of correctness rather than on considerations of socioeconomic status.

This distinction between types of prestige is evident in subjects' evaluations of the Swahili varieties recorded for the interview schedule. The great majority evaluated

the Standard speaker as having a better Swahili than the others but also evaluated the vernacular speaker frequently borrowing from French as having a higher level of education and salary. The socioeconomic importance of French and general socioeconomic irrelevance of Standard Swahili gives little motivation for most speakers to incorporate Standard forms into their speech in spite of their admiration of them. Apart from speakers brought up in the pre-Independence era, for whom the Standard could mark socioeconomic prestige as well as diglossic, the speakers whose speech is most affected by the Standard are those whose involvement with the church encourages focus on the variety of diglossic prestige.

In section 2.5.4, Trudgill was quoted concerning the effect of sex on linguistic behavior: "women...consistently use forms which more closely approach those of the standard variety or the prestige accent than those used by men (1974:91; my emphasis). It is unclear whether or not the second of the underlined phrases is intended to be a paraphrase of the first. In his 1983 discussion of "sex, covert prestige and linguistic change", Trudgill opposes dialects of covert prestige--that is, non-standard dialects that are associated with belonging to an in-group--with those of overt prestige. Statements such as the following indicate that he does equate the overt prestige dialect with the standard dialect:

> ...we have been able to demonstrate that it is
> possible to obtain evidence of the 'covert
> prestige' associated with non-standard varieties,
> and that, for Norwich men, working-class speech is
> statusful and prestigious. The clear contrast [of
> male subjects' scores] with scores obtained by
> female informants...indicates that women are much
> more favorably disposed towards [middle class]
> standard forms. (ibid., 177)

The study of Bukavu Swahili, however, indicates that
the distinction between covert (in-group) and overt
(associated with non-in-group norms) is insufficient. There
are also two types of overt prestige: diglossic and
socioeconomic. The prediction of my Hypothesis 11--that
female subjects in the middle and youngest-age groups would
have a significantly higher rate of standard Swahili
pronunciations and morphosyntactic structures than male
subjects with similar educational levels--may have been
wrong not because of the lack of prestige associated with
standard Swahili but because the prestige is diglossic
rather than socioeconomic. The large majority of female
subjects rated the Standard Swahili as speaking the best
Swahili but, since the prestige of speaking the variety well
has nothing to do with socioeconomic prestige, it does not
affect their linguistic behavior.

The relevance of this distinction to studies such as
Trudgill's is that unless it is clear whether it is
diglossic or socioeconomic prestige (or both) that is being
talked about, the discussion of social motivations
influencing linguistic variation may be muddled. Trudgill
says:

> Why it should have been possible to obtain this
> sort of evidence [based on self-evaluations of
> linguistic behavior] of covert prestige from
> Norwich speakers but not from New York speakers
> [with regard to (r) pronunciation] it is difficult
> to say. This may be due to the fact that [working
> class] speakers in Britain have not accepted
> [middle class] values so readily or completely as
> [working class] speakers in America. (ibid., 178)

In terms of the distinction I am proposing, the reasons for

this difference may be that in New York the prestige

associated with middle class speech patterns is primarily

socioeconomic (or both socioeconomic and diglossic) whereas

in Britain it is primarily diglossic. That is, in New York

City the variable under consideration may be primarily

perceived as a marker of socioeconomic prestige, but in

Norwich, the women may over-report their standard uses of

certain variables--while men under-report--primarily in

light of diglossic norms, with socioeconomic prestige being

secondary or irrelevant.

The influences on linguistic choice of exposure,

socioeconomic prestige and diglossic prestige may be

hierarchically related as indicated in Figure 4.1

Diglossic Prestige

Socioeconomic   Prestige
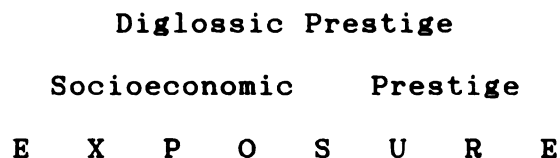
E   X   P   O   S   U   R   E

Figure 4.1.   Hierarchy of influences on linguistic
                choice.

The lowest layer "exposure" is the basic determinant of

linguistic choice--the sine qua non. The likelihood of

using a particular variant is directly related to the
frequency of exposure to that variant, regardless of the
prestige associated with it.   Then, socioeconomic prestige
will generally have more influence on linguistic behavior
than diglossic prestige.   Thus, in the Bukavu situation,
Swahili speakers will borrow from the socioeconomically
prestigious French rather than than the diglossically
prestigious Standard Swahili.

However, where socioeconomic prestige is not perceived
as a factor and when strictly linguistic forces are not
decisive, diglossic prestige may combine with exposure, to
influence one's speech patterns.   This may explain why
educated speakers increasingly pronounce (j) in -jua "known"
as standard [-sonorant] but (j) in moja "one" as non-
standard [-sonorant].   As pointed out in section 2.8.1.2,
phonological conditions for sonorization of (j) in moja seem
fairly clear but this is not the case for -jua.   Thus,
subjects' exposure to standard (j) in school and church may
be sufficient to influence their pronunciation in favor of
the standard, in spite of the lack of socioeconomic prestige
associated with it.   The same principle may also explain why
the educated subjects of the middle and youngest-age group
have continued to use standard ni at a frequency similar to
that of the subjects who were educated before Independence,
rather than reverting to the lower frequency levels of those
without education in the oldest-age group as they did in
pronunciation of (w) and mo(j)a.

4.3 *For further study*

Because of this study's broad scope, there are, of course, many areas touched on that could be studied in much more detail. A narrower, more in-depth focus on a particular issue could be accompanied by more refined methodological tactics.

Much more work on the morphosyntactic variable (ni) remains to be done. Follow-up work would involve two key issues. First, it should clarify how ethnic languages and innate tendencies have interacted to determine which variable is most likely to be used in which environments. Second, it could give further insight into the nineteenth century westward movement of Swahili from the Tanzanian coast. This study would necessitate study of both ni/-ko variation in Swahili and of ethnic language equivalents in areas throughout Tanzania as well as in Zaire. Areal survey techniques would have to be developed to provide this historical and regional perspective. Two main methods would be used to gather the data: 1) spontaneous interviewing with questions asked that are likely to produce many statements with present tense copulas; and 2) translation questions assuring examples of occurrences in the many different relevant environments. The elicitation of ethnic language equivalents could probably proceed with a straightforward translation exercise.

With my present data base, I would like to study how the use of class markers has been developing. In the Bukavu vernacular, the basic concord system used is certainly more complex than the animate-nonanimate dichotomy that is often claimed to characterize Zairean vernaculars. My preliminary analyses have indicated that here, as with (ni), there is a good deal of variation according to both grammatical environment and speaker. Study of this variable might be more indicative of diachronic developments in the morphosyntax than the study of (ni), which is complicated by the question of the degree to which ethnic language and/or innate tendencies have influenced its development.

With regard to the lexicon, the study of the incorporation of French into the vernacular Swahili may be expanded by considering: (1) phonological distinctions between borrowing and code switches; (2) borrowing of core lexical items that have commonly used vernacular equivalents; (3) how borrowing differs between subjects who have a high degree of education and those who do not; (4) how subjects' lexical scores used in testing of this dissertation's hypotheses would be affected if topic is more controlled; and (5) how the scores would be affected if switches were discounted (assuming a fairly reliable method for distinguishing between switches and borrowings could be worked out).

With regard to social factors studied in this research, further research could focus more on middle-aged and young

subjects who have no formal education and on those in all age groups with low levels of church involvement.

In this dissertation, the focus was on Middle and Young age subjects with formal education for two main reasons. First, hypotheses predicted that an advance toward acquisition of standard features by those educated before Independence would be discontinued by those educated after Independence because of new social attitudes viewing French as the sole High worth acquiring. Second, a primary education, at least, is increasingly available to Zaireans and statistics indicated that a large majority of Bukavu children do receive at least a primary education. If those with formal education are not acquiring standard speech patterns, it is doubtful that those without formal education are doing so. However, it would be interesting to concentrate more on those without formal education to see whether developments in their linguistic behavior and social attitudes parallel those observed in this study or whether they are diverging. This might also indicate how rural dialects are developing since the educational levels are much lower in the rural areas.

Although my hypotheses predicted that pastors' sociolinguistic behavior and attitudes would differ from most other subjects, I did not consider degree of church involvement for the laity to be an important factor until well into my research. However, statistical tests have indicated that this is a significant factor. The large

majority of the subjects selected for this study attend
church once a week and several attend it more often.   How
representative this proportion is of the Bukavu population
in general is not known. Methods for selecting subjects
were biased towards choosing those who attend church at
least once a week. A sociolinguistic study of those with
low levels of involvement would enable a more conclusive
evaluation of the effects of this factor. It is unfortunate
that the sociolinguistic influence of an institution as
socially and, often, economically and intellectually
important as the church--especially in third world
countries--has received so little attention in the
sociolinguistic literature.

Finally, this study should be complemented by other
regional studies in Zaire with particular regard to the
koineization process: are the various regional dialects
converging in a manner that will ultimately produce a
"Zairean Swahili"? Or are the vernaculars of urban centers
developing independently of each other?

4.4 Language policy issues

It is hoped that this dissertation may be of interest
to Zairean linguists and language policy makers, especially
concerning the policy of language use in primary education
and the forms of Swahili to be used in mass communication
for citizens who do not have adequate recourse to French.
With regard to education, key issues are students' lack of

socioeconomic motivation to know standard Swahili--coupled
with their high motivation to acquire French--and teachers'
frustrations with the program for use of Swahili in the
school (Masumbuko 1987; licence thesis done under my
direction). With regard to mass communication, the
translation-preference test reported on in section 1.3.4.2
is relevant to secular communication as well as religious,
especially in light of subjects' rating themselves higher in
understanding of "church Swahili" than "radio Swahili"
(Chapter 3, Hypothesis 28). If subjects prefer Lower
Swahili versions of literature for a domain in which they
have relatively frequent exposure, they would probably also
prefer Lower versions for literature concerning domains in
which they have had much less exposure.

Appendix A

A Comparison of Varieties of Swahili:

Standard coastal (SC), Standard Zairean (SZ)[1],

and Bukavu (B),

It may be assumed in reading the following that every feature cited as a characteristic of Bukavu Swahili is also a feature of Lubumbashi Swahili, unless a footnote indicates otherwise. Descriptions and/or texts of Lubumbashi Swahili on which I base my comparison are found in Polome (1969), Fabian (1982), and Mwamba (1985). Also, where there is no difference between SC and SZ, I will simply refer to "standard".

1. Phonology

Vowels, consonants, and syllable patterns are presented in this section.

1.1 Vowels

All varieties have a five vowel system: i, e, a, o, u.

1.2 Consonants

All phonemes listed in the chart are, according to Hinnebusch and Mirza (1979), found in the standard coastal dialect. If a phoneme is circled, it does not appear in any of the Zairean varieties. There are no phonemes that occur in the Zairean varieties but do not occur in the standard coastal variety. Parentheses around a phoneme indicate varying pronunciation of it in both the Lubumbashi and Bukavu varieties. The Zairean equivalents of the circled sounds and the variants of the sounds in parentheses are listed below the chart.

	Bila-bial	Labio-dental	Inter-dental	Alve-olar	Alv-pal.	Pala-tal	Velar	Glottal
stop								
- voiced	p			t			(k)	
+ voiced	b			d			(g)	
affricate								
- voiced					c			
+ voiced					(j)			
fricative								
- voiced		f	θ	s	s			(h)
+ voiced		v	ð	z			ɣ	
nasal	m			n	n		ŋ	
cluster	mb	mv		nd	nj		ng	
lateral				l				
flap				(r)				
glide	(w)					y		

In Zaire:

SC /θ/ merges with /s/ (hadiθi "story" becomes hadisi).

SC /ð/ merges with /z/ (ðambi "sin" becomes zambi).

SC /ɣ/ merges with /g/ (luɣa "language" becomes luga).

SC /ŋ/ merges with /ng/ (ŋombe "cow" becomes ngombe).

Variant pronunciations in both B (and L):

Variant	Phonetic Realizations	Especially in the Environment of:	Example
(k)	[k], [g]	final syllable	pi(k)a "cook" a-na-enda-(k)a "he often goes" 3sg.-pres.-go-habitual
(g)	[g], [k]	final syllable	kido(g)o "little"
(j)	[j], [y], [0]	see sec. 2.8.1.2 of main text	mo(j)a "one"
(h)	[h], [Ø]	all	(h)apana "no" -fura(h)i "be happy"
(r)	[r], [l]	all	muzu(r)i "good" -(r)udia "return to"
(v)	[v], [b]	class 2 prefix	(va-)toto "children" ku-(va-)ona "to see them"

1.3 Syllable patterns

CS and ZS syllabe patterns are the same. Both B and L
have common variants. The patterns listed as B and L are
common but not necessarily categorical.

Standard	B	Example Stand.	B
$\begin{bmatrix} +\text{vowel} & +\text{vowel} \\ -\text{front} & -\text{front} \end{bmatrix} \sim$	$\begin{bmatrix} +\text{vowel} \\ -\text{front} \end{bmatrix}\begin{bmatrix} +\text{liquid} \end{bmatrix}\begin{bmatrix} +\text{vowel} \\ -\text{front} \end{bmatrix}$	mguu -kaa -kohoa	mugulu "leg" -kala "sit" -kohola "cough"
m $\sim$	mu	mtu -amka	mutu "person" -amuka "arise"
Ø $\sim$	i/__N cl.9/10 pfx.	nchi mbva	inchi "country" imbva "dog"
mu- $\sim$	bu-/cl.14 pfx.	usiku	busiku "night"

2. Morphosyntactic differences

In the following, I shall present dialectal differences as if they are categorical but this is simply for brevity of presentation. There is, of course, variation in this area of linguistic performance as well as in pronunciation. I am simply presenting what are probably the most common tendencies of vernacular speech.

It may be pointed out that, in spite of the important differences between B and standard listed below, the varieties have more similarities than differences. For example, use and formation of the following verbal categories are the same in both varieties: simple past, narrative, present and future tenses; causitive; prepositional/applicative; passive; stative; and general verb structure.

2.1 Class distinctions

While Standard has 15 noun class distinctions, B commonly has only 7: when the reference is to a human, mu-(s.)/ba-(pl.) are used; when to non-humans, 0/ma-ˢ; to form diminutives, ka-/tu-; to form the augmentative singular, lu- is used as an augmentative but the plural is formed by adding ma- to the singular augmentative.

2.2 Locative prepositions

. Where Standard will use the nominal suffix -ni to indicate location, B will use ku or mu.

> Standard: nyumbani "at/in/to the house"
>
> B: ku nyumba "at/to/etc. the house"
>
> mu nyumba "in the house"

2.3 Copulas

Standard uses one set of copulas exclusively for predications concerning location (-ko, -po, or -mo, depending on the specifics of the location) and only the copula ni for all other predications. In B (there are no reliable studies of this variation in other Zairean vernaculars), only -ko of the first set is used but the rules distinguishing its use from the use of ni are much more complex than in Standard. See section 2.8.2 of main text.

2.4 Tense and Aspect
2.4.1 Progressive

B uses -ko before a verb in present tense apparently to signal either present progressive or immediate present-- or both. I haven't yet been able to study the significance of this use of -ko in detail, though it is a fixed feature of B.

For the past progressive, B prefixes -na- to the main verb whereas Standard uses -ki-:

Standard: nilikuwa nikihitaji   "I was needing"

     B: nilikuwa ninahitaji

2.4.2 Perfective

In B either the present or past tense marker is used instead of the standard's -me- used to signal positivee perfective. Generally, if the idea would be stated in the present perfect tense in English, B will use -li- (past tense marker):

Standard	B	
Nimeanza kazi.	Nilianza kazi.	"I have started work."
Amekwenda Goma.	Alienda Goma.	"He has gone to Goma."

If the idea would be stated in the present tense in English, the -na- tense marker is used. So, verbs of state that would necessitate -me- in the standard take -na- in B:

Standard	B	
Wamelewa.	Wanalewa.	"They are drunk."
Tumechelewa.	Tunachelewa.	"We are late."

B, as well as standard, uses the verbal prefix -ja- to signal negative pefect tense:

STANDARD/B: Hajafika "He hasn't yet arrived"

As in standard, B has a completive, perfective aspect formed with <u>kuisha</u> "to finish" as an auxiliary verb but the <u>-li-</u> marker is used rather than <u>-me-</u>:

A<u>me</u>sha jua   A<u>li</u>sha jua.   "He already knows."

2.4.3 Conditionals[3]

The *realis* conditional of standard and B differ only phonologically. B uses only one of standards's two *irrealis* conditional morphemes. <u>-ngali-</u>, the standard morpheme that is not used as an *irrealis* conditional has a different meaning in B (see 2.4.4).

<u>Standard</u>	<u>B</u>	
A<u>ki</u>niambia	A<u>ka</u>niambia	"If he tells me"
An<u>ge</u>niambia	An<u>ge</u>niambia	"If he would tell me"
An<u>gali</u>niambia	An<u>ge</u>niambia	"If he had told me"

2.4.4 The "still" tense[4]

While standard has no "still tense", B does, signalling it with a that is phonetically equivalent to the standard's past *irrealis* conditional[5]:

B: Un<u>gali</u> kula! "You are still eating!"

    Un<u>gali</u> hapa. "You are still here."

2.4.5 Habitual

In CS, the <u>hu-</u> verbal prefix signals habitual or customary action. In ZS as well as B, however, the suffix

-kà (or -ga) is added to conjugated verbs in the present tense:

>Standard: Watoto hufika saa mbili
>
>ZS/B: Batoto banafikaga saa mbili.
>
>   "The children usually arrive at 8 o'clock."

2.4.6 Distant time

Hononymous with the ZS/B habitual marker is the suffix which, depending on the tense marker with which it cooccurs, marks distant future or distant past. Standard does not have a parallel morpheme.

>ZS/B: Utaendaka siku gani? "What day will you go?"
>
>   Uliendaka siku gani? "What day did you go?"

2.5 Differences in verbal morphology

Generally, the B singular imperatives are formed in the same way as standard imperatives, except for the three standard exceptions:

Standard	B	
Lete!	Leta!	"Bring!"
Nenda!	Kwenda! or Uende!	"Go!"
Njoo!	Kuja!/Kuya!	"Come!"

The B plural imperative is the same as the second person plural subjunctive form. Thus, it differs from the

standard in that the -ni suffix is not used and the subject prefix is kept:

Standard	B	
Semeni!	Museme!	"Speak you all!"

As in the singular, the B plural does not take the standard irregular imperative forms:

Standard	B	
Nendeni!	Muende!	"Go you all!"
Njooni!	Mukuye!	"Come you all!"

In B, the ku- infinitive marker is usually retained for the monosyllabic verbs--regardless of tense or mood. Thus it differs from standard in wich the ku- marker is dropped in several verbal forms.

