

OROKO ORTHOGRAPHY DEVELOPMENT:
LINGUISTIC AND SOCIOLINGUISTIC FACTORS*

by

Dan T. Friesen
Bachelor of Arts, Providence College, 1990

A Thesis

Submitted to the Graduate Faculty

of the

University of North Dakota

in partial fulfillment of the requirements

for the degree of

Master of Arts

* Editor's note: This version of the thesis, prepared for publication on the SIL-UND website [<http://www.und.edu/dept/linguistics/theses/2002FriesenD.htm>], has been modified slightly from the version on file with the UND library.

Grand Forks, North Dakota
December
2002

This thesis, submitted by Dan T. Friesen in partial fulfillment of the requirements for the Degree of Master of Arts from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.

Mark E. Karan (Chairperson)
David J. Weber
S. H. Levinsohn

This thesis meets the standards for appearance, conforms to the style and format requirements of the Graduate School of the University of North Dakota, and is hereby approved.

Dean of the Graduate School

Date

PERMISSION

Title Oroko Orthography Development: Linguistic and Sociolinguistic Factors
Department Linguistics
Degree Master of Arts

In presenting this thesis in partial fulfillment of the requirements for a graduate degree from the University of North Dakota, I agree that the library of this University shall make it freely available for inspection. I further agree that permission for extensive copying for scholarly purposes may be granted by the professor who supervised my thesis work or, in his absence, by the chairperson of the department or the dean of the Graduate School. It is understood that any copying or publication or other use of this thesis or part thereof for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to the University of North Dakota in any scholarly use which may be made of any material in my thesis.

Signature _____

Date _____

TABLE OF CONTENTS

| | |
|---|-----|
| LIST OF FIGURES | ix |
| LIST OF TABLES | x |
| ACKNOWLEDGEMENTS | xii |
| ABSTRACT | xiv |
| CHAPTER | |
| 1. INTRODUCTION | 1 |
| 2. BACKGROUND | 2 |
| 2.1 Location | 2 |
| 2.2 Population (Mbongue 2000:5) | 4 |
| 2.3 Classification..... | 6 |
| 2.4 Current Status of Oroko Language Development..... | 9 |
| 3. LINGUISTIC ISSUES..... | 11 |
| 3.1 Linguistic Data..... | 11 |
| 3.1.1 The Londo Word..... | 11 |
| 3.1.2 Yoder Word List | 12 |
| 3.1.3 Friesen Word List | 12 |
| 3.1.4 Eyakwe Word List | 15 |
| 3.2 Word List Summary..... | 16 |
| 3.2.1 Numerals | 16 |

| | |
|--|----|
| 3.2.2 Issues Arising from the Word Lists | 17 |
| 3.3 Oroko Phonemes | 19 |
| 3.3.1 Vowels | 19 |
| 3.3.2 Consonants..... | 23 |
| 3.3.2.1 Alveolar Consonants..... | 24 |
| 3.3.2.2 Voiced Bilabial Consonants..... | 27 |
| 3.3.2.3 Voiceless Bilabial Consonants..... | 28 |
| 3.3.2.4 Alveopalatal Consonants | 29 |
| 3.3.2.5 Glides | 30 |
| 3.3.2.6 Nasal Consonants..... | 32 |
| 3.3.2.7 Prenasalized Stops | 33 |
| 3.3.2.8 Labiovelar Consonants..... | 35 |
| 3.3.2.9 Idiosyncratic Alternations..... | 38 |
| 3.3.3 Tone | 41 |
| 3.4 Morphological Issues | 44 |
| 3.5 Lexical Issues..... | 45 |
| 4. SOCIOLINGUISTIC ISSUES..... | 48 |
| 4.1 Sociolinguistic Data | 48 |
| 4.1.1 Mbongue Rapid Assessment..... | 48 |
| 4.1.2 Friesen Modified Recorded Text Testing (RTT) Survey..... | 49 |
| 4.2 History of Written Material | 52 |
| 4.2.1 European Languages..... | 52 |
| 4.2.2 Duala | 55 |

| | |
|---|----|
| 4.2.3 Oroko | 56 |
| 4.2.4 NACALCO Recommendations | 58 |
| 4.3 Sociolinguistic Factors..... | 59 |
| 4.3.1 Smalley’s Maximums | 59 |
| 4.3.1.1 Maximum Motivation..... | 60 |
| 4.3.1.2 Maximum Representation..... | 63 |
| 4.3.1.3 Maximum Ease of Learning..... | 64 |
| 4.3.1.4 Maximum Transfer | 65 |
| 4.3.1.5 Maximum Ease of Reproduction | 66 |
| 4.3.2 Other Factors..... | 67 |
| 4.3.2.1 Authority Structure | 67 |
| 4.3.2.2 Clan Autonomy..... | 68 |
| 4.3.2.3 Attitude Toward Language Development..... | 70 |
| 5. ORTHOGRAPHIC ISSUES..... | 73 |
| 5.1 Orthography Philosophies..... | 73 |
| 5.1.1 Composite Standard..... | 74 |
| 5.1.2 Common Conventions | 79 |
| 5.1.3 Conclusion | 83 |
| 5.2 Orthographic Recommendations | 86 |
| 5.2.1 Alphabet Recommendations | 87 |
| 5.2.2 Phonemic Recommendations..... | 87 |
| 5.2.3 Tone Recommendations..... | 90 |
| 5.2.4 Word Level Recommendations..... | 94 |

| | |
|--|-----|
| 5.2.4.1 Word Breaks | 95 |
| 5.2.4.2 Spelling Standardization | 96 |
| 5.2.4.3 Numerals | 96 |
| 5.2.4.4 Borrowed Vocabulary | 97 |
| 5.2.5 Sentence Level Recommendations | 98 |
| 5.3 Implementation | 99 |
| 6. CONCLUSION | 104 |
| APPENDICES | 106 |
| REFERENCES | 135 |

LIST OF FIGURES

| Figure | Page |
|-------------------------------------|------|
| 1. Oroko Map (Kuperus 1985:15)..... | 3 |
| 2. Dialect Groupings..... | 14 |

LIST OF TABLES

| Table | Page |
|--|------|
| 1. Number of Oroko Villages | 4 |
| 2. Summary of Census Data by Clan..... | 5 |
| 3. Comparison of Oroko Dialect Classifications | 7 |
| 4. Synchronic Lexicostatistic Analysis (Bradley 1992)..... | 12 |
| 5. Synchronic Lexicostatistic Analysis (Friesen and Friesen 2001)..... | 13 |
| 6. Eyakwe Word List Lexicostatistics | 15 |
| 7. Numeral Comparison..... | 17 |
| 8. Word List Differences Summary | 18 |
| 9. Oroko Phonemic Vowels | 19 |
| 10. /o/ + /i/ at Boundaries | 22 |
| 11. Oroko Phonetic Consonants..... | 24 |
| 12. Alveolar Consonant Distribution (Friesen 2001:3) | 25 |
| 13. Alveopalatal Changes | 29 |
| 14. Idiosyncratic Nasal Variations between Dialects | 32 |
| 15. Phonological Processes Affecting Nasals..... | 33 |
| 16. Prenasalized Stops in All Dialects | 34 |
| 17. Labiovelar Consonants | 36 |
| 18. Other Phoneme Correspondences in Eyakwe Word List..... | 38 |

| | |
|---|----|
| 19. Other Phoneme Correspondences in Friesen Word List..... | 39 |
| 20. Variations in Word Length Between Dialects | 40 |
| 21. Underlying Mbonge Tone Patterns..... | 42 |
| 22. Semantic Shifts Across Dialects..... | 45 |
| 23. Words versus Phrases | 46 |
| 24. Non-Related Word Pairs..... | 46 |
| 25. Recorded Text Testing (RTT) Score by Age/Sex..... | 51 |
| 26. Village Names with Alveolars | 54 |
| 27. Harmonization Impact | 82 |
| 28. Orthography Users..... | 84 |
| 29. Oroko Vowel Graphemes | 88 |
| 30. Oroko Consonant Graphemes..... | 88 |
| 31. Minimal Tone Pairs | 92 |
| 32: Examples of Tone Pairs in Mbonge..... | 92 |

ACKNOWLEDGEMENTS

First of all, I would like to thank my advisor, Dr. Mark Karan, committee members Dr. Stephen Levinsohn and Dr. David Weber, and readers Dr. Dennis Malone and Dr. Mary Morgan for their help and insight. This thesis, and the advice I can offer the Oroko people, is far better for your input.

I would like to thank the numerous other SIL personnel who have contributed in many ways, both directly and indirectly. These include Cameroon branch members (especially linguistic consultants and survey department) and the professors and staff of the University of North Dakota SIL summer sessions (1990, 1991, 1994, 1997, 2001, and 2002). Thanks for putting up with all my questions.

I would like to thank various members of the Cameroon Association of Bible Translation and Literacy (CABTAL) and the National Association of Cameroonian Language Committees (NACALCO) who have willingly given personnel and advice.

I would like to thank the World Team Cameroon leadership for encouraging me to pursue my M. A. in Linguistics. I would also like to thank Mike and Becky Scott, our teammates. To call them teammates doesn't begin to address all the ways both personally and professionally that they have impacted my life. They have contributed both data and encouragement to this thesis, but more importantly, are a part of the vision to see this project completed among the Oroko.

I would like to thank the Oroko people for warmly welcoming us into their lives. The people and churches of Big Bekondo, Meme Division, SW Province, Cameroon and Chief J. I. Okole have accepted us as part of their village. It has truly become our home.

I would like to thank the Oroko Language Development Committee (OLDC) for the opportunity to advise them in their struggle towards mother-tongue literacy. I hope this paper will be helpful in setting a solid footing for a widespread movement of vernacular education.

I would also like to thank the various individuals who have given of their time to teach us a part of their language and culture. Eyakwe Joseph, Mosongo Matthias, Mosongo Judith, and Mokwe Levi have been especially helpful. I am honored to call these people not our “informants” or “language resource personnel,” but our friends.

I would like to thank my father for all those late night talks where we discussed various issues from every angle. All that practice turned out to be helpful as I wrote this thesis.

I would like to thank my daughter Rachel for putting up with a few too many just-a-minutes as I struggled to finish some writing. Not every five-year-old can say “thesis”, let alone define it!

Finally, my wife, who put up with all my interruptions while she was writing her own thesis. Thanks for the listening ear, even when sometimes you had no idea what I was talking about, it really did help. I promise we won’t do this again, maybe...

ABSTRACT

This thesis explores the variety of linguistic and sociolinguistic factors that need to be considered in order to develop a good Oroko orthography. Oroko is a Bantu A language of the Southwest Province of Cameroon, Africa. The thesis starts with an overview of the Oroko's location, population, classification, and language development status. The linguistic factors discussed are based largely on analyses of two lists: a 118-word list of nine Oroko dialects and an 821-word list of four Oroko dialects (included in the appendix). Consistent phonetic and phonemic alternations are examined in detail. The next chapter discusses the sociolinguistic issues that arise from participant observation, historical context, and two sociolinguistic surveys: a rapid assessment of the sociolinguistic situation among nine of the Oroko dialects and an extendibility survey using a modified form of recorded text testing (RTT) done in six dialects. The next chapter opens with a discussion of a number of options for standardizing or not standardizing across all the Oroko dialects, concluding that the various dialects are different enough to require at least introductory material to be written in at least four dialects. Then, the various linguistic and sociolinguistic factors are drawn together to form the basis for orthographic recommendations. This chapter concludes with a discussion of the practical issues of presenting these recommendations to the Oroko.

CHAPTER 1

INTRODUCTION

The Oroko¹ people have taken the first steps towards writing their language. A severe challenge looms its head when approaching this project due to the fact that there are ten Oroko clans, each with their own dialect. Prior linguistic work has split the Oroko dialects into an east Oroko and west Oroko. However, sociolinguistic research shows that the Oroko people themselves see no such division, and consider themselves a unified whole, all able to understand each other. More recently, a longer comparative word list casts doubts on both these views and suggests that the Oroko may in fact need to be divided four ways.

This paper examines all the linguistic and sociolinguistic factors available and make some recommendations on how these factors can be taken into account during efforts to put the Oroko dialects into writing. The complexity of the problem and my position as an outside advisor necessitate tentative recommendations as opposed to solid decisions. My hope is that this document will be helpful to the Oroko people as they decide on the written form of their speech.

¹ Pronounced /orokɔ/.

CHAPTER 2

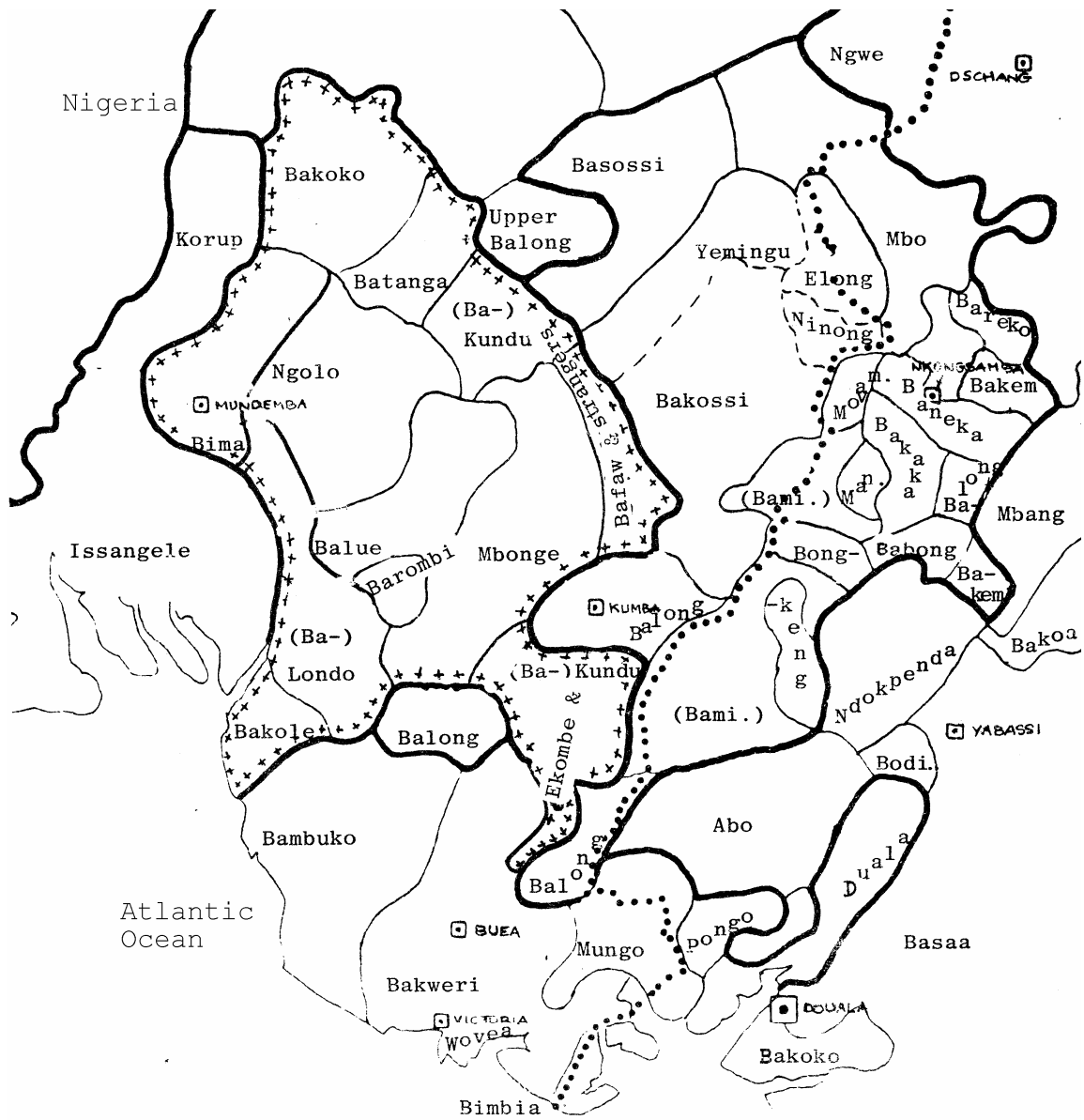
BACKGROUND

This chapter introduces the Oroko language and people, including their location, size, linguistic classification, and the current status of the development of a written Oroko language.

