



# **A Study of Ffulde Varieties of Eastern Niger: Dialect Intelligibility and Language Attitudes**

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# Contents

## **1. Introduction**

- 1.1 Theoretical issues**
- 1.2 Fulfulde speaking groups in Niger**
- 1.3 Written materials in Fulfulde**
- 1.4 Summary of research purpose and hypotheses**

## **2. Methodology**

### **2.1 Sampling**

- 2.1.1 Selection of potential reference dialects for text testing
- 2.1.2 Selection of data collection sites within the zones
- 2.1.3 Selection of individuals at each data collection site
- 2.1.4 Non-response
- 2.1.5 Actual sample population for the language attitude assessment
- 2.1.6 Summary

### **2.2 Methods of data collection**

- 2.2.1 General sociolinguistic interview schedule
- 2.2.2 Vallette list
- 2.2.3 RTT
- 2.2.4 Language attitude assessment instrument

### **2.3 Summary**

## **3. Results**

### **3.1 Intelligibility between western Niger Fulfulde and eastern Niger varieties**

### **3.2 Intelligibility for eastern Niger Fulfulde varieties**

### **3.3 Language attitudes for eastern Niger Fulfulde varieties**

- 3.3.1 Areas of evaluation: shared identity, identity difference, and language appreciation
- 3.3.2 Attitude assessments by zone
- 3.3.3 Attitude assessments by age and sex

### **3.4 Discussion**

## **4. Conclusion**

## **Appendices**

### **A: The Vallette list**

### **B: Language attitude assessment instrument questionnaires**

### **C: Detailed results of attitude assessment instrument**

- C.1 By zone and by text
- C.2 By age-sex category and by text

## **Selected references**

## **Table of Figures**

- Figure 1.1 Locations of Fulfulde speaking groups in Niger
- Figure 2.1 Harper's Zones extended into Niger (Zones 0-3)
- Figure 2.2 Zone 4 representing the Wodaabe Fulani
- Figure 2.3 Locations of reference texts for Zones 0-4
- Figure 2.4 The 17 data collection sites
- Figure 2.5 Quota grid for sampling individuals
- Figure 2.6 Individuals selected for language attitude assessment
- Figure 2.7 Sample population
- Figure 2.8 Evaluation scale for RA-RTT
- Figure 3.1 Map of highest lexical similarity figures
- Figure 3.2 Lexical similarity figures for Zone 1
- Figure 3.3 Mean "Shared Identity" results by text
- Figure 3.4 Mean "Identity Difference" results by text
- Figure 3.5 Correlation between positive judgments, age and sex

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## **Abstract / Résumé**

This study of Fulfulde varieties spoken in eastern Niger took place in 1998 and 1999. SIL Niger requested the study in order to determine if an existing language-development project in the Fulfulde of western Niger, eastern Niger, or central Nigeria would serve Fulfulde speakers in eastern Niger. Preliminary information indicated uncertainty as to the extent of intercomprehension between Fulfulde speakers, as well as a question of tensions between sedentary and nomadic speakers that could potentially prevent the two groups from using the same written materials. Various methods were used to study intelligibility between Fulfulde varieties, including a lexical and grammatical item elicitation list and recorded text testing. In addition, a language attitude assessment instrument was designed to explore language attitudes among eastern Niger Fulfulde speakers. Lexical and grammatical differences between the dialects indicated that speakers best understood those dialects closest to them, although comprehension of all texts representing potential reference dialects was good. Speakers generally demonstrated positive language attitudes for all potential reference dialects, however, middle-aged and old men were more critical than the rest of the population.

Cette étude de dialectes fulfulde dans la République du Niger a eu lieu de 1998 à 1999. Elle faisait l'objet de demande par la SIL au Niger, et elle avait pour but une recommandation quant à un éventuel dialecte de référence pour les locuteurs peuls à l'est du Niger. Actuellement, il existe trois projets de développement de langue : un à l'ouest du Niger, un parmi les peuls nomades de l'est du Niger, et un dernier au Nigeria. Autre que la question de compréhension du matériel écrit de ces projets par les locuteurs du fulfulde dans l'est du Niger, il y avait la question d'acceptation des peuls sédentaires pour le matériel développé dans le parler des peuls nomades. Cette étude a donc employé plusieurs méthodes de collecte de données pour adresser la question d'intercompréhension, y compris une liste de mots et d'éléments grammaticaux, ainsi que le test de textes enregistrés. En plus, un instrument pour sonder les attitudes langagières a été développé. Les résultats de l'étude montrent une bonne compréhension de tous les textes qui représentent les éventuels dialectes de référence, malgré des taux de similarité linguistique relativement bas. En ce qui concerne les attitudes langagières, les peuls sédentaires et nomades démontraient les attitudes positives envers tout parler, bien que les réactions des hommes de moyen âge et de troisième âge se révélaient plus discriminatoires.

## 1. Introduction

Fulfulde is a language of the Atlantic branch of the Niger-Congo family (Niger-Congo, Atlantic-Congo, Atlantic, Northern Senegambian, Fula-Wolof, and Fulani) (Wilson 1989; Grimes 1996:324). These varieties are distributed along a continuum that stretches from Senegal and Guinea on the western coast of Africa to Sudan and Ethiopia in east Africa. Various researchers and research organizations have claimed between five and 27 dialect areas along the continuum, depending on their interpretation of linguistic and socio-cultural data (cf. CNRS 1974; Fagerberg 1979; MAPE 1983:13–14). The two criteria most often used in these studies are similarity of lexical items, as well as historical connections and social divisions among Fulfulde speakers (cf. Breedveld 1995:7; Fagerberg 1979:8-10; MAPE 1983:8; Ronald Nelson, personal communication).

In this report, we describe the results of library research and fieldwork that took place from the fall of 1998 through the fall of 1999. The purpose of this research was to find out whether eastern Niger could be considered a single dialect area for the purpose of the development of written materials, and whether written materials being developed at the time by a joint SIM-SIL<sup>1</sup> project for the Fulfulde speakers in Niger would be comprehensible and acceptable to all of them. In order to answer those larger questions, it was first necessary to assess the

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<sup>1</sup> SIM is the Society for International Ministries. SIL (formerly “Summer Institute of Linguistics”) is a non-governmental organization that conducts linguistic research, language development, and Bible translation.

levels of intelligibility between Fulfulde varieties in Niger and also to investigate the language attitudes of speakers toward potential reference dialects.

### **1.1 Theoretical issues**

Intelligibility between language varieties is the result of factors that interact in complex ways. A common linguistic ancestor, similar sets of historic changes with resulting similarities of lexical and grammatical forms and meanings, are factors related to the lexical similarity that is an important source of intelligibility. Another source of intelligibility is grammatical phenomena, such as the ordering of morphemes and clause constituents, as well as grammatical relationships and the ways in which they are marked. Methodologies used to study these sources of intelligibility include wordlists, phrase lists, and recorded text testing. These are described in some detail in the following paragraphs. On the other hand, intelligibility does not always explain comprehension, especially when it is colored or impeded by subjective evaluations or attitudes towards the language variety.

Language attitudes involve beliefs and emotions about a language variety, as well as a readiness to use that variety (Baker 1992:12–13). However, these components may not always be in harmony with each other. Speakers may verbalize a love and appreciation for their language while teaching their children a different language for pragmatic reasons, such as access to education or



employment (cf. Adebija 1994; Bourhis and Giles 1976; Grimes 1982, 1984; Lambert, Giles, and Picard 1975). Nevertheless, theoretical models of groups of speakers, such as speech communities (Gumperz 1962; Gumperz and Hymes 1972; Saville-Troike 1989) and communities of practice (Eckert and McConnell-Ginet 1992) involve attitudes regarding linguistic forms and practices. The ability to understand one another, as well as agreement concerning the value of linguistic forms and shared norms of language practice, are key indicators for a language variety that may be the basis for a written form of the language. An important presupposition in the identification of a single language variety that may represent a language group is that the speakers do consider themselves unified in some way and, therefore, are identifiable (to themselves as well as to outsiders) as members of one and the same group.

In this study of Fulfulde varieties in eastern Niger, group identity was a crucial question. Members of SIM and SIL, working in these varieties in both eastern and western Niger, had doubts concerning whether all Fulfulde speakers considered themselves part of the same group and whether a single reference dialect for a written standard could be identified. The experiences of linguists and translators among Fulfulde groups in Niger had uncovered relatively clear distinctions between Fulfulde speakers in western and eastern Niger whose history, social organization, and communicative forms differed in significant ways (Malcolm Armour, fieldnotes; Steve White, personal communication; René

Vallette, personal communication. See also Breedveld 1995; Fagerberg 1979).

However, social cohesion, based on comprehension and language attitudes for the Fulfulde speakers in eastern Niger, was much less clear, for reasons that will become apparent in the following brief presentation that includes a description of three groups of Fulfulde speakers and the written materials developed for their use.

## **1.2 Fulfulde-speaking groups in Niger**

The total population of Fulfulde-speaking groups in Niger is estimated at close to one million or 10 percent of the country's total population: approximately 100,000 or more of these are nomadic herders, approximately 450,000 are sedentary farmers and semi-sedentary farmer-herders living in western Niger, and the remaining half-million are sedentary farmers and semi-sedentary farmer-herders living in eastern Niger (Schmid 2000:1). Researchers and scholars (in the materials we consulted) used different names and different criteria to define the various Fulani groups (Sow 1986, 1987, 1989; Grimes 1996, Schmid 2000, and White et al. 1998). For clarity in this report, we will use the following labels and descriptions:

- Western Fulani: sedentary and semi-sedentary Fulfulde speakers living in the regions of the Zarmaganda, the areas around the cities of Niamey, Téra, Torodí, and Say and the Dallols Bosso, Foga, and Maouri in the Zarmatarey, Boboye, and Aréwa area (see figure 1). The language of wider communication (LWC) in these areas is Zarma (Djerma). No study

of bilingualism in Zarma has been carried out, although sedentary Fulani and those trading in the market use Zarma in their dealings with non-Fulani.<sup>2</sup> This is not a homogenous population, although the varieties of Fulfulde spoken in western Niger group together according to reported intercomprehension (Steve White, personal communication; Milton Watt, personal communication; A. Loyzance, n.d.; Kris Riggs, personal communication; Hama 1968; Harrison 2000).

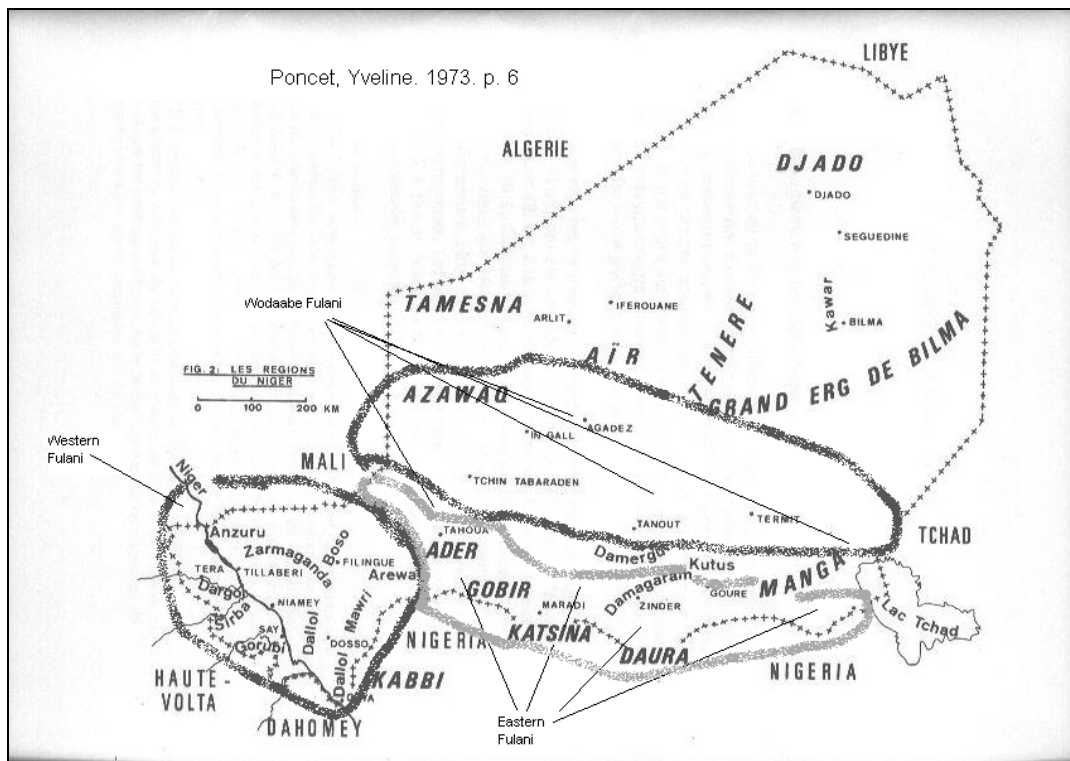


Figure 1. Locations of Fulfulde-speaking groups in Niger.

<sup>2</sup> During our survey of the southern Songhay groups we observed a fairly high level of bilingualism in Zarma among Fulani children, especially in the region of Torodi, to the extent that at times it was difficult for us to screen ethnic Fulani participants out of our subjects for dialect intelligibility testing in Zarma. (Harrison, Harrison, and Rueck. 1999.)

- Eastern Fulani: sedentary and semi-sedentary Fulfulde speakers living in the traditional regions of the Ader, Gobir, Daura, Mandaram, and Kadzel are indicated on figure 1. The urban centers in these areas include Birnin Konni, Maradi, Madarounfa, Zinder, Magaria, Gouré, Maïne-Soroa, and Diffa. Sow reports that these Fulani can be said to speak “Fulfulde-Hawsa” by reason of the influence of the majority language group, the Hausa (Sow 1987:4). Fulani in this area reported that their second language learned is almost always Hausa, even in areas where Kanuri is the dominant language. These “Sokoto Fulani” and "Fulbe Siire" (town Fulani) lost most of their cattle in droughts and epidemics (1973–1974 and 1984–1985). Because of this, they have resorted to farming and have settled in villages, some with existing Hausa populations and some surrounded by Hausa villages, where they have frequent contact with the Hausa (Baumbach 1997). Although there are some social and dialectal differences among the Fulani in these areas, they group together according to reported intercomprehension between speech varieties.
- Wodaaɓe Fulani (also spelled VoDaaBe): the third Fulani group in Niger are sometimes called Bororo, although they call themselves Wodaaɓe (sg: Boɗaaɗo). These Fulfulde-speaking nomads primarily raise zebu cattle (cf. Dupire 1962; Beckwith and Offelen 1983; Maaliki 1984; Eckert 1997;

Paris 1997). Schmid (2000) describes their regions of residence and transhumance as the traditional regions of the Zarmaganda, Ader and Azaouagh, Damergou, and Manga (see figure 1). Although there seem to be some distinctive features in the speech of some of the Wodʼaaɓe clans, reports indicate that these do not cause comprehension difficulties between them.

The key questions in the research reported here concern intercomprehension and language attitudes of the eastern Fulani and the Wodʼaaɓe. Based on findings during the phase of background research, we were fairly certain that Fulfulde-speaking groups in eastern Niger would not understand the speech of Fulfulde speakers in western Niger. This hypothesis was confirmed during fieldwork. More crucially, however, it was unclear how well the two groups of Fulfulde speakers in eastern Niger (the sedentary eastern Fulani and the nomadic Wodʼaaɓe) would understand each other. In addition, the social and cultural differences reported between the eastern Fulani and the Wodʼaaɓe were presumed to result in inter-group tensions and, therefore, most likely negative language attitudes.<sup>3</sup> The question of language attitudes held by the two groups was crucial, specifically whether those

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<sup>3</sup> The eastern Fulani reportedly resent the Wodʼaaɓe Fulani resistance to Islam, while the Wodʼaaɓe claim that other Fulani groups are no longer true to their cultural values and heritage because they do not practice nomadic herdsmanhip. During the fieldwork phase of this study, the team experienced this particular rivalry in the relationship we observed between our two interpreters, one is a Bodʼaaɗo from the Kasawsawa clan, and the other is an eastern Niger Fulani from the Maïne-Soroa area.

attitudes were strong enough to affect comprehension of the other group's speech, as well as the acceptance of written materials.

The application of this research concerns the reference dialect for Fulfulde in eastern Niger. As described in the following section, written materials have been developed by the government for Fulfulde in western Niger. Therefore, the two questions for application are as follows:

1) Is it possible for eastern Niger Fulfulde speakers to use materials developed based on the western Fulfulde reference dialect?

2) If not, which Fulfulde variety in eastern Niger would best serve as a reference dialect?

### **1.3 Written materials in Fulfulde**

Fulfulde has been written for centuries using arabic script (ajamiya) (Bâ 1991; Hama 1968; Nelson 1981; Scott Clark, personal communication<sup>4</sup>); it also appears that variation in linguistic form and meaning has not prevented trained readers from dialects across west Africa from using the same material. On the other hand, this does not appear to be the case for the orthography based on roman script that has recently been developed.