Standard	B	
hakula	hakukula	"He didn't eat"
hali	hakule	"He doesn't eat"
asile	asikule	"He shall not eat"
ale	akule	"He shall eat"
akila	akikkula	"If he eats"
akala	akakula	"He ate" (narrative)
aliyala	alizikula	"He ate them"

Notes

1. I consider Nkiko et al. (1983) as the representative of Zairean Standard Swahili.

2. To say that a noun has a 0 prefix is to speak in terms of concord rules more than the actual form of the noun in isolated context. Thus "chair" is kiti, "rock" is jiwe, and "house" is nyumba in both CS/ZS and B but in CS/ZS different concord patterns are governed by the prefixes whereas B has the same pattern:

Standard	B	
ki-ti ki-mepotea	kiti i-napotea	"the chair is lost"
ji-we li-mepotea	jiwe i-napotea	"the rock is is lost"
0-nyumba i-mepotea	nyumba i-napotea	"the house is lost"

3. Polome claims that specifically conditional morphemes are not used in Lubumbashi Swahili (1969:229)

4. About to use this label, I thought I better check with Comrie to see if he had a more esoteric sounding label. No; he also calls it the "still tense". He says that this tense "in the strcit sense of a single grammatical category.... seems[s] to be extremely rare cross-linguistically [but is] attested in a number of Bantu languages (1985:53).

5. Polome analyzes this as a "remarkable archaism" consisting of "the -nga- tense of -li- 'to be' (with the meaning Bishop Steere illustrates for archaic kiUnguja with examples like ningali hai 'while I am still alive')" (1969:230).

Zairean Swahili Features
Cited as Deriving from Local Language Influence

In the following, the base form listed in the "Feature" column is the Standard Coastal Swahili form. The derived feature is the common Zairean form. 7 of the 10 Zairean Swahili features cited by LeCoste (1948) and/or Polome (1969;1983) as due to local language influence have also characterized coastal dialects; the dialects having these features are given in the right-most column.

Feature	Example	Cited in[1]	Coast-al Di-alect[2]
Phonological patterns			
[j] ~ [y]	-jua~ -yua "know"	P. 129	Am
VV ~ V1V	-kaa~ -kala "sit"	P_b 224	Mg, Mr
[3] m ~ mu/ 1,3 class marker	mtu~ mutu "person"	P_b 225 L294	TD
m ~ mu/ __ [-vocalic]	amka~ amuka "rise"	P_b 225	TD
Ø ~ i/__N Class 9/10	nchi~ inchi "country" mbwa~ imbwa "dog"	P_b 225	
##u~ bu/class 14 marker	usiku~ busiku "night"	P_b 221 L296	
Morphemes			
ka- diminutive sing., not used in standard	katoto "small child"	P_b 226 L297	DS
[4] tu- diminutive plural,	tutoto "small children"	P_b 226 L297	
-ni lost and replaced by <u>ku</u> "at, to, etc."	nyumbani~ ku nyumba "at the house"	P_b 226	Mr[5] Mg,Ng
-ka "habitual verb suffix".	anaendaka "he often goes"	L298	Mr[6]

1.   P$_a$=Polome (1983); P$_b$=Polome (1969); L=LeCoste (1948).

2.   Except for the first feature ([j]   [y]), all information
on the coastal dialects is taken from Sacleux (1909) who
gives the following descriptions of the dialects listed:

Abbreviation	Stands for	Description
DS	*Dialectes Sud*	
Mg	KiMgao	*dialecte de Mgao, parle du Fufidyi au Mozambique: centre principal Kilwa.* (p.19)
Mr	KiMrima	*dialecte parle de Vanga au Rufidyi* (p.19); *sur la cote faisant face a l'ile de Zanzibar* (p.7)
Ng	KiNgozi	*dialecte poetique, libre et visant a l'archaisme* (p.20)
TD	*Tous dialectes*	

[j]   [y] was cited in Stigand and Taylor (1915:34) as a
feature of Kiamu, "the dialect of the town of Amu, or Lamu,
on the island of that name."

3.   Polome incorrectly says "the influence of the local
languages is especially obvious in the shape of the class
prefixes as shown by [the rule marked by this footnote]"
(1969:225).

4.   According to Sacleux (1909:311): "[*ka- est un*] *prefixe
nominal de qqs diminutifs plus emphatiques que les memes
avec pref. ki-:...DS.... Dans les dialectes orientaux ces
diminutifs sont des exceptions et n'ont pas de pluriel. Par
contre le Dial. [Kingwana] emprunte volontiers aux langues
voisines...le procede de former des diminutifs en -ka avec
plur. tu-(tw-)....*   But it may be pointed out here that ka-
is heard much more frequently than tu- in Bukavu, also.

5.   "*par emprunt aux langues voisines*" (Sacleux 1909:620)

6.   LeCoste realized that this was a feature of a coastal
dialect but assumes that, rather than being brought from the
coast, it "*est reapparue*" (1948:298).   Polome, on the other
hand, considers it as one of two "remarkable archaisms"
(1969:230).

Texts Used in Translation Preference Test (1.3.4.2)

MIDDLE V. LOW

The follow pair of texts gives the Middle (Protestant <u>Habari Njema</u>) and Low versions of a passage adapted from St. Mark (see footnote 16, chapter 1 for explanation of why the actual Biblical passage was not used). The texts were numbered and presented side by side, on the same sheet of paper, to the readers (not as given below, of course) under the title "Mwalimu Kapanga". Beneath the texts, were the questions:

> Kwa maoni yako, namna gani ya kuandika ni mzuri zaidi
> kwa kusoma na kufahamu vizuri?　　Kwa sababu gani?
> "In your opinion, which way of writing is better for
> reading and understanding well?　　Why?"

Below, the first line is the Protestant style and the second is the Low version (written by myself).

a

Wakati	Mwalimu	Kapanga	alipokuwa	akipita	kando	ya	ziwa	la
Wakati	Mwalimu	Kapanga	alikuwa	anapita	kando	ya	ziwa	ya
When	Teacher	Kapanga	was	passing	side	of	lake	of

b

Kivu,	aliwaona	Mirindi	na	ndugu	yake	Wasso.	Walikuwa
Kivu,	aliona	Mirindi	na	ndugu	yake	Wasso.	Walikuwa
Kivu	he.saw.them	Mirindi	and	relative	his	Wasso.	They.were
	he.saw						

c

wakivua	samaki.	Mwalimu	Kapanga	akawaambia:	"Mukuye[1];
wanavua	samaki.	Mwalimu	Kapanga	akawaambia:	"Mukuye;
fishing	fish.	Teacher	Kapanga	he.told.them	Come

d

masomo	yataanza	kesho."	Mara	moja,	wakaenda	kwao,
masomo	itaanza	kesho."	Mara	moja,	wakaenda	kwao,
school	will.start	tomorrow	time	one	they.went	to.theirs

e

wakakamata	vitabu	vyao,	wakamufuata.
wakakamata	mabuku	yao,	wakamufuata.
they.took	books	their	they.followed.him

f

Wakafika	Goma.	Siku	ya	kwanza,	wakaingia	katika
Wakafika	Goma.	Siku	ya	kwanza,	wakaingia	mu
They.arrived	Goma	Day	of	first,	they.entered	in

g
masomo.	Mwalimu	Kapanga	akafundisha.	Wanafunzi
masomo.	Mwalimu	Kapanga	akafundisha.	Wanafunzi
school	Teacher	Kapanga	he.taught.	Students

h
waliokuwa	wakimusikia	kwa	mara	ya	kwanza	walishangaa
wenyi walikuwa	wanamusikia	kwa	mara	ya	kwanza	walishangaa
who.were	hearing.him	for	time	of	first	were.surprised
who   were

i
sana			namna	alivyofundisha,	kwani	hakuwa	sawa na
sana	juu	ya	namna	alifundisha,	sababu	hakukuwa	sawa na
very	because	of	way	which.he.taught	because	he.wasn't	same with
				he.taught			

j
walimu	wengine	wasiotayarisha	masomo	vizuri.
walimu	wengine	wenye hawatayarishake	masomo	muzuri.
teachers	others	who.don't.prepare	lessons	well.
		who don't.prepare		

k
Lakini,	mwana	wa	mukubwa	mumoja	aliyekuwa	na	roho
Lakini,	mwana	wa	mukubwa	moja	mwenyi alikuwa	na	roho
but	son	of	big.shot	one	who.was	with	spirit
					who was		

l
mbaya	aliingia	ndani	ya	masomo	na	kupaza	sauti,	akisema:
mbaya	aliingia	mu		masomo	na	kulalamika,	aseme:
bad	he.entered	in	of	school	and	raise	voice	saying:
						cry.out		

m
"Una	nini	nasi,	wewe	Mwalimu	Kapanga?	Ulikuja
you.have	what	with.us	you	Teacher	Kapanga	You.came

"We	Kapanga,	tuko	na	neno	gani,	sisi	na	weye?	Ulikuja
You	Kapanga	we.are	with	word	which	we	and	you	You.came

n

kututesa?	Ninakutambua	wewe	ni	nani:	wewe	ni	mwalimu
to.bother.us	I.recognize.you	you	are	who	you	are	teacher

kututesa?	Minajua	uko	nani:	uko	mwalimu
to.bother.us	I.know	you.are	who	you.are	teacher

o
maskini	tu!"
maskini	tu!"
poor	only

p
Mwalimu Kapanga akamuhamakia   yule mwanafunzi,
Mwalimu Kapanga akamutombokea   ule mwanafunzi,
Teacher Kapanga spoke.sternly.at that student

q
akamwamuru: "Nyamaza, toka   somoni!" Mara moja, yule
aseme: "Nyamanza, toka   mu somo!" Mara moja, ule
he.ordered   Be.quiet   leave.from in.class time one   that
                                   in class

r
mwanafunzi akanyamaza. Akatoka. Alikuwa akisikia haya
mwanafunzi akanyamanza. Akatoka. alikuwa anasikia haya
student   he.was.quiet he.left   he.was feeling   shame

s
sana. Wanafunzi wote wakashangaa sana,   wakaulizana:
sana. Wanafunzi wote wakashangaa sana,   wakaulizana:
very   students all were.surprised very they.asked.one.another

t
"Neno gani hili?   Mwalimu   ana   nguvu!" Hata mwana wa
 word which this   teacher   he.has strength even son   of

"Hii ni neno gani? Mwalimu iko   na   ngufu!   Hata mwana wa
 this is word which teacher he.be with strength even son   of

u
mukubwa   anamutii."   Na kwa wepesi   habari za Mwalimu
mukubwa   anamuheshimia." Na kwa upesi   habari za Mwalimu
big.shot   he.obeys.him   and by quickness news of teacher

v
Kapanga zilienea po   pote katika muji wa Goma.
Kapanga zilifika fasi zote mu   muji wa Goma.
Kapanga spread   place all in   town of Goma

(a)When Teacher Kapanga was passing by the shore of
Lake (b) Kivu, he saw Mirindi and his relative Wasso. They
were (c) fishing. Teacher Kapanga said to them: "Come;
(d) school starts tomorrow." Right away, they went to their
homes, (e) got their books, and followed him.

(f) They arrived at Goma. Monday, they went to
(g) school. Teacher Kapanga taught them. The students
(h) who were hearing him for the first time were surpised
(i) very much at the way he taught, because he was not like
(j) other teachers who don't prepare their lessons well.

(k) However, the son of a bigshot who had a bad spirit
(l) came into class and shouted (m) "What do you have to do
with us, you Teacher Kapanga? Did you come (n) to bother us?
I know who you are: you are only a poor teacher!"

(p) Teacher Kapanga came down on that student and (q)
ordered him: "Be quiet, leave the classroom!" At once,

(r) the student was quiet. He left. He was ashamed. (s)
All the students were amazed, they asked themselves: (t)
"What's going on? This is a strong teacher! Even the son
of (u) a bigshot obeys him." Quickly, news of Teacher
(v) Kapanga spread throughout the town of Goma.

1. This is the one instance in which the orthography of the
Protestant version was changed from j to reflect the usual
vernacular pronunciation.

HIGH V. MIDDLE

     The following pairs the High <u>Biblia Takatifu</u> Catholic
version (first) of excerpts from Isaiah 1:1-20 with the
Middle <u>Habari Njema</u> Protestant version (second). The order
of some lines in the <u>Habari Njema</u> selection have been
altered to facilitate comparison between the two versions.

1. Haya ndiyo aliyoyaona   Isaya, mwana wa Amozi,
    these indeed which.he.saw Isaiah son   of Amos

    Haya ni maneno Isaya, mwana wa Amozi, aliyofunuliwa
    these are matters Isaiah son   of Amos   which.he.was.revealed

katika habari za Yuda na   Yerusalema.
in   news   of Judah and Jerusalem

na Mungu juu   ya inchi   ya Yuda na   muji Yerusalema.
by God   about of country of Judah and town Jerusalem.

2. Enyi mbingu, sikilizeni;
    You heavens listen

    Bwana Mwenyezi anasema   hivi: "Sikiliza Ee mbingu,
    Lord Ruler   he.speakes thus   Listen   ee heaven

nawe   nchi,   tega sikio, kwa maana Bwana amenena:
and.you country set ear   for reason Lord has.spoken

nawe   dunia utege sikio.
and.you earth set   ear

Nimelea   wana na kuwalisha, nao
I.have.raised sons and feed.them   and.they

Nimewalea   watoto, nimekomalisha,
I.have.raised.them children I.have.made.them.grow

lakini wameniasi.
but   they.have.rebelled.against.me

ingawa   hivyo wameniasi   mimi.
even.though this   they.have.rebelled.against.me me

3. Ngombe atambua   mchunga wake, na punda
   cow   recognizes shepherd his   and donkey

   ngombe anajua   mufugaji wake, na hata punda anajua
   cow   knows   shepherd his   and even donkey knows

hori   la bwana wake, bali   Israeli
manger of master his   however Israel

nafasi bwana wake anapomulisha,   lakini Waisraeli
place master his where.feeds.him but   Israelites

hajui   .kitu, taifa langu halifahamu   cho chote.
doesn't.know thing nation my   doesn't.understand of all

hawanijui mimi, hao   watu   wangu hawafahamu   kitu.
don't.know me,   these people my   don't.understand thing

5 Wapi niwapige,   maana mnazidi   kuasi?
  where I.shall.hit.you reason you.continue to.rebel

   Munataka kupigwa   tena? Kwa nini munaendelea kuasi?
   You.want to.be.hit again for what you.continue to.rebel

Kichwa chote kimeugua, moyo wote umezimia.
head   whole has.hurt heart whole has.fainted

kichwa chenu kinajaa vidonda, nao   moyo wenu unaumiza.
head   your is.full sores   and.it heart your hurts

8 Binti   Siyoni amebaki
  daughter Zion   has.remained

   Ni   muji Yerusalema tu   ndio   umebaki,
   It.is town Jerusalem only indeed has.remained

kama msonge katika mizabibu.
like shed   in   vines

umebaki   kama vile kibanda katika shamba la mizabibu.
it.remains like that shed   in   garden of vines.

kama kilindo   kati ya shamba la matikiti,
like watch.tower midst of garden of melons

Unaonekana   kama vile kibanda katika shamba la maboga,
It.resembles like that shed   in   garden of vegetables

```
kama mji    uliozingiwa.
like town   which.is.surrounded

kama vile muji unaozungukuwa          na    waadui.
like that town which.is.surrounded with enemies
```

```
10  Sikilizeni  neno la Bwana,
    Hear        word of Lord

    Musikilize  maneno ya Bwana Mwenyezi,
    Listen      words  of Lord  Supreme
```

```
enyi watawala
you  rulers

ninyi wakubwa
you   leaders

Sodoma;
Sodom

wa Yerusalema, ninyi mulio        waovo kama vile wale  wa Sodomo

of Jerusalem,  you   you.who.are rotten like that those of Sodom

pokeeni amri    ya Mungu wetu,
receive command of God    our

Mutege masikio, musikilize mafundisho ya Mungu wetu
set    ears       listen.to teachings  of God    our

ninyi wakaaji  wa Gomora.
you   dwellers of Gomorrah.

ninyi mulio        waasi  sawa vile watu   wa Gomora.
you   you.who.are rebels like that people of Gomorrah.
```

```
16  Jiosheni,        jitakaseni:
    wash.yourselves make.yourselves.holy

    Mujisafishe,     mujitakase.
    clean.yourselves make.yourselves.holy
```

```
ondoeni    uovu wa matendo yenu, usiwe    tena  mbele ya macho yan

take.away rot  of acts    your don't.be again front of eyes  my

Mutupe mbali na   macho yangu matendo yenu maovu,
throw  far   with eyes  my     acts    your rotten

Acheni kufanya mabaya.
Quit   to.do   bad

mwache kufanya mabaya.
Quit   to.do   bad
```

18 Njoni,   tukabishane,   asema Bwana.
    Come,   let's.discuss   says Lord

    Bwana Mwenyezi anasema hivi: "Mufike tukate   shauri.
    Lord Sovereign says   thus   come let's.cut counsel

zambi zenu zikiwa kama nguo nyekundu,
sins your being like cloth red

Hata zambi zenu zikionekana wazi   sawa vile rangi nyekundu sana,
even sins your appearing   clear like that color red   very

zitageuka   kuwa nyeupe kama seluji;
they.will.change to.be white like snow

nitazisafisha   ziwe   nyeupe kama pamba.
I.will.clean.them they.shall.be white like cotton.

zikiwa   nyekundu kama damu
they.being red   like blood

Hata zikionekana   sawa vile rangi nyekundu sana,
even if.they.appear like that color red   very

zitageuka   kuwa kama sufu.
they.will.change to.be like wool

nitazigeuza   nyeupe kama vile chokaa.
I.will.change.them white like that whitewash

19 Mukikubali   kutii,
   If.you.agree to.obey

    Ikiwa   munakubali na   kunitii
    If.it.be you.agree with to.obey.me

mtakula   mema ya nchi.
you.will.eat good of country

mutakula   mavuno   mazuri ya inchi.
you.will.eat harvests good   of country

20
Bali,   mkikataa,   upanga utawameza   ninyi
However if.you.refuse sword will.swallow.you you

Lakini ikiwa   munakataa, mutauawa   kwa upanga.
but   if.it.be you.refuse you.will.be.killed by sword

maana kinywa cha Bwana kimenena   haya.
reason mouth of Lord has.spoken these

Ni   mimi Bwana Mwenyezi ninayesema   maneno hayo.
It.is me   Lord   Sovereign I.who.speak words   these

1. The vision of Isaiah the son of Amoz, which he saw
concerning Judah and Jerusalem... 2. Hear, O heavens, and
give ear, O earth; for the Lord has spoken: "Sons have I
reared and brought up, but they have rebelled against me.
3. The ox knows its owner, and the ass its master's crib;
but Israel does not know, my people does not understand."
5. Why will you be smitten, that you continue to rebel? The
whole head is sick, and the whole heart faint. 8. And the
daughter of Zion is left like a booth in a vineyard, like a
lodge in a cucumber field, like a besieged city. 10. Hear
the word of the Lord, you rulers of Sodom! Give ear to the
teaching of your God, you people of Gomorrah! 16. Wash
yourselves; make yourselves clean; remove the evil of your
doings from before my eyes; cease to do evil. 18. "Come
now, let us reason together, says the Lord: though your
sins are like scarlet, they shall be as white as snow;
though they are red like crimson, they shall become like
wool. 19. If you are willing and obedient, you shall eat
the good of the land; 20. But if you refuse and rebel, you
shall be devoured by the sword; for the mouth of the Lord
has spoken.