2.1 Location

The Oroko people are found in the Southwest province of Cameroon, Africa, covering a large portion of the Meme and Ndian divisions (see Figure 1). The Oroko are made up of ten clans, each speaking their own dialect (noted in brackets):

- Bakoko (Lokoko)
- Bakundu (Lokundu)
- Balondo ba Diko (not known) – They are located in three villages to the southwest of Mundemba, in what is marked as Bima territory.
- Balondo ba Nanga (Londo)
- Balue (Lolue)
- Batanga (Lotanga)
- Bima (Bima)
- Ekombe (Ekombe)
- Mbonge (Mbonge)
- Ngolo (Longolo)



Plus signs (+) encircle the Oroko dialects.
 Duala is found on the bottom right of the map
 Thick dots divide west (anglophone) and east (francophone) Cameroon.
 The thick lines show Guthrie's zones and the thinner lines divide languages or dialects.
 Cities are designated by square dots, with the city name in small caps.

Figure 1. Oroko Map (based on Kuperus 1985:15)

2.2 Population (Mbongue 2000:5)²

The lists of all the villages for each clan (see APPENDIX 2) were collected during the survey documented by Mbongue (2000). This list of 241 villages was compared (in consultation with Eyakwe Joseph³) to village names found in the 1987 census data for the Meme and Ndian divisions. A total of 190 villages were found on both lists. The survey list had 48 more town names than the census list, while the census list had 13 names that were not on the survey list. There are also three towns that were duplicated in the Mbongue survey list. The reason for all these discrepancies (see Table 1) is unknown. Possible causes include: abandoned or new villages, missed villages (during survey, census, and/or our comparison), or differences in how they are named.

Table 1. Number of Oroko Villages

| | |
|---------------------------|-----|
| Survey List | 241 |
| Census List | 203 |
| Found on both lists: | 190 |
| Doubles on survey list: | 3 |
| Not found in census list: | 48 |
| Added from census list: | 13 |

Table 2 summarizes the census data (see APPENDIX 3 for details). The population for the year 2000 is based on an annual growth rate of 2.7% since 1987 (as recommended by Joseph Mbongue, a member of the SIL⁴ Cameroon survey department). The census data makes no reference to the tribal identity of the people in any of these

² I was the sole author of this section, which I inserted in Mbongue 2000 during my revision of the paper.

³ As is common among the Oroko, Eyakwe Joseph gives his name in the order: last name, first name.

⁴ SIL is a non-profit language research and development agency.

villages. For most of the villages this is not a problem, as the number of non-native Oroko people is relatively small. However, a number of the larger villages along main roads have had their Oroko populations severely diluted. In an attempt to quantify the number of Oroko speakers (versus people living in traditionally Oroko towns), the last three columns note the number of mixed villages (according to Eyakwe) and their total population. However, no attempt has been made to estimate the percentage of Oroko speakers in these villages. Many Oroko (percentage unknown) are also found in Kumba (1987 census population: 63,911, estimated 2000 population: 90,363), as it is the closest urban center. Considering these factors, the Oroko population in or near their native area (not counting Oroko that have emigrated to other areas of Cameroon) can be roughly estimated at 120,000–140,000.

Table 2. Summary of Census Data by Clan

| | Survey Villages | Census Villages | 1987 Pop | 2000 est. Pop | Mixed Villages | 1987 Pop | 2000 est. Pop |
|------------------|-----------------|-----------------|---------------|---------------|----------------|--------------|---------------|
| Bakundu – South | 25 | 21 | 27276 | 38565 | 4 | 11688 | 16526 |
| Bakundu – North | 20 | 13 | 9198 | 13005 | | | |
| Mbonge | 44 | 39 | 33353 | 47157 | 3 | 11022 | 15584 |
| Balue | 29 | 25 | 15545 | 21979 | | | |
| Ngolo | 45 | 38 | 4973 | 7031 | | | |
| Bima | 21 | 20 | 7250 | 10251 | 1 | 3285 | 4645 |
| Ekombe | 12 | 9 | 11539 | 16315 | 3 | 9113 | 12885 |
| Balondo ba Nanga | 15 | 15 | 6785 | 9593 | 1 | 4493 | 6353 |
| Batanga | 27 | 17 | 1552 | 2194 | | | |
| Balondo ba Diko | 3 | 3 | 1331 | 1882 | | | |
| Bakoko | 3 | 3 | 275 | 389 | | | |
| Totals: | 244 | 203 | 119077 | 168362 | 12 | 39601 | 55991 |

2.3 Classification

The Oroko have been classified a number of different ways, but seldom as a homogenous group. Table 3 summarizes some of the various classifications of the Oroko dialects. The first column shows the names that are used in this thesis and is based primarily on the two most recent surveys of the Oroko (Mbongue 2000, Friesen and Friesen 2001). The second column is based on the findings of Dieu and Renard (1983:364). The third column summarizes the classification of Guthrie in his classic work *The Bantu languages of western equatorial Africa* (1953). Finally, Johnston's (1919, 1921) divisions are given in the fourth column. As there is no known language data on Balondo ba Diko, and none of the other classifications address the two Balondo clans, its placement is based on the reporting of the Bima and Balondo ba Nanga people, who say that it is closer to Bima than Londo. Note that Lokoko is not identified as an Oroko dialect by any of the prior classifications, and that Johnston's divisions do not cover Bima and Mbonge.

The names of the different dialects/clans often carry Bantu class prefixes. The prefix /ba-/ is the class 2 prefix that is typical of plural human nouns, which in this case is often used for the name of the clan. The prefix /lo-/ is the class 11 prefix, which in this case is often used for the speech of the people. The spellings that are used in this paper are the spellings used by the Oroko people themselves, and do not represent the precise phonetic (or even phonemic) pronunciation.

Table 3. Comparison of Oroko Dialect Classifications

| Friesen and Friesen (2001:7) | ALCAM (Dieu and Renaud, 1983:364) | Guthrie (1953:15, 20) | Johnston (1919, 1921:10) |
|------------------------------|-----------------------------------|--|---|
| Oroko | Oroko-ouest (631) | A.10 Lundu-Mbo Group A.11 Lundu Cluster | |
| Lokoko (Bakoko) | | | |
| Londo (Balondo ba Nanga) | - Barondo | A.11a lundu (Balundu) | (208) Ngututu-Batanga (Murundu) |
| NW cluster | | | |
| - Londo (Balondo ba Diko)? | | | |
| - Longolo (Ngolo) | - Ngoro | A.11b ngoro (Ngolo) | |
| - Lotanga (Batanga) | - Dotanga | A.11d batanga and bjma | |
| - Bima | - Bima | | |
| SE cluster | Oroko-est (632) | | |
| - Mbonge | - Mbonge | A.11e ekumbe and mbonge | (210) Ba-rombi – Mbonge |
| - Ekombe | - Ekombe | | |
| - Lolue (Balue) | - Lolue | A.12 barue (Lue, W. Kundu) | (207) Balue or W. Bakundu (Barondtu-Bakasi) |
| Lokundu (Bakundu) | - Bakundu | A.11c bakundu | (209) Ba-kundu (of the east) |

The Atlas Linguistique du Cameroun (ALCAM) lists Oroko as under the branch: Niger-Kordofan, Niger-Congo, Bénoué-Congo, Bantoïde, Bantou, Equatorial, Équatorial-Nord, B, Côtier (A.10). It breaks Oroko into two sections: Oroko-ouest and Oroko-est (Dieu and Renaud 1983:364). As Kuperus collected the word lists used by ALCAM (p. 110), she uses the same division in her work (Kuperus1985:17). ALCAM makes no reference to the Bakoko or to any division in the Balondo. It does note that Balondo and Bakundu are the most different from the others in their respective Oroko-ouest and Oroko-est groupings.

The Ethnologue (Grimes 2000), follows the division in ALCAM, but goes one step further and lists two separate languages. Friesen and Friesen (2001:7) made a recommendation to the Ethnologue to collapse these into one entry since the publication of the latest edition.

The first language listed in the Ethnologue (Grimes 2000) is Bakundu-Balue (Oroko-east) [BDU], with the following linguistic classification: Niger-Congo, Atlantic-Congo, Volta-Congo, Benue-Congo, Bantoid, Southern, Narrow Bantu, Northwest, A, Lundu-Balong (A.10), Oroko. Dialects: BAKUNDU (KUNDU, LAKUNDU, BEKUNDE, BAWO, NKUNDU), BALUE (LOLUE, BARUE, BABUE, WESTERN KUNDU, LUE), MBONGE, EKOMBE (BEKOMBO, EKUMBE).

The second language listed is Balundu-Bima (Oroko-west) [NGO], with the following linguistic classification: Niger-Congo, Atlantic-Congo, Volta-Congo, Benue-Congo, Bantoid, Southern, Narrow Bantu, Northwest, A, Lundu-Balong (A.10), Oroko. Dialects: BALUNDU (BARONDO, LONDO, LUNDU), BIMA, DOTANGA (BATANGA-BAKOKO, TANGA), NGOLO (NGORO).

Guthrie (1953:15, 20) classifies the various Oroko dialects under A.10 Lundu-Mbo group, dividing them between A.11 and A.12. He also classifies Bakossi (A.15b) as part of the Lundu-Mbo group, while Duala (A.24) is part of the Duala Group (A.20). Lisa Friesen (personal communication, July 29, 2002) has observed that the lexical and grammatical characteristics of the Mbonge dialect of Oroko are much more similar to the Duala language (such as in Ittmann 1978) than to the language of the Bakossi (such as in Hedinger 1992). Some of this may be due to the more extensive use of Duala in the Oroko area. In any case, the relationship between Duala and the Oroko dialects is close enough (both linguistically and historically) for the Duala orthographic conventions to be a useful model when discussing a future Oroko orthography (see 4.2.2).

2.4 Current Status of Oroko Language Development

This study arises out of a personal interest I have for the written development of the Oroko language. My wife Lisa Friesen and I, along with Michael and Rebecca Scott work with World Team. In Cameroon, World Team works with the Cameroon Baptist Convention (CBC).

We were assigned to the Oroko area to examine the potential for a language development project in January 1998. After a positive response to our initial survey (Mbongue 2000), we moved into an Oroko village that is part of the Mbongue clan (Big Bekondo, Meme division, South West Province) in mid-1998. Since that time we have been learning the Mbongue dialect and developing relationships with local and regional tribal and church leaders.

In May 2000, Lisa Friesen and I conducted a dialect intercomprehension survey (Friesen and Friesen 2001) using a modified form of Recorded Text Testing (RTT) (Casad 1974). The primary purpose of this survey was to determine if the Mbongue dialect would be understandable to all other Oroko clans, and thus suitable as a reference dialect (see 4.1.2 for more details). As part of the survey the names of respected leaders from each of the clans were also collected.

The leaders were then invited to an informal meeting on July 18, 2000 to discuss the possibility of writing the Oroko language. Eight of the ten clans were represented among the nineteen Oroko attendees. At the meeting we informed them (speaking in Mbongue) of the linguistic work we had been doing on their language. The leaders were asked if they wanted to see their language written and were reminded that they would

need to spearhead any project to do so. They proceeded to form an impromptu committee to organize another meeting. Following our recommendation, they asked a representative of the National Association of Cameroonian Language Committees (NACALCO) to present some information on how they could develop a language committee (Eyakwe 2000a).

On October 6, 2000 we were honored to be invited to an organizational meeting for the Oroko Language Development Committee (OLDC). NACALCO kindly sent a representative to this meeting. The Oroko leaders that were present (again, eight of ten clans were represented, including one clan not present at the prior meeting, with a total of twenty two Oroko attendees) promptly appointed people to a language committee. All four of the World Team workers were invited to participate in the committee as technical advisors (Eyakwe 2000b).

In March of 2001, both the Scotts and Friesens returned to North America for a scheduled home assignment. I have undertaken the current study to help our team in its advisory role to the OLDC. We are all planning on returning to Cameroon to continue our work in the summer of 2002.

CHAPTER 3

LINGUISTIC ISSUES

This chapter presents the recent linguistic works on the Oroko dialects, summarizes the linguistic issues they raise, and then addresses the specific phonological, morphological, and lexical differences the orthography will need to address.

Although the sociolinguistic factors are discussed in more detail in chapter 4, this chapter takes into consideration a couple of the major sociolinguistic factors when making recommendations. These include: the importance of education in English, ease of learning, perceived unity among dialects, and yet the independence of dialects.

3.1 Linguistic Data

This section introduces the recent linguistic data collected on the Oroko dialects. These data serve as a foundation for discussing the phonological issues involved in orthography decisions.

3.1.1 The Londo Word

The Londo Word is the published doctoral dissertation of Julianna Kuperus based on her two years of fieldwork (mid-1978 to mid-1980) in Cameroon with three Balondo (Balondo ba Nanga) language informants (Kuperus 1985:46). Her aim, as stated on the title page, was to make a descriptive statement of the phonological and morphological structure of the Londo word. She presents her descriptions using a generative grammar framework, making use of word structure conditions and rule types.

3.1.2 Yoder Word List

In 1992 a linguist by the name of Yoder conducted a survey of the Oroko area with the cooperation of the Cameroon Baptist Convention (CBC). As part of this survey they used a list of 118 words, commonly used by the survey department of SIL Cameroon (similar to the list used in Dieu and Renaud 1983:132), to collect Oroko lexical data from the Lokoko, Lokundu, Londo, Lolue, Lotanga, Bima, Ekombe, Mbonge, and Longolo dialects. This word list was submitted to the survey department of SIL Cameroon, who analyzed the word lists using SIL's WORDSURV program (Wimbish 1989). Table 4 summarizes the results. The numbers refer to the percentage of words that are apparent cognates. The threshold level used for determining possible intercomprehension is 70% (Simons 1983:57). The numbers give an indication of the challenges in developing an Oroko orthography due to the inherent differences in the vocabulary of the dialects.

Table 4. Synchronic Lexicostatistic Analysis (Bradley 1992)

| | | | | | | | | |
|-------|--------|--------|---------|---------|-------|---------|------|--------|
| Balue | | | | | | | | |
| 93 | Mbonge | | | | | | | |
| 92 | 92 | Ekombe | | | | | | |
| 83 | 81 | 86 | Balondo | | | | | |
| 85 | 86 | 82 | 81 | Bakundu | | | | |
| 77 | 77 | 78 | 80 | 83 | Ngolo | | | |
| 78 | 78 | 78 | 81 | 81 | 95 | Batanga | | |
| 78 | 78 | 78 | 81 | 81 | 96 | 99 | Bima | |
| 71 | 72 | 71 | 74 | 76 | 83 | 85 | 86 | Bakoko |

3.1.3 Friesen Word List

A follow-up survey of the Oroko was conducted in May 2000 (Friesen and Friesen 2001). At this point, we had been studying the Mbonge dialect for nearly two years and had noticed some apparent inconsistencies in the Yoder word list (see 3.1.2).