The Department of Literacy and Adult Education (Departement d'Alphabétisation et Formation des Adultes-DAFA), in conjunction with the SIL

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<sup>4</sup> Much of the information we have from Scott Clark was later published as an orthography statement in 2007 (see Clark 2007).

team working in Birnin Gaouré with the Western Fulani, have produced written materials, developed computer fonts for the special characters in the romanized version of the Fulfulde alphabet, and have worked to agree on an orthography and set of writing conventions.

A language-development project involving members of SIM has been underway for several years in eastern Niger among the Wodaaɓe Fulani. As previously mentioned, this team doubted whether the sedentary eastern Fulani would accept materials developed for the nomadic Wodaaɓe Fulani.

The collective opinion of members of the SIL and SIM teams working among the Fulani in Burkina Faso, Niger, and Nigeria, as well as that of teachers we spoke to during fieldwork in eastern Niger, was that the Wodaaɓe Fulani and eastern Fulani could not use the same written materials developed for the western Niger Fulani. Differences in vocabulary and grammar were large enough to cause frustration and misunderstanding on the part of Fulani groups outside of western Niger.

The original design for this research included an investigation of how easily literate Fulfulde speakers could use materials in roman script, however this aspect of the study had to be abandoned because of the low number of Fulfulde speakers who have learned to read the language in roman script.

## **1.4 Summary of research purpose and hypotheses**

In this section, we briefly mention the complexities involved in determining whether three Fulfulde-speaking populations in Niger could be considered a single speech community for the purposes of a written form of their language. Two important indicators that define a speech community are intercomprehension and agreement in the attitudes towards language forms and practices. Data gathered during background research suggested that it was unlikely that all three Fulfulde-speaking groups in Niger could be considered a single speech community and, as a result, more than one reference dialect would most likely be necessary for the development of written materials. Therefore, the purpose of this research was to investigate dialect intercomprehension and language attitudes between Fulfulde-speaking groups in western and eastern Niger, and between sedentary and nomadic groups in eastern Niger. This involved the following hypotheses:

1a) Speakers of Fulfulde varieties in eastern Niger have difficulty understanding the western Niger Fulfulde dialect.

1b) This difficulty is great enough to warrant a recommendation of a reference dialect for eastern Niger Fulfulde.



2) There are four possible reference dialects of eastern Niger Fulfulde speakers, of which one is an optimal choice. (The reasoning for this hypothesis is explained in the following paragraphs.)

3) The inter-group tensions and language attitudes of the sedentary Eastern Fulani and the nomadic Wodaaɓe Fulani are strong enough to prohibit them from using materials developed from the same reference dialect.

Data to support or to defeat each of these hypotheses were collected using sociolinguistic questionnaires, word and phrase lists, and a language attitude assessment instrument. These methodologies are described in the next section.

## **2. Methodology**

In addition to library research and a general sociolinguistic questionnaire, our team used three tools designed to collect data concerning intelligibility and language attitudes. The first tool, the Vallette list of lexical and grammatical items, was specifically formulated for comparison studies of Fulfulde varieties by René Vallette (1994). The second tool, the recorded text test (RTT) (Casad 1974, Stalder 1996), was administered for corroborating evidence of actual speaker comprehension between varieties. The third data collection method was a tool designed specifically for this research based on the concepts of the matched-guise method developed in Canada by Lambert et al. (1975), and an adaptation of that method developed for research in Burkina Faso by Stuart Showalter (1991a). The

language attitude assessment instrument was used to test the hypothesis that the language attitudes between Fulfulde-speaking groups would prevent them from benefiting from written materials based on the same reference dialect. The next sections describe our sampling procedure and each method in more detail.

## **2.1 Sampling**

We used a multi-layered sampling design in order to accommodate our research goals. The first reason for this was the scope of the research, including the area where the populations are located (approximately 800,000 square kilometers), the estimated size of the populations (totaling nearly one million speakers), and the uncertainty of the number of Fulfulde varieties. The second reason for the multi-layered sampling design was because of the need to focus our hypothesis concerning the recommendation of a reference dialect in eastern Niger.

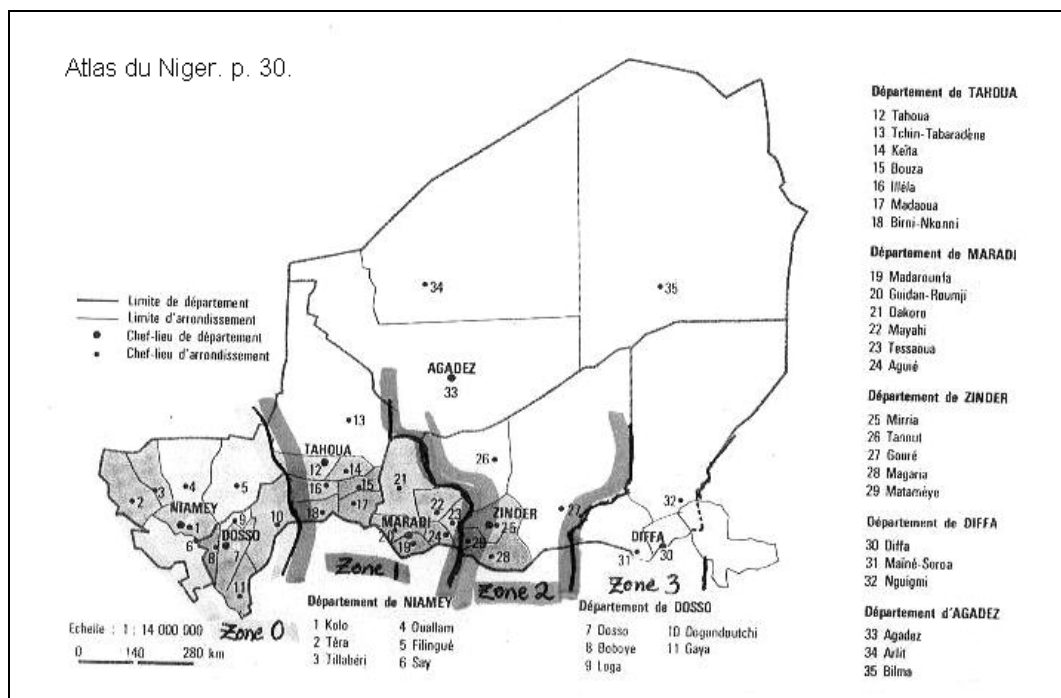
Research in Benin and Nigeria, related to the study of dialect intelligibility and to the identification of reference dialects for written materials in Fulfulde, demonstrated likely comprehension and group identity for Fulfulde speaking groups, based on common social and political histories, as well as on recent patterns of contact reported during Fulfulde Harmonization Project meetings<sup>5</sup> (cf. Arnott 1970; McIntosh 1984; Hama 1968; Fagerberg 1979; Sow 1986, 1987,

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<sup>5</sup> The Fulfulde Harmonization Project is a multi-organizational group of people from multiple countries who have agreed to base their linguistic analyses and production of materials in at least seven varieties of Fulfulde upon decisions made in harmony with one another. They meet yearly; Annette Harrison attended meetings in 1999 and 2000.

1989; Duddles 1992, Breedveld 1995; Fulfulde Harmonization Project Meetings 2000). This is why we followed Harper's (1997, 1999) division of Nigeria into four zones by extending her zones into Niger. The zones Harper posited roughly divide the northern two-thirds of Nigeria into four parallelograms from west to east. In addition, she noted that lexical and grammatical data from areas in Niger located north of each of these zones were very similar to the lexical and grammatical data in the zones in Nigeria (Harper 1997:10). The concept of "zone" became our largest sampling unit. It was our first sampling step; one that guided the choice of data collection sites as well as the number of reference texts used in the study of dialect intelligibility and language attitudes for Fulfulde varieties in eastern Niger.

We extended Harper's zones north into Niger (see figure 2). Zone 0 corresponded most closely to western Niger; Zones 1–3 divided eastern Niger into three large areas which are shown on the following map. In addition, we noted that these zones corresponded roughly with administrative divisions in Niger. The Wodaabe became "Zone 4" as they could not be easily identified with a single region, but tend to live in pockets on a band which can be traced across the width of Niger, generally north of the areas where the sedentary Fulani live (Dupire 1970) (see figure 3). The concept of "zone" came to include not only the geographic distribution of the population under study, but also the idea of nomadic versus sedentary lifestyle.



**Figure 2. Harper's zones extended into Niger (Zones 0–3).**

The following administrative areas were included in Zones 1–3:

**Zone 1:**

- Department of Tahoua; the arrondissements of Birnin Konni, Bouza, Illéla, Keïta, Madaoua, Tahoua, and Tchîn-Tabaradene.
- Department of Maradi; the arrondissements of Dakoro, Guidan Roumji, and Mayahi.

**Zone 2:**

- Department of Maradi; the arrondissements of Aguié, Madarounfa, and Tessaoua.
- Department of Zinder; the arrondissements of Magaria, Matamey, Mirria, and Tanout.

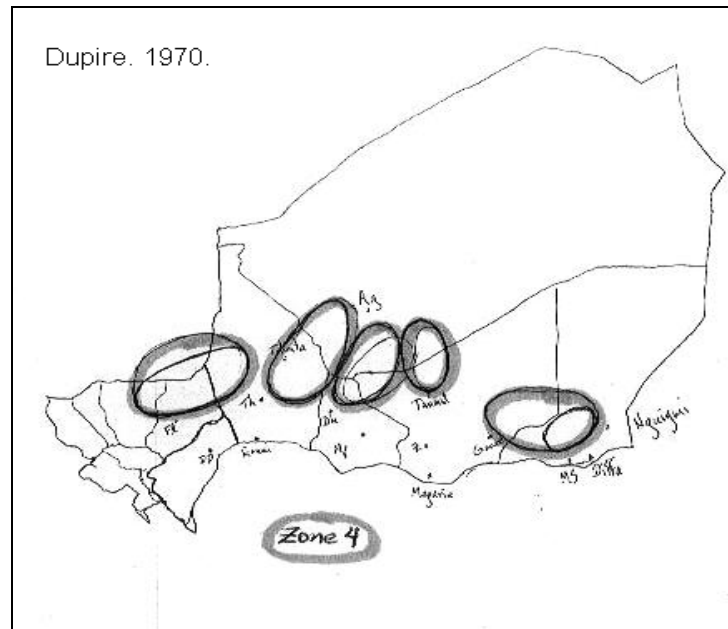
**Zone 3:**

- Department of Zinder; the arrondissement of Gouré.
- Department of Diffa; the arrondissements of Diffa, Mainé-Soroa, and Nguigmi.

**2.1.1 Selection of potential reference dialects for text testing**

In order to collect data concerning potential reference dialects for eastern Niger Fulfulde varieties, we selected five texts to serve as points of reference for the RTT (described in section 2.2.3.). Using information collected during background research, and with collaboration from Jennifer Harper, Jean Baumbach, and Steve White, we selected the following locations from which sample texts of the Fulfulde variety were collected. These reference points are as follows:

- Birnin Gaouré (Zone 0): selected to represent the Fulfulde variety in which written materials have already been developed for the Western Niger Fulani. The text we collected was from the city of Birnin Gaouré, a place of historical importance to the Fulani in Niger. It is located in the Department of Dosso.
- Tassa Ibrahim (Zone 4 – west): selected to represent the Fulfulde variety in which written materials have already been developed for the Wodaaɓe Fulani. Tassa Ibrahim is a semi-permanent Wodaaɓe encampment north of Dakoro in the Department of Tahoua (see figure 3).



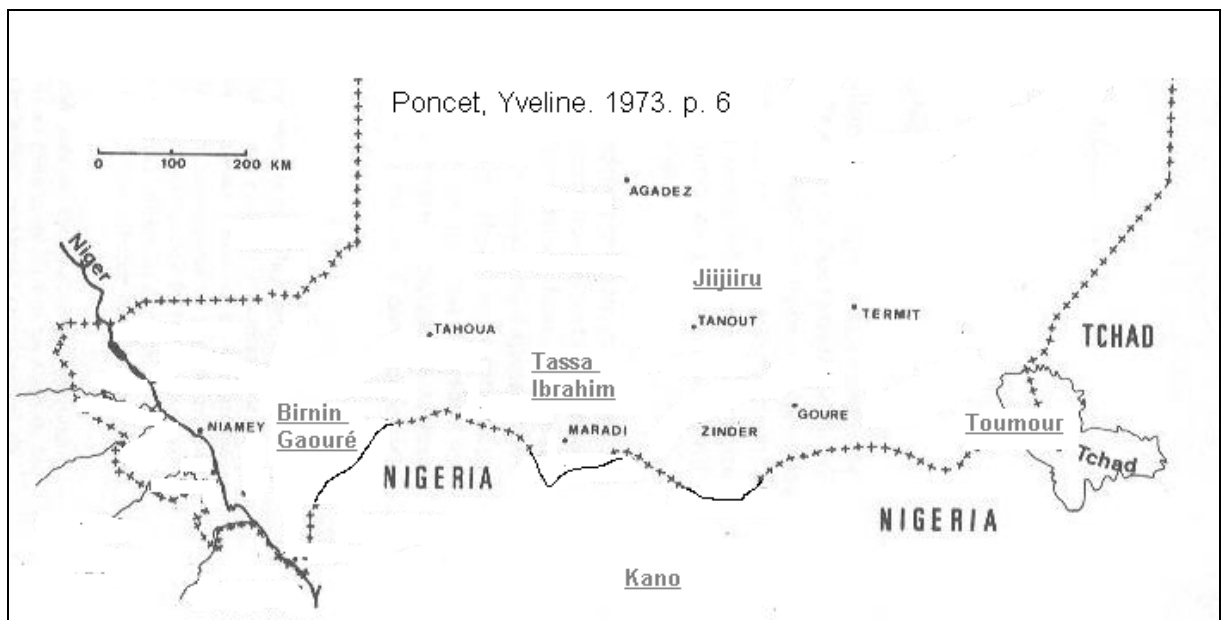
**Figure 3. Zone 4 representing the Wodaabe Fulani.**

- Central Nigeria or “Kano” (Zone 2): selected to represent the Fulfulde variety in which written materials are being developed by a team in Nigeria. The city of Kano is of historical importance to the Fulani in Nigeria; it is also a frequent destination for eastern Niger Fulani farmers and traders, and a southern point on the migration route for some Wodaabe Fulani clans from eastern Niger.
- Jijiiru clan of the Wodaabe Fulani or “Tanout” (Zone 4 – east): selected through consultation with anthropologist Patrick Paris, and through a pilot test in Kinshandi (Department of Diffa, Maïne-Soroa circumscription), we determined that a text from the Jijiiru clan of the Wodaabe Fulani would

represent a speech variety spoken by a clan with a large population and linguistic prestige. We met with members of the clan at a well north of the city of Tanout (see figure 4).

- Toumour (Zone 3): selected as an eastern alternative variety of Fulfulde spoken by the sedentary Fulfulde speakers of eastern Niger. Toumour is the residence of the most influential Fulani leader in the area. The village population is almost completely made up of sedentary Fulani, with many semi-sedentary and nomadic Fulani living in the areas around the village.

Figure 4 shows these reference locations.



**Figure 4. Locations of reference texts for Zones 0–4.**

### ***2.1.2 Selection of data-collection sites within the zones***

Given the large population, as well as its geographical spread, we selected 17 data-collection sites from the four zones, using a stratified sampling plan. For the first stratum, we put the names of the arrondissements for one zone at a time into a bag and drew out two names. The arrondissements selected were the following:

- Zone 1: Birnin Konni and Mayahi
- Zone 2: Madarounfa and Magaria
- Zone 3: Maïne-Soroa and Gouré

For the next stratum, we selected two Fulani leaders and, therefore, the populations for whom they are responsible, from each arrondissement. This was a little more difficult to control for randomness as we had to rely on the names of Fulani leaders given by a Fulani *chef de groupement*, 'group leader,' at the prefecture and sous-prefecture levels. In our circumstances as guests, it was not possible to re-verify information given by this person, we simply had to rely on his accuracy and completeness in compiling a list of the leaders under him. We first asked the prefect, sous-prefect, or *chef de groupement*, to pull two names out of a hat for us and then asked for his help in locating these leaders and the village or camp for which they are responsible. The following villages were selected:

#### ***Zone 1:***

- Arrondissement of Birnin Konni: **Ba'issu** and **Satchi**
- Arrondissement of Mayahi: **Guidan Kori** and **Maylalé Peul**



**Zone 2:**

- Arrondissement of Madarounfa: **Makouna** and **Nashembi**
- Arrondissement of Magaria: **Bao** and **Garin Mai Be'i**

**Zone 3:**

- Arrondissement of Gouré: **Mossata** and **Salajowel**
- Arrondissement of Maïne-Soroa: **Latwarum** and **Ngel Beyli**

N.B. We elected to name a fifth site in Zone 3 to ensure that the eastern side of the Zone would be adequately represented because the other four sites were more westerly; that site was **Toumour**.