(Revised Standard Version Translation)

APPENDIX D

INTERVIEW SCHEDULE:
Language Use And Attitudes

In this appendix, the interview schedule as used by my
research assistant is given first. The translation follows.
Italicized print indicates instructions to the interviewer.
Regular print indicates main parts of the interview and
questions asked to the subjects. Interviewers did practice
runs before administering the interview schedules on their
own and were encouraged to use their own words rather than
simply read the instructions as I had written them. The
recorded texts on which the first part of the interview
schedule were based are given at the end of this appendix.

Swahili Text

Maulizo juu ya cassette

Mbele ya kuuliza maulizo 1-5, utaeleza:

Nitakusikilizisha cassette kwenye watu watatu wanasema
kwa kiswahili. Watasema juu ya photo walionyeshwa.
Mukisha kusikia namna yao ya kusema, ninataka uniambie
bitu juu ya kila mtu: mawazo yako juu ya kiswahili
yake, anatoka wapi, kazi yake, na tabia yake. Hakuna
jibu nzuri ao mbaya. Ninataka tu kujua mawazo yako juu
ya hawa watu.

*Chezesha cassette kwa musemaji moja, kisha uliza
maulizo #1-5 juu ya ule musemaji. Endelea vile kwa
wasemaji wote watatu.*

1. Kiswahili yake ni namna gani?

	Musemaji	
#1	#2	#3

    1. mbaya sana
    2. mbaya
    3. kadiri
    4. mzuri
    5. mzuri sana

2. Uyu mtu

    1. anajivuna
    2. katikati
    3. anajinyenyekeza

3. Anapokea mushahara gani (zaires kwa mwezi moja)?

    1. 0-1999Z
    2. 2-3999Z
    3. 4-6999Z
    4. 7-11,999Z
    5. 12,000+

4. Alifanya masomo ngapi?

    1. Ecole primaire   1-3
    2.   "   "   4-6
    3. Ecole secondaire 1-4
    4.   "   "   5-6
    5. Universite

5. Anatoka wapi?

    1. Inje ya jimbo la Kivu
    2. Kivu (lakini si Bukavu)
    3. Bukavu

Maulizo juu ya kutumia na kusikia kiswahili

6. Huku Bukavu walimu wanatumia kiswahili mingi kwa kufundisha miaka mbili ya kwanza ya ecole primaire. Kisha wanafundisha sarufi ya kiswahili kwa miaka ine ya kufuata. Unawaza ni mzuri vile? Au unawaza ingekuwa mzuri zaidi kutumia na kufundisha kifransa tu tangu mwaka wa kwanza? Au unawaza ni mzuri kutumia na kufundisha kiswahili zaidi?

    1. Endelea kama sasa
    2. Kifransa tangu mwanzo
    3. Kiswahili zaidi

7. Unawaza ni lazima kwa mtu kujua kiswahili bora?

    1. Hapana, hata kidogo
    2. Si lazima, lakini ni mzuri
    3. Lazima kabisa

8. Unaweza kusikia kiswahili bila shida--

	Kidogo	Kadiri	Mingi	Yote
a. pamoja na marafiki				
b. ku kazi				
c. ku radio				
d. mu kanisa				

9. Unaweza kutumia kiswahili kwa gisi unafurahia--kwa
kusema kitu chochote na wakati yoyote munapenda kukitumia?

    1. mara mingi, hapana
    2. mara mingi, ndiyo
    3. kila mara, ndiyo

Maulizo juu ya maisha

10. Uko na ndugu mu Bukavu?
     a. Jamaa ngapi?
     b. Wanaishi wapi?

11. Unafanya kazi na watu wengine (wawili au zaidi) wa
mtaa/zone yako?
     a. Biko banaume au banawake (ao bote bawili)?
     b. Unaona hawa watu kisha kazi kwa kuzungumza na
         kujifurahisha nao?

         1. Hapana
             2. 1-2X/mwezi
             3. 1-2X/posho
             4. 3X au zaidi/posho

12. Unaenda ku kanisa?

         1. chini ya 1X/mwezi
         2. 1-2X/mwezi
         3. kila Siku ya Mungu
         4. zaidi

     a. Wanatumia luga gani?
     b. Unafanya kazi kwa kanisa?
         Kazi gani?

13. Unasafiri inje ya Bukavu mara ngapi kwa mwaka/mwezi
moja?
     a. Wapi?
     b. Kufanya nini?

         1. Kuona wandugu
         2. Commerce
         3. _____

14. Unasema luga gani na:

     a. wazazi
     b. watoto
     c. rafiki
     d. watu wenye unatumika nao

English Translation of Interview Schedule

Questions concerning the cassette

Before asking questions #1-5, you will explain:

> I will play you a cassette on which three people
> speak Swahili. They will speak about a photo
> that they are shown. After hearing their way
> of speaking, I want you to tell me things about
> each person: your opinions about his Swahili,
> his education, where he comes from, his work,
> and his personality. There is not a goor or
> bad answer. I just want to know your opinions
> concerning these people.

*Play the cassette for one speaker, then ask questions #1-5
concerning that speaker. Continue like that for the
three speakers.*

1. How is his Swahili?

                         Speaker
                      #1   #2   #3

        1. very bad
        2. bad
        3. in between
        4. good
        5. very good

2. This person:

        1. is arrogant
        2. in between
        3. is humble, pleasing

3. He receives what salary?

        1. $0-20/month
        2. $21-40/month
        3. $41-70/month
        4. $71-120/month
        5. $121+/month

4. How much schooling does he have?

        1. 1-3 years of primary school
        2. 4-6   "   "   "   "
        3. 1-4 years of secondary school
        4. 5-6   "   "   "   "
        5. University

5. Where is he from?

    1. Outside of the Kivu province
    2. Kivu (but not Bukavu)
    3. Bukavu

Questions about use and understanding of Swahili

6. Here in Bukavu, teachers use much Swahili to teach in
the first two years of primary school. Then they teach
Swahili grammar for the next four years. Do you think this
is good? Or do you think it would be better to use and to
teach only French from the first year on? Or do you think
that it is good to use and to teach Swahili more?

    1. Continue as is done now
    2. French from the beginning
    3. More Swahili

7. Do you think it is necessary to know Standard Swahili?

    1. No, not at all
    2. It is not necessary but it is good
    3. It is very important

8. Can you understand Swahili without problem--

	A little	Fair amount	Much	All
a. with friends				
b. at work				
c. on the radio				
d. in church				

9. Can you use Swahili in the way you please--to say
anything, whenever you want to use it?

    1. Many times, no
    2. Many times, yes
    3. Always, yes

Questions about living situation

10. Do you have relatives in Bukavu?

    How many families?
    Where do they live?

11. Do you work with other people (2 or more) from your
neighborhood?

    Are they men or women (or both)?
    Do you see them after work for talk and amusement?

        1. No
        2. 1-2X/month
        3. 1-2X/week
        4. 3X or more/week

12. Do you go to church?

        1. Less than once a month
        2. 1-2X/month
        3. Each Sunday
        4. More often

    What language do they use?
    Do you do church work?   What kind?

13. How often do you travel outside of Bukavu per
month/year?

    Where?
    To do what?

        a. to see relatives
        b. for business

14. What language do you speak with:

        a. your parents
        b. children
        c. rafiki
        d. people you work with

Texts That Subjects Evaluated

1. Vernacular with little French

    Hii picha ya kwanza unaona hapa ni tribinali. Iko ku
La Botte. Kama batu biko na mashitaki banaweza kukuya pale.
    Picha ya pili ni fasi kwenyi bakubwa ba kanisa ya
Katoliki banafanyiaka kazi yao. Nyuma ya pale kuko
Catedral. Pale kunakuwaka misa. Kila Siku ya Mungu kuko
misa tatu. Siku zingine kunakuwaka misa moya ya asubui.
    Picha ya tatu ni ya balobaji benyi biko banaloba samaki
mu bahari ya Kivu. Biko mu mitumbu ya miti.
    Siyui vizuri hii fasi kwenyi kuwa picha ya ine. Nazani
ni Lycee, pale yulu ngambo ya Kadutu.

Picha ya tano ni kiwanja ya kabumbu. Batu banachezaka
kabumbu pale kila Siku ya Mungu.

"The first picture you see here is the Court House.
It's at La Botte. If people have legal problems they can go
there.
"The second picture is the place where Catholic church
leaders do their work. Behind there is the cathedral.
There are masses there. Each Sunday, there are three
masses. On the other days, there is a mass in the morning.
"The third picture is of fishermen fishing on Lake
Kivu. They are in wooden boats.
"I don't know very well the place where this fourth
picture is. I think it's the Lycee, there in the high part
of Kadutu.
"The fifth picture is a soccer field. People play
soccer there every Sunday."

2.   Near-Standard

Hizi ni picha za Bukavu. Ya kwanza ni baraza ya
sheria. Watu wenyi kuwa na ugomvi kati yao watakuja pale
kwa kutafuta haki.
Ya pili ni ya nyumba ya wakuu wa kanisa la Katoliki.
Jumba hili lililo nyuma yake ni kanisa la Wakatoliki. Watu
wengi huja hapa Siku ya Mungu.
Ya tatu ni ya wavuvi wanaovua samaki kwa ziwa la Kivu.
Wamo katika vyombo vyao vilivyojengwa kwa miti.
Picha ya ine in ya Lycee Wima. Ni shule kwa vijana
wanawake. Ipo kwa kilima kimoja juu ya barabara ya kuenda
Kadutu. Kuna wabikira wanaofundisha pale.
Picha ya tano ni ya nyumba za Kadutu tu.

"These are pictures of Bukavu. The first is of the
Court House. People with disputes between them go there to
look for justice.
"The second is of the house for leaders of the Catholic
Church. The large building behind it is the church of the
Catholics. Many people come here on Sundays.
"The third is of fishermen fishing on Lake Kivu. They
are in their boats which are made of wood.
"The fourth picture is of Lycee Wima. It's a school
for girls. It's on a hill above the road going to Kadutu.
There are nuns who teach there.
"The fifth picture is just of houses in Kadutu.

Vernacular speaker using much French

Kwanza, hapa ni *photo* ya *tribunale.* Pale kunakuwaka
ba*avocats* na ba*juges.* Kama mutu fulani anakutesa, utaenda
kwa *avocat*na kupima kupata *justice.*
 Photo ya pili ni ma*bureau* ya *archeveche* na batu bingine
ba kanisa. Kisha pale yulu unaona *Catedrale.*
 Photo ya tatu ni ya ba*pecheurs* mu ma*pirogues* yao. Biko
banatengeneza ma*fillets* yao.
 Photo ya ine ni ya Lycee Wima--*ecole secondaire pour
les filles.*
 Photo ya tano ni ya *Stade*, fasi kwa kucheza *futbol.*
Kila *dimanche, des milliers des personnes* banafika pale kwa
kuangalia *match.*

"First, this is a picture of the Court House. There
are lawyers and judges there. If someone bothers you, you
go to a lawyer and try to get justice.
 "The second picture is the offices of the archbishop
and other people of the church. Then there above you see
the cathedral.
 "The third picture is of fishermen in their canoes.
They are fixing their nets.
 "The fourth picture is of Lycee Wima--secondary school
for girls.
 "The fifth picture is of the stadium, a place for
playing soccer. Each Sunday, thousands of people go there
to watch a game."

Interview Schedule Scores

VARIABLE LABELS: s 'sex' E 'educational level'
ed 'education in years' a 'question #1 of inter-
view schedule b '#2' c '#3' d '#4' e '#5'
f '#6' g '#7' h '#8a' i '#8b' j '#8c' k '8d'
l '#9   m 'network strength based on answers
to ##10-11 n '#12' o '#13' p '14a' q '#14b'
r '#14c' s '#14d'

VALUE LABELS: s: f 'female' m 'male'; E: 0 '0 years
of school' 1 '1-3 years' 2 '4-6 years' 3 '7-9 years'
4 '10-12 years' 5 '13-15 years' 6 '16+ years';
ed: number represents maximum number of years achieved;
a-l: values correspond with numbers of response
choices as listed in interview schedule; m: 0 'no
affirmatives to questions in 10-11 of interview
schedule' 1 'affirmative to #10' 2 'affirmative to
##10,11   3 'affirmative to ##10,11, co-workers are of
same sex (11a)' 4 'affirmative to ##10,11, co-workers
are of same sex, and they meet together at least once
a week'; n: values correspond with numbers of response
choices as listed in interview schedule; o: e 'English'
f 'French' l 'Lingala' m 'ethnic language' s 'Swahili'.

s	ag	E	ed	a__	b__	c__	d__	e__	f	g	h	i	J	k	l	m	n	o__	p__	q__	r__	s__
=	==	=	==	===	===	===	===	===	=	=	=	=	=	=	=	=	=	===	===	===	===	===
f	11	2	05	253	331	112	234	231	2	3	4	3	2	4	3	4	3	0	s	s	s	s
	11	2	04	432	231	223	134	322	2	2	3	2	1	3	2	4	3	a1.	sf	fs	s	s
f	11	2	05	354	232	123	245	312	2	2	3	4	2	2	3	3	4	0	s	s	s	
	11	2	05	443	321	223	345	231	2	2	3	3	1	3	2	4	3	a3	ms·	s	s·	s·
f	12	2	05	442	321	223	235	323	2	3	4	4	2	3	3	4	3	0	s	s	s	sf
m	12	2	06	443	321	122	244	231	2	2	3	3	2	3	2	4	3	1a	msf	sm	s	s
	12	2	05	443	321	122	244	231	2	2	3	3	2	3	2	4	3	a1x	msf	sm	s	s
	12	2	06	342	321	234	234	233	2	2	3	3	2	4	3	4	3	a1	s	s	s	s
	12	2	05	453	321	123	345	233	2	2	4	3	2	4	3	4	4	0·	s.	s	s	s
f	13	3	07	451	321	223	235	321	2	2	4	3	2	4	3	4	3	0	s	s	s	fs
	13	2	06	243	331	234	345	322	2	2	3	4	2	3	3	4	3	a1	s	· s	s	s
m	13	2	05	242	331	232	343	223	2	3	4	4	1	1	2	3	2	0	ms	s	s	f
m	13	3	07	352	321	122	235	323	2	2	3	3	3	4	2	4	3	a1·	s	s	sl	sf
m	13	2	05	453	232	132·	344	312	2	2	3	3	2	3	3	4		a1	s	s	s	
	13	3	07	453	331	122	245	233	2	2	4	3	2	4	3	4	4	0	s	s	s	s
m	13	2	06	344	321	122	134	231	1	2	4	4	3	3	2	4	4	a2	s	s·	s	s
m	13	2	05	342	231	231	345	213	2		3	2	2	4	2	3	3	a1	ms	s	sf	sf
f	14	2	04	543	221	522	441	213	2		4	3	2	4	3	4	3	a1	s	s	s	s
m	14	3	08	352	313	125	314	231	2	2	4	4	3	2	3	4	4	a1	s	s	s	fs
	14	3	08	243	332	123	334	212	2	2	4	4	3	4	3	4	3	a2	s	s	sf	fs
	14	3	08	453	321	223	234	323	2	2	4	3	3	3	3	4	0	a1	sf	s	fs	fs
	14	3	08	243	321	142	245	231	2	3	4	3	3	4	2	4	3	a3	s	s	fs	fs
m	14	2	06	342	321	133	244	321	2	2	3	4	2	3	2	4	3	a1	s	s	s	
m	14	0	00	513	321	120	---	313	-	2	3	-	2	4	2	3	3	0	ms	s	s	s
m	14	3	07	342	331	123	235	231	2	2	3	3	2	4	3	4	3	a1	s	s	· s	sf
	14	3	08	342	321	124	235	233	2	2	4	4	3	4	2	4	4	a1	s	s	s	.
m	15	2	06	352	231		234	213	2	3	3	4	2	4	3	4	3	a3	s	s	sfl	sf
m	15	3	06	345	321	123	234	233	2	1	4	4	3	4	3	4	3	b4	ms	s	sl	sl
m	15	2	05	253	321	122	134	322	1	3	4	2	3	2	3	4	4	a1	s	s	s	f
f	15	3	08	453	321	122	345	231	2	2	3	4	2	3	3	4	3	1a	s	s	s	sf
m	15	2	05	254	132	222	243	333	2	2	4	2	4	4	2	4	3	a2	m	ms	ms	ms
m	16	4	11	244	312	224	234	332	2	2	4	3	2	2	2		2	a1	s	s	sf	f
m	16	4	11	344	331	124	045	213	2	3	4	-	3	2	2	3	3	a	s	s	s	sf
f	17	4	12	235	331	1 3	234	212	2	2	3	3	1	3	3	2	2	a2	s	s	sfl	f
f	18	3	08	343	331		245	233	2	2	4		2	4	3		4	a1	s	s	s	s
f	18	3		352	231	223	454	223	3	3	2	2	1	4	3	2	3	0	sm	s	sk	fs
m	19	4	10	354	331	121	024	233	2	3	4	3	4	3	2		3	a1	s	s	s	s
f	21	0	00	4??	311	???	???	???		4	-	-	4	3	1	3	0	sm	s	s	-	
	21	4	12	354	322	112	233	233	2	2	3	3	2	3	2	4	3	0	sm	sm	sl	sf
f	21	3	09	353	231	452	245	323	2	2	4		2	4	2	1	3	0	s	s	s	
m	21	4	12	243	211		445	232	1	3	3	4	1	4	3	4	4	a3	s	s	fse	f
m	22	4	12	452	231	212	234	331	3	3	4	4	3	4	3	4	4	2a	ms	s	sf	s
f	23	2	05	352	221	122	344	232	2	3	4	4	2	4	3	4	3	0	s	s	s	s
m	23	2	05	351	231	243	355	323	1	2	4	4	2	3	2		1	a1	s	s	sl	s
f	24	4	10	344	322	214	334	321	2	2	3	4	2	3	2	4	3	1a	s	sf	sf	sf
	24	2	05	453	332	123	245	332	2	2	4		2	3	2	-	4	3a	ms	s	s	-
m	24	2		453	332	123	245	332	2	2	4		2	3	2	1	4	a3	ms	s	s	
f	24	3	08	455	322	335	345	233	2	3	3	3	2	4	3	4	3	0	s	s	s	s
m	26	4	10	352	321	234	345	321	2	2	3	4	2	4	2	4	4	a4	s	s	sfl	sl
m	26	4	10	142	331		143	222	3		4	4	2	4	3	1	2	ab3	sm	s	s	sf
m	26	3	09	454	321	224	234	231	2	2	4	3	2	4	3	4	4	a3	ms	s	s	s
m	27	4		453	211	143	225	333	1	2	4	4	1	3	3		3	0	sm	s	sfm	s
m	28	4	10	253	312	123	234	233	3	3	4	3	3	3	3	4	4	3a	s	s	sfl	fs
m	28	4	10	443	321	334	445	321	2	2	3	3	2	3	2	4	3	a1	ms	s	s	sl
m	28	0	00	344	321	322	331	231	2	2	2	4	2	4	3	2	3	0	s	s	s	s
m	28	4	11	453	321	344	445	231	3	3	3	4	4	4	3	3	4	b52	ms	s	sf	se