For example, some verbs had what appeared to be the infinitive marker (/di/) for some dialects, but not others. As for the nouns, some vocabulary differences between dialects (e.g. /do/ and /mofiki/) were semantically related in Mbonge (meaning ‘nose’ and ‘nostril’ respectively). Some of the Mbonge transcriptions (especially the mid vowels) also appeared to be inconsistent. Therefore, during this survey, the same 118-word list as used in the earlier Yoder survey (see 3.1.2) was re-collected. Eyakwe Joseph⁵ transcribed the words, as we were not yet consistent in differentiating between the mid vowels. After the survey, with the help of Michael Scott, the words were entered into WORDSURV (Wimbish 1989). Table 5 gives the results, showing the apparent cognates between dialects in percentages.

Table 5. Synchronic Lexicostatistic Analysis (Friesen and Friesen 2001)

| | | | | | | | | | |
|-------|--------|--------|---------|---------|-------|---------|------|--------|--|
| Balue | | | | | | | | | |
| 92 | Mbonge | | | | | | | | |
| 90 | 97 | Ekombe | | | | | | | |
| 82 | 83 | 83 | Balondo | | | | | | |
| 78 | 82 | 83 | 78 | Bakundu | | | | | |
| 76 | 77 | 78 | 81 | 83 | Ngolo | | | | |
| 78 | 78 | 79 | 82 | 83 | 96 | Batanga | | | |
| 77 | 78 | 79 | 82 | 84 | 96 | 95 | Bima | | |
| 73 | 73 | 74 | 77 | 78 | 85 | 86 | 85 | Bakoko | |

Figure 2 attempts to capture the dialect groupings using the above percentages.

⁵ Eyakwe is a Balue young adult who speaks Mbonge, as he grew up in a Mbonge village, Big Bekondo. Our team has had the opportunity to give him some private linguistic training, and he has assisted us extensively with our linguistic work in Cameroon. He accompanied us to two SIL workshops and assisted us with the modified Recorded Text Testing (RTT) survey (see 4.1.2) and word list collection. He is also the secretary for the Oroko Language Development Committee (OLDC).

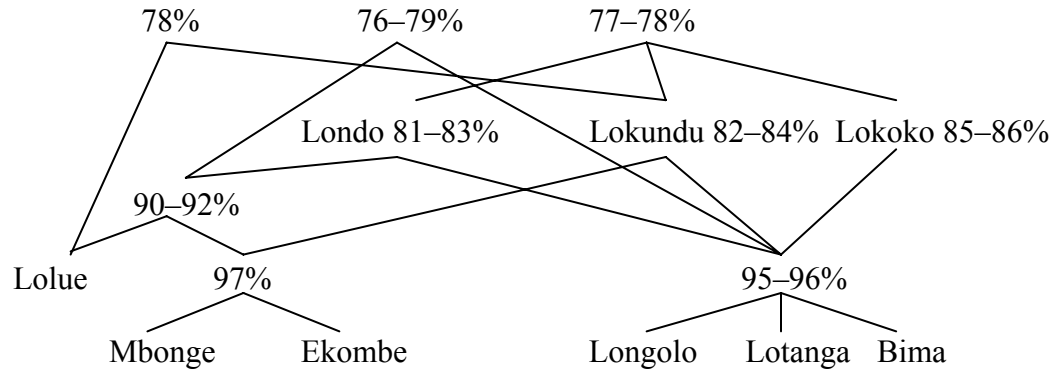


Figure 2. Dialect Groupings

Lotanga, Bima, and Longolo form a tight cluster at over 95% apparent cognates. Mbonge, Ekombe, and Lolue form another cluster at over 90% apparent cognates. However, these two clusters only share 76–79% apparent cognates with each other. Lokundu, Londo, and Lokoko also share 77–78% apparent cognates, as do Lokundu and Lolue. However, Lokundu shares over 82% apparent cognates with all but Lolue, Londo, and Lokoko. Londo also shares over 81% apparent cognates with all but Lokundu and Lokoko. The Lokoko is the most different, sharing only 73–74% apparent cognates with the Lolue/Mbonge/Ekombe cluster, although it has 85–86% apparent cognates with the Lotanga/Bima/Longolo cluster.

The above tree (Figure 2. Dialect Groupings) and underlying word list do not show any one dialect as the most central or possible source for all the other dialects. The tree does capture two clusters, the Longolo/Lotanga/Bima cluster and the Mbonge/Ekombe/Lolue cluster. However, further division of the Oroko into two groups is not supported by this data. If anything, Lokundu, which was grouped with the Mbonge/Ekombe/Lolue cluster by ALCAM (Dieu and Renaud 1983), has a slightly higher average score with the Longolo/Lotanga/Bima cluster.

3.1.4 Eyakwe Word List

Eyakwe went through SIL Africa's 2000-word list (SIL Africa Area 2000) and edited out words that in Mbonge would be duplicates, phrases, or obviously borrowed (primarily from Douala, Cameroon Pidgin, or English). A total of 825 words made the cut. Four words were not collected in any of the other dialects, reducing the words collected to 821.

Four dialects (Londo, Mbonge, Lokundu, and Longolo) were picked on the basis of their size and diversity. Eyakwe wrote down the Mbonge translation of the words and then during the spring of 2002 also collected these words from Longolo and Lokundu speakers. The lexicon in *The Londo Word* (Kuperus 1985:239–318) was used as a source for Londo vocabulary.

The apparent cognates from this longer word list were then tabulated. The results are summarized in Table 6 below. The numbers after the dialects designate how many words were collected from that dialect. The number of apparent cognates as well as the number of corresponding vocabulary items underlying the percentages is shown for each dialect pairing, as the number of words involved varies.

Table 6. Eyakwe Word List Lexicostatistics

| | | | |
|------------------|------------------|------------------|---------------|
| Lokundu – 776 | | | |
| 555 / 776 = 72 % | Mbonge – 825 | | |
| 357 / 506 = 71 % | 397 / 521 = 76 % | Londo – 521 | |
| 597 / 772 = 77 % | 557 / 817 = 68 % | 371 / 521 = 71 % | Longolo – 817 |

The percentages from this longer word list (68–77%) show less similarity between the dialects than originally thought, raising doubts that a single orthography can bridge across all the dialects. It also gives further data that Lokundu is slightly closer to

Longolo, and Londo slightly closer to Mbonge, going against prior divisions of the Oroko along an east-west split (i.e. Lokundu with Mbonge and Londo with Longolo, see Table 3).

3.2 Word List Summary

The lexicostatistic analysis presented in Table 5, while helpful for showing the potential “closeness” of the various dialects, does not give a complete picture of the variations between the dialects. As there are some unique issues with numerals, they are treated first and separate from the rest of the word list. The remainder of this section summarizes the issues that arise in the last two word lists discussed.

3.2.1 Numerals

This section addresses the differences between the numerals from 1 to 10. The numerals 1 and 5 are exactly the same in all dialects. The numerals 2 and 4 have some differences in their vowel quality, while numerals 3 and 10 have some variation in the coronal consonant (see 3.3.2.1). Numerals 6–9 are primarily compounds, and therefore repeat some of the variations seen in numerals 1–5. Eight dialects use “5+1” for numeral 6 and “5+2” for numeral 7, while Lokoko has what looks like different compounds for 6 and 7. For numeral 8, five dialects use a separate vocabulary item, while three use “minus 2”, and one uses “5+3”. For numeral 9, five dialects use variations of “minus 1”, while three use “5+4”, and Lotanga uses a different vocabulary item.

Table 7 summarizes the differences between the number systems. The table also shows how the dialects group differently depending on the numeral in question, further confirming the major groupings proposed above and presented in Figure 2.

Table 7. Numeral Comparison

| | 6 | 7 | 8 | 9 |
|---------|-----------------|-------------------|--------------------|------------------|
| Lolue | betaliokɔ (5,1) | betanabebeɛ (5+2) | bebeɛbeseɛ (-2) | mokɔaseɛ (-1) |
| Ekombe | betaliokɔ (5,1) | betanabebe (5+2) | bebeɛbese (-2) | eseɛyokɔ (-1) |
| Mbonge | betaliokɔ (5,1) | betanabebe (5+2) | bebeɛbese (-2) | eseɛyokɔ (-1) |
| Longolo | betariokɔ (5,1) | betanabebe (5+2) | wambi | eyokɔese (-1) |
| Bima | betaliokɔ (5,1) | betanabebe (5+2) | wambi | eyokɔese (-1) |
| Lotanga | betaliokɔ (5,1) | betanabebe (5+2) | wambi | mokɔsumado (1,?) |
| Lokundu | betaliokɔ (5,1) | betanabebe (5+2) | wambi | betanabeni (5+4) |
| Londo | betariokɔ (5,1) | betanabebe (5+2) | betanabelalo (5+3) | betanabeni (5+4) |
| Lokoko | motoba | moaŋgamoba | juambi | betanabini (5+4) |

3.2.2 Issues Arising from the Word Lists

Table 8 attempts to capture the amount and kind of differences between the 108 nouns and verbs in the Friesen Word List (Friesen and Friesen 2001) and the 821 words from the Eyakwe Word List (Eyakwe 2002). The top line of each section captures the major divisions, while the remaining lines subdivide the material further. The first section is of course the easiest to address, as all the forms are phonetically and phonemically identical. The second section presents the greatest challenge, as these words are all apparent cognates, yet their phonetic and/or phonemic form differs across dialects. The discussion of these differences is the main content of the remainder of this chapter (cross-references are given in the center column). The last section shows the large variety in the vocabulary between the dialects. Within this last section there are still words that have the same form between at least some of the dialects, and all the situations found in the first two sections are repeated in these subsets.

Table 8. Word List Differences Summary

| Friesen (108) | Description of Difference | Eyakwe (825) |
|---------------|---|--------------|
| 22% (24) | Exactly the same | 15% (122) |
| 44% (47) | Different surface sounds | 41% (334) |
| 27% (32) | Vowel - 3.3.1 | 13% (106) |
| 14% (16) | Alveolar (l/r/d) - 3.3.2.1 | 15% (122) |
| 2% (2) | Voiced Labials (b/β/w) - 3.3.2.2 | 6% (48) |
| 1% (1) | Voiceless Labials (f/ϕ) - 3.3.2.3 | 2% (19) |
| 7% (8) | Alveopalatals (y/j/c) - 3.3.2.4 | 3% (22) |
| 2% (2) | Glides - 3.3.2.5 | 2% (16) |
| 2% (2) | Nasals - 3.3.2.6 | 3% (21) |
| 2% (2) | Labiovelars (kp/kw, mŋgb/ŋgw) - 3.3.2.8 | 2% (13) |
| 8% (9) | Phonological Rule Output - 3.3.1, 3.3.2.6, and 3.3.3 | 3% (21) |
| 8% (9) | Other consonants - 3.3.2.9 | 5% (40) |
| 4% (5) | Class marker - 3.4 | 6% (51) |
| 2% (2) | Morpheme - 3.4 | 8% (68) |
| 14% (17) | Word Length - 3.4 | 7% (55) |
| 34% (37) | Different vocabulary in at least one dialect (37) | 44% (365) |
| 9% (11) | Half or more of the dialects have exactly same word | 17% (141) |
| 12% (14) | Half or more of the dialects have an apparent cognate | 24% (201) |
| 10% (12) | Half or fewer dialects share word or apparent cognate | 8% (67) |

Note that the indented percentages within the three categories do not add up to the section percentage, as some words have more than one of the phenomena (in the second row) or are equally split between dialects (44 words) in the Eyakwe word list (in the third row). In any case, Table 8 further highlights just how diverse the Oroko dialects are.

Somewhat surprising is the increased amount of differences found in the longer Eyakwe word list, even though it only covered four dialects as opposed to the nine covered by the Friesen list.

Each of the issues in the center column are examined in more detail in the following section, with possible harmonizing solutions. Later, this chart is reexamined to determine what differences are worth harmonizing (see Table 27).

3.3 Oroko Phonemes

This section systematically examines the phonetic and phonemic differences between the dialects that arose from the word lists. It addresses vowels, consonants, and tone. Phonological processes affecting particular phonemes are discussed in the sections of the phonemes that they affect.

3.3.1 Vowels

This section looks at the phonemic vowel inventory, phonological processes affecting vowels, and vowel alternations between dialects.

All the dialects have the same seven phonemic vowels (see Table 9), following the Proto-Bantu vowel system (Meeussen 1967:82).

Table 9. Oroko Phonemic Vowels

| | Front | Back |
|--------------------|-------|------|
| + high, - lo | i | u |
| - high, - lo, +ATR | e | o |
| - high, - lo, -ATR | ɛ | ɔ |
| - high, + lo | | a |

The Oroko dialects do not have underlying long vowels. Long vowels sometimes do result when two vowels meet at morpheme boundaries, especially when the tones on the vowels are different. Long vowels also appear in some single syllable noun roots. They appear to arise when there are more tones than syllables. In Mbonge word final tones remain floating (thus unpronounced), but indications are that other dialects allow lengthening of word final vowels to carry complex (rising or falling) tones.

A formal study of the phonology of all the dialects has not been done. However, *The Londo Word* (Kuperus 1985), my own study of Mbonge, and consistent changes in

the word lists shed some light on certain processes that have a bearing on the orthography.

Both Mbonge and Londo have ATR harmonization that affects only non-high vowels. The trigger for assimilation is always the [-ATR] mid-vowels /ɛ/ and /ɔ/, with the other non-high vowels /e/, /o/, and /a/ totally assimilating. This is most commonly seen in verbs, as in the Mbonge example in (1).⁶ Kuperus' (1985:233) automatic rule A8 predicts this same process in Londo.

- (1) SF: a- kɛnd-ɛk -ɛ
 UF: a- kɛnd-ak -a
 Gloss: 3S- walk -IMPF-FV
Free Translation: He is walking.

However, Londo has leftward and rightward spreading (Kuperus 1985:232–4, Rules ML6, ML7, MSC2, MSC3, WSC8/A8, P1, P2), while Mbonge, Longolo, and Lokundu only appear to have rightward spreading (at least in lexical stems). This difference in the application of vowel harmonization affects 12 (1%) of the entries⁷ in the Eyakwe word list. There are a few entries where the only difference between Londo and the other dialects can be attributed to the operation of a left spread rule in Londo. For

⁶ For interlinearized texts, the top line will always be the surface form (SF). The second line will contain the underlying form (UF) when necessary. The second last line will always have the gloss (usually morpheme by morpheme) and the last line will have a free translation. The key to the gloss abbreviations is in APPENDIX 1.

⁷ In this paper 'entry' indicates the word(s) associated with the same English gloss in one row of a word list.

example, the word for ‘arm’, which is made up of the class 3 prefix /mo/ plus the root /kɔ/, appears as /mɔkɔ/ in Londo but as /mɔkɔ/ in Lokundu, Mbonge, and Longolo.

Because harmonization operates in different ways, the orthography could represent the underlying form of the vowel whenever there is a difference in the surface form of the words. For example, Londo would write /mɔkɔ/ for ‘arm’. However, whenever the result of harmonization is the same, as is likely the case for example (1) above, the orthography should write the surface form. This would mean that Londo noun prefixes and some verbal morphemes (susceptible to leftward spreading from following mid height [-ATR] vowels) would need to be written in their underlying form. The added difficulty of recognizing and writing the underlying forms for all the complex verb suffixes (see Friesen 2002) would not be worth the effort, if the surface form is truly the same across dialects. This issue definitely needs more cross-dialectal comparison, the input of the Oroko Language Development Committee, and testing.

There are also some differences between the dialects regarding how they handle vowel combinations at morpheme boundaries. For example, Kuperus (1985:81–2) notes that /oi/ is not allowed in Londo, instead becoming /u/ in non-word-final position and /oe/ word-finally. Ittmann (1978:15) notes a similar phenomenon in Duala, where the vowel combination /o+/i/ at some morpheme boundaries results in a /u/. The Eyakwe word list offers some evidence on how this combination is treated in other dialects.