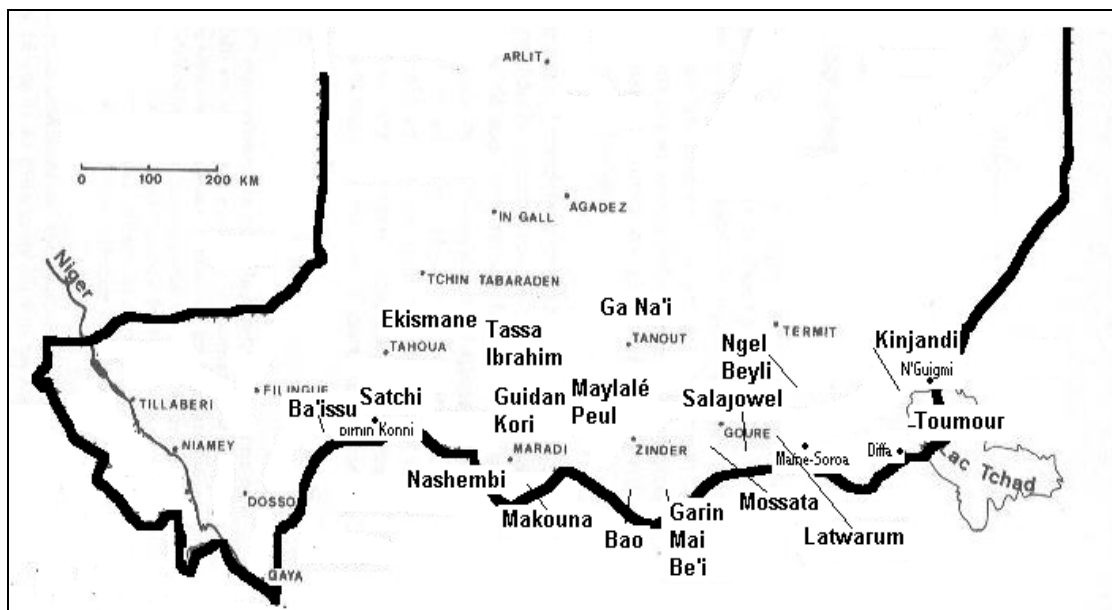
**Zone 4:**

As the nomadic Wodaaɓe Fulani could not be sampled based only on geographic location, we relied on a judgment call in consultation with anthropologist Patrick Paris to select a representative sample of four Wodaaɓe Fulani clans, based on social criteria, such as size of clan and relative prominence and acceptability of speech. The clans also represent Wodaaɓe Fulani populations in each of the major regions of transhumance in eastern Niger: the Ader/Azouagh region, the Damergou region, and the Manga region. The clans and test sites for Zone 4 are as follows:

- **Gojanko'en** clan at Ekismane: a well north of Abalak.
- **Kasawsawa** clan at Tassa Ibrahim: a semi-permanent settlement north of Dakoro.

- **Jijiiru** clan at Ga Na'i: a well north of Tanout.
- **Suudusukay** clan at Kinjandi (or Kinshandi): a market town and well south of N'Guigmi.

The 17 data-collection sites selected through stratified random and representative sampling are shown in figure 5.



**Figure 5. The 17 data-collection sites.**

### *2.1.3 Selection of individuals at each data collection site*

The collection of the Vallette list (word-and grammatical-item list) and the RTT did not require random sampling of individual speakers; the two methods are based on the theoretical assumption of an equal distribution of linguistic competence and inherent intelligibility throughout a speech community (Fasold

1984; Blair 1990; Hasselbring 1996). However, as a precaution to control for possible differences in levels of comprehension of other dialects by men and women, we alternately tested groups of men and groups of women within each zone, i.e., at the first data-collection site, we asked for men to help us with the RTT and, at the next site, we asked for women, and so on.

The language attitude assessment instrument required sampling of individuals because previous studies have shown that language attitudes vary across a population (Aghesiyisi and Fishman 1970). We selected age and sex as variables that could influence language attitudes because of their ubiquitousness (wide spread use) in sociolinguistic studies. Based on the list of taxpaying households under each leader, we numbered each household, and then drew the number for each household from a bag; therefore, each household was selected randomly. However, in order to assure equal representation for the variables of age and sex, individuals were selected from each household, based on a quota-sampling scheme. For each household, we requested the cooperation of one individual, until we had filled a quota of at least five individuals for each of the six categories resulting from our selection of age and sex as variables, based on the grid shown in table 1:

**Table 1. Quota grid for sampling individuals for language attitude assessment**

	<b>Young</b>	<b>Adult</b>	<b>Old</b>
<b>Male</b>	5	5	5
<b>Female</b>	5	5	5

Fulani society is organized along the lines of age-sex groups, and so the six categories were a culturally appropriate way to identify individuals. Four hundred two individuals were selected for participation in the language attitude assessment, as shown in table 2.

**Table 2. Individuals selected for language attitude assessment**

<i>Age</i>	Young		Adult		Old		Total
<i>Sex</i>	Men	Women	Men	Women	Men	Women	
<i>Zone 1</i>	16	15	16	15	19	16	97
<i>Zone 2</i>	19	11	21	17	12	20	100
<i>Zone 3</i>	17	13	19	25	22	13	109
<i>Zone 4</i> <sup>6</sup>	23	19	16	13	18	7	96
Total	75	58	72	70	71	56	402

#### **2.1.4 Non-response**

The individuals who were selected were not always available to help us. Most of the non-responses were due to the absence of the person selected; he or she had other errands, work, or personal reasons for being some distance away from his or her home. Whenever possible, we attempted to locate the person who was absent. Those individuals who were finally labeled “non-response” were too far away to make it feasible to contact them. There were a few individuals who refused to cooperate, although this group was small. Most of those individuals were women whose husbands did not want them to take part in the study. A high number of adult women in Zone 3 were counted as non-response due to the

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<sup>6</sup> At two sites in Zone 4, quota sampling was at the level of the household, because it was not possible to obtain a taxpayer list of heads of households.

situation in one village where we were allowed only very limited contact with the women because of religious restrictions.

We credit the good cooperation Fulani women gave us to the fact that, for the most part, they were willing to talk with the two women test administrators. We could even say that, in some cases, the subjects were curious about foreign (white) women and, therefore, were more willing to be tested than they otherwise might have been. Even so, as previously mentioned, the religious impropriety of a strange man talking with a woman prevented us from testing women in some areas because we had more men available as testers than we had women. We tried to be careful in situations where a team of male test administrators was obliged to test women by having them test older women.

#### ***2.1.5 Actual sample population for the language attitude assessment***

Table 3 represents the subjects who participated in the study. These figures represent an overall response rate of 78 percent.

**Table 3. Sample population**

<i>Age</i>	Young		Adult		Old		
<i>Sex</i>	Men	Women	Men	Women	Men	Women	Total
<i>Zone 1</i>	12	15	13	9	14	13	76
<i>Zone 2</i>	10	10	19	13	10	17	79
<i>Zone 3</i>	12	9	14	15	16	11	77
<i>Zone 4</i>	21	14	16	11	16	5	83
<b>Total</b>	55	48	62	48	56	46	315

Even by selecting more individuals for our sample than appeared to be necessary, there were still three categories where we were unable to obtain actual data for at least ten individuals (young women in Zone 3, adult women in Zone 1, and old women in Zone 4). These three categories are all women, although of different age groups and different zones. Given the cultural context of the larger importance of men in the decision-making process, we believe that the lower number of women available did not significantly affect the results and conclusions of this study.

Another group which was not well represented in the sampling are those who were absent because they were either traveling or away from their village/encampment with their herds. This was unavoidable, but is something to note, given the fact that the Fulani population as a whole, and especially the Wodaaɓe, tend to travel a lot.

#### ***2.1.6 Summary***

The sampling design for this research involved consideration of geographic and social variables at the level of the zone. Within each zone, units of political division (departments and arrondissements) were used to select villages to collect data among sedentary eastern Niger Fulani. Because it was difficult to employ this same method for the Wodaaɓe Fulani, a representative sample of clans was chosen, based on social criteria. The General Sociolinguistic Interview

Schedule, the Vallette list, and the RTT did not require further sampling of individuals, however, the language attitude assessment instrument did. We chose to combine aspects of random sampling (drawing names of households from a hat), and representative quota sampling (choosing individuals based on the variables of age and sex), to select 402 individuals. Ultimately, 315 men and women from three age categories participated in the language attitude assessment study.

## **2.2 Methods of data collection**

### **2.2.1 *General sociolinguistic interview schedule***

In the preparation phase for constructing the RTT and the language attitude assessment instrument, we interviewed village and clan leaders at the locations where we recorded texts (Birnin Gauré-Zone 0, Tassa Ibrahim-Zone 4 west, Tanout-Zone 4 east, and Toumour-Zone 3. The Kano text (Zone 2) was recorded by Jennifer Harper and sent to us for this research). A general sociolinguistic interview schedule was used to collect information concerning community demographics and habitual activities, travel patterns and contact with other groups, and locations of known Fulfulde-speaking groups in their area. The interview also included questions about perceptions of the speech of others, estimates of intercomprehension, probes for evaluations of speech forms, as well as bilingualism, domains of use, and language vitality. Much of that information was then used to plan the administration of the RTT and the language attitude

assessment instrument, as well as to interpret the results of the analysis of data gathered through those methods. A second method of research involved the collection of Fulfulde words and phrases through the Vallette list.

### **2.2.2 *Vallette list***

The Vallette list is primarily a targeted wordlist designed specifically for the study of Fulfulde dialect variation. Elicited data is used to systematically examine lexical and grammatical items known to vary from dialect area to dialect area along the Fulfulde dialect continuum.

As early as 1961, P.F. Lacroix posited a list of nine items which appeared to be indicators of “good” or “correct” Fulfulde in Cameroon. Fagerberg took up his list, as well as a discussion of “regular and concrete changes” in the areas of the lexicon, phonetic inventory, morphology, and grammar and suggested that some sort of “standard questionnaire” could be formulated in order to provide a basis for comparison across the continuum of Fulfulde dialects (Fagerberg 1979). In the 1980’s, René Vallette (personal communication) developed such a questionnaire or list to compare Fulfulde dialects in Mali and Burkina Faso. The 1994 version of Vallette’s list was used in western Niger and in Nigeria by Jennifer Harper (1997). It allows systematic examination of the consonant alternation, the noun class system and related morphological agreement, the noun phrase, the incorporation of lexemes from other languages, adpositions, the formation of verbal complexes,



word order at the clause level (including focus/topic markers, negation, and imperative constructions). The Vallette list is in appendix A.

It appears that two important factors relating to similarity between Fulfulde varieties in Niger concerns the semantic scope of a nominal root and its assignment to a noun class, the forms of morphemes in verbal complexes, and ordering clause components.

The items on the Vallette list were elicited through another language, either French, Hausa, or Kanuri, depending upon the common language between the researcher, interpreter, and the person available to help us with the list. In addition, each list was checked with additional speakers during a second visit to the test site. The lexical and grammatical items were transcribed using the International Phonetic Association (IPA). Lexemes were entered into Wordsurv, a computer program which aids in the analysis and calculation of lexical similarity through probability analysis. Phrases and clauses were entered into charts to be hand-counted. The results from the Vallette list, along with the RTT, provided two different types of evidence to support conclusions regarding interdialectal comprehension.

### ***2.2.3 The RTT***

The Recorded Text testing (RTT) is a method of testing the comprehension of a text from one speech variety by speakers of a different variety. From observing the performance of subjects on the test, researchers hope

to infer the level of comprehension that speakers of one dialect have of a related dialect which, in turn, provides an indication of the degree of relatedness between dialects.

#### 2.2.3.1 Basic methodology

An autobiographical narrative, three to five minutes long, is elicited in language variety A. It is important that the story not be a folk tale or a story which would be known throughout the speech community under study. Next, ten to 15 questions are formulated, based on the content of the story. These questions should include as many semantic and grammatical categories as possible. Questions which can be responded to by a simple “Yes” or “No” are not acceptable because the chances that a subject could respond correctly simply by guessing are too high. The questions are recorded and then inserted into the recording of the story.

The story, with all inserted questions, is then played for at least ten individuals who speak variety A as their mother tongue. Questions that native speakers cannot answer correctly are discarded. This “recorded text” is later used at other locations to test comprehension by speakers of different dialects. In location B, the questions are translated into language variety B. These questions are inserted at the appropriate points into the text in variety A. Before a subject

listens to the text in variety A, they first listen to the RTT constructed in their own variety.

Subjects are screened for contact with the speech variety under study, as well as the ability to perform consistently on the test. With these and other controls, sampling can be kept at a minimum because the theory behind inherent intelligibility assumes its equal distribution in a population.

#### 2.2.3.2 Modifications to the RTT methodology

The Rapid Appraisal-RTT (RA-RTT) is a modification of the RTT developed by Bergman and Stalder (Bergman 1991; Stalder 1996): rather than testing isolated individuals, a group of selected individuals listen to the text together. The benefit of using the RA-RTT is that it conforms to the cultural norms of group interaction in many African societies; this was the primary reason that we chose to use the RA-RTT, rather than to test individuals in isolation. In the RA-RTT methodology, the text is broken up into three or four logical sections. At the end of each section, the linguist designates individuals in the group and asks them to re-tell the section of the story as accurately and with as much detail as possible, without reciting the text verbatim. Other members of the group are then asked if there is anything they would like to add or if they disagree with any of the details that another member of the group mentioned. Our experience in West Africa led us to ask the younger people first, those between

ages 18–25 or so, because we found that, often when an older person is asked first, the younger people are reticent to add to or contradict what the older person said, although the reverse does not seem to be true. An experienced field linguist, taking good notes, can make an accurate preliminary evaluation of the group's comprehension level from this interaction.

In order to improve consistency and quality in note-taking during the administration of the RA-RTT, Byron Harrison introduced the concept of noting the salient points of the text as re-told by its native speakers during this research. He had observed that native speakers re-tell the story with information they apparently consider to be the most salient, based on their cultural and experiential knowledge. Points of information which are less important or obscure for native speakers and, therefore, more difficult for non-native speakers to comprehend, will generally be left out of the re-telling. Harrison then organized those points on a page and created a “score sheet” so that the person administering the RA-RTT could concentrate on listening to and observing the group and less time writing with head lowered to the paper. Space was left for information added by the group (whether correct or incorrect), as well as comments from the researcher's observations. If the group in a test location offered information that the native speaker test group did not mention, it was noted and the text examined to see if that information was in the story. This served two purposes: first, if the additional information was correct and the speakers of variety B were also able to re-tell the

story with the salient points mentioned by speakers of variety A, it revealed the depth of their comprehension. If the additional information was not in the text, it was an indicator that people were guessing to fill in areas where they did not understand the story. The idea of a “score sheet” was helpful to our team because it introduced a measure of consistency in the testing, as well as more accurate record-keeping.

### 2.2.3.3 Scoring the RA-RTT

In developing the RA-RTT, Stalder (1996) proposed a three-level scale to rate comprehension of the text (Stalder 1996:26), however, Byron Harrison judged that the gap between Stalder’s level 1 and level 2 was too wide and did not accurately reflect our testing situation. He modified the scale by changing Stalder’s “Level 2” to “Level 1.5” and adding a description for that level. He then modified the “Level 2” description, as shown in the following left-hand column in table 4. For each of the ratings, a particular decision is indicated for language development, as shown in the right-hand column.

**Table 4. Evaluation scale for RA-RTT**

<u>Scale of comprehension</u>	<u>Decision for language development</u>
Level 1: No comprehension. The group is not even able to respond to the general story lines.	Level 1: Use of a common speech variety is impossible; definite need for separate literature in view of comprehension.

#### Scale of comprehension

Level 1.5: Partial comprehension. By retelling different sections, people invent and add to the story. If asked, they are not able to provide details.

Level 2: Partial comprehension. By retelling different sections, people invent and add to the story. If asked, they are able to report some details.

Level 3: Good comprehension, i.e., the story is retold accurately and the people are able to furnish ample detail.

#### Decision for language development

Level 1.5: There is a low possibility for the use of shared literature in the test language, if the attitude is positive. Probable need for separate literature.

Level 2: There is a low possibility for the use of shared literature in the test language, if the attitude is positive. Probable need for separate literature.

Level 3: There is a high probability for the use of shared literature in the test language, if the attitude is positive; separate literature development need is unlikely.

#### 2.2.3.4 Follow-up questions

In addition to questioning the group on the content of the story, we asked follow-up questions according to suggestions from Radloff (1993) and O’Leary (1994). Questions such as, “Did you understand everything the story teller said?” or, “Does this man speak your language well?” helped us to draw out other comments to aid in the assessment of the group’s comprehension, as well as their attitudes toward the other variety.