s	ag	E	ed	a__	b__	c__	d__	e__	f	g	h	i	J	k	l	m	n	o__	p__	q__	r__	s__
■	29	5	15	254	333	134	234	221	2	2	3	3	4	4	1	2	3	3b	s	s	fs	fs
■	29	4	12	352	321	233	245	231	2	2	4	4	2	3	2	4	4	a2	m	ms	sf	f
■	30	0	00	241	331	131	135	231	3	3	4	4	4	3	4	4		12+	m	s	s	smr
■	31	5	15	345	322	124	245	233	2	2	4	3	3	4	2	4	3	a1	ms	s	sf	f
■	31	4	10	454	322	234	355	322	2	2	3	3	3	4	3	4	3	b6	ms	ms	slf	slf
f	31	5	14	451	-21	33-	-35	233	3	3	4	-	3	4	3	2	3	a2	s	fs	s	f
f	31	2	06	342	231	241	233	233	2	3	4	4	1	1	3	4	1	0	s	s	s	s
■	32	4	12	354	332	122	334	332	3	3	4	4	4	3	1	4		a3	ms	sf	sf	f
■	33	4	11	453	322	322	345	333	3	3	3	4	3	3	3	4	3	b24	ms	s	s	s
■	33	4	10	453	231	213	235	323	3	3	4	3	3	4	3	4	3	a24	ms	s	sfl	sf
■	36	1	03	352	231	244	354	331	3	3	3	4	3	4	3	4	4	a2	s	s	s	s
■	37	3	09	342	321	223	234	321	3	3	3	4	3	4	3	4	4	2a	m	ms	ms	s
■	38	4	11	354	232	234	234	321	3	3	3	3	2	3	2	4	2	2	m	msf	sf	ms
■	41	1	03	243	331	123	235	233	2	3	4	4	4	4	3	4	3	-	s	s	s	s
■	41	4	12	352	331	221	33	334	1	3	4	4	4	2	4	3		a	m	s	s	sf
■	42	4	10	453	331	133	325	223	1	2	4	2	2	4	1	3	3	1a	ms	s	fsm	fs
■	45	3	10	352	231	123	244	333	3	3	3	4	3	4	2	4	3	b4	m	sf	sf	f
■	46	2	06	241	331		223	232	3	3	4	4	4	4	3	3	0	0	s	s	s	s
■	47	3	10	251	231	233	354	331	3	3	4	4	4	4	3	4	4	a2	m	s	sf	f
■	52	3	07	453	221	234	345	331	2	3	3	4	3	3	2	3						
■	56	4	09	354	332	233	254	321	3	3	4	4	3	4	2	4	2	a1	m	sf	sf	
■	57	0	00	342	231	233	245	231	3	3	3	3	2	3	2	4	3	a1	m	ms	s	s
■	58	2	06	453	331	123	344	231	3	3	4	3	3	4	3	4	4	a2	m	ms	s	s
■	58	0	00	453	322	133	245	321	1	2	3	4	2	3	2	3	4	1a	m	s	s	s
■	59	3	09	453	321	212	335	323	3	3	3	4	3	4	3	4	4	1a	ms	ls	lsf	fs
■	60	2	05	453	332	234	345	321	2	3	4	3	3	4	3	0	4	a1	ms	s	s	s
■	62	2	05	432	332	223	344	321	3	3	2	3	1	3	1	3	4	3a	m	ms	ms	s
■	62	2	05	453	321	223	245	321	2	2	2	3	1	3	2	3	4	2a	m	ms	s	ms
■	62	4	10	453	231	134	345	321	1	2	3	4	2	3	2	4	3	3a	m	fs	fs	f
f	66	0	00	432	332	122	123	321	3	3	3	3	2	3	2	3	3	a2	m	ms	ms	
■	66	0	00	424	333			331	1	3	4	4	3	4	2		3		m	ms	s	s
f	68	0	00	532	312	212	234	233	2	3	3	4	2	3	2	4	3	a2	m	ms	ms	ms
■	68	1	03	342	222	242	443	321	2	3	4	3	3	3	3	4	3	a1	s	s	sl	s
■	71	0	00	543	321	223	234	321	2	2	4	3	2	3	2	4	4	3a	m	s	s	ls
■	71	0	00	543	321	223	234	321	2	2	4	3	2	3	2	4	4	a3	m	s	s	sl
■	72	2	04	442	331	324	455	321	2	3	2	3	2	4	2	4	4	3a	m	ms	ms	
■	72	0	00	443	321	223	345	332	3	3	3	3	4	4	3	4	3	a1	m	sl	sl	s
■	75	0	00	434	312	212	334	321	3	3	3	4	2	3	2	4	3	2	m	s	s	s
■	76	0	00	443	231	233	345	321	3	3	3	2	2	3	2	4	3	a1	m	s	s	s
f	76	0	00	533	332	112	234	312	3	2	2	-	1	2	1	4	3	6a	m	m	ms	-
■	78	0	00	442	321	234	345	312	3	3	3	3	1	2	1	4	2	1a	m	ms	ms	ms
■	85	0	00	544	332	321	234	322	3	3	3											
■	92	0	00	542	332	435	435	311	3	3	3	3	2	3	1	4	2	3a	m	sm	m	
■	99	0	00	434	322	113	345	321	3	3	3	2	2	3	2	3	3	a1	m	s	s	sl

Appendix F

Individual (j) Scores for Each Environment

Arranged Accordng to Age Groups' Implicational Scales

For Young and Middle-Aged groups' scores:

Column #	Environment
1	-jala 'be full'
2	-yala
3	-ja- 'not yet'
4	-ya-
5	-kuja 'come'
6	-kuya
7	moja 'one'
8	moya
9	moa
10	ngoja 'wait'
11	ngoya
12	ngoa
13	majani 'grass'
14	mayani
15	maji 'water'
16	mayi
17	-jua 'know'
18	-yua
19	-jenga 'build
20	-yenga
21	kijana 'youth'
22	kiyana
23	fujo 'noise; probem'
24	fuyo
25	stressed -ja-
26	stressed -ya-
27	-ja- before stress
28	-ya- before stress
29	-ji- after stress (excluding ##15,16)
30	-yi- after stress " " "
31	stressed -ji-
32	stressed -yi-
33	(-)ji- before stress
34	(-)yi- before stress

YOUNG AND MIDDLE-AGE GROUPS' J-Y IMPLICATIONAL SCALE

```
            1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34
NAME  AG ED j  y Ja ya ku ku no no no  n  n  n  j  y na na ku ku Je ye k ki  j  y  s  s  j  y Ji  y Ji  y Ji  y
===== == == =  = == == == == == == == :  :  :  =  =  == == == == == == = ==  :  :  :  :  =  = == :  == :  == :

zavad 11 05       00 01 00 11 00 24 07 0 1 1 0 4 00 11 00 04           2 0 1 0           03 0 18 0
bah k 11 05          01 15 04 10 00        01 01 10 00        0 01 6 0              ·10 0 01 0
sela  12 05       00 03 00 16 00 08 01     0 1 00 01 10 00           2 0              04 0 09 0
chik  12 06 0 4 00 02 00 30 00 16 06 0 2 2     00 01 16 00        0 3  7 0        02 0 08 0 12 0
bah n 13 05 0 2 00 01 00 11 01 28 07     0 2 00 07 10 00          0 1 1 0          04 0 06 0
magal 13 05 0 1 00 03 oo 11 01 23 15 0 4 0 0 1     17 01 00 01 1 00     1 0 4 0 01 1 02 0 18 0
nvani 13 05 0 1 00 04 00 29 00 12 01 0 1 0     00 06 00 13 00 01     1 2 1 0     01 0 22 0 06 0
sifa  14 04       00 02 00 38 00 46 00 0 2 0     00 17 00 07        0 01 8 0 2 0       11 0 19 0
dun b 14 00 0 5 00 10 00 30 03 22 07 0 9 0     00 11 01 28        0 3  1 0 8 0 1 0     03 0 12 0
pape  14 06       00 09 00 26 04 24 01 0 2 0     00 08 08 11        0 04    1 0       14 0 28 0
toto  14 09 0 6 00 10 00 14 01 17 04 0 1 0     00 01 11 09        3 2  4 0     01 0 03 0 04 0
ashen 14 08 0 6 01 02 00 09 27 13 0 2 0 0 1 3 00 01 07 21 02 00 1 00              0       07 0 17 0
kanbe 15 06       00 01 00 28 00 32 03              00 20        4 7    1 0       03 0 04 0
two s 15 08 0 1 00 06 00 37 00 28 24 0 1 0     01 00 24 01           0 1 3 0          04 0 18 0
nusha 15 06 0 2 00 12 00 35 00 38 05 0 5 2        15 05 00 01        0 0 1 0          13 0 12 1
bosco 15 05          06 17 05 13 07     4 2 01 08 12 00 00 01 0 01           12 0 07 0
fatak 15 05       00 05 00 22 01 31 01        00 10 07 03 01 00 2 01 4 0 3 0     01 0 14 0 22 0
victo 15 08       00 02 00 12 04 14 01        02 00 08 00        1 00           02 0 03 0
toyot 15 08       00 02 00 04 04 15 00           04 00        1 00 3 0 1 0 2 0       01 0 08 0
chant 15 07 0 1 00 12 00 27 01 39 04 3 0 0 1 0 03 00 13 14 00 07 2 02 6 0 2 0 5 0          13 0
aneri 16 11 0 2 01 05 01 23 01 10 21 0 1 0     00 08 18 06 02 00     0 2 1 0 2 0       02 0 11 0
nas u 16 11       00 02 00 12 00 24 21 0 2 0     01 07 01 16 00 01     2 0    1 0       04 0 13 0
onba  17 07 0 1 00 02 00 11 00 15 06     0 3     05 01           2 0 1 0          03 0 03 0
esper 17          00 06       00 10 04 0 3 1     01 09 00 03 2 00 7 0             07 0
aziza 17 07       00 11 00 04 01 04 02           04 08        3 00 4 0             05 0
nas z 17 12       00 03 17 00 05 20 07 0 1 0 0 4 02 01 18 06 02 00        5 0 3 0       06 0 20 0
kayij 18 12 0 1 00 10 00 13 00 53 0  1 0 0     05 31           1 1             02 0 16 0
'tanti 19 10      01 07 00 17 02 15 00 0 2 0        06 09 01 00 3 00 2 0 4 0          09 0
tabu  19 06       00 02 00 12 00 23 07 0 1 1 0 2 00 16 00 09        0 03    3 0       03 0 15 0
nas k 19 10 0 1 00 02 00 41 03 11 02 1 4 0 0 8 10 00 05 09 01 00     2 0 1 0     01 0 22 0 19 0
desir 19 13       00 01 00 20 00 38 04     0 1 01 00 15 01        5 6 2 0          02 0 14 0
seagh 20 11       00 07 00 19 00 58 05 0 1 0     00 01 07 21        0 01 0 2          15 0 41 0
shanb 21 12       00 05 00 33 00 14 32           01 25        2 00 3 0             13 0
ninaa 21 00       00 04 00 24 00 30 01 0 2 0 0 1 00 07 13 47 00 07 1 4  2 0     2 0    03 0 10 0
npf   21 12 0 3 02 02 00 26 03 27 54 0 1 0 0 1 03 0 51 01 00 03 2 00 1 0     3 1 03 0 02 0 37 0
justi 21 11       00 07 00 32 00 34              20 04              1 0       01 0 23 0
nvinj 21 09       00 03 01 17 01 30 00 0 5 0        14 14              1 0       03 0 13 0
nguzo 22 12          08 05 15 09 33 00 00        05 00 66 01              9 0    0 04 0 04 0 35 0
helen 23 07 0 4 00 10 00 25 19 08 00 0 3 3        05 22        1 01 2 1 1 0       01 0 02 0 04 0
kanak 23 05 0 3 00 17 00 14 04 50 00 0 3 0     01 10 06 32 01 02 5 01     2 0    01 0 13 0 16 0
kajan 23 05       00 09 00 44 01 40 00 0 1 0 0 1 00 03 03 11        1 00 0 8 1 0       09 0 10 0
balke 24 05 0 6 00 05 00 23 00 28 02 0 2 0 0 1 03 03 12 48        5 12 0 5 2 0     03 0 01 0 21 0
kiza  24 10 0 1 00 09 00 24 00 41 06        0 1     06 38        1 2  1 0 1 0 2 0 1 0 03 0 33 0
luban 26 10       01 07 01 09 03 13 03 2 1 0        06 04 01 00 1 04 2 0     3 0 01 0 01 0 17 0
abuda 26 09       00 04 01 07 08 11 00        00 01 19 01 02 00 0 11 2 0 6 0 8 0 20 0 05 0 07 0
nveng 26 10 0 1 00 04 00 29 00 83 00 0 6 0     00 13 02 23 01 00 0 03     2 1    01 0 08 0 10 0
hanul 27 10       00 06 21 00 03 28 00 0 2 0     04 00 17 30        2 00 1 1 3 1 4 0       02 0 18 0
namak 27 09 0 2 01 14 00 23 17 11 08 1 4 1     07 02 08 04 06 00 2 01 1 0 1 0 5 0 04 0 03 0 11 0
```

```
NAME  AG ED J  y Ja ya ku ku ao ao ao a a a J  y aa aa ku ku Je ye k kl J  y s  s J  y Jl y Jl y Jl y
===== == == =  = == == == == == == == =  = = =  = = == == == == == == =  == =  = = =  = == =  == =  == =
tambv 28 06 0 1 00 08 00 25 04 24 00 0 2 0 1 0 00 07 12 24 01 02 1 00        2 0 00 1 01 0 07 0
salon 28 12 0 1 00 05 00 07 00 29 12      0 1      23 05               0 2 0 4 0        02 0 13 0
vabll 28 11          04 12 13 19 00 0 1 0         33 12 01 00 6 00      0 2 0 6 0        03 0 28 0
dun b 28 00          00 06 00 24 01 55 00 0 1 0   01 01 05 25 01 00 3 2  2 0        3 0     11 0 16 0
luban 28 10          00 05 00 26 01 22 14         01 00 03 33 05 01 7 01 5 0        2 0     07 0 28 0
assen 29 10 3 0 01 20 00 22 08 08 08 1 1 0        04 00 09 08 01 00 2 1          2 0 03 0 02 0 05 0
ramaz 29 15          00 02 00 03 02 03 02         08 03 01 00               3 0 2 0     02 0 14 0
kazan 29 12 0 1 00 06 00 12 05 55 02 0 2 0        06 48 03 00 5 1           4 0              28 0
zihal 29 01 0 1 00 10 00 46 01 44 05 2 1 0 2 2 00 04 07 26          0 2  5 0 8 0    03 0 06 0 07 0
burok 30 11          00 10 00 18 00 35 09 1 4 0 0 1 00 01 04 27          1 01   1 1 7 0 03 0 03 0 22 0
nlrln 30 00          01 01 01 43 04 22 05 0 2 0   00 03 06 16 01 00 0 10    2 0 6 0 02 0 03 0 17 0
vakus 31 06 0 2 00 05 47 00 01 20 01      2 0      15 35               9 0 1 0 6 0     02 0 15 0
k hel 31 15          00 03 00 30 00 19 04 0 3 0   08 12                         2 0     02 0 22 0
amull 31 15 0 1 00 04 00 25 02 12 05 3 0 0        01 15 05 0           9 0 1 0 2 0 03 0 04 0 09 0
kanko 31 10          01 04 02 17 12 08 00    0 2 05 01 23 15 01 02 7 01         2 0 03 0 03 0 09 0
narce 31 14          00 09 01 18 00 13 00 0 2 0   00 01 00 47              0 3 2 0     02 0 28 0
kamba 32 13          02 00 11 08 33 09 04 2 0 0   00 04 13 01          4 01     4 0 01 0 19 0 15 0
nutun 33 11          02 01 00 32 00 08 01 0 1 0   06 06 01 00 8 11       1 2 1 0 00 1 01 0 07 0
VP    33 18 0 2 00 12 00 12 00 07 02 0 2 0        00 03 00 10 02 0              02 0     26 0
brall 33 15          00 05 00 16 00 05 14 0 2 0   00 03 02 56                   1 0     03 0 19 0
regln 33 12          00 05 00 30 01 18 03 0 6 0   06 00 16 28           6 0   3 0     02 0 05 0
nulan 33 10          09 03 09 04 21 02 00 1 1 0   03 01 23 00       8 00   1 0 7 0 12 0 21 0 24 0
phill 35 11 1 1 00 09 00 58 01 30 00 0 2 0 0 3 00 02 02 17 03 01 0 01 4 0 1 0        05 0 12 0
vllon 38 03          00 04 00 28 02 24 01         00 02 27 15 00 03 7 07 7 2    1 0 01 0 05 0 10 0
```

For Old-Age group's scores:

Column #	Environment
1	-ja- 'not yet'
2	-ya-
3	-kuja 'come'
4	-kuya
5	maji 'water'
6	mayi
7	ngoja 'wait'
8	ngoya
9	ngoa
10	majani 'grass'
11	mayani
12	moja 'one'
13	moya
14	moa
15	-jenga 'build'
16	-yenga
17	-jua 'know'
18	-yua
19	kijana 'youth'
20	kiyana
21	fujo 'noise; problem'
22	fuyo
23	stressed -ja-
24	stressed -ya-
25	(-)ja- before stress
26	(-)ya- before stress
27	-ji after stress
28	-yi after stress
29	stressed -ji-
30	stressed -yi-
31	(-)ji- before stress
32	(-)yi- before stress

Scores are the total occurrences of the variant in
question.