Table 10 shows the surface form (first line) and potential underlying morphemes (second line) for words where Londo likely has vowel coalescence. Londo and Longolo appear to operate consistently, while Lokundu (for ‘root’, ‘dirt’, and ‘door’) and Mbonge

(for ‘door’) appear to have different underlying forms, different rules, or both.

Incidentally, in the Friesen word list, the Ekombe dialect has /mili/ for ‘root’ (underlying /mo+/ili/), showing yet another phonological variation.

Table 10. /o/ + /i/ at Boundaries

| English | Lokundu | Mbonge | Londo | Longolo |
|---------|-----------|-----------|-----------|-----------|
| root | mori | ɲili | muri | mokako |
| | mo + ?ri | mo + ili | mo + ili | mo + kako |
| thief | ɲwiϕe | ɲibe | mube | ɲwiϕe |
| | mo + iϕe | mo + ibe | mo + ibe | mo + iϕe |
| door | muna | muna | muna | ɲwina |
| | mo + ?na | mo + ?na | mo + ina | mo + ina |
| dirt | ruŋga | ɲiŋgo | muŋgu | ɲwiŋgi |
| | l? + ?ŋga | mo + iŋgo | mo + iŋgu | mo + iŋgi |

In all the Mbonge examples (except for ‘door’) the noun prefix /mo/ (classes 1 and 3) becomes /ɲ/ before non-rounded vowels (see 3.3.2.6 on nasal processes for more on this). Mbonge also deletes a word-final /i/ following /o/.

The phonological results of vowel combinations across morpheme boundaries will need to be further examined across dialects before a final recommendation can be made. Lamuela (1991:71), summarizing Lafont’s plurality constraint, states that “Disregard for the output of certain phonological rules in spelling brings about the graphic unification of dialects that do not share these rules.” However, Weber (in press:31ff) argues against writing the underlying form of words. Tentatively, either the most transparent form or the underlying form can be considered if cross-dialect unification is desired.

The final challenge with vowels comes when dialects differ in the vowels used in some words, but not others. The words that are identical across the dialects contain all

seven vowels. However, when comparing apparent cognates between dialects, all the possible vowel combination switches are found. For example, there are entries where one dialect uses /i/ but another dialect uses a different vowel, with at least one entry using each of the other six vowels. The most common alternations, each involving over 10 lexical pairs, are: /i/ ↔ /u/, /i/ ↔ /e/, /e/ ↔ /ɛ/, /u/ ↔ /o/, and /o/ ↔ /ɔ/. These alternations are not surprising, as all differ by only one feature. However, the fact that they are not consistent makes it difficult to come up with a standard spelling for the 60 entries (7% of the word list) where only the vowels are different or the additional 46 entries (6% of the word list) where the vowels are one of the differences between words. In other words, vowel differences affect 106 entries or 13% of the word list.

3.3.2 Consonants

This section examines the consonants that alternate between dialects and discusses whether only a phonetic alternation is involved (thus one phoneme) or whether the alternation is between phonemes. It also addresses how the prenasalized stops should be written. Recommendations on what should be written are made at the end of each subsection. The spellings already used for the names of Oroko villages are taken into consideration (see APPENDIX 2)⁸. These recommendations are further impacted by the sociolinguistic issues discussed in CHAPTER 4. Therefore, a final summary is given in

⁸ The spellings of the village names are only informally discussed as they are subject to some variation. Their form is based on the spellings on maps that were consulted during the survey, village signboards, and the intuitions of the survey team, all of which are subject to non-Oroko influence. Some of the town names have variable spellings among the Oroko, while others are more established.

section 5.2.2, including the graphemes proposed for the consonants introduced in Table 11.

Unlike the vowels, the consonants have different phonetic shapes across the dialects. Table 11 shows all the phonetic sounds found in the Friesen (Friesen and Friesen 2001) and Eyakwe (2002) word lists (see APPENDIX 4). Note that [c] is used in place of the IPA [tʃ], [j] in place of the IPA [dʒ], and [y] in place of the IPA [j].

Table 11. Oroko Phonetic Consonants

| | labial | alveolar | alveopalatal | velar | labiovelar |
|---------------|--------|----------|--------------|-------|-------------------|
| stops, -vcd | p | t | c | k | kp / kw |
| stops, +vcd | b / β | d | j | | gw |
| continuant | f / φ | s | | | |
| lateral/glide | w | r / l | y | | w |
| Nasals | m | n | ɲ | ŋ | |
| pre-nasals | mb | nd | ɲj | ŋg | ɲmgb/ɲgw/mf/nv/nf |

The shaded boxes indicate consonants where there is some alternation across dialects with entries. The percentage of entries where at least one of the dialects has the phone in question is given at the start of each section.⁹ The consonants are discussed in the following order: alveolars, voiced labials, voiceless labials, alveopalatals, glides, nasals, prenasalized stops, labiovelars, and finally other idiosyncratic alternations.

3.3.2.1 Alveolar Consonants

The alveolar consonant is found in 478 (58%) of the 821 entries in the Eyakwe word list. In 186 (23%) of these entries, Eyakwe recorded it with a different phonetic

⁹ The percentages here are based only on the Eyakwe word list and may not be indicative of actual distribution in natural texts.

realization ([l], [r], or [d]) from another dialect. Note that the Londo and Mbonge word lists had already been standardized on one spelling.

The situation of the alveolar consonants in Oroko is best summarized by a quote from Nida (1963a:20):

In a number of languages in Africa, missionaries have argued for years as to whether certain words were pronounced with [l] or [r]. Some persons have heard [r] and others have heard [l], but in some pronunciations of certain words the Africans themselves have seemed to confuse the sounds. The truth of the matter is that the [r] and [l] were one and the same phoneme, a kind of flap-like sound, sometimes with the tongue grooved (in which case one heard [r]) and other times with the tongue humped up in the middle (in which case one heard [l]). If the tongue happened to be perfectly flat, the resultant would approximate [d] (which has been heard by other missionaries). In one language, the [l] is generally heard if the vowels /i/ or /u/ are contiguous, but if other vowels are nearby, then [r] is heard. It is unfortunate that so many unnecessary arguments have been waged over distinctions which to the African himself are not differences at all.

Due to the presence of this issue within our team, a word list with 94 occurrences of this alveolar consonant was developed. Some of these words were repeated with different morphology so that the alveolar consonant would be word initial in one case and morpheme initial in another. Eyakwe collect recordings of words with the alveolar consonant from seven different speakers (all males from his age group) and transcribed the words. The distribution of the consonants was then charted (see Table 12).

Table 12. Alveolar Consonant Distribution (Friesen 2001:3)

| Following Vowel | Word initial | | Morpheme Initial | | Intervocalic |
|--------------------|--------------|------|------------------|------|--------------|
| | + hi | - hi | + hi | - hi | |
| All said [l] | 0 | 13 | 12 | | 41 |
| Some [d], some [l] | 18 | 7* | 2 | 1 | 0 |

* Four of these were spoken as /d/ by only one speaker

This informal study gives evidence that the alveolar consonant in question is indeed one phoneme. The [d] allophone is more likely to occur word initially before high

vowels, while the [l] allophone is predominant in all other contexts. This parallels Duala where /l/ (considered as the underlying phoneme) has the allophone [d] whenever an /i/ follows and sometimes when a /u/ follows (Ittmann 1978:22). It is noteworthy that a spectrogram of [d], even word initially, shows that it is not a prototypical stop, as there is incomplete closure before the stop is released (Friesen 2001:4).

In her study of Londo, Kuperus (1985:66) chooses /d/ as the underlying phoneme, and states that it weakens to [r] intervocalically (she does not precisely define the phonetic makeup of this sound). She only transcribes one phonetic rhotic/lateral, but notes that one speaker had two variants that appeared to be conditioned by preceding or following high vowels (p. 55).

For the above study, Eyakwe did not differentiate at all between [r] and [l]. Certain villages are known to have a harder rhotic sound (e.g. northern Balue villages), recognizing that this is a dialectal variation of the softer lateral/rhotic that is more common among the southern Mbonge villages. The English spellings of Oroko clan names exclusively use <l> over <r> and the English spellings of the village names (see APPENDIX 2) show a higher incidence of <l> than <r> (approximately 3:1).

Early in our language learning, we challenged one of our language resource persons, Mosongo Mathias, about our perceived inconsistency in his pronunciation of [d] versus [l]. He in turn consulted with his fellow village councilors and reported back that the “older” and thus more “correct” pronunciation was [l]. Following the councilors’ decision and Nida’s quote, the recommendation is to use <l> (except after nasals, see 3.3.2.6). If other sociolinguistic factors (such as easy transition to English) create a desire

to overdifferentiate this phoneme the recommended rule would be that <d> be written before the high vowels <i> and <u> and that <l> be written elsewhere. An informal survey of the English spellings of the Oroko town names (see APPENDIX 2) lends support to this rule, as approximately 90% of the (non-prenasalized) occurrences of <d> follow this rule, as well as approximately 95% of the occurrences of <l>. As for <r>, the recommendation is that it be written only for already established names (such as <Oroko> versus <Oloko>) and in borrowed words (such as <bredi> for ‘bread’ see 5.2.4.4). This also corresponds to the Duala spelling, as Ittmann (1978:23) noted that [r] is not employed except in a few “mots d’emprunts”.

3.3.2.2 Voiced Bilabial Consonants

The above ambiguity between [l], [r], and [d] is also found between [b], [β], and [w]. The bilabial consonants [b], [β], and [w] are found in 393 (48%) of the entries in the word list. In 69 (8%) of these words, Eyakwe recorded a specific alternation. However, these labials differ from the alveolar consonants in that two phonemes are present underlyingly. This is seen in Mbonge when adding the non-specified nasal subject agreement prefix /N/ to verbs as in example (2).

- (2)
- | | |
|-----------------|-----------------|
| ηm- gb -ɛli | m- band -i |
| N- w -(ɛl)i | N- band -i |
| 1s- die -TMLS | 1s- catch -TMLS |
| <i>I'm dead</i> | <i>I caught</i> |

As with [d], [b] is also not a prototypical stop. Instead, a spectrogram shows the lips only come together briefly (when not prenasalized). Because the voiced bilabial stop is not prototypical, it is sometimes transcribed as the fricative [β], just as [d] is sometimes transcribed as the weaker [l]. In fact, many words transcribed with a [w] turn out to show

a similar spectrogram. The vowel formants do not change, as would be the case if the phone were a true [w]. Further clouding the picture is the fact that in one situation where a spectrogram shows a true [w], it is actually underlyingly the class 14 noun prefix /bo/ (Friesen 2001:6). There are, however, occurrences of [w] that are underlyingly /w/, such as other forms of the verb ‘die’ /w/ in (2), they are just fewer than one might expect.

The linguistic recommendation would be for to be written unless a phone can be proved to be unequivocally a /w/ (when <w> would be written), so as to properly differentiate between the /b/ and /w/ phonemes. However, this is likely to meet some resistance, especially in nouns where the phone in question is always intervocalic and sounds much closer to a [w] than a prototypical [b]. The popular impetus will likely be to default to writing the sounds according to their relative proximity to the English phonemes /b/ and /w/.

3.3.2.3 Voiceless Bilabial Consonants

There is a phonetic alternation between [f] and [ɸ] found between the dialects in 97 (12%) of the entries. Kuperus (1985:66) identifies [ɸ] as the voiceless bilabial phoneme in Londo. In all the dialects these seem to be the same phoneme. When Oroko village names are written in English, the [ɸ] phone is often represented as <p>, resulting in a split between the use of <f> and <p> (approximately 6:4 in favor of <f>) in village names. Since the [f] used by some Oroko is closer phonetically to the English <f> than [ɸ] is to the English <p>, the recommendation is that the <f> be used consistently for both phonetic sounds, and that <p> be reserved for borrowed words such as /pumbi/ ‘pump’. When transferring their reading skills to English, those individuals or dialects

that use [ɸ] will thus need to learn to properly distinguish (both in speech and writing) both <f> and <p>, but those that use [f] will only need to add the <p> to their inventory. If <p> is used, those with [ɸ] still have the same learning challenge, while those writing <p> for [f] would have to unlearn an association (between [f] and <p>) that they have already made. Whatever is chosen by the Oroko Language Development Committee (OLDC), whether <f> or <p>, it should be implemented consistently across all dialects.

3.3.2.4 Alveopalatal Consonants

The alveopalatal consonants [c], [j], and [y] are found in at least 129 (16%) of the 821 word list entries. In 22 (3%) of these entries, Eyakwe recorded a specific alternation. Where alternations exist, Lokundu often uses [j] or [c], Longolo [c], and Londo and Mbonge [y], as in Table 13 below. This alteration works for 18 of the entries, with the other four having idiosyncratic changes.

Table 13. Alveopalatal Changes

| English | Lokundu | Longolo | Londo | Mbonge |
|------------|------------|-----------|-------------|--------|
| wood | ico / ijoo | ico | iwori / ile | iyoli |
| give birth | ca / ja | ca / dica | ya | ya |
| vomit | coa / joa | coa | yoa / yuwa | yoa |

However, there are also many cases where [y] is used uniformly across the dialects, such as for [ya] ‘hot’, which is identical in all the dialects. Incidentally, the phonetic homonym (including tone) [ya], which in Mbonge means both ‘hot’ and ‘give birth’, has different phonetic forms in Lokundu and Longolo (see Table 13). A hint at the possible root of this change is found in the association marker used in some of the phrases collected in the word list. The associative marker [ya] is used in /iyeme ya moa/ ‘flame (lit. tongue of fire)’, while [ca] is used in /ekɔmbɔ ca ŋwarana/ ‘girlfriend’.

Judging from the noun class prefixes on the preceding head noun, it is likely that [y] arises from an underlying /i/ and [c] from an underlying /e/. Further morphological and phonological research is needed to verify that [y] and [c] can arise from different underlying vowels. It is also possible that this process is both currently productive and a historical explanation of changes producing present phonemic forms.

If a harmonized alphabet is pursued for the Oroko people, the underlying vowel should be written for all the dialects where a productive phonological process converting underlying vowels to [y], [j], or [c] can be demonstrated. However, for many of the nouns, such as those in Table 13, the recommendation would be to write a single consonant across dialects rather than an underlying vowel that may only have arisen historically. As <j> is used in various languages to represent a range of sounds from glides to affricates, the recommendation would be to use it for the [y], [j], and [c] phones. Then <y> would be preserved for phones that are consistent across all dialects. The grapheme <c> is less desirable as a candidate for [y], [j], and [c] as it is used for /s/ and /k/ in English, and /c/ is represented as <ch>.

3.3.2.5 Glides

The Eyakwe word list has 203 entries (25%) with the glides [y] and [w] in them, of which 16 words (2%) differ between dialects. Some of the occurrences of glides are as epenthetic consonants, and others are underlying phonemes.

The epenthetic consonant [y] follows the front non-low vowels /i/, /e/, and /ɛ/, while [w] follows the back non-low vowels /u/, /o/, and /ɔ/, such as in the Mbonge

example in (3). These transition glides are predictable from their environment and not part of the underlying phonemes, as in Duala (Ittmann 1978:12).

- | | | |
|-----|---------------|----------------|
| (3) | i(y)- anda | l- anda |
| | i- anda | lo- anda |
| | CL19- finger | CL11- finger |
| | <i>finger</i> | <i>fingers</i> |

There are, however, cases where the glide is part of the underlying morpheme even when it fits the above pattern. The presence of a phonemic /w/ or /y/ can be confirmed by changing to a plural noun class marker, which in many cases does not have the same glide triggering vowel, as in example (4) (found in both Mbonge and Londo).

- | | | |
|-----|---------------|----------------|
| (4) | i- yeme | lo- yeme |
| | i- yeme | lo- yeme |
| | CL19- tongue | CL11- tongue |
| | <i>tongue</i> | <i>tongues</i> |

Glides can also be the surface phonetic variant of an underlying vowel. For example, when a single vowel is the subject agreement marker and it is added to a vowel initial verb, the result is a glide, as in example (5).