#### 2.2.3.5 Difficulties in data collection

Due to cultural restraints inhibiting women from participating while in the company of men, it was necessary to test women apart from men. This proved to

be difficult, since at least one male would usually want to be present during the testing procedure. The presence of a man, even a very young man, such as a translator or as an observer, significantly changed the group dynamics. As result, even with a female linguist and a female translator, we were only able to test women in four of the 17 test sites. In the village of Maylalé Peul, group cooperation was so poor that we were unable to carry out the RA-RTT. At the Ekismane well, we arrived for our previously arranged rendezvous to find that most of the group had gone north to a party, at a distance of several days' travel. As a result, we were only able to test two of our reference texts at that site.

The data collection methods described so far were primarily used to study dialect intercomprehension in the Fulfulde-speaking population of eastern Niger. The language attitude assessment instrument was developed to study language attitudes, the subjective evaluations of language varieties.

#### ***2.2.4 Language attitude assessment instrument***

A methodology for an indirect investigation of language attitudes was first developed by Lambert and his colleagues in connection with motivations for second language learning (Lambert, Frankel, and Tucker 1966). Language attitudes are those tacit, often sub-conscious, personal thoughts, feelings, and emotions about language varieties. At the time, Lambert and his colleagues were studying language attitudes toward varieties of French and English spoken along the US-Canadian border. He had the help of people who were equally fluent in

two or more varieties of French and/or English. He used recordings of these people, each speaking in different “guises,” as a stimulus for value judgments by the subjects. As the subjects listened to the recordings, they were actually hearing the same person, and so the researchers could assume that any difference in the subjects’ reactions to the different recordings was to the speech form and not to the person.

Matched-guise testing, then, is an attempt to discover evaluations and judgments about a particular speech form by studying the visible reactions of someone listening to it. The strength of this technique rests in the fact that it is an indirect method of study. In our experience as researchers, we have observed that answers to questions are sometimes based on what the subject thinks we want to hear, and not necessarily on the actual state of affairs. To by-pass this paradox, the matched-guise technique appears to the subject to be focusing on the person whose voice they are hearing, when in fact it is focused on the reactions to the speech variety. In particular, for the purposes of the eastern Fulfulde survey, we wanted to know if both the sedentary eastern Fulani and the nomadic Wodaaabe would accept and use written materials from one of the five speech varieties we had chosen as our reference texts.



#### 2.2.4.1 Finding an appropriate method

Existing methods to study language attitudes were not compatible with our situation. The matched-guise technique previously described was developed for use with literate individuals; although there are literate and highly-educated Fulani, we determined that we could not count on finding a sufficient or representative sample in the areas where we carried out our field research to use this type of method. Methods of testing in countries with high literacy rates and highly-developed educational systems are not very useful in areas where western-style schooling is avoided, the majority of the population is pre-literate, people tend to be suspicious of strangers, individual interviews may be culturally inappropriate, and people are not accustomed to answering questions which are abstract or hypothetical. In addition, we were unable to locate a speaker who could reliably take on up to five guises to match the selected reference dialects of Birnin Gaouré, Kano, Tassa Ibrahim, Tanout, and Toumour.

#### 2.2.4.2 Developing a research tool for the research context

To solve the difficulty of a testing method designed for literate subjects, we turned to Showalter's adaptation of the matched-guise technique for use in a rural, pre-literate society (Showalter 1991b). In his research, Showalter conducted language-attitude testing using an oral questionnaire. In addition, he developed a system of rotating questions and texts listened to by a subject wearing headphones, so that individual subjects could answer questions put to them in the

middle of a crowd of curious on-lookers without being overly distracted or prompted by the crowd; we followed this same procedure.

Showalter used recordings of different speakers of different language varieties in his testing, controlling for age. He was also able to use two recordings of a true guise of a bilingual Kaanse speaker. In the sense that different speakers were used in his research, as well as in ours, the research instrument was not a true matched-guise test. As Showalter did, we controlled for the age and sex of speakers, and attempted to match voice quality. In addition, we were able to elicit stories which were very similar in content: boyhood experiences of herding cattle that strayed into farmers' fields. During testing, however, we saw that this may have been a miscalculation on our part, for, while the Wodaaɓe Fulani appeared to uniformly enjoy the story content, the more sedentary Eastern Fulani who farm, and who compete with the nomadic groups for land and water, did not always appreciate the stories.

As a means to limit abstract or hypothetical questions, Showalter used a semantic differential scale to help subjects give responses that could then be treated as quantitative data (Osgood et al. 1957). The subject was asked to choose between semantic opposites (generally presented on a seven-point scale) attached to the concepts under investigation by the researcher. Based on input from our consultants, however, we decided to formulate most of the questions for a “yes”

or “no” answer for ease in administering the assessment. In order to develop the questions for the language attitude assessment instrument, it was first necessary to discover the cultural values that would evoke a sense of shared cultural identity, as well as the measurable areas of that identity.

#### 2.2.4.3 Cultural values for the language attitude assessment instrument

One of the challenges of developing a tool based on cultural values is learning enough about the culture to select the values useful to probe for judgments, evaluations, and attitudes. A well-known aspect of Fulani culture and tradition is known as *pulaaku* (also spelled *pulaagu*) (cf. Breedveld 1995:1–5; Galo 1969; Mukoshy 1991:viii; Nelson 1981:40; Sow 1989:68; Stenning 1959; Weekes 1978:135). Adherence to the *laawol pulaaku* 'pulaaku path' of the Fulani includes: keeping to the ways of herdsmanship, the true religion of Islam, and the standards of personal conduct that originated in Fulani ancestors, including the virtues of *hakkiilo* 'care and forethought,' *semteende* 'modesty,' and *munyal* 'patience and endurance.'

*Hakkiilo*, 'care and forethought,' is a primary aspect of *pulaaku*, the system of cultural values and worldview of the Fulani. It is associated with the head and the mind (Stenning 1959:55-59). The noun *hakkiilo* derives from the verb root *hakkiil*, meaning to be careful, attentive, sensible, prudent, clever, and skillful (Seydou 1998:244). Its primary meaning does not include knowledge or

experience but, rather, is focused on characteristics of the practices of a person who possesses knowledge and experience. For the Fulani, the life of a virtuous cattle herder is the ideal life, whether or not they themselves own cattle, therefore, the chief application of *hakkiilo* is for the welfare of the herd; this ensures the welfare of family and clan (Nelson 1981:79).

Cattle are the livelihood and the love of the ideal Fulani who wants to know the best way to raise and multiply the herd, and who aspires to have more cows and children than his or her forbearers (Weekes 1978:135, also see Stenning 1957:139–159). Therefore, *hakkiilo* represents more than an abstract virtue, but part of a way of life that, at worst, will save a person from starvation and, at best, elevate them to a position of leadership and respect. Evidence of *hakkiilo*, then, can be found in the size and health of the herd, in the age and experience of the herder, and in their ability to remember knowledge and experience and to express it well, using the Fulfulde language (Nelson 1981:43).

The second of the three major virtues of *pulaaku* is *semteende*, from the verb root *semt-* 'timidity, modesty, shame' (Osborne, Dwyer, and Donohoe 1993:308). Seydou (1998:618) adds 'respectful' and 'bashful' to this definition. René Vallette (personal communication) described how the Fulani that he lived with in the 1980s, near Dori, Burkina Faso, believed the act of putting food into one's mouth to be so intimate that they either turned their backs to each other or covered

their heads and mouths with their turbans as they ate. This was proper behavior for a modest person. Fulani literary figure and statesman Amadou Hampâté Bâ (1991:209–210) describes similar meal etiquette from his childhood in Mali. The discipline of this meal etiquette, he explained, taught an "art de vivre," an art of living: self-control, humility, contentment, politeness, and moderation.

If *hakkiiilo*, the virtue of ‘care and forethought,’ is associated with the head; *semteende*, ‘modesty and shame,’ is associated with the secret, inward part: the stomach. What knowledge is to *hakkiiilo*, emotion is to *semteende*: both are arenas for the exercise of the respective virtues. Tim Eckert, who had lived and worked among the Fulani in Niger for over twelve years at the time of this research, describes how the exercise of self-control and modesty works itself out in everyday behavior as follows:

*His speech and actions are typified by forbearance and patience, especially in difficult or painful situations. He doesn't show negative emotions, especially anger. He doesn't complain.... He doesn't readily admit to having needs such as feeling hungry or thirsty or ill. He doesn't raise his voice. He avoids arguments and disagreements, and always tries to save face.... He doesn't sing (except possibly at a special event if he participates). He won't converse when eating (this shows he is enjoying the food). He doesn't say the name or talk about his first or second born. If asked about his first born he doesn't answer or give a response. He doesn't say his wife's name (this is his way of showing his love). He shows hospitality to visitors and strangers, and shares with them from what he has. He is a herder and avoids doing work not typical of a herder like cutting wood, or selling merchandise in the market (except for animals and food products from them). (Eckert 1997)*

*Munyal*, 'patience and endurance,' is the third of the virtues within *pulaaku*, the Fulani system of cultural values. It is the virtue encompassing the notions of tolerance, determination, and a certain amount of resignation; it is associated with the heart (Stenning 1959:55). The noun *munyal* is derived from the verb root *muny*, which means to bear, endure, submit (Osborne, Dwyer, Donohoe 1993:230), and to be patient, tolerant, and endure steadfastly with resignation (Seydou 1998:468). While patience may seem to have a passive connotation for western readers, *munyal* is both passive and active, as it includes both the patience that waits, as well as the endurance and determination that fuels action.

*Munyal* is the virtue which carries a Fulani through a difficult life. Stenning states that it is the possession of wives and children that gives a man this virtue. This may be very revealing, considering that *hakkiiilo*, the virtue associated with knowledge, comes from cattle. In a society which allows and often encourages "wife stealing," divorce, polygyny, and widow inheritance, the virtue of *munyal* would carry a man through potentially disagreeable domestic situations, including feuding wives and children (see Stenning 1959, Dupire 1962, Nelson 1981; especially their descriptions of arranged *koogal* marriage and the *gerewol* ceremony). In practice, this is the virtue that guides Fulfulde speakers in avoiding arguments and disagreements, as well as in face-saving actions.

*Hakkiilo* 'knowledge,' *semteende* 'modesty,' and *munyal* 'perseverance' are the values by which members of the Fulfulde-speaking communities judge each other and, therefore, those that are suitable to use in formulating questions to probe for the attitudes and feelings toward speakers of various Fulfulde varieties. The language name *Fulfulde* is closely related through linguistic form and meaning to *pulaaku*. According to René Vallette, the meaning of the verb root *ful* refers to speech and action. Because of the Fulfulde system of initial consonant alternation between singular and plural, the singular form of *ful* is *pul*. With the added allomorph for the noun class corresponding to people, the word for one person from the group is *pullo*, while the plural form is *fulbe*, both the initial consonant of the root and the noun class ending agreeing for singular and plural. The name for the language of the Fulbe is formed through the reduplication of the plural form of the root, and an allomorph for the noun class corresponding to language: *ful-ful-de*. To speak Fulfulde, then, is to walk the true path of *pulaaku*.

In addition to a careful study of the cultural values of Fulfulde speakers, the development of the language attitude assessment instrument required attention on how to measure dimensions of attitude.

#### 2.2.4.4 Measuring dimensions of attitude

Showalter designed the questions for his matched-guise study based on concepts he related to sociocultural cohesion and positive evaluations of the

speaker. These included: 1) Ethnic identity, with sub-dimensions of family relationships, shared traditions, shared religion, cultural maintenance, and shared language; 2) Ethnic contact, with sub-dimensions of personal familiarity and linguistic accommodation; 3) Social status and personal character, with sub-dimensions of economic status, personal importance, and character of contact; and 4) Language awareness with the sub-dimensions of understanding and speaking ability. We translated these dimensions into categories for question development, scoring, and analysis. Our categories were as follows:

**Shared**, for "shared identity," based on ideal behaviors, i.e. social status and personal character, implied by the *pulaaku* system of cultural values. Questions in the Shared category probed for ways in which the subject evaluated the recorded speaker as sharing the same cultural values and practices. They included questions like, whether the recorded speaker raised cattle in the same way, whether he followed the same religion, whether he knew the ways of the bush, and whether he followed the path of *pulaaku*.

**Diff**, for "identity differences," based on an estimation by the subject concerning the recorded speaker's deviation from shared ideals. In other words, questions in the Diff category probed for ways in which the subject believed the recorded speaker to be somehow different, perhaps inferior, to him- or herself.



Questions for the "shared identity" and "identity differences" measurement also included the subject's estimation of the recorded speaker's personal character, including his courage, trustworthiness, and hospitality.

**Ling**, for "language awareness," was based on the subject's judgement of how well they understood the recorded speaker, the quality or "purity" of their speech, whether they had ever met someone who spoke in that way, and whether people who speak in that way are members of the same speech community as themselves.

We developed 52 questions based on cultural values and the evaluative dimensions of shared ethnic identity, identity differences, and language awareness.

#### 2.2.4.5 Development and pilot testing the language attitude assessment instrument

The pilot form of the 52 language attitude assessment questions was developed in French, with translation into Fulfulde, followed by a back-translation to check for accuracy. These questions were pilot-tested in Dakoro and Maradi with nomadic and sedentary Fulani. As we constructed the final form of the questionnaire, we realized that the variety of Fulfulde used in the questions could skew the results of the research; therefore, the final form of the instrument included separate sets of translated questions, one for the sedentary Fulfulde speakers, and the other for the nomadic Fulfulde speakers.

In keeping with Showalter's method of rotating questions to control for influences on the subject by onlookers, we organized the 52 questions into three series that were rotated as subjects listened to the reference texts from Birnin Gaoré, Tassa Ibrahim, Kano, Tanout, and Toumour. Developing a set of protocols for all researchers to follow when administering the language attitude assessment instrument was the next step.

#### 2.2.4.6 Administering the language attitude assessment instrument

In an effort to reduce the possibility of errors introduced by subjects who were easily distracted or could not hear the texts well because of surrounding noises (from babies, livestock, curious neighbors, etc.), we had them wear headphones to listen to the texts. The tester also wore headphones to listen in on the text in order to start and stop the recorder appropriately. Additionally, the tester could gage when the surrounding noise level would even overpower headphones and then appeal to the by-standers to either disperse or quiet down. Another use of the headphones was part of the unpredictability of the testing situation from the point of view of the subject, as well as the “audience.” We wanted to control the subject being tempted to accept answers from the people watching, for subjects who were first onlookers and who somehow contrived to memorize as many responses as possible, as well as to make the situation a little more unpredictable and interesting for the subject to reduce the possibility of boredom. The five texts and the three question series were rotated in such a way

that the audience could not “help” the subject respond by volunteering an answer, nor could an intimidated subject accept an answer offered by an on-looker, without the testers’ knowledge. As a further security, the translator did not wear headphones, so that even they could not know which text was being listened to. This was especially helpful during the few occasions when it was necessary to accept translation help from local villagers who had difficulty understanding the testing method and who were also much less reliable as objective test administrators.

Originally, to ensure consistency in test administration among four researchers with and without interpreters, we devised a system using two tape-recorders: the first recorder played the tapes of the reference texts; the second recorder played the questions of the questionnaire in rotating order. We hoped to avoid error introduced when male and female researchers and interpreters asked questions differently (perhaps with differences in intonation, repetition, facial expression, etc.). However, we found that this system confused the subjects, who did not distinguish between a recording of a story and a recording of a question, and, therefore, did not understand that they were to answer the question and not simply listen to it as part of the story. In the end, we decided that the error introduced by the subjects’ difficulty with the test method would be greater than error introduced by some inconsistency in questionnaire administration. The questions were written down, then the researchers and interpreters rehearsed the

questions so they could ask them as naturally as possible, without having to read directly from the questionnaire sheet. These proved to be good decisions because we found subjects to be more at ease and the testing situation more culturally appropriate.

Copies of the language attitude assessment instrument question series are presented in appendix B.

### **2.3 Summary**

Four data collection methods were used in this study: a general sociolinguistic interview schedule, the Vallette word and phrase list, RTT, and a language attitude assessment instrument. The Vallette list and RTT were primarily used to investigate the question of dialect intelligibility. Neither of them required sampling for the population of subjects, but they did require sampling to decide on five possible reference texts, as well as the locations for data collection.

Our sampling design included the notion of a zone, a concept based on the geographical location of Fulfulde-speaking groups in Niger, as well as their lifestyles. Therefore, Zones 0–3 included sedentary Fulfulde speakers of the western Fulani and eastern Fulani groups, while Zone 4 included the nomadic Wodaabe. Within each of these zones, we used a method of stratified random sampling, with quota sampling included at the level of the household.

The random sampling design was necessary primarily for the administration of the language attitude assessment instrument. This method of data collection was based on the same hypotheses as the matched-guise methods originally developed in North America (cf. Lambert, Frankel, and Tucker 1966) and adapted for our circumstances, following Showalter's model (1991a). The instrument was designed, based on the Fulani cultural system, including the three emic virtues of knowledge, modesty, and perseverance. The resulting data was organized according to categories reflecting the subject's assessment of whether they shared group identity with the speaker of the text, whether they believed the speaker to be somehow different, as well as their judgement about the comprehensibility and purity of the form of the language spoken by the person in the recording.