J/Y ENVIRONMENTS ARRANGED TO OLD-AGE GROUP IMPLICATIONAL SCALE

```
              1  2  3  4  5  6  7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
AG ED  Ja ya ku ku ma ma n n n k kl no no no Je ye ku ku J y s s J y Ji y Ji y Ji y
==  == == == == == == = = = = == == == == == == == == = = = = = = == = == = == = == =

37 09 02 02 03 01 01 00        00 46 08 00 04 00 09 01      8 0 6 0 41 0 11 0 29 0
38 11 00 05 00 29 04 04 5 0 0 3 05 01 21 02 00 03 08 24        2 0 02 1 11 1 16 0
41 06 00 03 00 58 00 07 0 5 0 2 7  09 27 16 06 00 02 16    1 0           03 0 08 0
41 12 00 02                    15 00 0 06 00 05 00          8 0           01 0
41 03 05 00 18 00 02 00        4 00 49 03 00 02 0 02 00      4 0   0 10 0 10 0 13 0
42 10 00 05 01 01 01 04        0 04 00 12 00 00 08 00 24      2 0   02 0 06 0 08 0
45 13       00 06              00 08 00       04 03 4 0                01 0 03 0
46 06 00 02 02 19       1 0 0 1 0  17 07 00 10 06 31 11      7 0           06 0 10 0
52 07 01 03 00 07       1 0 0 6 00 10 03 00 01 00 07 00 1 0    2 0 05 0 05 0 17 0
52 04 00 05 01 10 02 01 1 0 0   29 16 02 02 02 18 15 7 1 5 0 1 0 06 0 04 0 26 0
56 09 00 01 00 21 00 04        0 03 00 15 01 01 00 02 05 2 0      02 0 01 0 10 0
57 00 00 06 18 00 00 06        3 02 01 30 06 01 18 12 23    2 0   10 0 03 0 04 0
58 00 00 07 00 23 00 13        7 02 06 07 00 03 02 12 33 2 0 1 0 1 0 03 0 02 0 03 0
60 05       00 27 00 05 0 2 0 0 31 00 23 01 00 18 00 18 2 3 2 0 3 0 06 0 04 0 15 0
61 03       00 59 00 06 0 4 0 0 9  00 13 00 00 06 00 31      7 0·          01 0
62 05 00 12 00 16       0 1 0 1 01 11 01 01 03             2 0 4 0 24 0 01 0 12 0
62 05 00 08 00 05              9 00 15 24 00 11 03 23 03    3 0 8 0       06 0 16 0
65 00 00 03 00 43 00 01 0 3 0 0 12 01 33 00 00 30 00 12                06 0 01 0
66 00 00 02 00 28 00 09        0 02 01 11 00 00 03 52 01 4 0      00 1 05 0 05 0
66 00 01 07 01 41 00 01 0 3 0 0 01 10 39 05 00 09 04 53 5 0    3 0       09 0 05 0
66 02 00 01 00 16 00 04 0 2 0 1 02 00 10 01 01 09 01 05 1 0           01 0
68 03 0 3 02 16        0 2 0 7 01 01 10 00 00 01 21 13 1 0      01 0 07 0 01 0
71 00 00 08 01 45 00 02 0 6 0 0 05 00 25 00 01 18 02 27
71 00 00 05 00 65 02 06        2 07 00 27 00 00 07 01 35 4 0      09 0 03 3 03 0
72 04 00 12 00 20 00 04        2 19 01 17 00 01 03 06 07    1 0 1 0       04 0 20 0
75 00 00 02 00 21 00 02 0 2 1 0 09 01 21 00 00 01 01 80 0 1      02 0       01 0
76 00       00 47 00 14 0 4 2 0 06 00 20 00 00 20 01 17 0 5    01 0 05 1
76 00 00 05 00 20 00 04 0 1 0 3 00 00 07 00 02 07 00 15 1 0 0 2      07 0 01 1
78 00 00 10 0 66 00 10 0 1 0 4 02 01 36 03 0 4 04 30 3 0 0 6   02 1 02 1 03 0
82 00 00 01 00 49 00 07 0 5 0 1 02 00 34 03 00 04 01 16 2 0 3 1 0 2 00 3 08 0 00 2
85 00       00 08       0 4 0 0 02 00 16 02 00 07 01 08              02 1 00 1
92 00       00 18 00 03 0 1 0 4 11 00 08 03 0  1  01 22      2 0 02 0 02 0
99 00       00 21 00 03        0 06 00 34 00 00 07 00 15         26 0 04 0
```

Appendix G

Individual (ni) Scores for Each Environment

In the following table, the total number of ni occurrences within an environment are given on the left-hand side of the dash; the total number of -ko occurrences are given on the right-hand side. The ordering of environments is the same as that which is used and explained in section 2.8.2.1.

VARIABLES: 1 'Subject' 2 'year born' 3 'French modifier'
4 'Sawa + NP/Cl' 5 'ku/mu' 6 'ngufu' 7 'measure' 8 '-zuri/-baya'
9 'rank' 10 'occupation' 11 'sawasawa##' 12 'ethnic group/nationality'
13 'religion' 14 '-A + NP' 15 'kweli' 16 'magumu'
17 'relationship' 18 'demonstrative pronoun' 19 'name' 20 'kama'
21 'complex' 22 'tautology' 23 'nini/nani'

1 Su	2 Bo	3 FrMo	4 Saw	5 KuM	6 Ngu	7 Mea	8 Zuri	9 Ran	10 Occ	11 S##	12 Eth	13 Rlg	14 A+N	15 Kwe	16 Mag	17 Rel	18 Dem	19 Nam	20 Kama	21 Comp	22 Tau	23 Nin
ka	00		0-3		0-1	0-8							0-3			0-3			0-5	2-1		
me	00		0-1		0-7	0-8							0-9	0-4		1-0	0-1			0-1	1-0	1-0
be	01	0-1	0-1			0-4				0-1			0-2			1-0				3-1	0-1	1-0
mu	04					0-2										1-0				5-2	1-0	
ka	10				0-1	0-2				6-1	0-1											
mw	10		0-1																			
ka	10		0-1			0-2																
ka	11	0-1	0-4	1-2					1-0	0-2						2-1			0-1	2-0		1-0
ky	14		0-2	0-1					6-2	1-0						2-1	3-2	2-0	1-0	14-3		1-0
mm	15		0-1						0-1	1-0			0-2							11-2	1-0	
ka	18			0-4	2-1				1-0	1-0			3-0			3-2	2-1	2-1		18-1	1-0	
ru	18	1-0			0-2				6-0	2-0			1-0					7-1		12-1	7-1	
na	19	0-1	0-1			0-2										0-1			0-1	7-1		
ka	20	0-1	0-1			0-4			0-1	1-0			0-1			0-2	2-0		0-1	17-1	1-0	1-0
mw	20	0-2	0-1			2-2			0-1	1-0			1-0				0-1		0-1	7-0	1-0	1-0

	1 Su.	2 Bo	3 FrMo	4 Saw	5 KuM	6 Ngu	7 Mea	8 Zuri	9 Ran	10 Occ	11 S##	12 Eth	13 Rlg	14 A+N	15 Kwe	16 Mag	17 Rela	18 Dem	19 Nam	20 Kama	21 Comp	22 Tau	23 Nin
ta 20			0-1																				
nd 21			0-1	0-1																			
lu 23			0-1	0-1	0-1																		
ng 23			0-1	0-1	0-1	0-3																	
k 24					0-2	0-1	1-2																
lu 24				0-3		0-1	0-6	4-2	4-2														
sh 24							0-8	0-5															
ma 25				0-3			0-5	0-2															
ka 26					1-3	0-2	0-8	0-1	0-1														
lu 26				0-2	0-2	0-3	2-1	1-2	0-1									3-0	2-1				
ta 28				0-2	0-2		0-1		1-0									0-1	0-1				
mw 30			0-1				0-3						1-2					1-0		1-0			
ka 34				2-0	0-2	1-0	1-3	2-0	0-1				0-1	1-0					0-1				
ma 34			0-1	0-2	0-4	3-4	1-1		2-0				1-0	1-2		2-0				2-0			
ka 39				0-5	1-2	0-2	0-1		0-1			1-1	5-0	1-0		1-0	5-0	1-0	1-0	1-0		1-0	
td 40				0-4	0-1	1-1	0-1					0-1	1-0	0-1		1-0	1-0	1-0	1-0	1-0			
id 45			0-2	0-1	1-5	0-2	0-1			2-0	1-0		2-0			2-0	2-0	2-0	2-0	18-0		1-0	1-0
ka 45			0-1	0-2	0-1	0-2	0-1	4-0						0-1				1-0	3-0	10-0		1-0	1-0
zu 45						1-0	0-2	0-1		1-0								1-0		16-0		1-0	1-0
ma 46				1-1		1-0	1-0	2-0								2-0		1-0	3-0	6-1		2-0	2-0
mu 46					1-0	0-1						0-1								6-4		1-0	1-0
pa 46			0-3	0-2	4-0	3-0	0-1						4-0	2-0	6-0	4-0	1-0	4-0	2-0	29-0		1-0	1-0
mu 48				0-2	0-5	0-5	0-7									1-0	2-1		1-0	9-1			1-0
w1 50						5-4	1-5											2-0		20-5			
pk 51			0-4	0-1	0-1	1-6		0-1		2-0					1-1	1-1	4-0	2-0	10-0	3-0		
he 52			1-7	0-2	1-0	0-2			0-1	0-1			2-0	1-0	1-0	1-0	2-0	4-3		
km 53			1-8		2-5	0-1		1-0				1-3			2-0		0-1		
mt 53			1-10		0-1	1-6	0-1					3-1		3-0			30-3		1-0
mu 53				0-2		0-1	0-1						0-2	2-0	5-0	1-0	10-1	1-0	
re 53			0-3	0-1	2-0			1-0	0-1			1-0	1-0	1-0	1-0	3-0	1-0	
v1 53			0-7	0-2		1-4						1-1	0-1	2-0	0-1	12-0		2-0
am 55			0-11	0-1	0-1	2-5	4-5		0-1			3-0	1-1		2-0	5-1	15-2		1-0
br 55			0-3	0-3		1-0	2-0	1-0	1-0		2-2	2-1	3-0	3-0	11-0	3-1	58-0	2-0	1-0
ka 55			2-3	0-1	2-0	2-1	1-1	0-1	1-1		1-1	8-0	1-0	1-0	1-0	12-0	6-0	2-0
ma 55			0-16	2-5	1-1	0-2	1-2		1-0	1-0	3-0	1-0	1-0	1-0	1-0	1-0	2-0	2-0	1-1

1 Su	2 Bo	3 FrMo	4 Saw	5 KuM	6 Ngu	7 Mea	8 Zuri	9 Ran	10 Occ	11 S##	12 Eth	13 Rlg	14 A+N	15 Kwe	16 Mag	17 Rela	18 Dem	19 Nam	20 Kama	21 Comp	22 Tau	23 Nin
mu 55			0-1		0-4	0-1		0-3							0-2	7-0		3-0	10-0	3-0		3-0
wa 55	0-1		0-1		1-4	1-4			0-1	0-2							3-0	3-0	3-0	11-0	19-0	2-0	2-0
bu 56	0- 2	0-6		1-0	1-1	1-2			2-1	0-1								2-0	1-0	4-2	22-1	1-0	2-0
ka 56		0-3			0-5	3-1	0-2			1-0				1-0			1-0	2-0	3-0	64-0	11-4		3-0
ml 56					0-2	1-4										3-0	3-0	3-0	3-0	3-0		
ka 57	2-16				0-5	1-4			0-1	0-2	0-4			1-2			1-1	1-0	1-0	18-2	3-0		
ra 57	0- 8	0-1		1-0	1-5	1-0							6-1				4-0	3-0	1-0	10-0			
zi 57	0- 1	0-1		0-1	1-7	0-3					1-0			1-0	1-0	1-0	1-0	1-0	16-1	5-0		
ab 58		0-1	0-6	2-2	1-5						2-0		8-0	8-0	4-0	36-3	2-0						
du 58			0-2	1-2	1-2												2-1		15-0				
lu 58	0-11	0-5	0-2	0-9	0-7				0-1	1-0	1-0	4-2		14-0	27-4	1-0							
sh 58	0- 1	0-2	0-1	4-0					1-0	2-0			1-5			6-1	7-0	5-0					
ab 58	0- 1	0-2	0-1	0-7			1-1	1-0	1-1					36-6	0-1								
wa 58	0- 7	0-8	0-3	2-0			1-0	2-0			3-0	2-0		14-2									
ha 59	0- 2	1-2	1-3	1-0			2-0	0-2			2-1			7-9									
mu 59		0-1	6-7	0-2	0-3		1-0							2-0									
ab 60			2-4	1-0	1-0		1-1		1-0		2-0	1-0	4-0	2-0	1-0	43-0	2-0	0-1					
lu 60	0-14	0-3	3-3	0-4	0-3		1-0			0-4	1-0	1-0	1-0	2-0	7-0	26-1	1-1						
mw 60	0- 1	1-0	1-0		3-0	0-1	1-0			3-0	1-0			2-0	3-0	6-1							
ba 62																							
ki 62	1- 2	0-8	0-3	2-0	0-1	0-3	2-0			5-0	1-0	1-0	3-1	27-3	6-0								
he 63	0- 1		1-0	1-0	1-2	0-2	2-0		3-4	1-0	4-0	5-0	8-0	7-0	1-0								
kaj63		0-2	0-1	1-0	1-0	2-0			7-0														
kam63	0- 2	0-9	2-4	0-3	0-1	3-1		0-2	1-1	4-0	6-0	3-0	5-0	6-0	19-1	6-0							
ng 64	0- 6			0-1						2-1	1-0	1-0	4-2	22-1	1-0								
ju 65	1- 9	0-5			1-1		2-1	1-0	6-1	1-0	1-0	11-0	6-0										
ma 65	0- 7	0-2		1-1	0-3				2-0	2-0	3-0	2-0	4-0	51-2	1-0								
mw 65	0- 1		1-1	2-3	0-1				2-1	3-0	2-0	3-0	3-0	12-2	1-0								
sh 65	0- 1	0-2	3-9	1-2	7-11	0-2	0-4		0-1	2-1	0-2	0-1	7-1	15-6	1-0								
ml 66		0-1	1-2	0-2			0-2		3-0	6-0	8-0	15-6											
de 67	0- 4	0-2	0-4	0-1		0-1		3-0	1-0	1-0	8-1	1-0											
mk 67	0- 1	0-1	0-		6-0	7-0	7-0																
se 67	2-11	1-8	0-1	2-4	5-0	4-0	5-0	7-0	8-2	2-0	2-0												
tab67	0- 2	2-0	0-4		2-0	5-0	2-0	1-0	4-0	4-0	1-0												
tan67	0- 2	0-1	1-3	1-0	6-2	2-0	8-4	1-0	1-0	12-1	1-0												
ka 68	2-0	1-8	0-2	1-0	6-0	2-0	2-0	13-1	5-0	3-0													
az 69	1-0	1-2	0-1		0-1	2-0	2-0	4-3	1-0														

Su	Bo	FrMo	Saw	KuM	Ngu	Mea	Zurl	Ran	Occ	S#	Eth	Rlg	A+N	Kwe	Mag	Rela	Den	Nam	Kama	Comp	Tau	Nin
bu 69	0-3		0-1		0-1	0-4	1-1		0-1					1-0					0-1	2-0	0-1	
es 69	0-1		0-1		0-1	1-2	0-2					1-0	5-1	1-0	1-2	1-1	11-1	1-0	5-0	3-0	2-0	
na 69	0-1		0-2	0-6	0-1	0-3					1-0	1-0	1-0	1-1	1-1	1-0	1-0	9-0	1-0	1-0	
om 69	0-2		0-1	0-4	1-3			0-1			1-0	2-0	1-0	2-0	2-0	1-0	5-0	1-0	1-0	
ta 69	0-1		0-2	0-3							1-2	0-1	2-1	2-0	2-0	2-0	4-0	11-0	1-0
am 70	0-3		0-3	0-3	0-1	0-1		1-2				0-1	1-0			0-1	2-0	3-0	1-0
na 70	0-1		0-1	0-1	0-1	0-1					2-0	2-0	1-0		0-1	5-0	2-0	1-0
bo 71	0-1		0-2	0-1	1-1	1-1		1-0	2-0	2-0	1-0		3-0	3-0	5-0
ch 71	0-1		0-4	0-1	0-1	0-4		0-2	3-0	1-0	3-0	1-0	3-0	7-0	1-0
fa 71	1-1		0-2	0-1	5-1	0-1	1-0	1-0			4-0	4-0	1-0
ka 71	0-4	0-2	0-3		0-3		0-1				
lj 71	0-4	0-1	0-1	0-1				
mu 71		0-1	0-1		1-0	1-0		5-0	2-0
to 71	1-0	0-1	0-1	0-1	1-0	2-0	1-0	6-0
vi 71	1-0		0-1		1-0	1-0	2-0	9-0	2-0
du 72	1-0	0-1		1-0	3-0	2-0	2-0	58-0
ns 72		0-2	4-1	14-0	3-0	5-0	5-0	1-0
pa 72	0-4	0-5	0-1	1-1	1-2	2-0	0-1	0-1	4-0	2-0
si 72			0-2		1-0	2-1	6-0	3-0	8-1
to 72	0-3	0-3	0-1		2-0	1-0	0-1	4-0
za 72		0-1	1-0	0-1	2-0	4-0	2-0	4-0	2-0
ba 73	0-2	0-2	0-1	1-0	0-4	3-3	0-1	3-0	2-0	1-0	4-0
ma 73		0-2	0-1	0-2	2-1	0-1	2-0	1-0	3-0	1-0
mw 73		0-1	0-1	0-3	0-1	1-0	2-2	0-2	4-1
ch 74		0-1	0-2	0-3	1-1	0-1	2-0	0-1
se 74	0-1	0-1	0-2	0-1		4-0	2-0	2-0	1-1	1-0
ba 75			1-0		2-0	1-0	2-0	2-0
tg 76	0-1		1-0		1-0	4-0	1-0	1-0	1-0

1 Su	2 Bo	3 FrMo	4 Saw	5 KuM	6 Ngu	7 Mea	8 Zurl	9 Ran	10 Occ	11 S##	12 Eth	13 Rlg	14 A+N	15 Kwe	16 Mag	17 Rela	18 Dem	19 Nam	20 Kama	21 Comp	22 Tau	23 Nin
bu	69	0- 3				0-4	1-1		0-1				1-0	1-0		2-0		2-0	3-0	0-1	2-0	
es	69	0- 1		0-1	0-1	1-2	0-2						1-0		1-2	1-1	1-0	1-0	9-0	3-0	1-0	
na	69	0- 1		0-6	0-1	0-3							5-1	1-0	11-1	2-0	2-0	5-0	2-0	9-0		
om	69	0- 2	0-1	0-1	0-4	1-3			0-1			1-0	1-0	2-0	1-0	2-0	1-0	1-0	1-0	5-0		
ta	69	0- 1	0-2										0-1		1-1	1-0						
an	70	0- 1	0-3										0-1									
na	70	0- 1	0-1	0-1	0-1								2-1	1-0		1-0	2-1	2-0	4-0	11-0		
bo	71	0- 1	0-1		1-1	0-1						2-0	2-0	1-0	1-0		0-1	3-0			1-0
ch	71		0-2	0-1	0-4																	
fa	71	1- 1	0-4									1-0	3-0	1-0		3-0	1-0	3-0		4-0	1-0
ka	71	1- 1	0-2	0-1		5-1	1-0	1-0					1-0								
lj	71	0- 4	0-2		0-3	0-1						2-0	2-0			1-0	7-0	2-0	4-0	5-9	1-0
mu	71		0-1	0-1	0-1	0-1	1-0	1-0	0-1			1-0							5-0	2-0	
to	71		0-1			0-1															
vi	71	1- 0		0-1								2-0							6-0		
du	72	1-0				0-2	1-0					3-0	2-0	1-0	2-0	2-0	2-0	9-0	2-0	
ns	72				0-1	4-1			1-0			3-0	1-0	5-0	5-0	4-0	58-0	58-0		
pa	72	0- 4	0-5	0-1	1-1	1-2			1-0			1-0		0-1	2-1	4-0	4-1	2-0	2-0	
al	72					0-2									6-0	3-0	2-0		
to	72	0- 3	0-3	0-1		2-1			2-0			2-0		6-0	0-1	3-1	8-1	2-0	4-0
za	72	0- 2		1-0	1-0	3-3	3-0					4-0			4-0	2-0	3-0	4-0	2-0
ba	73			0-2	0-1	0-4						2-1			1-0	2-0	3-1	4-0	2-0	1-0
ma	73	0- 2	0-1	0-1	0-2	0-1	3-0									1-0	1-0	4-0	
mw	73		0-1	0-1	0-1	0-3	0-1				2-1				1-0	2-2		0-1	
ch	74		0-1	0-2	1-0		1-1				0-1	4-0			0-1	1-0	11-0	4-1	4-0
se	74			1-0	1-0					0-1				1-0		1-0	0-2	0-1	2-0
ba	75			1-0						2-0						2-0	1-1	1-0
tg	76	0-1		1-0										2-0				2-0	2-0	1-0