- | | | | | |
|-----|------|-------------------------|-------|-------|
| (5) | kema | y- | ak | -ε. |
| | ∅- | kema | e- | ak -i |
| | CL9- | monkey | C9-go | -TMLS |
| | | <i>The monkey went.</i> | | |

The resulting recommendation is that, whenever a phonetic glide can be shown to arise from an underlying vowel, the underlying vowel should be written. This is in agreement with the recommendation for the alveopalatal section above (3.3.2.4). This recommendation is especially useful when distinguishing between the class 9 (/e/) and class 10 (/i/) class agreement markers when they are put before vowel initial verb stems. Writing the underlying vowels will take some additional time in literacy classes, and it is

possible that this will not be acceptable to the Oroko. In that case the surface glides can be easily written, and any resulting ambiguity will be dealt with in the same way as in speech, by context. The most linguistically efficient recommendation is that a glide should also not be written when it is epenthetical, so that [diyowa] ‘to know’ would be written <dioa>. However, redundancy in writing is not bad (Weber in press:21-24), so if the Oroko prefer to write some or all epenthetic glides, that is also a reasonable option, as long as it is employed consistently.

3.3.2.6 Nasal Consonants

The Eyakwe word list has 55 entries (7%) with a nasal (excluding prenasalized stops). A total of 21 entries (3%) are noted as having variations across dialects. Table 14 gives a representative sampling of the idiosyncratic variations across dialects in the Eyakwe word list, with the highlighted change given in the second column.

Table 14. Idiosyncratic Nasal Variations between Dialects

| English | Change | Lokundu | Mbonge | Londo | Longolo |
|-----------|----------|------------------|----------|----------------|----------|
| shin | m/nj | mboma | mbonja | mbonja ... | mboma |
| stand | nw/ɲw/m | unwa | ima | imana | ɪɲwa |
| your (2p) | ny/n | eyanyu | eyanyu | eyanyu | eyanu |
| bell | ny/n/nd | ɲganyika | ɲgandika | ɲganikaɲ | ɲganyika |
| child | ɲw/ny/ɲ | ɲwana | ɲana | nyana ɲwana | ɲwana |
| cat | ɲw/ɲ | aɲwa | aɲa | — | aɲwa |
| suck | ɲu/ɲw/ny | ɲuaɲga ɲwaɲga | nyɲga | nyɲga | ɲwaɲga |

In addition to the above variations, Table 15 shows the differences in how morphemes with nasals are handled across morpheme boundaries, resulting in variations in the surface realizations.

Table 15. Phonological Processes Affecting Nasals

| English | Morphemes | Lokundu | Mbonge | Londo | Longolo |
|---------|-----------|---------|--------|-------|---------|
| thief | mo+iBe | ɲwiϕe | ɲibe | mube | ɲwiϕe |
| noon | mo+ese | ɲwese | ɲese | ɲwese | ɲwese |
| year | mo+a | ɲwa | ɲa | ɲwa | ɲwa |
| tobacco | mo+eni | ɲweni | ɲeni | ɲweni | ɲweni |

Take ‘thief’ as an example, which is made up of the class marker /mo/ and vowel initial stem /iBe/ (the phonetic shape of ‘B’ varies from [b] to [ϕ] between the dialects).

In Londo the vowels coalesce (see 3.3.1), but the underlying /m/ remains. However, in Lokundu and Longolo the /o/ becomes a [w] and the preceding nasal assimilates to the velar place of articulation, changing from [m] to [ɲ]. The process is similar in Mbonge, except that the /m/ and /o/ coalesce into [ɲ]. For ‘noon’, the rules are the same, but since the root does not have an /i/, Londo follows the same pattern as Lokundu and Longolo.

For maximum harmonization, the underlying form of these words would need to be written. However, if the orthography is not fully standardized across all dialects, this is one area where the increased effort to teach people to read and write a more abstract form is not worth the payback, as it only affects 14 entries (2%) of the Eyakwe word list.

A second option that promotes uniformity without going to an underlying form is to adopt the same representation for /ɲw/ and /ɲ/, as these forms uniformly alternate. The recommendation in this case would be to adopt the shorter form <ɲ>.

3.3.2.7 Prenasalized Stops

The Oroko dialects have a full range of prenasalized stops as shown in Table 16. Except for the last line of the table, all the prenasals are found in all the dialects. More

research needs to be done to see how the prenasalized alveopalatals operate across dialects.

Table 16. Prenasalized Stops in All Dialects

| Surface Form | Underlying Form (s) |
|--------------------|------------------------|
| mb | N+b, N+f |
| nd | N+d, N+l (see 3.3.2.1) |
| nj | N+s |
| ŋg | N+k |
| ŋmgb (see 3.3.2.8) | N+kp, N+w |

The phonetic sounds [g] and [gb] (and in some dialects [j], see 3.3.2.4) only occur in combination with a nasal. Because of this the phonemic inventory is simplified if the prenasalized stops and their corresponding voiced obstruents are not included. However, as the orthography needs to specifically address how the prenasalized stops should be written, they are left in the phonemic inventory.

The recommendation is that the voiced surface forms of the stops be written instead of the underlying phonemes, because in many cases the surface form could come from more than one underlying form, and for nouns the underlying consonant is usually irretrievable (except for nominal derivations from verbs). This will also make the orthography more transferable to English and Duala (Ittmann 1978:13). For example, if Oroko writes the underlying form of the prenasalized velar (/nk/) some confusion would result when teaching the pronunciation of the English words <sing>¹⁰, which would have the same sound as an Oroko <nk>, versus <sink>, which would have the same spelling but different pronunciation.

¹⁰ Incidentally, <singing> is pronounced as /siŋgiŋ/ by many Oroko who are literate in English.

As for the prenasals, the recommendation is that <m> be written before because it is recognized as its own phoneme in other environments, and is written in village and dialect names. All the other forms should be written using <n> as the prenasal along with the appropriate voiced stop: <nd>, <nj>, and <ng>, as this is both the underlying form, and easier to write than the phonetic variations /ɲ/ and /ŋ/. See the next section (3.3.2.8) for a discussion of labiovelars, including prenasalization.

3.3.2.8 Labiovelar Consonants

The Oroko dialects have a number of variants for what is a double articulated labiovelar consonant (/kp/ and /ŋmgb/) in the southeast cluster (see Table 3). There are 49 entries (6%) with some variant of a labiovelar consonant or consonant cluster (/kp/, /kw/, /gb/, and /gw/). In 18 entries (2%), there is some alternation between dialects.

The prenasalized voiced alveopalatal stop is found only at morpheme boundaries in Mbonge. Example (6) documents the two underlying forms that can result in the voiced labiovelar prenasalized stop in Mbonge.

- | | | | | | |
|-----|---------------------|----------|----|------------------|--------|
| (6) | ŋm- gb | -ak | -a | ŋm- gb | -eli |
| | N- kp | -ak | -a | N- w | -(el)i |
| | 1S- peel | -IMPF-FV | | 1S- die | -TMLS |
| | <i>I am peeling</i> | | | <i>I'm dead!</i> | |

The variations across the Oroko dialects are summarized in Table 17 (based on only one vocabulary item for each line as recorded in the Friesen word list). The two voiced stops which are found in multiple dialects (/ŋmgb/ and /nv/) do not share the same voiceless stop.

Table 17. Labiovelar Consonants

| | SE Cluster | Bima | Londo | Lokundu | Longolo | Lokoko | Lotanga |
|-----------|------------|------|-------|---------|---------|--------|---------|
| Voiced | ɲmgb | nv | | ɲmgb | mf | nf | ɲgw |
| Voiceless | kp | | kw | | | | |

It is also noteworthy that there may be some variation within dialects, as not everyone in the Mbonge clan uses /ɲmgb/. In some situations (such as in proper names) the variant /ɲgw/ is also used (e.g. the village name ‘Ngwandi’). As for Londo, Kuperus (1985:75–76) notes the presence of the phonemes /ɲmgb/ and /kp/. However, she suggests that they are borrowed from Efik (a Cross River Language just over the Nigerian border) as their number is few (only 19 voiceless labiovelars and two prenasalized labiovelars in her data corpus). She also notes that the first person singular subject agreement prefix /n/ never appears before /kp/ to result in /ɲmgb/; instead, the allomorph /na/ is used.

Regarding the voiceless labiovelars, the Eyakwe word list shows both /kp/ and /kw/ occurring in both Lokundu and Longolo. For both dialects, /kp/ is the more common form. More interesting still is the variance between /w/, /kw/, and /gw/ as in examples (7) and (8). As indicated in (7), ‘boat’ is a class 14 word in Mbonge and Londo. The Eyakwe word list does not give the class for the Longolo or Lokundu words.

| | | | |
|-----|----------------------|----------------|----------------|
| (7) | w- alo | kwaro | gwaro |
| | bo- alo | ? | ? |
| | CL14- boat | boat | boat |
| | <i>Mbonge, Londo</i> | <i>Longolo</i> | <i>Lokundu</i> |

In (8) the Mbonge word is a nominalized verb. The Eyakwe word list does not have the verb for ‘pain’ anywhere in the data, so any change in the roots cannot be confirmed.

| | | | | |
|-----|-----------------------|--------------|----------------|----------------|
| (8) | bo- w -ak -i | boaki | bocoaki | bogwaki |
| | CL14- pain -PFT -TMLS | ? | ? | ? |
| | <i>pain</i> | <i>pain</i> | <i>pain</i> | <i>pain</i> |
| | <i>Mbonge</i> | <i>Londo</i> | <i>Longolo</i> | <i>Lokundu</i> |

It is not readily apparent what is happening here, whether these words are in the process of becoming labiovelars, or retreating from labiovelars. At some level this is similar to the alternation between dialects for alveopalatals, with Lokundu and Longolo moving away from glides towards stops (see 3.3.2.4).

The above information is based on a very small sample of words. Further research needs to be done to verify the phonetic form of words with these phonemes in other dialects. In addition, the underlying morphemes involved need to be verified.

The recommendation is that the phonemes /kp/, /kw/, /ɲmgb/, and /ɲgw/ be written consistently across all the dialects, no matter what their surface variations are. Based on the current English spelling of village names, an initial recommendation is <kw> for the voiceless labiovelar (as in ‘Kwakwa’, a Bakundu town) and <ngw> for the voiced labiovelar (as in ‘Ngwandi’, a Mbonge town). The one downside of this spelling is the potential confusion of <w> as /o/ in some situations (see section 3.3.2.5 for more discussion of glides). For example, Mbonge has both /ɲgoa/ ‘pig’ and /ɲmgba/ ‘dog’, which would be written <ngoa> and <ngwa> (as said in Longolo and Lokundu) according to this recommendation. On the positive side, this recommendation preserves the underlying /w/ in /n+/w/ => <ngw> while /n/+/kw> => <ngw> parallels the /n/+/k/ => <ng> relationship seen in the velar stops (see section 3.3.2.7).

As for the other combinations of velar stops and /w/ that are not consistent across dialects, either /w/ should be used, or each dialect needs to write their own particular variant.

3.3.2.9 Idiosyncratic Alternations

In addition to all the above words, the Eyakwe word list has a total of 39 entries (5%) with other correspondences that do not fit into the previously discussed categories. Table 18 has a representative sample of the kind of idiosyncratic alternations in the word list. This list also gives an idea of the kind of differences that were allowed when considering whether words were apparent cognates. The first column designates the number in the Eyakwe word list. The third column gives the consonant that alternates, as for many of these words there are other changes in addition to the highlighted difference. When a number is present (e.g. k8/c), it indicates how many dialects use that form. No number indicates that only one dialect uses the particular alternating form for that entry.

Table 18. Other Phoneme Correspondences in Eyakwe Word List

| Num | English | Difference | Lokundu | Mbonge | Londo | Longolo |
|------|------------------|------------------------|------------|-----------|----------------|-----------|
| 0013 | blood | k3/c | makia | makia | maca, macia | makia |
| 0066 | molar tooth | ke2/kiɔ/cɔ | ekekɔ | ekiɔkɔ | ecɔkɔ | ekekɔ |
| 0103 | waist | ju/w/u/cugw | ejue | eue, buwe | ewe | ecugwe |
| 0134 | naked | s2/ɲ | moɲombo | mosombo | | mosomba |
| 0154 | breath (v) | s3/f | soa | ɲo, soa | soɛ | fua |
| 0163 | comb (v) | s2/c | sasoa | sasoa | | casoa |
| 0231 | wound (n) | ɸ/ey | ɸora | fola | ɸola | eyora |
| 0264 | male, man | moma/nwia/ moi/moɲa | nwiana | momana | moina muina | moɲana |
| 0280 | deaf mute | b2/kp | eβoβo | ebobo | | ekpokpo |
| 0497 | ant | si2/c/sic | siako | siako | caku | sicako |
| 0519 | millipede | ɲg1/k | ɲgɔɲgɔrɔki | ɲgɔkɔlɔkɔ | ɲgɔkɔlɔkɔ | ɲgɔɲgɔrɔ |
| 0590 | tree | bo3/we | bole, βore | wele | bole | ire, bore |
| 0994 | chop into pieces | r2/s/- | sɛrɛ | sɛsɛ | sɛɛ | disɛrɛ |
| 1050 | trap (n) | l3/t | erambi | ilambo | ilambi | itambi |

| Num | English | Difference | Lokundu | Mbonge | Londo | Longolo |
|------|--------------------|------------|-----------|----------|-----------|---------|
| 1219 | bring up (a child) | mb2/ŋg | βomboa | boŋgoa | | βomboa |
| 1274 | show | i3/du | imere | dumele | imere | imere |
| 1427 | laugh (v) | l/j-y-c | ɔjɔ | ɔyɔ | ɔlɔ | ɔcɔ |
| 1432 | measure (v) | l/n | mene | mele | mene | mere |
| 1525 | (003) three | l3/y | beraro | belalo | beyaro | beraro |
| 1597 | round, be | k/t/di/- | kiŋgirana | iŋgilana | tunɣulene | diŋgira |
| 1965 | scatter (intr.) | ŋg2/k | ɸaŋge | faŋgee | ɸake | ɸaka |

The Friesen word list (APPENDIX 4) also has a number of correspondences that are counted as apparent cognates but do not follow any of the other noted patterns. As some of these alternations are from dialects not covered in the Eyakwe word list, they are summarized in Table 19:

Table 19. Other Phoneme Correspondences in Friesen Word List

| Sound | Word | Dialect | Word | Dialect |
|-----------|-------------------------|-----------------------------------|----------------------------------|--|
| r/s | dirɔŋga | Lotanga | disɔŋga | all others |
| c/ki | maca | Londo | makia | all others |
| c/s | sasoa | Mbonge, Lokundu | casoa | Longolo |
| ŋ/c/y | ŋoa | Lokundu | yoa coa | SE cluster other 5 |
| nj/ŋg/ŋgw | injɛ iŋgwɛ iŋgwɛa | Londo Bima Longolo, Lotanga | uŋgee uŋgwe iŋgwɛ uŋgea | Mbonge Lokoko Bima Ekombe, Lokundu, Lolue |

All the words in this section, although potentially cognates, will need to be written using the phonemic guidelines as proposed in the previous sections with no consideration of the form of the words in the other dialects. For the practical purposes of the orthography, they are best treated as different vocabulary items.

Related to this alternation between consonants is the difference in length of words between some dialects. A total of 58 entries (7%) have some difference in length, whether the insertion of a letter or letters, or the presence of an extra syllable or

consonant in the verb. Samples of the changes are included in Table 20 below. The alternations include incomplete reduplication, double vowels at the ends of words, dropped syllables, and word final consonants. As with Table 18, the third column indicates what phenomenon is being highlighted, and how many times each alternation occurs in that entry.