The methodologies for this research were all used to gather evidence regarding the intelligibility of each of the five reference texts for speakers of Fulfulde varieties in eastern Niger, as well as to assess attitudes toward those varieties. We began the research with the three following general hypotheses:

1a) Speakers of Fulfulde varieties in eastern Niger have difficulty using materials based on the western Niger Fulfulde dialect.

1b) This difficulty is great enough to warrant a recommendation of a reference dialect for eastern Niger Fulfulde.

2) There are four possible reference dialects of eastern Niger Fulfulde speakers, of which one is an optimal choice (Tassa Ibrahim, Kano, Tanout, and Toumour).

3) The inter-group tensions and language attitudes of the sedentary eastern Fulani and the nomadic Wodaaɓe Fulani are strong enough to prohibit them from using materials developed from the same reference dialect.

The following section presents the results of our analysis, as well as recommendations concerning a reference dialect for Fulfulde speakers in eastern Niger.

### **3. Results**

The results of the research are presented according to the order of the hypotheses. First, we present the results concerning intelligibility between western and eastern Niger Fulfulde varieties, followed by results pertaining to intelligibility between eastern Niger Fulfulde varieties. Finally, we present the results of the language attitude assessment study.

#### **3.1 Intelligibility between western Niger Fulfulde and eastern Niger varieties**

Based on preliminary assessments at the outset of this research, we believed that formal linguistic differences between the Fulfulde varieties of western and eastern Niger would be great enough to impede comprehension. The

results of the Vallette list reveal that lexical similarity between western Niger Fulfulde (represented by lists elicited in Birnin Gaoré) and eastern Niger Fulfulde varieties ranges between 34–53 percent with a median percentage of 44.

Difficulty in comprehension was further confirmed by the RTT.

With the exception of two sites in Zone 3, Mossata and Toumour, no group demonstrated sufficient comprehension of the Birnin Gaouré text to indicate that they might be able to use materials developed in the Fulfulde of western Niger. Notes by recorded text testers contain comments from the groups like “difficult,” “hard to understand.” From the linguist administering the test, there were comments such as, “followed the basic story line but needed a lot of help from each other,” “seemed lost,” and “only a few are willing to hazard a response.”

Where comprehension was greater than “1” or “1.5,” the notes from several of the sites indicate that one or two individuals were able to answer well and, perhaps as a result, dominated the group, answering out of turn and giving hints to others called upon to tell what they had understood. There is a great possibility that the score from Toumour is high because they had just finished up a second year of literacy campaign using materials published in the western Niger Fulfulde dialect. These additional pieces of information indicate that individuals who are able to understand western Niger Fulfulde have had enough opportunity

and/or motivation that they have learned to understand this form of Fulfulde, an indication of acquired, rather than inherent comprehension.

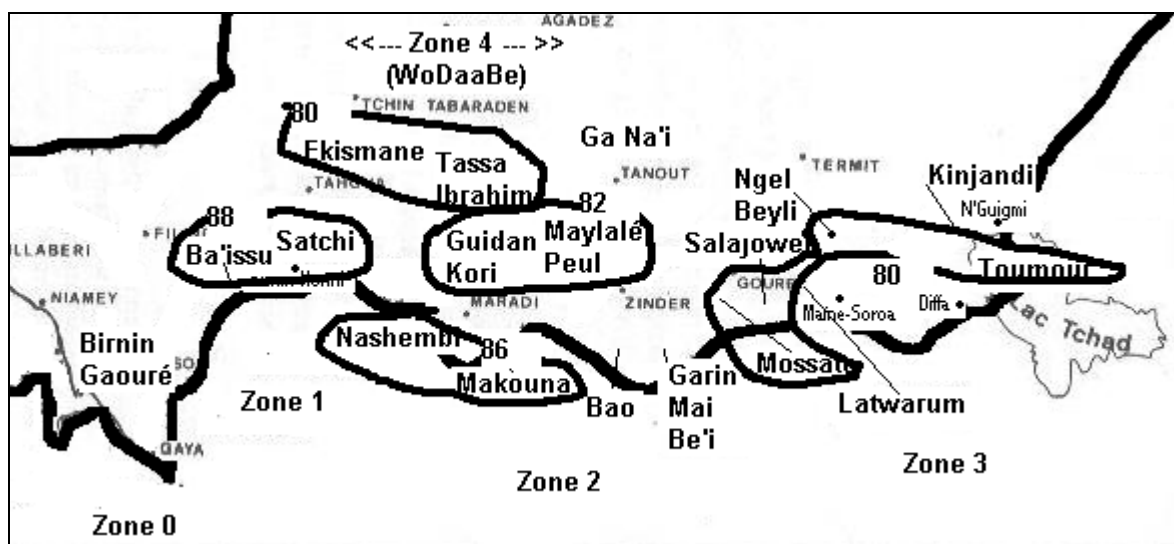
In summary, the results of background research, the Vallette list, and the RTT all support the hypothesis that the differences between western Niger Fulfulde and the eastern Niger Fulfulde varieties are great enough to impede comprehension; therefore, the use of any written materials developed in western Niger Fulfulde are not useful to speakers of eastern Niger Fulfulde varieties who have not had the possibility of the contact and motivation for learning western Niger Fulfulde. The implication for this finding is that it is necessary to identify one or more reference dialects for the Fulfulde speakers in eastern Niger.

### **3.2 Intelligibility for eastern Niger Fulfulde varieties**

The first result of the Vallette list and of the RTT was the confirmation of the use of zones in our sampling approach. As previously discussed, the Fulfulde of Zone 0 (western Niger Fulfulde) is notably different from the Fulfulde varieties of Zones 1–4. Likewise, the analysis of the Vallette list revealed that, in general, lexical similarity between sites in close geographical proximity were more similar to each other than to sites farther away. Furthermore, in most cases, a given site had a higher percentage of lexical similarity with other sites in the same zone than with sites in the other zones. This is illustrated by the map in figure 6. The similarity between the lexical and grammatical forms from the Zone 1 sites of



Ba'issu and Satchi is at 88 percent; the lexical and grammatical similarity between the Zone 4 sites of Ekismane and Tassa Ibrahim is at 80 percent; most of the sites included in Zone 3 group together are at similarity percentages above 80.



**Figure 6. Map showing highest lexical similarity figures for eastern Niger Fulfulde varieties.**

There were two notable exceptions to the generalization concerning the relationship between geographic proximity and the similarity of lexical forms: the first exception is that two of the sites, from an area we had labeled “Zone 1,” Guidan Kori and Maylalé Peul, actually showed slightly higher lexical similarity with Nashembi and Makouna in Zone 2 than they did with the other two sites from Zone 1 (see figure 7).

Ba'issu (Zone 1)		88		Satchi (Zone 1)	
68	65	Guidan Kori (Zone 1)			
66	67	82	Maylalé Peul (Zone 1)		
69	67	72	78	Makouna (Zone 2)	
71	69	77	83	86	N Nashembi (Zone 2)

**Figure 7. Lexical similarity figures for Zone 1.**

Looking at figure 7, it is not difficult to see that including the sites of Guidan Kori and Maylalé Peul, which are located in the arrondissement of Mayahi (our Zone 1), was probably an error. The Fulfulde spoken in that area is apparently slightly more similar to the Fulfulde spoken directly south in Nashembi and Makouna (Zone 2) than it is to the Fulfulde spoken to the west in Ba'issu and Satchi.

The second exception to the generalization that sites within the same zone are very similar to each other is that two sites in Zone 3, Salajowel and Latwarum, showed levels of lexical similarity of between 55–69 percent with the other three sites in Zone 3 (Mossata, Ngel Beyli, and Toumour). The results of the analysis of the Vallette list in these cases are not supported by the good level of comprehension of the Toumour text; we have no real explanation for this outcome.

As stated in the discussion of zones, the concept includes lifestyle as well as geography, that is, the nomadic Fulfulde speakers are in Zone 4, while the Fulfulde speakers of Zones 1–3 are mostly sedentary. The lexical similarity

between the sites in Zone 4 and the sites in Zones 1–3 are under 80 percent. Lexical and grammatical similarity between the Fulfulde spoken in Ga Naï (Tanout area - Zone 4) and the sites in Zones 1–3 ranges from 51 percent to 63 percent, with a median percentage of 59. Likewise, the range of lexical similarity percentages for the Vallette list collected at Tassa Ibrahim (Zone 4) is between 56–80 percent when compared with Zones 1–3; the median percentage is 66.5. Despite the variations in the similarity of lexical and grammatical forms, the text from Tassa Ibrahim was well understood at every test site in the RTT. With a better analysis of the grammatical data, we may gain a more complete picture of the similarities and differences between Fulfulde varieties in eastern Niger.

In order to recommend a reference dialect for the Fulfulde varieties of eastern Niger, we analyzed data from the RTT as well as the analysis of the Vallette list of words and phrases. The four eastern Niger reference dialects proposed were from Kano (Zone 2), Toumour (Zone 3), and Tassa Ibrahim and Tanout (both Zone 4). Some language development has already taken place in the Kano and Tassa Ibrahim dialects. The results of the RTT indicate that the texts of Kano, Toumour, and Tassa Ibrahim were all well understood, while the text from Tanout presented many more difficulties for listeners.

The text from Kano was well understood, with the maximum score of “3” at every test site.<sup>7</sup> According to the scale previously presented (table 3), the score of “3” means, “good comprehension,” i.e., the story is retold accurately and the people are able to furnish ample detail. The test administrator noted laughter from several of the groups who listened to the story. Most groups added that the speaker spoke Fulfulde well, with comments like, “easy to understand.” Two or three groups offered the additional piece of information that, “he doesn’t speak like us.” Some comments indicated that the Fulfulde from the reference text was somehow better than their own variety because, “he doesn’t mix in as much Hausa.” After studying the text with our translators who spoke Hausa, as well as Fulfulde, we decided that this was a subjective opinion, indicating high regard for the speech variety. There were some Hausa borrowings in the story, even a word borrowed into Fulfulde from English; however, the subject of the story (herding) did control for a certain extent for borrowed words, since it concerned an activity central to Fulani cultural ideologies. All of these comments and reactions indicate high comprehension and acceptance of the speech form represented by the Kano text.

The Toumour text was also well understood at every site, with the exception of the village of Satchi (Zone One), where the group of women tested were not able to re-tell the story accurately, indicating only partial comprehension. This was another well-told story which provoked laughter from several groups. It was

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<sup>7</sup> We were unable to test this text at the Ekismane and Maylale Peul sites.

interesting that the storyteller was identified several times as a Bod'aado (the singular of Wod'aabe) and, therefore, a nomadic Fulfulde speaker, even though he is from a sedentary group. Two of the Wod'aabe groups even identified him as a fellow Bod'aado. Other comments included “speaks well,” “easy to understand,” “speaks well, like us.”

The text from Tassa Ibrahim was also well understood at every test site.<sup>8</sup> In several locations, the linguist reported laughter during the story, with comments such as, “they repeated the story so fast I couldn’t keep up with them,” “excellent comprehension.” The groups’ feedback included such comments as “he speaks well,” “he’s a Bod'aado” (as, in fact, he is), “he doesn’t speak like us, but he speaks well.” In Tassa Ibrahim, the speaker was easily identified as a relative of one of the participants. All of these comments indicate high comprehension and acceptance of the speech form represented by the Tassa Ibrahim text.

These results suggest that any of the three speech varieties represented by the texts from Kano (Zone 2), Toumour (Zone 3), or Tassa Ibrahim (Zone 4) could be recommended as a reference dialect, based on comprehension. The speech variety from the Tanout area (Zone 4) would most likely not be suitable. This conclusion is based both on the results of the lexical and grammatical similarity analyses and on the results of the RTT.

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<sup>8</sup> Note that we were unable to test this text at the Ekismane and Maylalé Peul sites.

The Tanout text was understood at a level three at all of the Zone 4 sites, however, the results were much more varied for Zones 1–3. Where the text was well understood, the comments from the linguist included mention that the listeners were able to identify the clan of the speaker (in the case of the Wodaabe listeners), or at least to identify him as a Bodaado. This suggests marked and identifiable features in the speech of the storyteller. Other comments included “speaks well but cassette of bad quality,” and “easy to understand; bad recording.” Where the text was poorly understood, there was mention made of the fatigue of the listeners and their unwillingness to cooperate. Other comments included, “On n’a pas bien compris ce peul” (We didn’t understand this Fulani well), “were able to follow the storyline but got mixed up on the details,” and “very little comprehension, they asked to play the tape again.” The recording was of poorer quality than that of the other potential reference texts; the marked speech of the speaker may have also contributed to the comprehension and evaluations of the listeners.

In summary, the two methods used to study the intelligibility between eastern Niger Fulfulde varieties affirm the three zones originally posited by Harper and Vallette (Harper 1997). Moreover, the results of the data analysis also support the recommendation of three of the four dialects represented by the

recorded texts from Kano, Toumour, and Tassa Ibrahim as potential reference dialects for the development of written materials.

The final hypothesis tested by this research concerns language attitudes. Longtime fieldworkers from SIM and SIL believed that the inter-group tensions and language attitudes of the sedentary Eastern Fulani and the nomadic Wodaaɓe Fulani would be strong enough to prohibit them from using materials developed from the same reference dialect.

### **3.3 Language attitudes for eastern Niger Fulfulde varieties**

In order to test the final hypothesis, we collected data using the language attitude assessment instrument described in section 2.2.4. Three hundred and fifteen subjects listened to short texts from each of the potential reference dialects; afterwards, we asked them questions about the speaker. These questions were designed to probe for judgments regarding whether the subject and the speaker were of the same or different group, as well as considerations of the purity and "correctness" of the speech.

Each of the five reference texts received the full range of positive and negative scores, from the smallest score possible (−7, indicating negative reaction) to the largest score possible (+7, indicating positive reaction). A majority of the subjects indicated positive reactions to all of the texts, from 68 percent positive reactions to the Birnin Gaouré text (western Niger), to 80 percent positive

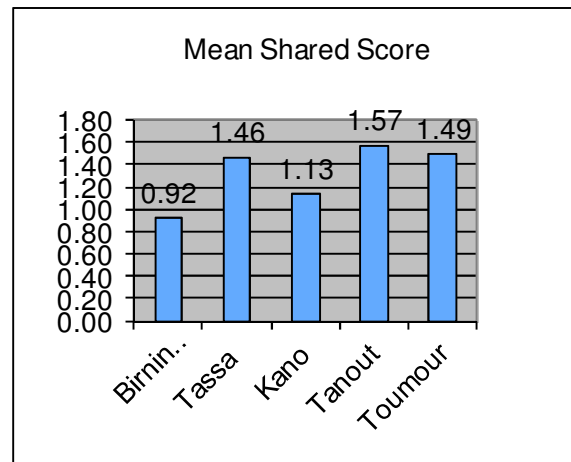
reactions to the two Wodaaɓe texts (Tassa Ibrahim and Tanout). Seventy-two percent of the subjects gave positive reactions to the Kano text. One of the most striking aspects of these results is that, even for texts that were poorly understood (the Birnin Gaouré text from western Niger and the easternmost Wodaaɓe text from Tanout), on average, the subjects demonstrated a relatively positive attitude toward the speaker. This is not surprising, when considering that even the poorly understood texts were identified as being in the Fulfulde language and, therefore, the speaker could be assumed to share the ideals of the *pulaaku* system of cultural values described in section 2.2.4.3.

### ***3.3.1 Areas of evaluation: shared identity, identity difference, and language appreciation***

The results of the "shared identity" judgments by the subjects reveal that the speakers of the three texts from eastern Niger were considered, for the most part, to share the same values and ideals as the subject. The median score was +3 on a scale of -3 to +3. The appreciation of the speaker from Kano reflected a lower median score of +2, while the western Niger Fulfulde speaker from Birnin Gaouré received a median score of +1. Looking at the average scores, the picture is only slightly different. The chart in figure 8 shows that the speaker of the Tanout text, although one of the least well understood, was considered by the subjects to more closely share their identity with a mean score of 1.57. The speakers of the Toumour and Tassa Ibrahim texts are slightly behind with means



of 1.49 and 1.46, respectively. The speaker from Kano was less appreciated for a shared sense of identity with a mean score of 1.13, while the western Fulfulde speaker from Birnin Gaouré received the lowest consideration of shared identity.