Appendix H

Individual (ni) Scores for Combined Environments

Variable	Values
i "interviewer"	0 'Zairean only' 1 'Zairean + me' 2 'me only'
s 'sex'	0 'male' 1 'female'
b 'born'	1 'before 1950' 2 '1950-1968' 3 '1969-1976'
ed 'education'	0 'none' 1 '1-3 years' 1 '4-6 years' 3 '7-9 years' 4 '10-12 years' 5 '13-15 years' 6 '16+ years'
o 'occupation'	0 'never full-time paid employment' 1 'manual laborer' 2 'teacher' 3 'skilled laborer' 4 'administrator' 5 'preacher'
e 'ethnic group'	1 'Shi' 2 'Rega' 3 'Other'
S 'Necessity of Swahili	1 'not necessary at all' 2 'not necessary but good' 3 'very necessary'
N 'network strength'	0-5 = weakest to strongest
1a 'non-nominal ni'	Numbers = total occurrences in text
1b 'non-nominal -ko'	" " " " " "
2a 'Simple NP ni'	" " " " " "
2b 'Simple NP -ko'	" " " " " "
3a 'Complex NP ni	" " " " " "
3b 'Complex NP -ko'	" " " " " "

NI/-KO: COMBINED ENVIRONMENTS

i	s	b	ed	o	e	S	N	k	Ia no	Ib no	2a no	2b no	3a co	3b co
0	0	1	2	1	3	3	2	3	5	6	1	0	12	1
0	0	1	0	1	3				1	12	0	1	5	2
0	0	1	0	1	3	2	4	4						
0	0	1	0	1	1	3	5	2	0	12			2	1
0	0	1	0	1	3	3	3	3	1	12	0	1	2	1
1	0	1	0	1	3	3	5	3	0	3	8	1	3	1
0	1	1	0		1	3	4	3	2	5	0	1	4	0
0	0	1	0	1	1	3	5	2						
0	0	1	0	1	3	3	5	3	0	3	0	1		
0	1	1	0	0	1	2	5	3	0	3			2	0
0	0	1	0	1	3	3	5	3	3	8	3	3	14	3
1	0	1	0	1	3				3	2	0	4	18	1
0	0	1	0	1	2			4	1	3			14	1
1	0	1	0	1	1	3	5	3	0	7	0	1	17	1
0	1	1	0		1				1	1	1	1	10	
0	0	1	0	1	2	3	5	3	4	12	1	1	19	1
0	0	1	1	1	1	3	5	4	9	9	1	0	11	2
1	0	1	1	1	1				2	2	0	1		
2	0	1	5	4	3				1	3	1	0		
0	0	1	1	1		3	5	3	4	0	3	0	16	0
0	0	1	1	1	3				0	7			0	6
0	0	1	2	1	1	2	4	4	6	14	4	3	7	0
0	0	1	2	1	2	3	4	4	3	9	0	1	20	1
0	0	1	2	1	3	3	5	4	1	3	1	0	8	4
0	0	1	2	1	1				2	1	0	1	6	1
1	0	1	2	1	1	3	4	0	3	1	0	4	6	4
0	0	1	2	1		3	4	4	5	4	1	0	9	0
1	0	1	2	1	1				5	11	2	1	28	0
1	0	1	3	2		2	5	3	1	3	1	3	5	0
2	0	1	4	2	1				1	5	4	0	10	0
0	0	1	3	2	1	3	5	4	11	3	6	0	29	0
0	0	1	3	1	1	3	4							
0	0	1	3	1	2	2	5	4						
1	0	1	4	3	2	3	5	2	0	3			1	0
1	0	1	4	1	1				0	21			9	1
0	0	1	4	3	1									
1	0	2	2	1	3				3	8	0	2	10	0
0	0	2	4	1	2	3	5	3	2	3	0	1	1	0
1	0	2	4	3	3	3	5	3	11	9			30	3
0	1	2	0	1	1	2	3		6	11			8	0
0	1	2	3	3	2				1	0	2	1	12	0
0	0	2	1	1	2	3	5	4	6	9	3	0	20	5
0	1	2	6	4	3				3	1	0	1	4	3
2	1	2	6	4	3				1	7			15	2
0	0	2	0	1	1	2	3	3	2	6			15	0
1	0	2	0	1	1	3	5	4	4	9	0	1	3	0
0	0	2	4	1	2	2	5	4	2	11	1	3	26	1
0	0	2	1	1	1				5	18	2	1	16	1
0	1	2	2	1	1	2	5	3	0	3			7	0
0	1	2	2	0	1				1	0	6	3	6	0
0	0	2	2	1	2	2	2	1	0	1	0	2	19	1
1	1	2	2	1	2	3	5	1	2	9	3	1	19	0
0	0	2	2	1	1	2	3	4	3	1	6	1	26	2
0	1	2	3	3	3									
0	0	2	3	1	3	5	3		14	5	7	0	58	0
0	0	2	3	1	2	2	5	4	2	3	2	1	43	0

l	s	b	e	o	e	S	N	k	no	no	no	no	co	co
0	1	2	3	1	3				3	2	0	2	8	0
0	1	2	3	1	3				4	7	1	2	12	1
0	1	2	3	1	2			4	8	14	1	0	7	9
0	1	2	3		1	2	1	3	5	6	1	1	12	2
0	0	2	4	2	2	3	5	4	0	23	0	3	27	4
0	0	2	4	1	3				2	8	2	2	11	4
0	1	2	4	2	1	2	5	3	6	14	0	2	27	3
0	0	2	4		3				14	14	3	0	8	2
0	0	2	4	1	1	2	2	3	5	3	2	0	14	2
0	1	2	4	0	3				1	7			4	2
0	0	2	4	1	1			2	3	7	1	4	6	1
0	0	2	4	1	1	2	5	3	11	8			36	3
0	0	2	4	2	3	3	5	4	10	1	5	4	22	1
0	0	2	4	2	3	3	4	4	2	1	3	2	36	6
2	0	2	4	2	2	3	2	4	7	2	2	3	64	0
0	0	2	4	2	3	2	5	3	11	25	0	2	15	6
1	0	2	4	0	1	3	5	4	4	7	0	4	51	2
1	0	2	4	0	3	3		3	0	2			7	0
0	1	2	5	4	1				1	5	2	0	3	1
0	0	2	4	2	1	2	5	4	2	13			18	2
0	0	2	4	3	3				5	8			13	1
0	1	2	5	3	3	3	2	3	5	11	2	2	12	0
1	0	2	5	2	2	2	5	3	8	11	0	2	1	0
0	0	2	5	0	3				0	7	0	1	8	1
0	0	2	6	4	3	2	4	3	9	7			10	0
0	0	3	2	0	1	3	3	2	0	5	4	0	2	0
0	0	3	0	0	1	2	4	3	3	2			9	0
1		3	1	0					1	1			2	0
0	1	3	2	0	2	2	5	4	1	0	0	1	2	0
0	1	3	2	0	2	3	5	3	0	4			1	1
0	0	3	2	0	2	3	5	3	0	1	1	0	4	0
0	0	3	2	0	2	2	5	3	2	9	1	0	2	0
0	0	3	2	0	2	2	5		1	4	0	2	0	1
0	1	3	2	0	3	2	5	3	0	2	3	2	2	0
2	0	3	2	1	1	2	5	3	1	1	1	0		
0	1	3	2	0	1				0	1	1	1	4	1
2	1	3	3	0	1				0	5	0	1	7	0
0	0	3	2	0	1	1	5	3	0	3	1	0	2	0
0	1	3	2	0	3				4	3	2	0	4	0
0	0	3	2	0	1		4	3	0	7	0	1	4	0
0	1	3	3	0	2				0	1	0	2	2	0
0	1	3	3	0	3				2	6			8	1
0	1	3	3	0	1				0	1	0	1	5	0
0	0	3	3	0	1	2	5	4	23	3	1	0	58	0
0	1	3	3	0	2	2	5	3	2	0			6	0
0	0	3	3	0	1	3	5	4	6	5			5	2
1	0	3	4	0	3	2	3	2	1	12	0	1	9	0
0	1	3	3	0	3				2	8	1	0	1	0
0	1	3	3	0	1				3	3	4	0	4	1
0	1	3	3	0	1				0	5			3	0
0	0	3	4	0		3	4	3	0	5			11	0
1	0	3	4	0	3	2		2	0	2			3	0
1	1	3	3						1	6	0	2	0	1

Appendix I

Plot of (w)a- Scores

```
                          PLOT OF V7 WITH V5
   100                                                              1 O,C
    I                                                                 !
    I                                                                 !
    I                      1 M,1b                                   1 M,C
   87.5           1 O,E1              1 M,C,1b                         .
    I                                                                 I
    I                                                                 !
   75                                                                 .
    I                                                                 !
    I                                                                 !
    I                                                                 !
   62.5           1 O,E2                                              !
W   I                                                                 !
A   I                          1 M,1a                                 !
V   I             1 O,E3                                              !
E  50            1 M,C7                                               !
R   I            1 M,C7                                               I
B   I            1 M,C                                                !
    I            1 O,E2,C                                             !
   37.5                        1 M,C                                  .
    I                                                                 !
    I             1 O,E2                                              I
    I             1 M,C                                               !
   25             2 M; M,C                                            .
    I             2 O,E2; M,C                                         !
    I             1 O,E2,C        1 M,1a         1 O,E4              I
   I1             1 Y,1b                                              .
   12.5           1 M,Ia                              1 O,E5,Ib       !
    I             1 O,E0                                              !
    I                                                                 !
    0             22             2           .          .             !
                  Manual        Teacher      Skilled    Administrator  Preacher
                  Laborer                    Laborer

                              OCCUPATION
```
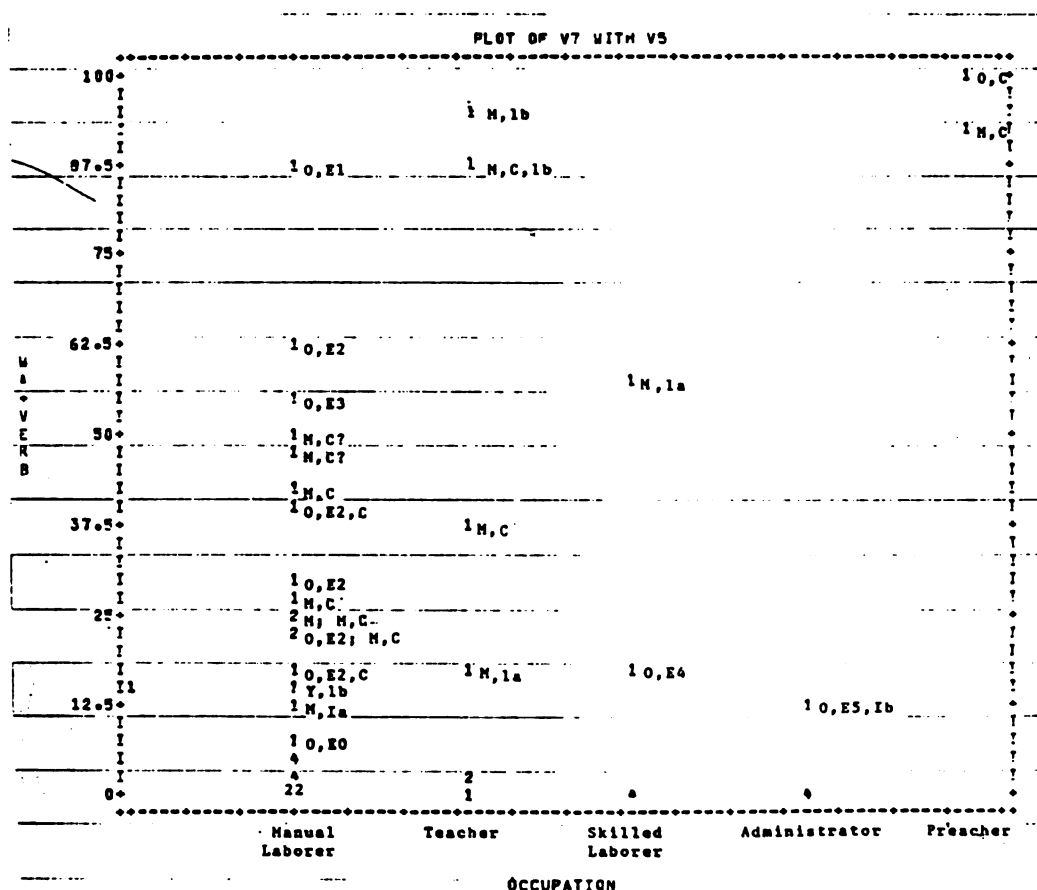
Table . [w] scores according to occupation. C=above average church attendance; C7=church attendance not known; E=Educational level (0=0 yrs; 1=1-3 yrs; 2=4-6 yrs; 3=7-9 yrs; 4=10-12 yrs; 5=13+ yrs); Ia=Interviewed by Zairean + myself; Ib=Interviewed by myself only; M=middle-age group; O=old-age group; Y=young-age group.

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Appendix J

Independent Variables and
Phonological and Lexical Scores

<u>VARIABLE LABELS</u>: <u>1</u> "interviewer" <u>2</u> "sex" <u>3</u> "born"
<u>4</u> "education" <u>5</u> "occupation" <u>6</u> "ethnic group"
<u>7</u> "necessity of Swahili" <u>8</u> "network strength"
<u>9</u> "church attendance <u>10</u> "wa + verb" <u>11</u> wa + noun
<u>12</u> "moja" <u>13</u> "jua" <u>14</u> "French frequency"
<u>15</u> "lakini v. màis"

<u>VALUE LABELS</u>: <u>1</u>: 0 'Zairean only 1 'Zairean + me'
<u>2</u> 'Me only'; <u>2</u>: 0 'male' 1 'female'; <u>3</u>:
1 'Before 1950' 2 '1950-1968' 3 '1969-1976';
<u>4</u>: 0 'no education' 1 '1-3 years' 2 '4-6 years'
<u>3</u> '7-9 years' 4 '10-12 years' 5 '13-15 years'
6 '16+ years'; <u>5</u>: 1 'manual laborer 2 'teacher'
3 'skilled laborer 4 'administrator' 5 'preacher';
<u>6</u>: 1 'Shi' 2 'Rega' 3 'Other'; <u>7</u> 1 'not at
all necessary' 2 'not necessary but good' 3 'very
necessary'; <u>8</u>: 1-5 = lowest to highest;
<u>9</u>: 0 'does not attend' 1 'less than 1X/mo. 2 '1-
2X/mo. 3 '1X/week' 4 'more than 1X/week'
<u>10-13</u>: percentage of standard variant occurrences;
<u>14</u>: 6-99 = lowest to highest frequencies of Swahili
words relative to French; <u>15</u>: percentage of
<u>lakini</u> occurrences.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
i	s	b	e	o	e	S	N	k	waV	waN	moJ	jua	fre	lak
=	=	=	=	=	=	=	=	=	===	===	===	===	===	===
0	0	1	2	1	2	3	4	4	003	006	000	000	047	100
0	0	1	0	1	3	2	4	4	000	000	000	007	052	100
0	0	1	0	1	1	3	5	2	000	000	000	004	099	
0	0	1	0	1	3	3	3	3	001	000	000	000	063	
1	0	1	0	1	3	3	5	3			000	011	048	100
0	0	1	0	1	3				008	002	000	006	069	100
0	0	1	0	1	1	3	5	2	000	003	000	008	074	100
0	0	1	0	1	3	3	5	3			000	006	053	
0	1	1	0	0	1	2	5	3	000	000	000	000	093	100
0	0	1	0	1	3	3	5	3	000	000	005	001	054	100
0	0	1	1	1	1	3	5	4	000	003	005	053	066	100
1	0	1	0	1	3				006	004	000	001	065	100
0	0	1	2	1	3	3	2	3	030	075	009	062	025	100
1	0	1	0	1	1	3	5	3	000	000	019	007	086	100
1	0	1	1	1	1				000	000	000	017	040	100
0	1	1	0		1	3	4	3	000	000	008	098	099	100