Table 20. Variations in Word Length Between Dialects

| Num | English | Difference | Lokundu | Mbonge | Londo | Longolo |
|------|--------------|---------------|---------------|------------|----------------|---------------|
| 0028 | ear | i2/-2 | ditoi | dito | dito | ditoi, ritoi |
| 0031 | eyebrow | lo3/- | eφoφo | efolofolo | efolofolo | eφoroφoro |
| 0048 | head | -2/lo2 | moro | molofa | moroφo | moro |
| 0061 | leg | Nga2/- | mofa, mofaa | ηende | moφaηga | moφaηga, riko |
| 0114 | phlegm | -3/N | ekɔɔ | ekɔ | eka | ekaη |
| 0173 | feel, hear | -3/b | oka, okalanea | boka | oka | oka |
| 0418 | fowl | -2/b | kuβa | kua | kua | kuβa |
| 0446 | owl | VsVk/- | eremba | isekelemba | | esikeremba |
| 0501 | bee | oi2/-/wo | noi | no | jawo | noi |
| 0509 | fly (n.) | -3/η | iki | iki | ηiki | iki |
| 0519 | millipede | kɔ2/ki/- | ηgɔηgɔrɔki | ηgɔkɔlɔkɔ | ηgɔkɔlɔkɔ | ηgɔηgɔrɔ |
| 0597 | cola nut | u2/- | riβeu | libe | | ribeu |
| 0633 | leaf | -3/ni | eca, eja | eya | eyani | eca |
| 0672 | flat rock | bar/barab/lab | eβaraβanja | elabanja | | eβaranja |
| 0729 | wood | -2/li2 | ico, ijoo | iyoli | iwori, ile | ico |
| 0774 | night | te2/-2 | bulu, buru | bulute | bulute, bulite | buru |
| 0819 | lamp | -3/N | etonika | itonika | otilikanη | etonika |
| | | | | | otonikanη | |
| 1098 | thatch (n) | u2/-/uN | sɔu | sɔ | sewu | sauη |
| 1233 | exchange | s2/- | eηgorene | seηgolene | | soηgore |
| 1471 | you (pl.) | i2/-2 | ηje | ηje | ηe | ηe |
| 1678 | rotten, be | -2/tɔ | bɔ | bɔtɔ | | diβɔ |
| 1713 | burn (intr.) | y3/- | yaηga | yaηga | aηge | yaηga, uwea |
| 1767 | middle | 2-2x/1-2x/2x | watiwati | watewate | tete | watiti |
| 1950 | lose (tr.) | ɔ/- | bɔre | ɔbɔ | bɔle | bɔre |
| 1981 | squeeze | oa2/a | amoa | amoa | ama | ama |
| 1991 | tear (tr.) | -2/twa | ηa | kamboa | ηatwa | ηa |

If a harmonized spelling is being sought, the longer form is generally recommended as the standard. However, for words ending in consonants, the

recommendation would be to take the shorter form. This is because the Oroko dialects have open syllables. When words end with a consonant, it is a good indication of a borrowed word. Therefore, where some dialects have a form that does not have the coda, that form should be chosen as it is more completely integrated into the native phonology.

3.3.3 Tone

This section starts by describing the Mbonge tonal system (Friesen et al. 2001)¹¹. Then it compares this to what Kuperus (1985) writes about Londo tone. Finally, it looks at tonal issues arising from the Eyakwe word list. Orthography recommendations on tone are reserved for section 5.2.3, after sociolinguistic factors have been discussed.

Mbonge is a two-tone system, with the possibility of some toneless tone-bearing units (TBUs). Floating tones (tones without a corresponding TBU) are also helpful in understanding some processes, especially in verbs. Mbonge has all four logical tone combinations (LH, HL, LL, HH) underlyingly present on typical disyllabic noun roots (see Table 21).

¹¹I am deeply indebted to Michael and Becky Scott for their part in the analysis of Mbonge tone. In October and November 2000 the three of us participated in a five-week tone workshop led by Dr. Keith Snider of SIL in Yaoundé, Cameroon. Most of our understanding of Mbonge tone came as a result of this workshop. Following the workshop I gathered our joint findings into a single unpublished paper which serves as the basis for the following discussion.

Table 21. Underlying Mbonge Tone Patterns

| Tone Pattern | Mbonge Word | English Gloss |
|--------------|-------------|---------------|
| HH | tándá | goat |
| LL | sòmbò | drill monkey |
| LH | mbòkó | squirrel |
| HL | kóndĩ | bean |

Mbonge has automatic downstep, that is to say that every high tone that follows a low tone is slightly lower than the last high tone (9).

- (9) [^ˉ _ˉ ^{ˉˉ} _{ˉˉ} ^ˉ _ˉ]
 bá-mò- kát-á kósò
 3P- PST.FAR- tie -FV parrots
 They tied the parrots.

Non-automatic downstep has also been observed, such as when a low between highs has no TBU to anchor to, resulting in the second of the two highs being realized at a slightly lower pitch (10).

- (10) [_ˉ ^ˉ ^{ˉˉ} _{ˉˉ} ^ˉ _ˉ]
 à- kó`- kát-á kósò
 3S- FUT.NR- tie -FV parrot(s)
 They tied the parrot(s).

Mbonge also has tone spread. Any low tone that follows a high tone and is in turn followed by a low tone (or is at the end of a phrase) succumbs to the preceding high and become high itself. The word /koso/ ‘parrot’ found in the above two examples actually carries a low tone underlyingly, but the high tone from the final vowel (FV) of the verb spreads to the first syllable of the object.

In general, a high tone only spreads one syllable forward, as in the above two examples. However, initial investigation into derivational suffixes on verbs has shown that a high tone can spread across a number of suffixes, raising the possibility of these

suffixes being toneless. A high tone also spreads across some word boundaries, such as from a verb to a following object, but not others, such as from a subject to the following verb.

Kuperus (1985) notes that Londo also has only two tones (p. 61), including floating tones (pp. 41–2, 62), and four-way contrast of tone patterns on noun stems (p. 43). Londo has automatic and non-automatic downstep (p. 42). However, only one of her informants had non-automatic downstep, while another did not realize a floating low as a downstep, instead keeping the two high tones involved at the same pitch. Londo also has high tone spread, but unlike Mbonge, nouns are excluded from this process (p. 43). Kuperus' description of tone spread in her rule ML4 (p. 163) seems to parallel what our team analyzed as toneless verbal suffixes. The other tone-spreading rule (A15) that she described only operates when vowels come together at morpheme boundaries (p. 86).

A comparison of the tones transcribed from the Eyakwe word list¹² shows a wide potential variation in the surface tones. The 227 words that are most closely related phonemically cross-dialectally (as found in the first row of Table 27 in section 5.1.2) were compared. Of these, not quite half (107 of 227) were tonally identical. Of the remainder, an additional 41 may have the same underlying tonal form, if one considers the effects of potential tone spread rules in Mbonge, variations in the verb suffixes, and variation in how floating tone may be dealt with. In any case, the differences in both underlying tones and tone processes appear to be substantial.

¹² The words were said on tape, followed by the tone which was whistled by Eyakwe. The tape quality was extremely bad, and the whistling was rushed at times. The tone data is therefore of marginal quality.

Linguistically, it would be hard to write a consistent tonal form of the words across all dialects, considering the number of potential tone processes and variations in surface tone combined with potential differences in underlying tone.

3.4 Morphological Issues

Both the nouns and verbs have varying morphology across the dialects. For the nouns, there are 51 entries (6%) that have differences regarding the noun class used. For the verbs, there are a total of 107 entries (13%) that appear to have some difference in the verbal morphology. These differences include the presence of what appears to be the infinitive prefix /di/ on the verb stem. This is probably just an issue of inconsistent elicitation and transcription. For 27 entries (3%), this is the only morphological difference between words, although there may still be other phonological issues.

Other verbs have a different phonetic realization of what may be the same morpheme. For example, in 19 words (2%) the applicative suffix /eɛ/ on Mbonge verbs alternates with the suffix /ea/, /ɛle/, or /a/ on Lokundu and Longolo words, and /a/, /ɛ/, or /ɛle/ for Londo words.¹³ Helmlinger (1972:xv) notes quite a range of allomorphs for Duala also: /ea/, /edi/, /ɛye/, and /ɛle/. For most of the other verbs with potentially different morphology, there is a contrast between the presence and absence of various derivational suffixes including: /ise/ ‘causative’, /ɛ/ ‘frozen causative’, /an/ ‘instrumental, accompaniment’, and /ak/ ‘imperfective’.

These variations give a hint at the potential grammatical mismatches between the dialects, in addition to the lexical issues that are the primary focus of this paper.

3.5 Lexical Issues

In addition to phonological issues, the word lists also raise some lexical issues. In at least 49 entries, words were spotted that are used in Mbonge, but with different semantics. Table 22 summarizes some of the semantic shifts that have happened across the dialects. The dashed lines group together Oroko words or English glosses that have different correspondences between dialects. For example, /mumbu/ means ‘lips’ in some dialects, and ‘mouth’ in others. Meanwhile, there is also another word, /wana/ or /owana/ used for ‘mouth’ in some dialects. The dashed lines that cross the entire chart break it into four sections with different sets of semantic shifts.

Table 22. Semantic Shifts Across Dialects

| Oroko | Gloss | Dialect |
|----------------------|-------------|---|
| mumbu | lips | Mbonge, Londo |
| mumbu | mouth | Bima, Lokoko |
| wana/owana | mouth | SE Cluster, Londo, Lokundu, Longolo, Lotanga |
| esɔsɔ, esasa | finger nail | SE cluster, Lokundu, Londo |
| canda, randa, nyanda | finger nail | NW cluster, Lokoko |
| iyanda, nyanda | finger | Mbonge, Londo |
| rikɔnjɔ | finger | Ngolo |
| likɔnjɔ, rikɔnjɔ | hand | Mbonge, Londo, Lokundu |
| mokɔ | hand | Longolo |
| mokɔ, mɔkɔ | arm | ALL |
| kendɛ | walk | Mbonge, Londo |
| kendɛ | go | Londo |
| aka | go | Mbonge |
| aka | pass | Londo |
| kita | join | Mbonge |
| kita | resemble | Londo |
| akana | resemble | Mbonge |

¹³ Kuperus (1985) does not note a distinct applicative suffix for Londo.

The above semantic shifts both increase and decrease the similarity between dialects. They increase it in the sense that some words that the word list may identify as non-cognates, may in fact have a semantically similar word in another dialect(s). They decrease it in the sense that, although the words may be recognizable in a neighboring dialect, the semantics may not accurately transfer across the dialects, resulting in some confusion.

Table 23 gives a few examples of words that do not have their own lexical entry, but instead use a phrase that would probably be understood in the other dialects.

Table 23. Words versus Phrases

| Oroko | Gloss | Dialect |
|-----------------|---|------------|
| esome | pineapple | Mbonge |
| ekoko ea mokala | pineapple (lit. sugarcane of white man) | Londo |
| ndondi | fish | 8 dialects |
| nyama maliba | fish (lit. meat-river) | Londo |

In addition to the above words that have shifted to a semantically related meaning, there are words that have adopted a totally different meaning, such as /tata/ in Table 24 below. In some of these cases it is possible that the tone is different. However, if tone is not written, these pairings will still create some confusion in the written form.

Table 24. Non-Related Word Pairs

| Oroko | Gloss | Dialect |
|-------|-----------|------------------|
| ingɔ | look, see | Mbonge, Londo |
| tata | look, see | Lokundu, Longolo |
| tata | be angry | Mbonge |
| kua | be angry | Lokundu |
| fili | | Longolo |

All of these differences in the semantic scope of words that have similar phonetic forms between the dialects create a challenge for comprehension when sharing material

across dialects. The assumption is that readers will need to learn the alternate uses of these words in the other dialects for written documents, just as they now do for speech.

CHAPTER 4

SOCIOLINGUISTIC ISSUES

This chapter presents the sociolinguistic data available on the Oroko dialects and then describes the exposure the Oroko have had to written materials. The third section applies Smalley's (1963d) principles to the Oroko dialects and examines other issues arising from the sociolinguistic data presented and my own observations.

4.1 Sociolinguistic Data

This section summarizes the findings from the two most recent sociolinguistic surveys of the Oroko, a Rapid Assessment survey (Mbongue 2000) and a Recorded Text Testing (RTT) survey (Friesen and Friesen 2001).

4.1.1 Mbongue Rapid Assessment Survey

In February 1998 a Rapid Assessment survey was conducted by a research team composed of Michael Scott and myself from World Team and Joseph Mbongue¹⁴ of the Cameroon Association for Bible Translation and Literacy (CABTAL), who was working with the survey department of SIL Cameroon. The survey was designed (Mbongue 2000:4) to:

- assess “the self-reported intercomprehension and attitudes between the surveyed speech varieties with regard to language development”

¹⁴ Despite his last name, Mr. Mbongue is not from the Mbonge dialect (or any of the other Oroko dialects).

- “assess the vitality of the Oroko speech varieties ... in terms of the use of the mother tongue and the neighboring languages, the interest in languages of wider communication (standard English and Cameroon Pidgin), the interest in language development, and other sociolinguistic factors”
- determine “possible bilingualism ... (particularly Cameroon Pidgin), including degree of proficiency and domains of use.”

The survey concluded that:

- Self-reported intercomprehension was high.
- The Oroko dialects were in daily use and were not being widely replaced by another language.
- Although Cameroon Pidgin is widely used, the “mother tongue is generally used in all the domestic domains and by all age groups and is still strong in the more remote villages” (Mbongue 2000:11).

4.1.2 Friesen Modified Recorded Text Testing (RTT) Survey

In May 2000, Lisa Friesen, Eyakwe Joseph, and myself conducted a language survey among five representative Oroko dialects (Friesen and Friesen 2001). The primary purpose of this survey was to determine if the Mbonge dialect would be understandable to all other Oroko clans, and thus suitable as a reference dialect for an Oroko language standardization project. Three secondary purposes were to:

- re-collect a word list (see section 3.1.3)
- update people on the status of the language development project

- ask for the names of two to four respected leaders to contact regarding the formation of a language committee.

This survey used a form of Recorded Text Testing (RTT). The basic procedure for RTT (see Casad 1974 for a more detailed explanation of this procedure) is to obtain a good autobiographical or nonfolkloristic text on audiotape from each dialect to be tested. Subjects from a different language or dialect are found. The stories from the other dialects are played for them, and then replayed with comprehension questions interspersed. The subject's answers are recorded to determine their level of comprehension of the test stories. The goal is to determine dialect groupings based on attested intercomprehension.

Three key modifications were made to Casad's procedure:

- The test story was only from one dialect, not all the dialects
- A pre-test was done in the test language, not in the local language
- Test questions were given in the test language, not in the local language

Unfortunately, these modifications weaken the scientific validity of the test, as there is no control data with which to compare the results. Prior to the survey the language situation was discussed with members of the SIL Cameroon branch, including consultants and the survey department. Because of the previous lexicostatistic work, the decision was made to not get stories from all the dialects, but rather seek to confirm whether Mbonge would be understandable by the dialects most different from it lexicostatistically. At the time it was felt that the added time needed to follow the full procedure of recording a pre-test and questions in the local language would be

unnecessary if initial scores were high, as they were. Unfortunately without benchmarks in the local language, there is no way to explain the meaning of the few low scores.

The result of the RTT survey showed an average score of 81% with a standard deviation of 17 with 48 participants. The average score was sufficiently high to encourage efforts to develop a unified Oroko orthography. However, the high standard deviation caused some concern. Age and sex were determined to be the most influential (see Table 25) (Friesen and Friesen 2001:5).