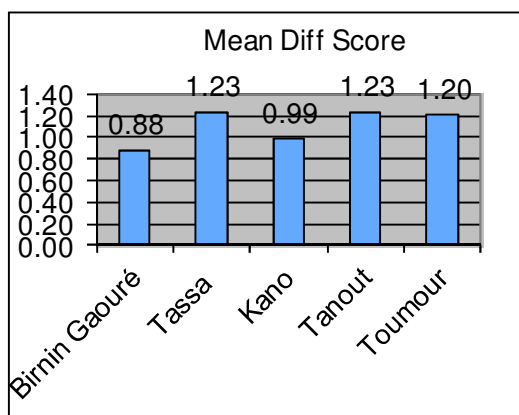


**Figure 8. Mean "Shared Identity" results by text.**

The standard distributions for the scores ranged from 2 for the Tassa Ibrahim text to 2.2 for the Birnin Gaouré text. The values of the median and mean scores, along with the standard distribution, indicate skewed distribution curves, which suggests that, although many people reacted positively regarding a sense of shared identity to the speakers, there were a substantial number who did not. This indicates a lack of consensus opinion for the entire group of subjects as to whether or not they feel a shared identity with the speakers of any of the texts.

The second area of evaluation concerned identity differences, an estimation by the subject concerning whether the subject believed the recorded speaker to be different than themselves. The maximum "identity difference" score

is +3, which reflects the perspective that the subject does **not** perceive the speaker's identity as different from theirs (i.e., another aspect of shared identity), whereas the lowest score, -3, reflects that the subject feels very strongly that their identity is different from the speaker. For each text, the median score is +1. The mean results for each text are displayed in figure 9. The speakers of the Tassa Ibrahimin and Tanout texts are considered, on the average, to be less different with mean of 1.23, while the speaker from Toumour is only slightly less different with a mean of 1.20. The speakers from Kano and Birnin Gaouré averaged .99 and .88, respectively. These results indicate that the speakers from eastern Niger are considered less different from the subjects than the speakers from Kano, Nigeria, or western Niger.



**Figure 9. Mean "Identity Difference" results by text.**

The pattern of preference for the three texts from eastern Niger is repeated for the "Ling" or "Language Awareness" score type. The maximum number of points for this score type is +1, while the lowest possible score is -1. The mode or

most frequent score in the case of each text is 1. The mean figures for Tassa Ibrahim, Tanout, and Toumour are .56, .54, and .51, respectively. The results for Kano and Birnin Gaouré are .41 and .31, respectively. The Tassa text had the lowest standard deviation of scores (.83), while the Birnin Gaouré text had the highest at .95. These results indicate that eastern Niger Fulfulde speakers are most familiar with other varieties of eastern Niger Fulfulde and that they also consider them to be the best kind of speech.

So far, a consideration of shared identity, identity differences, and language awareness demonstrates a preference by eastern Niger Fulfulde speakers for the varieties spoken around them. Nevertheless, in each instance, and also viewed together as a "total" score, the figures make up a skewed distribution curve, one that would have its highest point on the far right side of the curve where the most positive scores are, but have a long tail of more negative scores to the left. This tells us that a majority of people reacted positively, but that a significant number still indicated attitudes which were much more negative. There were enough strong negative reactions to lower the average scores appreciably from the medians. Not all of the subjects agreed with each other in how they viewed the speakers of the texts. If the distribution of scores were smaller, we would be more certain that the average score represents more of a consensus opinion of all of the subjects.

Our hypothesis that negative attitudes would prohibit sedentary and nomadic eastern Niger Fulfulde speakers from sharing a reference text is, therefore, not supported. Nevertheless, the analysis shows significant differences (at  $p < .01$ ) in how the subjects as a whole reacted to the five reference texts; this warrants a closer look at the results by population variable. As previously described, the sampling procedure took into consideration where the subjects lived (zone), their sex, and their age. We did this in order to find the best random and representative sample possible, as well as to investigate the possibility that any of these variables could have an effect on language attitudes.

### ***3.3.2 Attitude assessments by zone***

The responses of eastern Niger Fulfulde speakers vary according to their zone, sometimes in significant ways. The shared identity results of the nomadic Fulfulde speakers are so much more positive for the three eastern Niger Fulfulde texts than those of the sedentary speakers as to be statistically significant at  $p < .01$ .<sup>9</sup> The nomadic Wodaabe subjects of Zone 4 identify strongly with the speakers of the Tassa, Tanout, and Toumour texts. It is interesting to note that the speaker of the Toumour text from Zone 3 is a sedentary Fulfulde speaker who was identified often (and incorrectly) as a nomadic Fulfulde speaker during the language attitude assessment. This was also the case during intelligibility testing, although the speaker on the test tapes was a different person.

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<sup>9</sup> For detailed results of all texts by zone, see appendix C.

As for considerations that subject and speaker are different in their identity, subjects in Zones 3 and 4 reacted more strongly than their counterparts in Zones 1 and 2 in favor of the three eastern Niger Fulfulde texts so as to be significantly different ( $p < .01$ ). Moreover, the reaction of the Zone 2 subjects to the Kano text was more reserved than those of the other three zones, to the point of creating a significant difference ( $p < .05$ ). This is surprising, because the Kano text was presupposed to represent the speech of Fulfulde speakers in Niger's zone 2, but their reactions in terms of judgment of difference seem to contradict that assumption.

The measure of linguistic awareness demonstrated that subjects in Zones 1 and 3 evaluated the five texts in significantly different ways. The subjects in Zone 3 are understandably most aware of the speech represented by the Toumour text, as well as considering it to be the most correct ( $p < .05$ ). The subjects in Zone 1 demonstrated a significantly stronger preference for the speech represented by the Tassa Ibrahim text ( $p < .01$ ). There were no highly negative language attitudes for any text, rather, the significant differences are caused by evaluations that are much more highly positive than others.

A summary of the data as presented by the variables of zone and text appears to represent positive judgments for all five reference texts; the percentage of those subjects giving a positive reaction is always larger than the percentage of

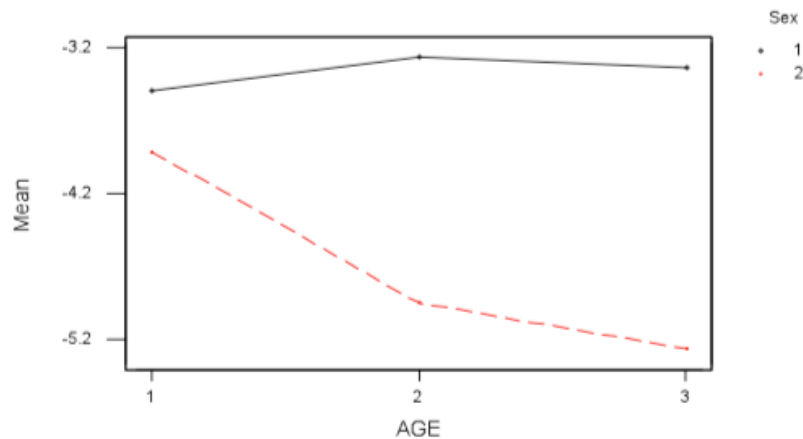
those subjects giving a negative reaction. However, each zone does register a set of reactions unique to itself, sometimes differing significantly from the reactions of the other zones. Generally speaking, the subjects in Zone 2 tended to be less positive in their reactions to the texts than the subjects from the other three zones, while the subjects from Zone 4 tended to be more positive than the subjects from the other zones. The subjects in Zones 1 and 4 appear to favor the speech represented by the text from Tassa Ibrahim, while the subjects in Zone 3 seem to prefer a text further to the east: Tanout or Toumour. We discovered, however, that the language attitude assessments made by subjects in the study also varied significantly according to their age and sex.

### ***3.3.3 Attitude assessments by age and sex***

Our statistical consultant, Dr. Richard Berger, observed a relationship between age, sex, and positive evaluations of speakers.<sup>10</sup> Regardless of the text, women tended to be more positive than men in their reaction to the text, and young people tended to be more positive than old people, as shown by the graph in figure 10, where 1=young, 2=adult, 3=old; the women are represented by the solid line and the men by the dashed line.

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<sup>10</sup> Richard A. Berger, Temple University. Statistical consultation by e-mail.



**Figure 10. Correlation between positive judgments, age, and sex.**

When we examine the results for each area of the language attitude assessment (shared identity, identity difference, and language appreciation) for each text by the variables of age and sex, as a general rule, the same pattern repeats itself. Middle-aged and older men give the lowest, we might say the most discriminating judgment scores, while the women and young men give highly positive scores.

The evaluations of the middle-aged and older men were strongly negative in every measure for the Birnin Gaouré text from western Niger. In addition, the three texts from eastern Niger tended to be favored over the text from Kano, Nigeria. The middle-aged men judged the speaker of the Kano text to share less identity with them than the speakers of the texts from eastern Niger, while the older men made that same judgment about the speaker from Tassa Ibrahim. The

speaker of the Toumour text was consistently positively evaluated by both middle-aged and old men.

The negative correlation between the assessments of the women and young men on one hand, and of the middle-aged and old men on the other hand, is most strongly evident for the area of identity difference. The young women gave very positive identity difference scores, indicating that they did not feel a difference between the speaker of the text and themselves. On the other hand, the old men differentiated clearly between themselves and the speakers of each reference text. The speaker of the Birnin Gaouré text was considered most different, while the old men considered there to be less difference between themselves and the speakers of the Toumour and Tanout texts.

In terms of language appreciation, the middle-aged men were most favorable to the speech represented by the Toumour and Tassa Ibrahim texts. The old men appreciated the speaker of the Tanout text the most, and the Toumour and Birnin Gaouré texts the least.

In summary, no text but the text from western Niger seems unacceptable to eastern Niger Fulfulde speakers, although this study uncovered two important patterns of preference. First, there is a pattern of preference for a speech variety closest to home. Those sedentary speakers living farther west (Zone 1), as well as the nomadic speakers (Zone 4), show a preference for the speech represented by



the text from Tassa Ibrahim. This is not surprising, as it is also the westernmost of the eastern Fulfulde reference texts. On the other hand, the sedentary speakers from Zone 3 show a preference for the text representing a variety from their own zone. The speakers from Zone 2 did not identify closely with the speaker of the Kano text, which leads us to believe that it may not represent the speech of Zone 2 in Niger after all. Secondly, and perhaps most crucially, the most discriminating subjects are middle-aged and old men. This indicates that the variables of age and sex make a difference for language attitudes among the speakers in this study. More importantly, the speech represented by the Toumour text (zone 3 of eastern Niger) was more consistently positively evaluated by the middle-aged and old men than any other text. The implication is that the eastern Fulfulde variety from Tassa Ibrahim, that is currently used in a language program, may not be the first choice for all eastern Fulfulde speakers; also, the Fulfulde variety from Kano, that is also currently used in a language program in Nigeria, may not be the best choice for Fulfulde speakers in eastern Niger.

### **3.4 Discussion**

The results from the study of dialect intelligibility and language attitudes among Fulfulde speakers in eastern Niger confirm that a reference dialect for eastern Niger is necessary because of low comprehension of western Niger Fulfulde. Among the possible reference dialects for eastern Niger is one spoken by nomadic Fulfulde speakers and one spoken in Nigeria. Comprehension of these

two texts is good, and judgments by subjects concerning the language varieties represented by the texts are positive. Nevertheless, a pattern emerged in the analysis of the results of the language attitude assessment instrument indicating that the middle-aged and old men make more finely-tuned judgments about language varieties than did the women and young men, who tend to be much more generally positive about all language varieties in this study.

The discriminating judgments of middle-aged and old men becomes pertinent in light of John Watters' (1990) article concerning community involvement in language development. In this article, he discusses three socio-economic factors that contribute to successful community-based programs. In particular, he states the following:

*[T]he greater the community's homogeneity, openness to the outside, and resident middle-aged leadership, the greater is the possibility for a widespread community participation in the development and implementation of a language program.*  
(1990:6.7.1)

Watters asserts that the presence of middle-aged men who are active in leadership in the community on a day-to-day basis at the local level constitutes a group through which results in the community are attained. Activities which do not have their consent and active participation would ultimately be less successful. The implications of this "leadership factor" in the study of language attitudes in this particular cultural context is that the leadership of the group would tend to have a

critical degree of influence over the group's thoughts and opinions and, therefore, also their language attitudes.

In light of this “leadership factor,” it is essential that those in charge of the language-development projects take into account the reactions of the middle-aged and old men towards the five reference texts because their attitudes are more likely to become the basis of the group reaction to the speech variety used in language development. While none of the assessments of the three reference texts that represent speech varieties already targeted for the development of written materials (Birnin Gaouré in western Niger, Kano in Nigeria, and Tassa Ibrahim in eastern Niger) are negative enough to warrant a change of plan, it is important to take into account that the speech variety most favored in most areas of evaluation by middle-aged and old men is the one represented by the Toumour text.

#### **4. Conclusion**

The issues surrounding dialect intercomprehension and language attitudes for Fulfulde varieties in eastern and western Niger are complex. Nevertheless, with the data collected during the course of this research, the hypothesis that speakers of eastern Niger Fulfulde varieties have difficulty using materials based on the western Niger Fulfulde dialect was supported. Eastern Niger Fulfulde speakers do not understand the Fulfulde of western Niger well enough to use materials developed in that variety. Furthermore, although in general, eastern

Fulfulde speakers do not demonstrate negative language attitudes towards western Niger Fulfulde, it is nevertheless less appreciated that any of the eastern Niger Fulfulde varieties we tested. The second hypothesis, then, that the comprehension difficulties for eastern Niger Fulfulde speakers, who listen to texts in western Niger Fulfulde, warrant a recommendation of a reference dialect for eastern Niger Fulfulde, is supported.

Four reference dialects were proposed for eastern Niger Fulfulde, two from nomadic speakers (represented by the Tassa Ibrahim and Tanout texts), one from a sedentary speaker in Toumour at the eastern end of the country, and one from Kano, Nigeria. Lexical similarity figures between the four zones in eastern Niger suggest that speakers understand those closest to them the best. On the other hand, the lower similarity results were not reflected in the RTT. The texts from Tassa Ibrahim, Toumour, and Kano were all very well understood; listeners had more difficulty with the text from Tanout. Based on the results of the intelligibility study, any of the varieties represented by the texts from Tassa Ibrahim, Kano, and Toumour could serve as a reference dialect. However, the Tassa Ibrahim text represents a language project already underway among nomadic speakers, and the language team wondered if language attitudes of sedentary speakers would prevent them from using the material being developed.

Our final hypothesis, then, concerned inter-group tensions and language attitudes between the sedentary and nomadic Fulfulde speakers. From comments collected during the RTT, the texts from Tassa Ibrahim, Kano, and Toumour were all well-received, even when listeners noted that the speaker's language was different than their own. It was also noteworthy that the sedentary speaker from Toumour was sometimes identified as a nomadic speaker. The results of the language attitude assessment study generally indicated positive language attitudes for all eastern Niger Fulfulde varieties. The reactions from subjects varied by zone, such that some groups showed more enthusiasm than others for some of the texts. Even so, it was not until we examined the results according to sex and age group that we noted an area requiring consideration.

As previously discussed, the evaluations by middle-aged and old men tended to be much less positive than the evaluations by young men and the women of all ages. Further examination of the reactions of this group reveal a preference for the speech represented by the Toumour text over the speech represented by either the Tassa Ibrahim or Kano texts. It is possible, then, that the middle-aged and old men show a preference for a speech variety of sedentary speakers of far-eastern Niger over a variety from Nigeria or from a nomadic speaker of an eastern Niger Fulfulde variety. While it does not seem that these attitudes would hinder the projects already underway, it is, nevertheless, a consideration to take into account.

For further study, it would be helpful to assess the comprehension of materials more complicated than narrative discourse, as well as reactions to orthography. In addition, further examination of word- and phrase-list data may shed light on why lexical similarity percentages could be relatively low, while comprehension of spoken texts was apparently high.

## Appendices

### Appendix A. The Vallette list

#### Questionnaire linguistique pour l'enquête dialectale du fulfulde

*version avril 2000*

#### 1. Renseignements personnels

##### 1.1 Nom du chercheur :

Date :

Village/puits :

##### 1.2 Informateur :

Nom :

Sexe :

Age :

Clan :

Peul noble/serviteur :

Métier :

Lieu de naissance :

Résidence actuelle :

##### 1.2.1 Relatifs au milieu traditionnel :

Toujours vécu au village peul (sédentaire)

Toujours vécu avec son groupe nomade

N'habite plus dans son milieu d'origine, mais garde toujours le contact

Perdu contact avec son groupe d'origine :

##### 1.2.2 Education :

cours élémentaire

moyen

troisième

terminale

enseignement supérieur (diplôme)

école technique

école Coranique

## Appendix A. The Vallette list (continued):

### 1.2.3 Milieu linguistique:

- Langue(s) du père
- Langue(s) de la mère
- Langue(s) de l'informateur
- Autres langues parlées dans la région
- Région(s)/pays où l'informateur a voyagé :
- Durée du voyage :
- Combien de fois est-ce qu'il a fait le même voyage ?