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0	1	1	0		1				000	000	000	000	099	
0	0	1	0	1	2			4	002	027	046	027	069	100
1	0	1	3	2		2	5	3						
0	0	1	2	1	1	2	4	4	001	000	008	031	072	100
0	0	1	2	1		3	4	4	039	054	038	088	048	100
0	0	1	1	1	3				000	000	000	000	049	100
0	0	1	0	1	2	3	5	3	000	003	003	034	039	100
0	0	1	3	1	1	3	4		054	081	077	100	037	100
0	0	1	3	1	2	2	5	4						
0	0	1	2	1	3	3	5	4	017	030	015	033	024	089
1	0	1	4	3	2	3	5	2	017	013	000	029	019	100
1	0	1	2	1	1				023	058	062	055	018	097
0	0	1	1	1		3	5	3	088	100	094	100	061	100
2	0	1	5	4	3				013	050	000	033	005	042
0	0	1	4	3	1				000	000	000	000	013	052
2	0	1	4	2	1				094	089	094	100	024	093
1	0	1	4	1	1				004	021	004	025	014	031
1	0	1	2	1	1	3	4	0	063	091	071	074	013	063
0	0	1	2	1	1				001	004	024	011	030	080
0	0	1	3	2	1	3	5	4	100	100	085	090	099	
0	0	2	4	1	2	3	5	3	004	013	000	050	019	
0	1	2	3	3	3				000	000	000	082	017	060
0	0	2	0	1	1	2	3	3	000	000	002	017	048	100
0	0	2	4	2	2	3	5	4	003	029	003	008	013	062
0	0	2	1	1	2	3	5	4	000	000	007	064	066	100
1	0	2	2	1	3				002	003	003	011	019	095
0	1	2	6	4	3				000	000	000	040	006	000
2	1	2	6	4	3				000	001	000	000	005	010
1	0	2	4	3	3	3	5	3	058	065	084	100	009	080
0	1	2	3	3	2				000	004	005	036	017	097
0	1	2	4	2	1	2	5	3	000	000	000	014	017	009
1	0	2	5	2	2	2	5	3	018	016	010	006	009	063
1	1	2	2	1	2	3	5	1	001	009	005	030	077	097
0	1	2	5	4	1				000	000	000	003	011	004
0	0	2	3	1	3		5	3	049	074	060	061	032	092
0	1	2	5	3	3	3	2	3	000	000	000	000	010	033
1	0	2	0	1	1	3	5	4	001	003	015	027	099	100
2	0	2	4	2	2	3	2	4	088	094	072	093	023	082
0	0	2	4	1	3				000	000	000	013	022	089
0	0	2	4	2	1	2	5	4	037	034	008	011	008	054
0	0	2	1	1	1				001	003	002	021	031	009
0	0	2	6	4	3	2	4	3	000	011	029	073	004	000
0	0	2	4	1	1	2	5	3	013	037	033	053	022	100
0	0	2	4	2	3	3	4	4	024	036	050	073	010	057
0	1	2	3	1	3				047	048	013	040	013	043
0	0	2	5	0	3				001	010	000	094	015	070
0	0	2	4		3				000	000	000	025	009	000
0	1	2	3	1	2			4	028	052	047	066	057	100
0	0	2	4	1	1	2	2	3	003	013	010	036	012	006
0	0	2	4	1	2	2	5	4	026	050	033	060	010	066

l	s	b	e	o	e	S	N	k	waV	waN	moJ	Jua	fre	lak
0	0	2	3	1	2	2	5	4	043	075	042	095	032	089
0	0	2	4	1	1			2	000	000	000	008	018	080
0	0	2	2	1	1	2	3	4	022	040	000	020	035	095
0	1	2	4	0	3				000	000	000	083	011	000
0	1	2	3	1	3				000	005	000	019	028	100
0	0	2	2	1	2	2	2	1	004	007	007	016	031	031
0	1	2	2	1	1	2	5	3	000	000	002	021	045	091
1	0	2	4	0	1	3	5	4	003	006	004	098	014	007
0	0	2	4	2	3	3	5	4	092	100	100	099	051	093
0	1	2	3		1	2	1	3	018	040	003	050	050	100
0	1	2	0	1	1		2	3	000	000	000	022	055	100
0	0	2	4	2	3	2	5	3	003	008	000	004	026	000
1	0	2	4	0	3	3		3	012	000	019	036	062	
0	1	2	2	0	1				000	004	000	000	046	100
0	0	2	4	3	3				049	074	000	100	017	010
0	0	3	4	0		3	4	3	006	038	003	075	012	000
1	0	3	4	0	3	2	3	2	000	000	016	075	019	041
0	1	3	3	0	3				000	000	000	083	026	086
0	1	3	3	0	1				000	009	014	033	027	100
0	1	3	3	0	1				006	007	000	010	030	100
1	0	3	4	0	3	2		2	016	009	000	006	023	000
0	1	3	3	0	2	2	5	3	027	021	021	100	020	094
2	0	3	2	1	1	2	5	3	016	033	020	000	099	
2	1	3	3	0	1				001	003	000	097	018	019
0	1	3	3	0	1				003	063	021	100	022	100
0	1	3	3	0	2				003	008	002	048	035	100
0	1	3	2	0	3	2	5	3	000	009	000	000	062	
0	0	3	2	0	1	1	5	3	000	000	000	075	036	092
0	0	3	3	0	1	3	5	4	000	000	003	070	021	081
0	1	3	3	0	3				000	000	005	055	015	100
0	0	3	3	0	1	2	5	4	092	085	068	025	037	100
0	0	3	2	0	1	3	3	2	000	014	003	100	021	100
0	1	3	2	0	3				000	000	000	059	046	093
0	0	3	2	0	2	2	5	3	000	000	014	042	041	095
0	0	3	0	0	1	2	4	3	001	000	009	003	040	097
0	0	3	2	0	2	2	5		000	003	000	000	037	090
0	1	3	2	0	2	2	5	4	020	019	029	100	075	100
0	0	3	2	0	1		4	3	002	010	002	094	027	094
0	1	3	2	0	1				000	012	000	100	017	086
0	1	3	2	0	2	3	5	3	000	010	000	100	034	
0	0	3	2	0	2	3	5	3	000	000	000	000	018	053
1		3	1	0					000	000	002	064		

Appendix K

Samples of Recorded Interview Texts

In this appendix, I give excerpts from several texts to provide extended examples of subjects' speech. The first is from the speech of one of the oldest subjects. His father was a powerful chief of the Bukavu area when it was ethnically homogeneous, before the incursion of Europeans. He had no formal education. The second text excerpt is of a subject from the middle age group with formal education whose linguistic scores used for testing the hypotheses are fairly close to the median scores of her age group. This excerpt is given as an example of fairly typical Bukavu Swahili. The third and fourth excerpts are from two whose educational and socioeconomic statuses are high; both use more French than most other subjects (the fourth excerpt is from one who had the highest rate of French borrowings/code switches). The fifth excerpt is from a preacher who uses a relatively high amount of Standard forms. The final excerpt is from a third-grade teacher who uses Swahili as a medium of instruction in the class-room.

I have chosen excerpts in which the subject speaks with a minimum of interruptions from the interviewer. Capital letters signify ellipsed sounds. Italicized words are borrowed from French. "_____" signifies that the recorded speech is unclear.

Excerpt #1

    Birth: @1894
    Formal education: none
    Occupation: farmer
    Ethnic group: Shi
    Sex: male

In this text, two features distinguishing this subject's speech from founger speakers are: the use of o instead of u as the second person, singular prefix (e.g., sentence 8) and the formation of negative verb phrases with the isolated word hapana "no" rather than the negative verb prefix ha- (e.g., sentences 9 and 20).

Text

1. Nakuambia   kama iko   zamani.   2. kwa ile siku ya
   I.tell.you that it.be long.ago   at   that day of

mutoto wangu, mutoto wangu mukuBwa, iko   sawa
child my   child my   big   he.be he.be like

Huyu,   Mirindi. 3. Na   nani, kama, kama siku minayenga,
this.one Mirindi.   and whatℤ if   if   day I.build

minalunga ndoa,   minakamata mwanamuke wa mbere,
I.join   marriage I.take   woman   of before

tunasinda miaka saba naye   bado   kuzala.
we.conquer years seven and.her not.yet to.bear

4. nakamata ungine, anazala   mutoto, mutoto wa mwanamuke.
   I.take   another she.bears child, child of woman

5. na   ule   mutoto mwanamuke anagufa, namufukuza.
   and that child woman   she.dies I.send.her.away

6. nakamata ungine, ye njo iko,   ye njo miye niko
   I.take   another she whom she.be she whom I   I.be

naye,   ye njo anazala Miri--mutoto wangu mukuBwa Mirindi.
with.her she who she.bears   child my   big   Mirindi

7. iko   sawa Huyu Tabura Huyu iko   Hapa....
   she.be like this Tabura this she.be here

8.okakamata   mwanamuke, okaona   iko   Hapana sikia vire
  if.you.take woman   if.you.see she.be no   hear that

onamwambia   onamufukuza   unakamata ungine. 9. kama
you.tell.her you.send.her.away you.take another   if

Hapana sikia vire onamuambia, onamufukuza   onakamata
no   hear that you.tell.her you.send.her.away you.take

ungine.   10. kama anasikia onamuba--onabakia naye.
another   if she.hears   you.stay with.her

11. njo vire kwa zamani. 12. hakulungage   ndoa
    so that at long.ago   one.didn't.join marriage

sawa Hivi banalunga ndoa.   13. kama banalunga ndoa,
like this they.join marriage   if   they.join marriage

BAnaweka rupeta. 14. ule, ukafika   mu nyumba na ule
they.put ring   that if.you.arrive in house and that

munalunga ndoa   naye,   akakamata   fimbo Hii nyama...
you.join marriage with.her if.she.takes stick this animal

15. zamani ukamua-- ukamwambia: leta chakula we,
    long.age   if.you.tell.her bring food   you

we mwanmuke, alete;   leta, fanya Hivi na Hivi
you woman,   she.shall.bring bring do   this and this

afanye;   kwenda kulima,   akwende   kulima.
she.shall.do go   to.garden   she.shall.go to.garden

16. njo vile ilikuwa zamani. 17. kwa sasa, Hapana
    so that it.was long.ago   at now, no

18. kwa sasa akwambie,   leta   franga nikwende   ku
    at now she.shall.tell.you bring money I.shall.go to

soko   we. 19. ba sasa, leta   franga kwenda ku soko.
market you   of now bring money go   to market

20. kama we Hapana na   franga, we toka,   uko
    if you no   with money you get.out   you.be

sawa maskini we.
like poor   you

*The primary meaning of <u>nani</u> is "who?;whom?" but it is
commonly used as a filler phrase, as in this instance, to
mean "what?"; it signals that the person is searching his
memory for the right expression.

Free translation

1. I tell you it was long ago. 2. At the time of my oldest child M, he was like this one [indicating child in room]. 3. And what, on the day I build a house, I marry, I take my first wife, we live together seven years without her giving birth. 4. I take another wife, she bears a baby girl. 5. That girl dies; I send the woman away. 6. I take another wife, she's the one that I am with now--the one who bore M, my oldest child. 7. She is Tabura, here. 8. If you take a woman and see that she doesn't obey you, you send her away and take another. 9. If that one doesn't obey you, you send her away and take another. 10. If she obeys, you stay with her. 11. That's how it was long ago. 12. One didn't marry like one does now. 13. If they marry, they put on a ring. 14. If you come home and the one whom you married takes a stick--animal. 15. Long ago, you tell her "You, bring food, you woman" and she brings it. "Bring it, do this and that," and she does it. "Go do the gardening" and she goes to do the gardening. 16. That's how it was long ago. 17. Now, no. 18. Now, she says to you "You, give me money so that I can go to the market." 19. Those now: "Give me money for going to the market." 20. If you don't have any money: "You, get out!" You're like a poor person, you!"

Excerpt #2

> Birth: 1953
> Formal education: Three years of secondary school
> Occupation: Mid-wife
> Ethnic group: Rega
> Sex: Female

Text

Interviewer's Question: [ugonjwa] ilikuwa inakukamata aye?
                     sickness   was   taking.you how
                     "How did you come down with the sickness?"

1. ginsi   ilikuwa inanikamata?   2. siyue   minAWezA
   manner it.was   taking.me   I.don't.know I.can

eleza   aye juu   wakati inanikamata ni ma-*deux heures du*
explain how since when   it.takes.me be   two   hours of

matin, trois heures.   3. ile   saa   mi sitakuwa   busingisi.
morning,three hours   that hour me I.won't.be sleep.

4. sawa saa   Hii mtu   analalaka, unasikia saWa
   like hour this person sleeps,   you.feel like

kabusingisi kanataKa kukukamata--lakini tenA
little.sleep wants   to.take.you--but   again

unashituka   unaseMa: kumbe minataKa lala.
you.are.startled you.say: really I.want   sleep.

5. njoo sasa malali   yangu ilikuWA inanikamata ile.
   so   now sickness my   it.was taking.me   that.

6. lakiNi mbele wakati ilianzaka, nilikuwa nasikia
   but   before when   it.started,I.was   feeling

saWa *foie*, *foie* na *rate*. 7. inaniluma   tiii, naenda
like liver liver and spleen   It.hurts.me then, going

kupimisha ni damu, ni mukoyo, ni wapi, Habaone
to.test   be blood, be urine   be where, they.don't.see

ataa jibu   moya. 8. *apres*, nikasikia tu   minaanza
even answer one.   After, I.felt   only I.begin

kuwa na--   nashitukaka   vile.   9. saa moya
be   with-- being.startled like that.   hour one

minaona batu banaingia mu-- mule   mu *chambre*,
I.see   people they.enter   in.there in room,

tunaanza pigana pigana pigana pigana pigana, *apres*
we.begin hit.each.other   after

minatas-- nItasikia   tu   niko na-- nalalamika.
          I.will.feel only I.am   crying.out.

10. kama mwenzangu   minalala naye,   kuna
    if   my.companion I.sleep with.her, there.is

saa nasikia ananitingiza, aseMe: uko unasemasema
hour I.hear she.shakes.me saying   you you.talk.talk

nini? 11. minasema: Hapana. 12. wala ananiambia
what   I.say   no   or   she.says.to.me

aseMe: uko   unalota   nini? 13. minaseMa:
saying you.be you.are.dreaming what   I.say:

siko   nalota, niko macho *mais* niliona Hivi,
I.not.be dreaming I.be eyes but   I.saw   this,

nikaona Hivi, nikaona Hivi. 14. yeYe anasema: Hapana,
I.saw   this, I.saw   this.   she says: no
M

```
hauonake              vile.    15. minasema: ndio, minaonaKa
you.aren't.seeing those.things I.say      yes    I.am.seeing

vile.           16. tukaikalaka.  17. apres kuikala tena
those.things.       we.sat            after to.sit again

18. nikaonaka minalala   tu    Hivi       mu chambre juu
    I.saw     I.lie.down only  like.this in room      since

alikuwaKa zamu          ku Hopitali, njoo kule  kule
she.was   night.shift at hospital, so    there there

masisi kule,  18. iko    saWa balikuwa  bananijaribia
Masisi there,     it.be like they.were they.are.bothering.me

bale  benzangu   juu    hatukukuwa tunasikilizana
those companions since we.weren't we.get.along.with

nabo.        19. minalala mu chambre nasikia mulango ya
with.them.       I.sleep  in room    I.hear  door    of

chambre ina-- inafunguka,    inalia.   20. kipande
room          it.opens       it.creaks     part

minaona kipande ya migulu inakuya  kushimama Hivi       pale
I.see   part    of legs   it.comes to.stand like.this there

ku kitanda.  21. minakuwa NaseMa:  sitaki        yangu,
at bed           I.am     saying   I.don't.want mine,

sitaki yangu,    sitaki        yangu, sitaki yangu.
I.don't.want.mine I.don't.want.mine  I.don't.want mine

22. sasa maina          Yangu nilikuwa
    now  sister-in-law my    I.was

naye       ku chambre akasikia.
with.her at room      she.heard.

23. anakuya   aseMe: nini?  24. uko      unasema    na   nani?
    she.comes says  what?      you.be you.speak with who

uko      unalota?  25. minasema: Hapana, siko        nalota,
you.be you.dream       I.say      no      I.not.be   dreaming

niko macho aLakini nilikuwa napigana, niliona kitu  fulani,
I.be eyes  but     I.was    fighting I.saw    thing some

na  kitu  fulani.  26 na  njo tuliikalaKa tiii...
and thing some.       and so  we.sat      then...
```

Free translation

1. How I came down with it? 2. I don't know if I can explain how since when I did it was two or three o'clock in the morning. 3. At that time, I wasn't asleep. 4. It was a time when people sleep; you feel drowsy enough to sleep but then you are startled. You say "Really, I want to sleep." 5. That's how I was coming down with my sickness. 6. But before it started, I was feeling my liver, liver and spleen. 7. It hurt. Later, I go to test whether it's in the blood, urine, or where but they didn't have any answer. 8. Then, I just feel that I'm beginning to be startled like that. 9. One time, I see people entering the room, we begin to fight, fight, fight, fight, fight, then I just hear myself crying out. 10. If I'm sleeping with a co-worker, there are times I feel her shaking me: "what are you jabbering about?" 11. I say: "Nothing." 12. Or she says to me: "What are you dreaming about?" 13. I say: "I'm not dreaming; I'm awake but I saw this, I saw that, I saw this. 14. She says: "No, you aren't seeing those things." 15. I say: "Yes, I am seeing those things." 16. We sat there. 17. After sitting, again I saw. I was just lying like this in a room since she had the night shift at the hospital--the one there in Masisi. 18. It was as if my co-workers were testing me since we weren't getting along with them. 19. I sleep in my room, I hear the door open. It creaks. 20. I see part of someone's legs coming to stand like this, there at the bed. 21. I am saying: "Stay away from me! I don't want to be hurt!" 22. Now, my sister-in-law with whom I was staying in the room heard. 23. She comes to me: "What is it? 24. "Who are you speaking with? Are you dreaming?" 25. I say: "No, I'm not dreaming, I'm awake but I was fighting. I saw such and such. 26. And so we sat, then...

Excerpt #3
   Birth: 195
   Education: University graduate (3 years)
   Occupation: Executive secretary in prosperous
            private enterprise
   Ethnic group: Shi
   Sex: female

Text

1. ile   siwezi   yua   *parce que*-- hapendi   bibi
   that I.can't know   because   he.doesn't.like wife

Hatumike   juu   ya nini?   2. mi sionAKe* ma--
she.doesn't.work because of what   I I.don't.see

sionAKe*   *probleme.* _____   3. anaji*imposer*   kwangu?
I.don't.see problem   he.imposes.himself on.me

4. b*ien sur* anapashwa *jiimposer*   *sinon*   mi
    well sure he.must   impose.himself if.not   I

ndamuonea   5. anapashwa kujionesha
I.will.look.down.on.him   he.must   to.show.himself

kama ye njo   *chef.*   6. *bon,*   kaMA anasema:
that he the.one.who boss   well   if   he.says

"usitoke   saa   Hiyi".   7. tunatoka *par exemple seize*
don't.leave hour this   we.leave for example sixteen

heures moins le quart.   8.   ambia "Hapana usItoke
hours minus the quarter   says   no   don't.leave

na   mi siyakuya.   9. mi nikala.   10. *bon,* kama sasa
and me I.haven't.yet.come   me I.sit   well, if   now

tuseme   ningekuwa   na   bwana   ku nyumba mwenye
let's.say I.would.be with husband at house   who

ananingoya   *seize*   *heures.*   11.*seize*   *heures* mi
he.waits.for.me sixteen hours   sixteen hours   me

sikuye,   niko na   minachunga *patron* mpaka saa
I.don't.come I.be with I.attend   boss   until time

atakuya.   12. ona pale anaweza sirika.   13. *comment*
he.will.come   see there he.can be.angry   how

anachelewa   kule   na   mi niko namungoYa.   14. *mais*
he.is.late   there and me I.be be.waiting.him   but

mi sione,   sione   *pourquoi* mtu   anAWeza kukataza
me I.don't.see I.don't.see why   person he.can   to.refuse

bibi yake kUtumika.... 15. *en tout cas* minazani
wife his   to.work   in all   case I.think

Habanioneage.   16. siItikage
they.don't.look.down.on.me   I.don't.accept

banionee   *en tout cas.*   17. *mais* minazani
they.shall.look.down.on.me in all   case   but   I.think

ina*dependre,* inafatana   na -- gisi mutu   ye   peke
it.depends   it.follows.with with   way person she alone

anajikamata.   18. kama minajikamata--
she.takes.herself   if   I.take.myself

sijipatie   ile   nguvu,   mi peke
I.don't.get.for.myself that strength I   alone

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sijipatie              ile  buchef,     njo vile na  mi
I.don't.get.for.myself that leadership so  that and I
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batanikamata.        19. kama saa  ya kukamata decision
they.will.take.me        if   time of to.take   decision
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minaanza "ee tutasema-- niseme        nini?" batayua
I.begin  "ee we.will.say I.shall.say what  they.will.know
```

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kama mi si-- sina           ile  uwezo   ya kusema.
that I       I.don't.have that ability of to.speak
```