Table 25. Recorded Text Testing (RTT) Score by Age/Sex

| Age/Sex | Group Score | Standard Deviation | Participants |
|--------------|-------------|--------------------|--------------|
| 49–78 yrs | 81% | 11 | 20 |
| 35–45 yrs | 90% | 9.5 | 13 |
| male 16–31 | 82% | 10 | 5 |
| female 16–31 | 65% | 16.5 | 11 |

A true RTT test is designed to make a statement on whether intelligibility is inherent or learned. Some people admitted that their children would not be able to understand the other Oroko dialects well. However, during the subject selection process, it was surprisingly difficult to find people who had not traveled out of their village or spent extended time with the other dialects. This suggests that the intercomprehension is acquired and not inherent. This gives further possibilities for the relatively poor score of the young women, as they have probably had the least exposure to other dialects.

A final informal finding was that people once again reaffirmed their common identity as Oroko people. Those who participated in the tests readily accepted Mbonge, and indicated that they understood it well, sometimes even proceeding to retell the story instead of answering the particular comprehension question given. Lisa Friesen and I

were able to communicate with people from the other dialects using Mbonge.¹⁵ But even these positive attitudes were slightly undermined by Eyakwe's practice of sometimes repeating instructions in Cameroon Pidgin, after initially giving them in Mbonge, "just to make sure people understood."

4.2 History of Written Material

During recent history the Oroko have been exposed to a number of different writing systems. These include the languages of European colonizers (English, French, and German), Duala (a Bantu language spoken on the coast of Cameroon), and scattered attempts at writing in Oroko. The impact of each of these language groups are addressed in turn.

4.2.1 European Languages

Germany claimed Cameroon as a colony from 1884, when they signed a treaty with the coastal Douala tribe, until 1916, when their territory was divided between the English and French as a result of World War I. From 1916–1961 the English administered part of Cameroon, including the area in which the Oroko lived, while the French administered the rest of the country. A plebiscite in 1961 reunited the southern portion of English Cameroon (in which the Oroko are found) with French Cameroon. English and French were proclaimed as the official languages of Cameroon, with each favored in the area formerly controlled by the respective countries (Neba 1987). Each of the respective colonial powers promoted the use of their language during their tenure.

¹⁵ During our 22 months of language study we both attained a level of approximately 2+ to 3 on the Inter-agency Language Roundtable scale (ILR, also widely known as the FSI scale) (Higgs 1984:Appendix B).

However, except for those few who left their home villages for their education, it is unlikely that a significant portion of the population was taught extensively in the colonial languages, as secondary schools¹⁶ were only recently introduced into Oroko villages.

Even before the colonial powers laid claim to Cameroon, Cameroon Pidgin (an English-based Pidgin) was used by tribal communities along the coast for trading with Europeans. Cameroon Pidgin and Douala were also “used along the coast as the middleman language in trading with adjacent tribes” (Vernon-Jackson 1967:3–4). The Oroko had a history of trading slaves (some towns are still known as “slave quarters”), and are likely to have been part of the group that was exposed to Cameroon Pidgin. German rule seemed to have little effect on the continuing use of Cameroon Pidgin, as “when non-German-speaking, Franco-British military expeditionary forces arrived at Douala in 1914, no language difficulties appear to have been encountered with the local pidgin-speaking population” (p. 12).

The primary application of European spelling conventions to the Oroko dialects occurs in the names of people and villages. For most of the consonants this is not a problem. However, the voiced alveolar consonant is only one phoneme in Oroko, but covers the English phonemes /l/, /r/, and /d/. Unfortunately, the distinction between [l], [r], and [d] has already been applied to Oroko surnames and village names. Table 26

¹⁶ Secondary school is the five years of school that follows seven years of primary school and precedes two years of high school and university. Most rural Oroko currently only have local access to primary schools. The British (before the early 1960s) tried to provide six years of primary school in the rural areas of Cameroon (personal communication, Dr. Oryn Meinerts, July 30, 2002).

gives a small sample of village names showing this European overrepresentation (see APPENDIX 2 for more examples).

Table 26. Village Names with Alveolars

| Dialect | Villages | Position |
|---------|-----------------------|----------------|
| Mbonge | Lokando and Disoso | word initially |
| Mbonge | Ngolo Bolo and Dikoro | word medially |
| Lokundu | Marumba and Bole | word medially |
| Longolo | Bareka and Ilando | word medially |

The question is whether the Oroko will demand to see all three letters in their alphabet because of their existence in English. Speaking of a similar situation in the 1960s, Nida (1963b:24) comments that some Indians in Spanish-speaking Latin America “prefer to go to the trouble of learning the use of *c* and *qu*, because this makes their language more like Spanish and gives them a sense of cultural prestige.”¹⁷ Not only is the issue of prestige relevant, the issue of bridging between the languages is important. If Oroko is not over-represented, people will have to learn a set of rules for writing Oroko which will be confusing and contradicting what they need to spell English, Cameroon Pidgin, and French (M. Karan, personal communication, June 2002).

As for vowels, the proper names are written using the phonetic values for the five Roman vowels. The remaining two [-ATR] vowels /ɔ/ and /ɛ/ have not been given any special letter and are most often written with <o> or <e> respectively. The back vowel /ɔ/ is sometimes signified by <oh>, as in the village name <Matoh> /matɔ/, or <or>, as in

¹⁷ Although some of the Latin American Indians may now wish their language to look different (S. Levinsohn, personal communication, July 18, 2000), I believe this comment represents the Oroko.

<Illor> /ilɔ/. However, these variations on written /ɔ/ are used inconsistently, and then only for final vowels.

The allophones [f] and [ɸ] have also been represented with two different English characters: <p> as in Lipenja, and <f> as in Mofako (see APPENDIX 2 for more names and section 3.3.2.3 for more discussion).

4.2.2 Duala

Duala was one of the first languages to be written by early missionaries to Cameroon. Alfred Saker, a British Baptist missionary, first put the Duala language into writing in the last half of the eighteenth century. This included a translation of the entire Bible (Old Testament 1872 and New Testament 1862, second edition 1882) (Ittmann 1978:5). During the following years Duala gained a certain status among other Cameroonian languages (Vernon-Jackson 1967:7). When the English regained control of Cameroon in 1916, Duala was used in mission schools, following the English policy of vernacular instruction for the first two years of primary school before transition into English (p. 17). The use of Duala in the schools ended around the time of reunification (1960). Many of the Oroko leaders learned Duala in the school system. The effect of Duala is still felt today, as Duala hymns are still regularly sung, especially in the Presbyterian and Baptist churches. Even those who only became literate in English can easily learn to follow the Duala in the hymnbooks.

As might be expected, Duala's influence is also seen by the presence of Duala loan words among the Oroko dialects. Interestingly enough, Ittmann (1978:4) comments that Duala was earlier strongly altered by the influence of their Londo wives. This cross-

pollination means that many Oroko have already seen recognizable parts of their language in written form. Thus, although Duala is no longer taught, the continued use of it in church has exposed many younger people both to the potential of writing an African language, and to a system for writing it.

Recently, Duala has undergone a revision of its orthography to bring it into line with the recommendations of the National Association of Cameroonian Language Committees (NACALCO) (see 4.2.4). However, most Oroko are not aware that the Duala orthography that they are familiar with is no longer in official use. Pertinent aspects of the old Duala orthography are introduced as necessary.

4.2.3 Oroko

During the Rapid Assessment Survey, the Oroko reported that some people had attempted to write a few things in or about their language (Mbongue 2000:4). Most of these works (listed below) about the Oroko were written in English, so special note is made of those that are written in Oroko. Unless noted, copies of the material listed below have not been found. As a result, the primary impact of the material is psychological—the people are aware that their language can be written. In other words, the impact is not concrete—none of this is widely available as an opposing standard to whatever the Oroko Language Development Committee (OLDC) puts forth.

- A catechism by Father Doswycke of Dikome-Balue (no one knew of any surviving copies of this work) written in the Balue dialect
- Book of idioms by Mr. Ban Njandi
- Unpublished manuscript by Father Lucius

- A calendar by Miango Peter Ekoi (in an Oroko dialect)
- The origin of Balondo by Sama Mba
- Batanga song writing competition
- History of Mbonge by Eseme
- Culture of Mbonge by Ituka Frida
- Mbonge: Fernland Dwellers by Mr. Samuel Bokwe. We have a copy of this booklet. Mr. Bokwe is a well-educated member of the Oroko elite. The book summarizes some basics of the grammar tenses, number system, etc. Mr. Bokwe used the Duala orthographic conventions.
- History of Oroko by a pastor (since deceased)

A few Balondo were vaguely aware of the work by Kuperus (1985). Our team has also met a number of people who had made personal attempts to systematically address the problem of an Oroko orthography, including:

- A Balue Apostolic pastor, Elangwe Aloysius, who wrote down the phonemic inventory of Balue as part of an attempt to translate portions of scripture into his dialect. He used the old Duala orthography.
- A Bakundu Presbyterian pastor, Rev Ngoeh Samson T., who is stationed in Toko (a Ngolo village). He attended a SIL workshop in the 1980s, but was overwhelmed by the size of the task of standardizing the Oroko language.
- Reports of a Lokundu literacy class being held in the capital, Yaoundé.
- Mr. Okole Shadrack Sakwe, a Balue man (since deceased), who spent two weeks with a SIL consultant (Dr. James Roberts) in Yaoundé in December 1991 (Roberts 1991).

4.2.4 NACALCO Recommendations

The National Association of Cameroonian Language Committees (NACALCO) is committed to promoting literacy and publishing in the national languages. It is a source of advice for any language group that organizes itself, and seeks to provide some limited financial assistance (M. Annett, personal communication, June 21 and 28, 2002). NACALCO has adopted the *General Alphabet of Cameroon Languages* (Tadadjeu and Sadembouo 1979) as their standard orthography for all indigenous languages (B. Chiatoh, personal communication, May 13, 2002). The experience and resources that NACALCO has makes their advice valuable, although language committees are not required to accept all the details of their recommendations.

There are a number of points raised in this work that are applicable to the Oroko orthography. Two of the pertinent general principles listed are: preference for phonemic representation—allophones will only be written in exceptional circumstances—and diacritical marks are limited to tones (except for transitory use where already in use).

Some of the specific comments that may impact the Oroko orthography include:

- Write <ŋ> and not <ng> for /ŋ/.
- Do not add graphemes for /ɸ/ and /β/ as these are usually allophones of /p/ and /b/.
- Write <ŋm> for the labiovelar nasal consonant.
- Use <l> for liquids and <r> for vibrants.
- Use <c> and <j> for prepalatal affricates, <ch> shows aspiration.
- Use <ny> for palatal nasals.
- Use a homorganic nasal for prenasalization of consonants, e.g. <ŋg> .

- Show length by doubling.
- Adopt the vowel graphemes <ɛ> and <ɔ>.
- Indicate vowel harmony by a dot <.> under the vowel so conditioned. Leave out if no confusion results.
- Mark tones: the question is not if, but how. Use diacritics – <´> for high tone and <`> for low tone. If there is no phonemic length, indicate rising and falling tones on double vowels, e.g. <^> for falling tone. The most frequent tone may be unwritten. For purposes of publication, it may be expedient to mark only “necessary” tones.
- Use apostrophe only for glottal stop, elision should not be marked.

4.3 Sociolinguistic Factors

This section applies Smalley’s Maximums (1963d) to the Oroko. Following this, other factors that are uniquely important to establishing a good Oroko orthography are discussed.

4.3.1 Smalley’s Maximums

In 1963 William A. Smalley (1963d) published a landmark article that outlined five competing principles to guide people who were attempting to develop a writing system:

- Maximum Motivation – what is most acceptable to the learner
- Maximum Representation – fullest representation of spoken language
- Maximum Ease of Learning – not too complex
- Maximum Transfer – follow sound/symbol pairings of dominant language
- Maximum Ease of Reproduction – ease of typing and printing.

Although these principles do not specifically address the problems of developing an orthography that spans multiple dialects, they do address the general issues involved in any orthography development. While Smalley considered this list to be in order of importance, Jack Berry (1977:4), among others, has argued for changes in order based on the individual situation. This next section briefly addresses how Smalley's principles speak to different issues involved in the Oroko orthography.

4.3.1.1 Maximum Motivation

This principle addresses the motivation of the speaker who is learning to read and write his or her language. However, the Oroko are not unified in their language use and thus their motivation for reading and writing Oroko will be different.

In 1960, Eugene Nida (1960:38) predicted that the language situation in the newly independent African countries would be broken into three sections. The elite (and more progressive middle class) would know the colonial language, the trade language, and their local language. The middle class would know the trade language and their local language. Finally, the lower class would know mainly their own language.

It is now forty years since Cameroon received its independence. My perception is that the prediction about the three sections still applies, with a slight shift away from their local languages. The children of the elite are growing up with only a basic knowledge of their local language, if that. The middle class is fairly conversant in the national language, but seem to prefer the trade language and have retained the local language. Finally, the lower class uses their own language and the trade language.

The motivation for literacy for these three sections is different. In our initial meetings with the Oroko, the elite were largely tapped. The main motivation for them to see their language written is one of preservation. They are seeing their children lose the ability to speak their local tongue, and would like to reverse this trend. In fact, there are reports that a Bakundu person has started a school to teach their local language to immigrant Oroko in the capital, Yaoundé.

For the middle class, literacy will only be of interest if it helps them learn English faster, as most of these people put a high priority on attending enough school to learn English. Friesen and Friesen (2001:6) note that the Oroko youth, once outside their villages, are often reluctant to speak their language. The Oroko orthography will not be accepted by this group if it is seen to reduce their chances of integration into the larger Cameroon community.

Finally, for the lower class, literacy will be the way to ensure that any education they receive will enable them to reach a maintainable ability to read and write. Literacy in English does not serve them well, as they do not get to the point of understanding formal English well enough for them to remain literate. One reason for this is that most of the teaching done in elementary school is in Cameroon Pidgin, not Standard English. If they can be convinced that instruction in their mother tongue will provide increased literacy skills, they may consider putting their limited resources into it.

The original Rapid Assessment survey found that people agreed that it would be good to have their language taught in the schools (as is allowed in the Cameroonian school system), and some remarked that Nigeria was doing this (lending credibility to the

idea). Some villages (specifically from the Bakundu and Balondo) had tried to research how this could be done, but had not made any progress. People were “proud of their language and felt the need of developing it into written form” (Mbongue 2000:10). However, given the above desires of the elite, middle, and lower class, the Oroko orthography will need to take into consideration the desirability of English literacy. The orthography will need to be easily mastered, as parents will be unlikely to allow children extended time in Oroko literacy classes. This idea of time “lost” to literacy will need to be balanced against the cost of producing literacy materials in multiple dialects (Weber in press:72). It will also need to be as similar as possible to the English orthography, so that as many of the sound to symbol correspondences as possible are transferable.

The Oroko people have an interesting blend of unity and diversity. All the clans are adamant that they are part of the Oroko. However, individual people identify themselves as members of a certain clan and are speakers of their clan’s dialect (as opposed to “Oroko”). When the Oroko Language Development Committee was named, there was some discussion on what to call the language committee, as in the past “Oroko” has only been applied to the people, not the language. Any orthography that is not recognizable to a particular clan will face obstacles for acceptance.

In our first meeting with the members of the Oroko elite the one thing that most excited them was the lexicon that we had been working on as part of our language learning. One of the chiefs challenged everyone else to return home and collect words from their dialect to contribute to the dictionary. Another member suggested that each dialect would thus contribute their uniqueness to the total dictionary, producing a richer

language. This desire to integrate the dialects with each other needs to be addressed in the orthography.