## 2. Lexique

<u>2.1 Êtres humains</u>			<u>Explications pour chercheurs</u>
1. personne (1)			
2. personne mauvaise/laide – sans valeur (5)			On cherche la classe nominale 'gum'
3. enfant (moins de 12 ans) (1)			
4. jeune homme (15–18 ans, célibataire) (1)			
5. jeune femme (15-18 ans, célibataire) (1)			
6. chef de village (peul et non-peul) (1)			
7. chef de région (1)			
8. étranger (1)	(peul):	(non-peul):	
9. griot			En Afrique de l'ouest, un griot est celui qui raconte des histoires et qui tient des fois du pouvoir magique.



**Appendix A. The Vallette list (continued):**

10. voisin	(peul)	(non-peul)	
11. messenger			(« prophèt » si « messenger » n'est pas connu)
12. ennemi			
13. forgeron			

<u>2.2 Termes de parenté</u>			Est-ce qu'il y a une assimilation de la marque de possession ?
14. mon mari			Il est possible que ce soit une énoncé taboo.
15. ton mari			
16. son mari			
17. ta femme			« deekaa » reconnu?
18. sa femme			« deekiiko » reconnu?
19. clan (17)			
20. clans			pluriel -i, -yi, -di ?

<u>2.3 Le corps humain</u>			
21. intelligence			Quelle est la classe nominale pour mots d'emprunt ?
22. poitrine			non pas « sein »
23. hanche			
24. muscle			
25. poils (du corps) (17)			
26. cheveux (de la tête) (11)			

**Appendix A. The Vallette list (continued):**

27. joue (16)			
28. sang (22)			

<u>2.4 Animaux</u>	<u>Singulier</u>	<u>Pluriel</u>	
29. bouc (s) (24)			
30. grenouille (s) (25)			alternatif : « crapaud »
31. crocodile (s) (12)			
32. serpent (s) (17)			
33. poisson (s) (15)			
34. hyène (s)			
35. poule (s)			
36. oeuf (s)			
37. chien (s)			
38. lion (s)			
39. étalon (s)			
40. jument (s)			
41. plume (d'un oiseau) (17)			
42. aile (d'un oiseau)			Est-ce qu'il y a double suffixe ?

<u>2.5 Plantes</u>			
43. herbe (sèche) (20)			hudo ?
44. fruit de baobab			
45. bois à brûler			

<u>2.6 Choses</u>			
46. enclos à bétail			
47. puits (11)			
48. tô (tuo, mush) (10)			

**Appendix A. The Vallette list (continued):**

49. poche (18)			jiiba ?
50. marché (s)	sg.	pl.	
51. chargement (poids, fardeau, ce qui est chargé sur un animal pour transporter)			
52. montagne/colline			
53. village			population maximum 2.000
54. guerre			
55. parole/mot			
56. arc			
57. tam-tam			
58. gerbe (de mil)			
59. faucille			

<u>2.7 Phénomènes</u>			
60. sable (10)			
61. sel (22)			
62. lune (11)			
63. fleuve/rivière (14)			
64. pluie (9)			
65. ombre			
66. ce jour			nyalaande ?
67. lumière du jour			
68. lumière (d' une torche, lampe)			(lumière artificielle) Est-ce le même que 67. ?
69. demain			
70. hier			
71. nuit			

**Appendix A. The Vallette list (continued):**

72. ténèbres/ obscurité	sg.	pl.	Est-ce qu' il n'y a que la forme pluriel ?
73. marigot/étang (de la saison de pluie)			weendu ?
74. trou (de lapin)			
75. ciel			ne pas confondre avec « le paradis »
76. feu (13)			
77. fumée (19)			
78. rosée			

<u>2.8 Numéraux</u>			Pour compter les choses
79. un (homme)			Est-ce il y a une différence entre le numéro et la monnaie/ l' argent ?
80. cinq			
81. six			
82. sept			
83. vingt			
84. vingt et un			
85. quarante			
86. soixante			
87. quatre-vingts			
88. cent			
89. mille			
90. deux mille			

**Appendix A. The Vallette list (continued):**

<u>2.9 Adjectifs</u>			
91. grand homme (de haute taille)			Morphologie de l'adj. « grand » (dernière consonne de la racine)
92. grand arbre			
93. grand morceau de bois			
94. pattes devants (d' un animal)			Est-ce qu' un adposition peut devenir adjectif ?
95. pattes derrières (d' un animal) (16)			

<u>2.10 Adpositions</u>			
96. sur			
97. sous			
98. dans			
99. hors de			
100. si			S' il arrive, nous allons partir ensemble.
101. parce que			J' attends ici parce qu' il n' est pas encore venu.
102. bien que/quoi que			Bien que nous quitions tôt, nous n' arrivions pas avant le couché du soleil.

<u>2.11 Divers</u>			
103. un peu d'eau (4)			« dihal kal » ?
104. une grande vache (7 ou 12)			« nakka » ?

**Appendix A. The Vallette list (continued):**

105. concessions/ cases/maisons/ chambres (25)			Chercher le pluriel de « suudu ». Est- ce que la voyelle est longue ?
106. pierres (24)			
107. faire ce qui est mauvais			
108. erreur/faute			
109. mensonge			
110. tristesse			
111. cris/pleurs			les cris d'un bébé
112. blessure/coupure			
113. fièvre			
114. maladie (15)			double suffixe ?
115. vie (19)			
116. quelque chose (23)			Donne-moi quelque chose (« godum » or « kodume » ?)
117. quelque part			Je vais quelque part (bunye) ?
118. génisse (une vâche qui n'a pas encore mis bas un petit) (21)			« nyalahol » reconnu?

**3. Morpho-Syntaxe**

<u>3.1 Alternance consonantale</u>			
119. homme			(g)
120. hommes			(w)
121. petit homme			(gorel)
122. petits hommes			(ngoroy)

**Appendix A. The Vallette list (continued):**

123. femme			(d)
124. femmes			(r)
125. petite femme			(debbel)
126. petites femmes			(ndehoy)
127. scorpion			(y)
128. scorpions			(j)
129. petit scorpion			(jahel)
130. petits scorpions			(njahoy)
131. Il est venu.			Alternance consonantale pour nom et verbe. (w)
132. Ils sont venus.			(ng)
133. La vache boit.			(y)
134. Les vaches boivent.			(nj)
135. Ce pagne est un pagne blanc.			
136. Voici un bout de papier blanc.			
137. Prends cette petite chaussure blanche.			
138. Prends ces petites chaussures blanches.			
139. Tu parles.			(« haala » ou « wolwa » ?)
140. Nous parlons tous.			tout/tous
141. Nous te parlons.			Quel est le suffixe de beneficiare ?

**Appendix A. The Vallette list (continued):**

<u>3.2 Verbes passifs</u>			Utilisation du passif.
142. Ces grandes vaches (8) ne se vendent pas.			(Nakko ko shoorataake.)
143. Cela ne se dit pas.			(d'um wiataake.)
144. Il ne s'appelle pas Oumarou.			(O wiaaka Umaaru.)
145. Demandez : Est-ce qu' on parle couramment comme ça ?			

3.3 d'um accord (sujet)

146. Lisez les phrases suivantes. Ensuite, demandez qui sont les acteurs – agent, objet, bénéficiaire :

“Ali est venu hier. Il a vu Oumarou. Il lui a donné son couteau. ” Dans le cas où la traduction de ces phrases est différente de la transcription dessous, veuillez noter la traduction. Nous désirons savoir s' il faut accorder le sujet, l'objet, et le possessif pour la classe nominale « d'um »

Ali wari keeṅa. O yii' Oumarou hokki mo labi muudum.

Qui est celui qui donne le couteau ?

Qui est celui qui reçoit le couteau ?

À qui appartient le couteau ?

<u>3.4 Phrases locatifs/ inaccompli</u>			(présent, inaccompli)
147. Il boit.			(Il boit actuellement.)
148. Il a faim.			(« rafuki » ? « weeleeki » ?)
149. Il travaille.			Il travail (actuellement).



**Appendix A. The Vallette list (continued):**

150. Il cultive.			Il cultive (actuellement).
151. Il prie.			Il prie (actuellement).
152. Il danse.			Il danse (actuellement).
153. Elle accouche.			...actuellement...
154. Il la juge.			...actuellement...
155. Il prend.			...actuellement...
156. Il demande.			...actuellement...
157. Il a peur du chien.			...actuellement...

<u>3.5 Focalisation et topicalisation</u>			
158. <u>Focus</u> : Ce que je dis c'est <u>je viendrai demain.</u>			Focalisation sur l'énoncé (objet) verbal. aspect verbale : inaccompli
159. <u>Focus+Topique</u> : <u>C'est ça</u> que j'ai dit.			Focalisation et topicalisation d'un objet (devenu sujet).
160. <u>Focus</u> : J'ai <u>bien dit</u> que je viendrai demain.			Focalisation sur le verbe primaire.
161. <u>Topique</u> : <u>Quant</u> <u>à Musa</u> , il ne peut pas venir demain.			Topicalisation sur le nom (sujet).

**Appendix A. The Vallette list (continued):**

<u>3.6 Infinitif du verbe</u>			
162. Il ne peut pas garder les vaches.			(faire pâturer, « durowi »)
163. Il n'aime pas pardonner (aux autres).			
164. Il est difficile de piler le maïs.			
<u>3.7 Aspect du verbe : accompli moyen</u>			
165. Je me suis lavé.			(« Mi loot(i)ke » ou « Mi lootiima » ?)
<u>3.8 Divers morpho-syntaxe</u>			
166. Son piment			
167. Il n'y a pas d'eau dans le canari.			
168. Attache ce veau et (puis) cet âne.			Structure de l'impératif. Structure d'une série nominale.
169. Toutes les vaches ont bu.			
170. Il m'a salué.			
171. L'année passée il y avait une grande famine.			
172. Beaucoup de vaches sont mortes.			

**Appendix A. The Vallette list (continued):**

173. Tous les mercredis ma femme va au marché.			
174. Je ne peux rien faire pour l'aider.			

Dans l'éventualité où il est possible de continuer l'obtention des données , veuillez utiliser les phrases dessous.

Ali est maître coranique. Amadou est vieux.			nominal attributif (« no », « yo », « ko »)
C'est elle qui vend du lait.			« hanko », « kanko »
Le garçon <u>qui est venu hier</u> est mon frère.			pronom
Abdou n'est pas venu.			accompli négatif
Assieds-toi. Asseyez-vous.			Impératif moyen
Il a oublié. Ils ont oublié.			alternance consonantale
Il a vu. Ils ont vu.			alternance consonantale
Il a fait. Ils ont fait.			alternance consonantale
Il a creusé. Ils ont creusé.			alternance consonantale
Quand est-ce que vous allez venir ?			termes interrogatifs
Où est-il allé.			termes interrogatifs
Quelle vache est-ce que tu as acheté ?			termes interrogatifs
C'est un scorpion qui l'a piqué.			focalisation

**Appendix A. The Vallette list (continued):**

Moi aussi, j'irai bientôt.			focalisation
Aysatu est très belle.			expansion
Il parle un peu de fulfulde.			expansion
Assieds-toi à côté de moi.			expansion
Je reste ici jusqu'à demain.			expansion
Il est venu avec sa femme.			expansion
Il est tombé à cause de toi.			expansion
Il pleure comme un enfant.			expansion
barbe (sg. & pl.)			alternance consonantale
bâton (sg. & pl.)			
fatigue.			
matin			
oeil			
oreille			
semaine			
travail			
est			
ouest			
nord			
sud			
dimanche			
vendredi			
samedi			

## **Appendix B. Language attitude assessment instrument questionnaires**

(E)=translation in English; (Fr)=translation in French; (F)=question in language variety of sedentary eastern Niger Fulfulde speakers; (W)=question in language variety of nomadic eastern Niger Fulfulde speakers.

### Series 1

#### ***Ethnic identity:***

#### ***Identité ethnique:***

1. (E) Are his customs the same as yours?  
 (Fr) Est-ce que ses coutumes sont les mêmes que les tiens ?  
 (F) Koo ndonu ma'ako e ndonu moodon d'um go'otum?  
 (W) Koo ndonu ma'ako e ndonu moodon d'um go'otum?
2. (E) Do people like him build the same (type of) houses as the people here?  
 (Fr) Est-ce que les gens comme lui construisent les mêmes maisons que les gens d'ici ?  
 (F) Yimbe iri be ma'ako ebe nyiba cuudi kama yimbe moodon?  
 (W) Duuniya iri be ma'ako e nyiba suudu iri ndu maa?
3. (E) Is that how Fulfulde should be spoken?  
 (Fr) Est-ce que c'est comme ça qu'il faut parler le fulfuldé ?  
 (F) Koo d'um noon fulfulde wolwirtee?  
 (W) Koo d'um noohan haani volvira fulfulde?

#### ***Intra-ethnic contact:***

#### ***Contact intra-éthnique:***

4. (E) Do you have the opportunity to talk with people who talk like him (every day, every market day, once a month, a few times during the year, never)?  
 (Fr) Est-ce que tu as l'occasion de parler avec les gens qui parlent comme lui (chaque jour, chaque jour de marché, une fois par mois, quelques fois dans l'année, jamais) ?  
 (F) Koo a meedii wolirgo e yimbe kama ma'ako? (koo e nyandere fuu; koondeye nyande luumo; koo nde go'o nder lewru, nde tati; koo nde nayi nder hitaande)  
 (W) A meedii volvididgo e duuniya iri be ma'ako? (koondeye nyandere; koondeye nyalnde luumo; nde go'o nder lewru, nde tati; nde nayi nder hitaande)

**Appendix B. Language attitude assessment instrument questionnaires  
(continued):**

5. (E) Would you allow your cows to go to pasture with his cows?  
 (Fr) Est-ce que tu laisserais tes vaches venir avec les tiennes au pâturage ?  
 (F) A jaḅay ngoora na'i maad'a e na'i ma'ako ndurdoya?  
 (W) Koo a woorā na'i ma'a ndillida e na'i ma'ako durngol?

***Individual character:***

***Tempérament des individus:***

6. (E) Have you had disagreements/fights with people who talk like him?  
 (Fr) Est-ce que vous avez eu de disputes avec les gens qui parlent comme lui ?  
 (F) On meedi haḅdugo e yimḅe wolweede kama hanko?  
 (W) On meedii haḅgo volveede kama kanko?

***Perception of language:***

***Appréciation de langue:***

7. (E) Is his way of speaking easy to understand?  
 (Fr) Est-ce que sa façon de parler est facile à comprendre ?  
 (F) No mo wolwirta koo d'um sadd'aa?  
 (W) Koo laawol ngol o volwirta sadd'aay heptaago?
8. (E) What are people who talk like him called?  
 (Fr) Comment s'appellent les gens qui parlent comme lui ?  
 (F) Noy mbi'oton yimḅe wolwireede kama hanko?  
 (W) Noy duuniya mbi'ete volvireyde noohan?
9. (E) How do you know?  
 (Fr) Comment est-ce que tu sais ?  
 (F) Noy anndid'aa?  
 (W) Noy anndird'aamo?

**Series 2**

***Ethnic identity:***

***Identité ethnique:***

1. (E) Is this someone who is still following your path?  
 (Fr) Est-ce que c'est quelqu'un qui suit toujours votre chemin ?  
 (F) Koo o tokkuḅo laawol iri ngol mood'on?

(W) Koo o tokkufo laawol iri ngol moodon?

**Appendix B. Language attitude assessment instrument questionnaires  
(continued):**

2. (E) In the beginning, did his clan come from the same place as your clan?  
 (Fr) A l'origine, est-ce que son lineage vient du même endroit que votre lineage ?  
 (F) Ila arande koo lenyol ma'ako e lenyol moodon iwduyi yaayre wo'ore?  
 (W) Ila arande koo lenyol ma'ako e lenyol moodon ivoyi yaayre wo'ore?
3. (E) People who talk like that, do they follow the same religion as you do?  
 (Fr) Les gens qui parlent comme ça, est-ce qu'ils suivent la même religion ?  
 (F) Yimbe wolwireebe noon, koo adini mabbe yo go'otum e dum moodon?  
 (W) Duuniya kama oon?a'e ebe tokka adini kama iri dum maada?

***Intra-ethnic contact:***

***Contact intra-éthnique:***

4. (E) Do people like him know your way of speaking (your words)?  
 (Fr) Est-ce que les gens comme lui connaissent votre parler (vos mots) ?  
 (F) Yimbe kama hanko koo ebe anndi haalaji moodon?  
 (W) Koo duuniya iri be ma'ako ebe anndi bolle moodon?
5. (E) Does he do the same kind of work that you do?  
 (Fr) Est-ce qu'il fait le même travail que toi ?  
 (F) Koo kuugal ma'ako yo go'otal e ngal moodon?  
 (W) Koo kuugal mabbe no go'otal kama ngal moodon?

***Individual character:***

***Tempérament des individus:***

6. (E) Would you trust this man with your cows?  
 (Fr) Est-ce que tu peux confier tes vaches à cet homme ?  
 (F) A rakay ndokka mo na'i maada mo joggo?  
 (W) Koo a waawi reenugo mo na'i maada?