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20. inafaa             mwanaume anisisaidie     njo
    it.is.necessary man      he.shall.help.me so.that
```

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ntasema.
I.will.speak
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*Transcribers agreed that a "raised tone" on last syllable indicates that the -ak- "habitual" or "emphatic" marker is ellipsed.

Free translation

1. That I can't know because--why doesn't he want his wife to work? 2. I don't see any problem.... 3. Does [the boss] impose himself on me? 4. Of course! He must impose himself; if not, I won't respect him. 5. He must show that he's the boss. 6. If he says: "Don't leave at this time--" 7. We leave [work], for example, at quarter of four. 8. He says: "No, don't leave if I haven't yet come. 9. I stay.
10. If now-- let's say I had a husband at the house who was waiting for me at four o'clock. 11. Four o'clock, I don't come; I'm looking after the boss until he comes. 12. You see, he can be angry in that situation: 13. " How can she be late there while I'm waiting for her?" 14. But I don't see, I don't see why a person can keep his wife from working.... 15. Really, I don't think they look down on me. 16. I don't accept that they look down on me, really. 17. But, I think it depends; it's according to how the individual person carries herself. 18. If I carry myself-- I don't get for myself that strength, I alone don't get the leadership, and like that they will take advantage of me. 19. If, when it's time to make a decision, I begin "Hmmm, what should we-- what should I say?", they will know that I don't have the ability to speak. 20. It's necessary for a man to help me so that I can speak.

Excerpt #4

Born: 1957
Education: Post-secondary degree (three years)
Occupation: Assistant director of
a financial institution
Origin: Kasongo area (he arrived in Bukavu in early
teens)
Sex: male

(The use of French in the following excerpt is typical
of the whole text)

Text

Interviewer: labda   kesho   au kesho   kutwa
perhaps tomorrow or tomorrow is.met

unaweza   pita *directeur* kabisa   kule
you.can   pass director completely there

ku [name of institution]. unawaza   nini
at   you.think what

suivant   gisi uko   unatumika?
following way you.be you.work

1.miye *personnellement, j'ai mes principes. 2. Principe*
 mi   personally,   I've my principles   Principle

yangu, *je n'ambitionne jamais un poste. 3. Depuis que*
my   I not.seek   never   a position. since that

nilianzaKA tu--si*   unaisha   ona gisi nilikuelezea.
I.began   not.be you.already see way I.explained.to.you

4. Nilimaliza, *on me dit: "vous etes engage   telle   part;*
   I.finished one me tells you are employed certain place

je suis parti. 5. compte   tenu ya mamatieres, peut-etre
I am   parted   account held of materials   maybe

njo batu   bana*juger* abo banyewe.   6. nilifika ku
so people they.judge them themselves   I.arrived at

[name of institution] *comme inspecteur. 7.quelques temps*
                       as   inspector   some   time

apres, j'etais promu   chef de service; quelques temps
after I was   promoted head of service some   time

apres j'etais promu   assistant du directeur. 8. si
after I was   promoted assistant of director   if

banye   biko na-- na*apprecier* banani*elever* ku *rang* ya
those.who they.be   evaluating   they.raise.me to level of

directeur, je ne   trouve pas-- je ne   trouverai rien   de
director, I not find   not   I not find   nothing of

special parce que mina*assumaka* ma*fonctions du directeur.*
special   because I.assume   functions   of director.

9. *a chaque fois qu'il   est absent, c'est moi qui*
    at each   time that.he is absent, it's me that

dirige l'enterprise.   10. donc pratiquement, il n'y
directs the.enterprise   so   practically, it not.there

a   rien   de nouveau ya kuseMA batani*apprendre   mule*
has nothing of new   of to.say they.will.teach.me there

mu *maison.* 11. *parce qu'il y a   meme des fois je fais*
in house   because there are even some times I do

trois mois   d'interim.   12. je connais bien l'enterprise
three months of.interim   I know   well the.business

parce que wakati nilipita *assistant du   directeur,*
  because when   I.passed assistant of.the director,

nili*subir   periode* moYa ya *formation* yenye ilini*permettre*
I.underwent period   one of training   which it.permitted.me

kujua   enterprise, *comment ca se passe.* 14. *c'est a dire*
to.know business   how   it occurs   that's to say

le-- l'ancien   directeur akaNIpatia *un mois, rien   que*
    the.former director   he.gave.me one month nothing that

lire et   comprendre   tous les documents qui   existent dans
read and understand   all the documents which are   in

la maison. 15. *entant que assistant, si vous me poser*
the house.   as.much as assistant if you me pose

une question sur la [name of organization], je sais que ca
a   question on   the   I know that it

existe telle part, peut-etre sitakuwa   tu   njo na
exists such place maybe   I.won't.be only so with

ma*references, mais* ninajua kama ina*exister* mu [name of
references   but I.know that it.exists   in

institution]. 16. *tout un mois,   tu ne fais que lire de*
                    all a month   you not do   but read of

sept	*heures*	*trente*	*a*	*quinze*	*heures*	*trente.*	*17. alors*
seven	hours	thirty	to	fifteen	hours	thirty	so

ilini*permettraga*	*en*	*tout*	*cas*	kuni*former*	*mwa*	*ile*	*cadre.*
it.permitted.me	in	all	case	to.train.me	in	that	respect

*The negative copula <u>si</u> is commonly used to introduce a
rhetorical question to which the expected answer is "yes".
It is much less commonly used in the standard sense for
signalling the negative mode. Rather, the <u>-ko</u> copula is
generally used with a negative prefix (<u>si-</u> in first person,
singular and <u>ha-</u> in all other persons).

Free translation

Interviewer: Maybe you'll have the highest position at
[institution] one of these days. What do
you think about that in terms of how you
are working?

1. Me, personally, I have my principles.   2. My principle
is never to seek after a position.   3. Since I began--
you've already seen what I explained to you, right?   4. When
I finished [school], one said to me: "You are employed in a
certain place." I left for there.   5. With regard to
content, maybe people judge for themselves.   6. I arrived
at [name of institution] as an inspector.   7. A while later,
I was promoted to be the head of service. A while later, I
was promoted to be the assistant director.   8. If those who
are evaluating me raise me to the director level, I won't
find that to be anything special since I have already taken
on the responsibilities of director.   9. Whenever he is
absent, it's me who directs the business.   10. So,
practically, there's nothing new in-house that they will
teach me   11. because there are even times when I will do
three months as interrim director.   12.   I know the business
well because when I became assistant director, I underwent
one month of training which permitted me to know it, how it
operates.   14. In other words, the former director gave me
one month to do nothing but read and understand all the
documents which are in the house.   15. In the position of
assistant, if you ask me a question about [name of
organization], I know that [the answer] exists in a certain
place; maybe I won't have the references but I know if it
exists in [name of institution].   16. A whole month, you
don't do anything but read from 7:30 AM to 3:30 PM.   17. So,
it really permitted me to train myself in that respect.

Excerpt #5
    Birth: 1949
    Education: Secondary school
    Occupation: Pastor
    Ethnic group: Shi

Note: In this text, I underline high phonological,
morphosyntactic, and lexical forms that are rarely used in
Bukavu Swahili. This text is in answer to the interviewer's
question: na watoto munawasomesha "and you pay for your
children's studies?"

Text

1. ndio. Mungu ni wa ajabu kama vile nimetoka[1]   kusema.
   yes. God   be of wonder like that I.have.left to.say

2. kweli hiyo[2] elfu   moja na mia   tano, ao elfu
   truly this   thousand one and hundred five or thousand

moja, ao *zaires* elfu   mbili kama vile nilivyosema[3] mbele,
one   or zaires thousand two   like that which.I.said before

wakati unapozipata[3],   zinakuwa   na   mibaraka.
time   when.you.get.them they.become with blessings

3. tunazikamata zile   pesa ambazo[3] kanisa inatupatia,
   we.take.them those money which   church it.gives.to.us

tunakamata *zaires* elfu   moja tunapatia mwanamuke.
we.take   zaires thousand one we.get.to woman

5. mwanamuke anapita   mu Kadutu, anachuruza ndagaa[4],
   woman   she.passes in Kadutu, she.sells   smelts

anachuruza visamunyu, viazi   ao bunga, ao anachuruza
she.sells bananas,   potatoes or flour or she.sells

vitunguu, ao pilipili. 6. hivi   faida anayopata[3]
onions   or pepper   like.this profit which.she.gets

kwa ile, mara   nyingi[5] ananunua[6] vyakula vya siku ambayo[3]
by that times many   she.buys   food   of day which

tutakula   na watoto[7] wanapata[7]   kukula. 7. hivi
we.will.eat and children they.will.get to.eat   like.this

kama kunaombwa   malipo kwa masomo ya watoto, mama
if   there.is.asked fee   for school of children mother

huyo[2] anasaidia kwa njia ile ile kusudi tunapata namuna
this she.helps by road that that so.that we.get   way

ya kusomesha   watoto   wetu. 8. Hivi   Mungu
of to.make.study children our   like.this God

anaibariki   na tunapata kuishi.   9. watu   wengi
he.blesses.it and we.get   to.live   people many

wanashangaa vilevile kwa namuna gani tunaishi,
they.marvel also   at   way   which we.live

10. tunasomesha   watoto,   wanagonjwa,   tunawavalisha,
    we.make.study children they.become.sick we.dress.them

11. lakini Mungu anaibariki   kwa ile   njia nimetoka[1]
    but   God   he.blesses.it by that road I.have.left

kukwambia,   kwamba wasaidizi wetu yani   wake   wetu nao
to.tell.you that   helpers   our that.is wives our and.they

wanajipa   moyo, 12. wanakazana   kusudi   na
they.give.themselves heart   they.persist so.that and

wapate   kusaidiana   na   sisi, na Mungu
they.shall.get to.help.one.another with us,   and God

anawabariki   mahali wanapopita[3].   13. kwa njia hiyo[2],
He.blesses.them place where.they.pass   by road this

watumishi wa Mungu wanaishi.
workers   of God   they.live

1. The present perfect marker -me- is usually replaced
   by the present tense -na- or past tense -li-. (See
   Appendix __, section_____.

2. Standard Swahili has three demonstrative base forms.
   The counterparts of the hio "this, already referred
   to" form used in sentence 2 are hii "this" and ile
   "that". Only the last two are generally used in
   the Bukavu vernacular.

3. Generally, only juxtaposition or the isolated
   morphemes njo or -enyi (the latter prefixed by a
   class marker) are used to indicate relative
   clauses in the Bukavu vernacular.

4. Generally, an [1] would be inserted between the
   final two vowels: ndagala.

5. The class 10 concord prefix ny- accords with the
   plural noun mara "time; occurrence" (class 9/10).
   However, in the Bukavu vernacular, mingi is
   generally used to qualify nouns in all but the
   second ([+human]) class.

6. Generally, -uza is used rather than -nunua for the verb "buy" (in standard, uza means just the opposite: "sell").

7. Generally, the class 2 marker of plural, human referents is pronounced as an obstruent (stop or fricative).

Free translation

1. Yes. God is wonderful, as I've just said. 2. Truly, this 1,500 or 1,000 or 2,000 zaires, as I said before, when you get them, they become blessed. 3. We take the money which the church gives us and give 1,000 zaires to my wife. 5. My wife goes to Kadutu and sells smelts, sells cooking bananas, potatoes, or flour, or sells onions or hot peppers. 6. In this way, the profit which she gets by that she often uses to by the day's food which we will eat and the children get to eat. 7. Thus, if the children's school fees are demanded, the wife in that very way so that we will have a way to educated our children. 8. Thus, God blesses the money and we are able to live. 9. Many people are amazed also at the way we live. 10. We educate our children, they become sick-- we clothe them. 11. But God blesses the salary in the way I have just told you: our helpers, that is, our wives are courageous. 12. They persist and are able to help us, and God blesses them whereever they go. 13. In this way, God's workers live.

Excerpt #5
      Birth: 1962
      Education: Secondary School
      Occupation: Third-grade teacher
      Ethnic group: Shi
      Sex: Female

Text

Interviewer asks her to tell about her work, the way she teaches, and advantages and drawbacks of teaching.

1. miye ____. 2. kwa Hiyo kusikilizana na batoto,
   me   for this to.get.along.with with children

ya kwanza haifae   kuwa mkali. 3. juu
of first it.isn't.suitable to.be mean.   since

ukisha   kuwa mkali, kila neno utafundisha,
if.you.already be   ·mean each word you.will.teach

mwanafunzi ataitika   aseme alisika   et pourtant
student   he.will.agree saying he.understood and yet

hakusikia.   4. juu   ya nini? juu   ya
he.didn't.understand   because of what   because of

bukali   yako. 5. we mwalimu inafaa   unakuwa
meanness yours   you teacher it.is.suitable you.be

simple mbele ya batoto.   6. Inafaa
simple before of children   It.is.suitable

munazoeana,   we na batoto.
you.become.accustomed.to.each.other you and children

7. Mukisha   zoeana,   utayua
   If.you.already are.used.to.each.other   you.will.know

aseme HuYu mwanafunzi iko   na   akili   fulani, Huyu
saying this student   he.be with intelligence some,   this

mwanafunzi iko   na   akili   ya chini, Huyu iko   na
student   he.be with intellegence of low,   this he.be with

akili   ya yulu. 8. banafunzi bote habakuage   sawa.
intelligence of high   students all they.aren't same.

9. kila mutu   iko   na   yake akili   yenye Mungu
    each person he.be with his intelligence which God

alimuumbaga   nayo. 10. Usiforcer   nature yake
he.created.him with.it   Don't.force nature his

kabisa juu   apate   akili   ya kutambuka
greatly since he.shall.obtain intelligence of to.surpass

ile   yenye Mungu alimuumbaga   nayo. 11. Hapana.
that which God   he.created.him with.it   no

12. Bon, minafurai _____ minaonaga ku balimu, _____.
    Well, I.am.happy   I.see   at teachers

13. Nilifundisha mutoto, mwisho wa mwaka anapata,
    I.taught   child, end   of year he.gets,

14. ni furaha   yangu mi mwalimu juu k-- sifa
    be happiness my   me teacher since   praise

itaenda   asema mwalimu fulani anayUa   kufundisha.
it.will.go saying teacher certain she.knows to.teach.

15. na   hangekuwa   mwalimu fulani,
    and she.hadn't.been   teacher certain,

singepataka   *diplome* yangu *ou*
I.wouldn't.have.gotten   diploma my   or

singepataga   Hivi na Hivi mu maisha. 16. njo
I.wouldn't.have.gotten   this and this in life   so

furaha   minaonaga ku bwalimu ile.   17. maalaka
happiness I.see   for teaching that

ziko   mingi sana, alakini na we walimu, unayUa   kaMA
they.be many very, but   and you teacher, you.know that

kazi ya mwalimu ni kusema.   18. na kama uko   nafundisha
work of teacher be to.speak   and if   you.be teaching

inafaa   kupana mamifano mingi juu   banafunzi
it.is.suitable   to.give examples many so.that students

basikie.   19. banasikiliaga   *a travers* ile
they.may.understand.   they.understand through   that

mifano. 20. *Bon*, na kisha fika   ku nyumba, ile saa
example   well and after arriving at house,   that time

ma*preparation*, manini,   inafaa   kwanza we
preparations,   what.things it.is.suitable first you

mwalimu mbele ukule,   ukuwe na   nguvu.   21. kama
teacher before you.eat you.be with strength   if

haukule   muzuri, unalala   mubaya, kusirika
you.don't.eat well   you.lie.down badly   to.be.mad.about

nini. 22. ile yote iko   napunguza ma-- bitu   mu kichwa.
what   that all it.be lowering   things in head

23. byote   benye ungeenda   fundisha kule ku masomo,
    all.things which you.would.go teach   there at school

haiko   tena. 24. ao ukisha   wa na   bisirani ku
it.isn't again   or if.you.already be with anger   at

masomo, "ah, leo   bibi yangu alinikosea,   leo
school   ah, today wife my   she.did.me.wrong today

bwana   'angu alinifanya Hivi na Hivi." unAenda lumiza
husband my   he.did.me this and this   you.go hurt

mutoto wa batu.   26. ao byote   benye ungifundisha
child of people   or all.things which you.would.teach

```
batoto,    hauna              tena  idee ku kichwa yako unaanza
children you.don't.have      again idea in head    your you.begin

kuwa   nasema bingine       bingine.  27. unaona    pale
to.be  saying other.things other.things  you.see  there

banafunzi habawezi    sikia. _____   28. mwalimu
students  they.can't  learn                 teacher

inafaa            unakuwa simple, unazoea               na
it.is.suitable    you.be  simple, you.be.accustomed with

batoto    nA   unaz--, unayua   namuna ya kubaencadrer.
children and         you.know way    of to.care.for.them

29.  bale   banafunzi utaona         munafikisha
     those  students  you.will.see   you.enable.them.to.arrive

mwisho wa mwaka muzuri.  30. na  ule       mweNYE alikuwa wa
end    of year  well         and that.one who     he.was  of

kupata, wa akili,        atapata.       31. na  mweNYE       alikuwa
to.get  of intelligence he.will.get        and the.one.who he.was

wa kukosa, juu    mu somo kunaikalaga wa kupata na  wa
of to.miss since in class there.sit   of to.get and of

kukosa, anakosa.
to.miss he.misses
```

Free translation

1. I ___. 2. So, to get along with children, first, one
musn't be mean. 3. Since if you've already been mean, the
student will accept each word you teach, saying that he
understood even though he did not. 4. Why? Because of your
meanness. 5. If you are a teacher, you need to be simple
in front of the students. You need to get used to each
other, you and the children. 6. Once you're used to each
other, you will know this student has a certain intelligence
level, this one has a low level, this one has a high one.
8. Students aren't all the same. 9. Each person has his
intelligence level which God created him with. 10. Don't
force his nature to obtain a level of intelligence
surpassing that which God created him with. 11. No. 12.
Well, I'm happy _____ I see teachers ____.
13. I taught a child and at the end of the year he gets to
go on. 14. It's happiness for me since my reputation will
go out. People will say: "This one knows how to teach. 15.
And if it wasn't for her, I wouldn't have gotten my diploma
or I wouldn't have gotten this and that in life." 16. So,
that's the happiness I see in teaching. 17. There are many

responsibilities but, as teacher, you know that a teacher's work is to speak. 18. And if you are teaching, it's necessary to give many examples so that the students will understand. 19. They understand through those examples. 20. Well, after coming home, the time for preparations, what all, it's necessary first that you eat, so that you'll be strong. 21. If you don't eat well, you sleep poorly, and get mad about anything. 22. All that hampers your ability to think. 23. All that you were planning to teach there at school no longer exists. 24. Or you are already fuming at school: "oh, today my wife did me wrong," "today my husband did this and that." You go and hurt the children of others. 26. Or, all that you were going to teach the children, you don't have an idea in your heard and you begin to talk about all kinds of other things. 27. You see there that the students can't understand. _____ 28. If you're a teacher, you need to be simple, get used to your students and -- know how to take care of them. 29. You'll see that you'll enable them to get to the end of the year well. 30. And the one who had enough skill to pass will pass. 31. And the one who fails--since in class there are always those who pass and those who fail, fails.

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