***Appréciation de langue***

***Language awareness judgements***

7. (E) Is it difficult to understand the people who talk like that?  
 (Fr) Est-ce que c'est difficile de comprendre les gens qui parlent comme ça ?  
 (F) Koo dum caddum fahama koo yimbe beye mbi'ata?

(W) Koo dūm caddūm heptugo duuniya volvireyde kama noohan?

**Appendix B. Language attitude assessment instrument questionnaires  
(continued):**

8. (E) What are people who talk like him called?  
 (Fr) Comment s'appellent les gens qui parlent comme lui ?  
 (F) Noy mbi'oton yimbe wolwireede kama hanko?  
 (W) Noy duuniya mbi'ete volvireyde noohan?
9. (E) How do you know?  
 (Fr) Comment est-ce que tu sais ?  
 (F) Noy anndid'aa?  
 (W) Noy anndird'aamo?

Series 3

***Ethnic identity:***

***Identité ethnique:***

1. (E) Are the customs of people who talk like him different than yours?  
 (Fr) Est-ce que les coutumes des gens qui parlent comme lui sont différentes que les tiens ?  
 (F) Koo ndonu yimbe kama ma'ako hawtaay e ndonu moodon?  
 (W) Koo ndonu duuniya iri be ma'ako perɗɗindiri e ndonu moodon?
2. (E) Is his family like your family?  
 (Fr) Est-ce que sa famille est comme ta famille ?  
 (F) Koo iyalu ma'ako nanndiri e iyalu maada?  
 (W) Koo iyalu ma'ako e nanndi e iyalu ma'a?
3. (E) Does he talk like someone who knows how to live in the bush?  
 (Fr) Est-ce qu'il parle comme quelqu'un qui sait vivre en brousse ?  
 (F) Koo emo wolwira kama goddo anndudo joodaaki nder ladde?  
 (W) Koo emo volwira kama tagu anndudo joodaago nder ladde gonngaajo?

***Intra-ethnic contact:***

***Contact intra-éthnique:***

4. (E) Are there people who talk like that here with you?  
 (Fr) Est-ce qu'il y a des gens qui parlent comme ça ici avec vous ?  
 (F) Koo e woodi yimbe wolwireyde noon ngonbe do'o hakkunde moodon?  
 (W) Koo e woodi duuniya volvireyde kama noon do'o hakkunde moodon?



5. (E) Are the people who talk like that richer than you are?  
 (Fr) Est-ce que les gens qui parlent comme ça sont plus riches que vous ici ?

**Appendix B. Language attitude assessment instrument questionnaires  
 (continued):**

- (F) Koo yimbe wolwireyde noon buri on arziki (dukiya)?  
 (W) Nder duuniya volvireyde kama kanko, koo be buri on risku?

***Individual character:***

***Tempérament des individus:***

6. (E) Is this someone who would help you to find water and good pasture during the dry season?  
 (Fr) Est-ce que c'est quelqu'un qui t'aiderait à trouver de l'eau et du bon pâturage pendant la saison sèche ?  
 (F) Koo dum goddo wallaydo maa no tefirta ndiyam e geene be kirki sa'i ceedu?  
 (W) Koo o goddo mo mballitotodaa heβgo ndiyam e durngol mbo'ongol nder ceedu?

***Appréciation de langue***

***Language awareness judgements***

7. (E) Is his language the same as your language?  
 (Fr) Est-ce que sa langue c'est la même chose que ta langue ?  
 (F) Koo demgal ma'ako e demgal maada no go'otum?  
 (W) Demgal ma'ako e demgal maada iri go'otum?
8. (E) What are people who talk like him called?  
 (Fr) Comment s'appellent les gens qui parlent comme lui ?  
 (F) Noy mbi'oton yimbe wolwireede kama hanko?  
 (W) Noy duuniya mbi'ete volvireyde noohan?
9. (E) How do you know?  
 (Fr) Comment est-ce que tu sais ?  
 (F) Noy anndidaa?  
 (W) Noy anndirdaamo?

## Appendix C: Detailed results of attitude assessment instrument

### C.1 By zone and by text

BIRNIN GAOURÉ			TASSA			KANO			TANOUT			TOUMOUR			Reactions comparing texts to each other		
SHARED	Negative	Positive	SHARED	Negative	Positive	SHARED	Negative	Positive	SHARED	Negative	Positive	SHARED	Negative	Positive			
n=76	ZONE 1	34%	66%	ZONE 1	24%	76%	ZONE 1	24%	76%	ZONE 1	22%	78%	ZONE 1	30%	70%	No significant difference.	
n=79	ZONE 2	37%	63%	ZONE 2	38%	62%	ZONE 2	28%	72%	ZONE 2	31%	69%	ZONE 2	29%	71%	No significant difference.	
n=77	ZONE 3	26%	74%	ZONE 3	32%	68%	ZONE 3	30%	70%	ZONE 3	23%	77%	ZONE 3	24%	76%	No significant difference.	
n=83	ZONE 4	34%	66%	ZONE 4	7%	93%	ZONE 4	33%	67%	ZONE 4	12%	88%	ZONE 4	12%	88%	Chi-sq. val 32.999 significant at p<.01	
Reactions comparing zones to each other			No significant difference.			Chi-sq. vε 23.179 Significant at p<.01			No significant difference.			Chi-sq. vε 8.067 Significant at p<.05			Chi-sq. vε 9.315 Significant at p<.05		
PHI 0.101			PHI 0.346			PHI 0.089			PHI 0.207			PHI 0.225					

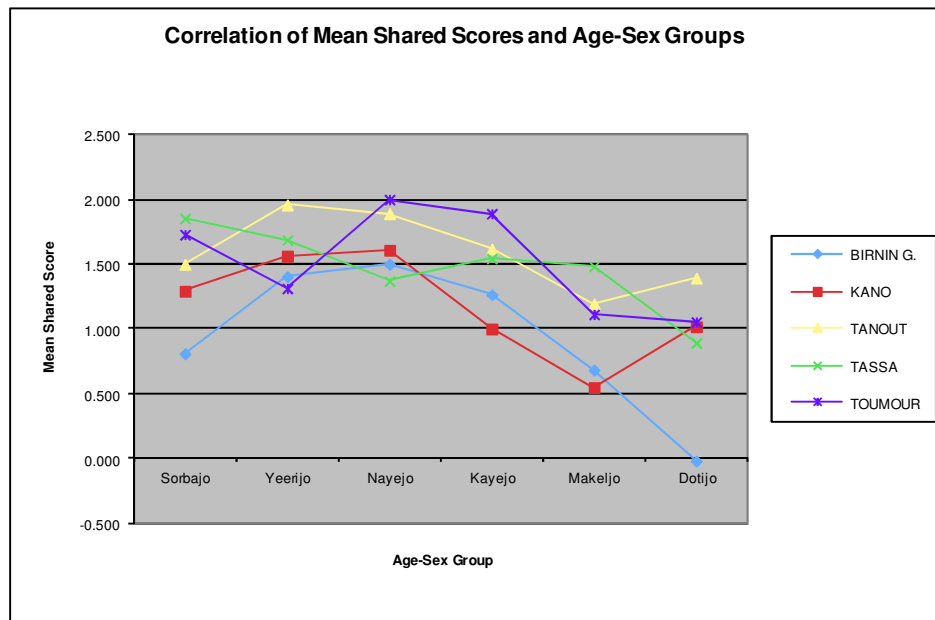
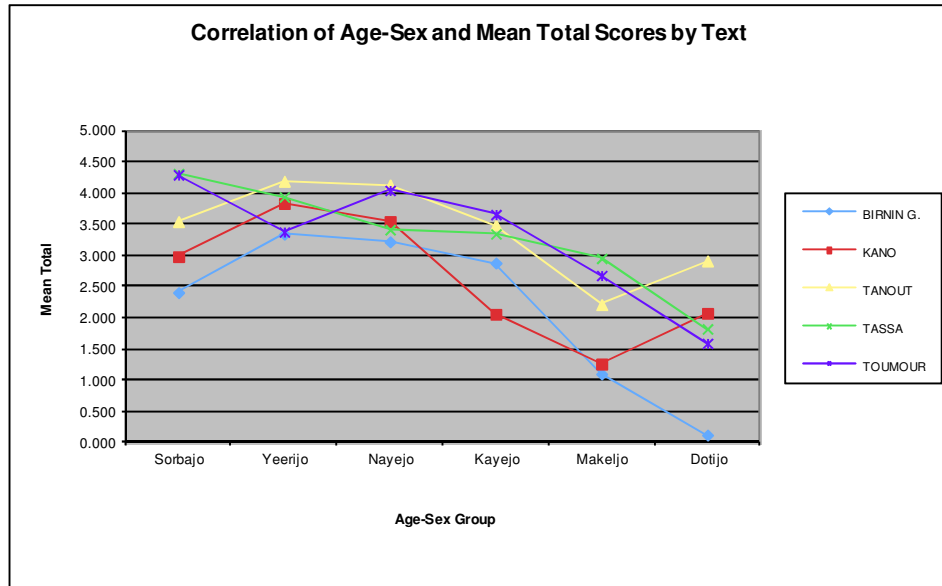
BIRNIN GAOURÉ			TASSA			KANO			TANOUT			TOUMOUR			Reactions c		
DIFF	Negative	Positive	DIFF	Negative	Positive	DIFF	Negative	Positive	DIFF	Negative	Positive	DIFF	Negative	Positive			
n=76	ZONE 1	33%	67%	ZONE 1	27%	73%	ZONE 1	25%	75%	ZONE 1	32%	68%	ZONE 1	38%	62%	No significa	
n=79	ZONE 2	44%	56%	ZONE 2	43%	57%	ZONE 2	43%	57%	ZONE 2	37%	63%	ZONE 2	41%	59%	No significa	
n=77	ZONE 3	32%	68%	ZONE 3	28%	72%	ZONE 3	24%	76%	ZONE 3	19%	81%	ZONE 3	17%	83%	No significa	
n=83	ZONE 4	25%	75%	ZONE 4	10%	90%	ZONE 4	25%	75%	ZONE 4	13%	87%	ZONE 4	12%	88%	No significa	
Reactions comparing zones to each other			No significant difference			Chi-sq. va 22.904 Significant at p<.01			Chi-sq. va 9.2384 Significant at p<.05			Chi-sq. va 15.302 Significant at p<.01			Chi-sq. va 25.724 Significant at p<.01		
PHI 0.3397			PHI 0.3397			PHI 0.2075			PHI 0.2768			PHI 0.3598					

### Appendix C: Detailed results of attitude assessment instrument (continued):

	BIRNIN GAOURÉ			TASSA			KANO			TANOUT			TOUMOUR			Reactions comparing text
	LING	Negative	Positive	LING	Negative	Positive	LING	Negative	Positive	LING	Negative	Positive	LING	Negative	Positive	
n=76																
n=79	ZONE 1	38%	62%	ZONE 1	12%	88%	ZONE 1	29%	71%	ZONE 1	24%	76%	ZONE 1	36%	64%	Significant at p<.01
n=77	ZONE 2	44%	56%	ZONE 2	32%	68%	ZONE 2	34%	66%	ZONE 2	34%	66%	ZONE 2	27%	73%	No significant difference.
n=83	ZONE 3	39%	61%	ZONE 3	30%	70%	ZONE 3	32%	68%	ZONE 3	22%	78%	ZONE 3	17%	83%	Significant at p<.05
Reaction	ZONE 4	15%	85%	ZONE 4	16%	84%	ZONE 4	23%	77%	ZONE 4	12%	88%	ZONE 4	19%	81%	No significant difference.
zones to	Chi-sq. $\chi^2$ 16.2787			Chi-sq. $\chi^2$ 13.4051			No significant difference.			Chi-sq. $\chi^2$ 11.0841			Chi-sq. $\chi^2$ 8.79407			
	Significant at p<.01			Significant at p<.01						Significant at p<.05			Significant at p<.05			
	PHI 0.25717			PHI 0.26087			PHI 0.11832			PHI 0.24011			PHI 0.20704			

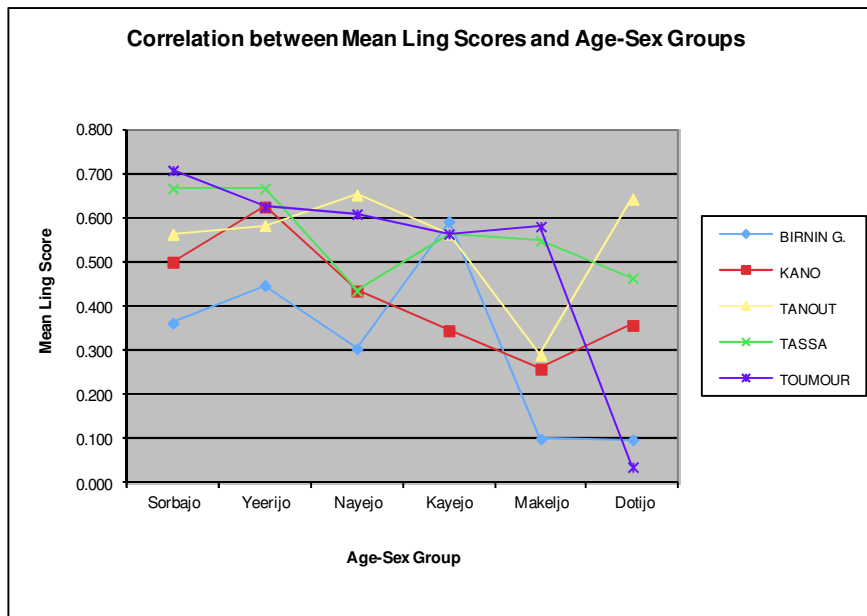
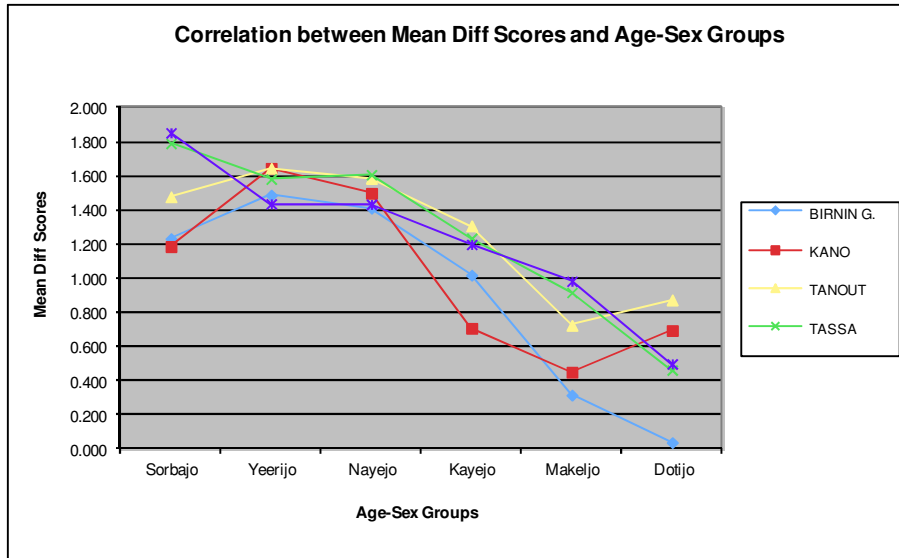
	BIRNIN GAOURÉ			TASSA			KANO			TANOUT			TOUMOUR			Reactions comparing text
	TOTAL	Negative	Positive	TOTAL	Negative	Positive	TOTAL	Negative	Positive	TOTAL	Negative	Positive	TOTAL	Negative	Positive	
n=76																
n=79	ZONE 1	32%	68%	ZONE 1	16%	84%	ZONE 1	24%	76%	ZONE 1	24%	76%	ZONE 1	33%	67%	No significant difference.
n=77	ZONE 2	39%	61%	ZONE 2	34%	66%	ZONE 2	33%	67%	ZONE 2	28%	72%	ZONE 2	32%	68%	No significant difference.
n=83	ZONE 3	26%	74%	ZONE 3	26%	74%	ZONE 3	27%	73%	ZONE 3	17%	83%	ZONE 3	19%	81%	No significant difference.
Reaction	ZONE 4	28%	72%	ZONE 4	6%	94%	ZONE 4	27%	73%	ZONE 4	11%	89%	ZONE 4	11%	89%	Significant at p<.01
zones to	Chi-sq. $\chi^2$ 22.2451			Chi-sq. $\chi^2$ 22.2451			No significant difference.			Chi-sq. $\chi^2$ 8.60372			Chi-sq. $\chi^2$ 15.2807			Chi-sq. val 23.4243087
	No significant difference.			Significant at p<.01						Significant at p<.05			Significant at p<.01			
	PHI 0.34908			PHI 0.34908			PHI 0.21517			PHI 0.28146			PHI 0.28146			

C.2 *By age-sex category<sup>11</sup> and by text*



<sup>11</sup> Sorbajo=young woman; Yeerijo=adult woman; Nayejo=old woman; Kayejo=young man; Makeljo=adult man; Dotijo=old man.

**C.2 By age-sex category and by text (continued)**



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