Anything that will make the orthography “deeper”, i.e. less like the surface phonemic form, is likely to meet stiff resistance. Any rules associated with reading and writing Oroko will need to be easily mastered by people already literate in English or Duala. New readers will need to see quick payback for their efforts, or else they will quickly abandon literacy in their mother tongue in favor of literacy in English. This means, for example, that rules standardizing the spelling of some phonemes (like <l>, <d>, , <w>, and <f>) will likely work. However, rules that require the writing of underlying forms (like <mo> for /ŋ/) or the memorizing of the spelling of a word in a neighboring dialect will be distasteful. The practicalities of limited resources make it impractical for a new reader to put serious effort into learning a complex orthography for a language they already speak which has no further financial advantage.

4.3.1.2 Maximum Representation

The principle of Maximum Representation proposes that all sounds should be represented in the alphabet. As is typical among Bantu vowel inventories, all the Oroko dialects have seven phonemic vowels. To fulfill this principle the vowels /ɔ/ and /ɛ/ should be separately represented. In addition, the representation of the consonants /ŋ/ and /ɲ/ needs to be addressed.

The principle of Maximum Representation suggests that epenthetic glides that are sometimes found between vowels should be written. For example: /di/ + /bo/ + /εε/ should be written as <diboweyε> (see 3.3.2.5).

This principle is at odds with strategies that may complicate the writing system in favor of harmony across dialects, such as writing both <j> and <y> for the same phoneme /y/ in Mbonge as proposed in 3.3.2.4.

This principle supports the idea that long vowels that are found at morpheme boundaries should always be written.

Finally, this principle appears to support the writing of tone. However, Smalley does make allowances for not writing tones (or other features of the language) that do not carry a large functional load. Since tone in Oroko does not appear to carry a large functional load (see 5.2.3 for more discussion of this), it might be better to not write it. Writing tone also would make the writing system look less like English (therefore going against the principle of Maximum Motivation), more difficult to teach (going against the principle of Maximum Ease of Learning), and more difficult to write (going against the principle of Maximum Reproduction).

4.3.1.3 Maximum Ease of Learning

This principle ties in closely with the principle of Maximum Motivation. Anything that makes it more difficult to learn to read and write will contravene this principle. Long words can be a hindrance to fluent reading (Adams 1980:127–8 in Weber in press:29). Although Oroko verbs are arguably a single word phonetically, strict adherence to this principle would make for some inordinately long words, such as /amomamotileε/ ‘he had written to him’. In addition, Duala set the precedent of splitting words up, which creates the expectation that the above word should be written <a mo ma mo tileε>. However, where phonological processes such as the deletion or

harmonization of vowels occur at morpheme boundaries, the morphemes should be written as one word. For the same reason, the first person singular agreement prefix /N/ should also be written as part of the stem (unless it is before a nasal when it is written <na>).

Although this principle does not address multi-dialect situations, it does support the idea that each dialect should be written in the way that best represents that dialect, if that is preferred by the people. Although the Oroko people pledge a unified cultural identity, it is hard to believe that the breadth (differences in vocabulary) and depth (variations in the phonemes involved in words) of the differences between Oroko dialects can be overcome by a unified orthography and still maintain maximum motivation. If that is the case, each dialect, or dialect cluster, will need to be maximally represented.

4.3.1.4 Maximum Transfer

The orthography must have maximum transfer with both English and previously written native words (i.e. Duala and spellings of Oroko place names). The impact of Duala is still being felt in the Oroko area, due to the continuing usage of Duala hymnals in the church. In addition, the language committee has many members who were taught Duala in primary school. Most of the attempts to write the Oroko dialects have simply adopted the Duala orthographic conventions. The more that the Oroko system follows the Duala orthography, the easier it will be for those already literate in or previously exposed to Duala to make the transfer to Oroko.

The National Association of Cameroon Language Committees (NACALCO) has published guidelines to use in developing writing systems for the indigenous languages of

Cameroon. One argument used to support this idea is that people could learn how to read neighboring languages more easily. However, that is not what the Oroko are most interested in; it is the national languages (English and French) that most interest them. Thus, the orthography must be seen as a tool to help the Oroko to better acquire reading and writing skills in the national languages.

The principle of Maximum Transfer suggests that the Roman alphabet should be used with no special characters (<ɔ>, <ɛ>, and <ɲ>) or diacritic markings for tone. However, in this case Smalley's ordering is correct, and maximum representation of the vowels is more important, although, as mentioned, tone need not be written.

This principle also suggests that the affricate /tʃ/ that is found in some dialects should be written using the digraph <ch>, as that is what is used in English. Whether the Oroko will ask for this digraph, or be content with a single letter such as <c>, is for them to decide.

When it comes to the representation of the alveolar consonant found in the Oroko dialects (see 3.3.2.1), Smalley (1964c:50) makes allowances for overrepresentation to be used to make the transition to the official language easier, if it is requested by the people. A compromise that gives simple and specific rules for the writing of both <d> and <l> will probably make the orthography more transferable and thus more acceptable.

4.3.1.5 Maximum Ease of Reproduction

In the forty years since Smalley published these maxims, the advances in technology and printing have made this principle much less significant. However, the introduction of special characters (<ɔ>, <ɛ>, and <ɲ>) into the Oroko script does still

pose a technical challenge to typing up materials at regional commercial keyboarding businesses. If these special characters are used, the Oroko Language Development Committee (OLDC) will need to carry out a public awareness campaign, including strategies to deal with this obstacle with these local firms.

4.3.2 Other Factors

In addition to the factors covered by Smalley, there are a number of other key factors important to the Oroko project that the next section discusses. First of all, the consensus-based decision making of the Oroko people is bound to affect not only the process but also the outcome of language standardization. Secondly, in a multi-dialectal project such as the Oroko, the existing relationships between the dialects play a big role in how any standardization project is implemented. Finally, a number of informal observations are made about the Oroko attitude toward their own language.

4.3.2.1 Authority Structure

During the recent surveys of the Oroko (Mbongue 2000 and Friesen and Friesen 2001) every attempt was made to tap into the existing authority structure of the Oroko. Thus, it was surprising to find that not every clan has a paramount chief. Kuperus (1985:8, referencing Buys 1983:24–33) writes that the Balondo society is very “loosely structured”, and chiefs were only introduced in colonial times. Although most (if not all) villages had chiefs, not every clan had a recognized paramount chief over the whole clan.

Among the Mbonge (and quite likely among the other clans), the traditional leader of their village is known as the *sanga mboka* “village father” and holds the top religious post in the village. This position still exists today, but the chief has become the

top administrator in the village, and has the recognition of the government as the village leader.

It is not surprising then that the Oroko reach decisions more by consensus than by edict. The NACALCO representative was quite amazed at how the language committee was chosen. Names were suggested, some discussion followed, and members were chosen. No voting was involved, and no one person made all the suggestions.

This consensus-oriented process will have a huge effect on the selection and implementation of a successful orthography. Without proper discussion at all stages, the orthography will not be accepted as the group's decision. The testing stage of an orthography carries special importance given this situation.

4.3.2.2 Clan Autonomy

Mbongue (2000:9) found that people from all the surveyed clans agreed that they would be “willing to learn to read and write in the M[other] T[ongue] no matter which dialect was chosen as a reference.” However, there are some interesting patterns that are worth noting.

Although all the dialects strongly identified themselves as “Oroko”, each clan also maintains a strong sense of its own identity. The eight largest dialects (excluding Bakoko and Balondo ba Nanga, which have only three villages each – see APPENDIX 2) all have development associations at their clan level. There have been recent attempts (dating back to the early 1990's) to form an Oroko wide development association, but these fledgling attempts seem to be stuck in the planning stage.

The dialects are not arbitrary geographic designations by outside authorities, but rather long-held identities of the people themselves. Kuperus (1985:11) notes that when the Oroko area was surveyed for the ALCAM project, “there was complete agreement as to the spread of languages and dialects over the villages listed.” Each clan displayed a pride in their own dialect and yet no one put down another clan as less Oroko. Rather, they all stated that they could understand each other (Mbongue 2000:9–10).

This independence is further displayed in the use of spoken Oroko dialects on the radio. The regional government radio station has one hour per week devoted to radio broadcasts for Oroko speakers. The radio station does not cover the entire Oroko area. Four of the five dialects in the listening area (Lokundu, Mbonge, Lolue, Londo) each take 15 minutes of the weekly time. Ekombe is the only dialect in the listening area that is not represented. A number of possible reasons come to mind: their villages are scattered amongst the other dialects, it is the smallest (in number of villages and population), and, according to the lexicostatistics (see Table 5), it is very similar to Mbonge. Despite linguistic differences, Oroko people regularly listen to the programs in dialects other than their own.

The survey described in Mbongue (2000) tried to find any stories of the history of the Oroko people, either as individual dialects or as a whole. There were various reports that the Oroko had come from the region of Congo (from the Southeast), or from the Rumpi Hills (found in the center of the Oroko area) (p. 6). A book of Bakossi history written by a Bakossi man (Ejedepang-Koge 1971:24–25) claims that the Bakundu and Balondo people (and Oroko by extension?) descended from the same ancestor as the

Bakossi (who are found to the east of the Oroko). Whether all Bakundu or Oroko formally accept this is unclear, although some Oroko are aware of the story. Notably, no one had an explanation of the division of the Oroko into multiple clans, or whether they even shared a common ancestor or history. In fact, there are reports that the Oroko name was specifically decided on in recent history to represent the commonality that they recognized between the various dialects. Oroko means ‘welcome’ or literally ‘you have come’, and is a greeting shared by all the clans (Mbonge 2000:6). At this level, the Oroko is at least partly a political unit. In fact, smaller tribes (whose language is quite different from any of the Oroko dialects) found within or near the Oroko (most notably the Barombi) have also been referred to as Oroko at times.

Although for many reasons it does not appear possible to develop one standard Oroko writing system, every attempt should be made to promote continued cooperation among the Oroko dialects. Just as the Oroko now listen to audio programs of other dialects, everything possible should be done to encourage the reading of other dialects.

4.3.2.3 Attitude Toward Language Development

The Oroko people are excited about seeing their language written, but are concerned that teaching it in the schools might slow their children’s progress in English. English is recognized as the language of “progress” and economic advancement.

However, it is not English, but Cameroon Pidgin which is widely used in the Oroko area. Vernon-Jackson (1967:12) suggests that this may date back over a century (see 4.2.1). His observation that Cameroon Pidgin lacks prestige (p. 19) still holds true today. And yet, one of the concerns of the Oroko elites who attended the organizational

meetings for the Oroko Language Development Committee (OLDC) (see CHAPTER 1) was that their young people, especially in towns with mixed populations, were using Cameroon Pidgin to the exclusion of the Oroko dialects. Eyakwe further agreed with this, noting that the Oroko Student Association (OSA) had a hard time recruiting students on university campuses, as many were ashamed of their local language. Even in the secondary school in Big Bekondo (a Mbonge village), when secondary school children gather together, they very often use English or Cameroon Pidgin over their Oroko dialect. In primary school, Cameroon Pidgin is the de facto language of instruction. Even many young children not yet in school can converse in basic Cameroon Pidgin.

The Oroko are unlikely to use their language in the presence of others who are not Oroko speakers. Mosongo Hans, a Mbonge young adult, attends a school in the Northwest province of Cameroon. He noted that people there were prouder of their language than the Oroko, and would greet him (even as an outsider) in the local language, while the Oroko would more likely use English or Cameroon Pidgin. Chief Okole of Big Bekondo defers to the handful of non-Oroko speakers in the village by using Cameroon Pidgin when conducting village meetings. He has also added a non-Oroko speaker to the village council as a representative for immigrants to the area, with the result that council members often discuss issues in Cameroon Pidgin as opposed to Mbonge.

One of the members of the Oroko Language Development Committee even suggested that the Oroko language could die out in the next 50–100 years unless something was done to revive the use of the language. And yet the populace seems to have accepted English as the language of progress, and Cameroon Pidgin as the way to

get there. Writing Oroko is perceived as a way to preserve the language, and yet for Oroko literacy to take off it must also be seen as a path to literacy in English.

CHAPTER 5

ORTHOGRAPHIC ISSUES

Previous chapters have covered many factors, both linguistic and sociolinguistic. Now it is time to draw all the information together and apply it to an orthography for the Oroko. This chapter first looks at the various degrees of standardization possible. Secondly, it presents some recommendations for the Oroko Language Development Committee (OLDC) to consider. Finally, it discusses what decisions lie ahead for the OLDC.

5.1 Orthography Philosophies

There are two basic extremes when dealing with a multi-dialectal situation. The first extreme is basically what now exists. Every dialect, in fact each individual, chooses whatever writing conventions they want. Most often these conventions are based on Duala, due to the past use of Duala and its continuing influence (see 4.2.2) or on English. Following this option does not properly address the unity that the Oroko people feel, and makes any organized development of the language impossible.

The second extreme is to pick one dialect to develop with no thought of the others. This option is logistically the easiest in some regards, and probably the default strategy for most language development projects. Nida (1963b:26) advocates this approach, although he allows that “primers and some introductory materials” should be produced in the other dialects.

Mbongue (2000:9) indicated that there was no accepted “mother” dialect from which the other dialects came, or to which the other dialects look. There is also no accepted largest or most prominent dialect; each claimed their own was the best. However, all the dialects did claim that they would accept whatever standard was chosen. Büttner (1991:63) describes a similar difficulty in selecting among various dialects of the Ashaninka of eastern Peru. He concludes that the growing sense of ethnic identity may well pave the way for an acceptable compromise. The potential compromises are dealt with shortly.

Some sort of standardization has at least three positive results: 1) it raises the status to that of a “real” language, 2) it gives the language group a stronger identity, and 3) it is key to developing a formal education program in the language (Wölck 1991:44). The Oroko have shown interest in all these areas. The question remains as to the best way to move toward a standard.

The following two sections discuss hybrid options to consider in the development of a standard writing system. These options are in addition to the possibility of choosing to write only one dialect or each writing their dialect. The third section closes with some final thoughts on which of the options or combination of options may be preferable for the Oroko dialects:

5.1.1 Composite Standard

A composite standard is more or less what the major European languages (including English, German, and Italian) have achieved, through a process of absorbing features from various dialects (Wölck 1991:46). Written English does not phonemically

represent the speech of any particular dialect of English, although there are certain regional differences in spelling conventions. The question is whether this can be successfully engineered among the Oroko.

Nida (1963b:26) states, “On the whole, it is not advisable to ‘make up’ an artificial dialect.” Gudschinsky (1973:137) concurs, stating that mixing dialects together will probably please no one. Nevertheless, Hausa has done just that, as Wolff (1991:22) reports that “there is no natural dialect of the language which can be equated with Standard Hausa. Standard Hausa is an artificial system of reference which was primarily devised for the creation of written materials.” However, even this artificial standard is based on a regional variety of Hausa, that is “the speech of Kano, i.e. the most important urban agglomeration in northern Nigeria” (*loc. cit.*).

Cerrón-Palomino (1991) argues that the codification of a language means that alternate registers will develop, so that what is written does not need to look like what is said. He argues that a language that seeks to transcribe the idiosyncrasies of each dialect is biased toward a second-language learner (i.e. the foreign linguist), and not toward the need of the language (p. 34). Instead, he calls for a creation of unique forms to deal with polymorphism – such as when there are wide variations in the pronunciation of grammatical markers (p. 35). Simons (1994) suggests that these forms should be based on extensive comparison between the dialects, with the goal of finding common ground between them, whether that is phonetic, phonemic, or in a more abstract underlying form. This is employed to some extent in English to minimize the phonological changes resulting in such things as the plural suffix (‘s’ representing /ɪz/, /z/, and /s/) and past

tense marker ('ed' representing /d/, /t/, and /ɪd/). Although Smalley argues for a phonemic system, he does make allowances for the use of consistent forms of morphemes where pronunciation changes between dialects (1963b:7).

Mahlau (1991) presents an overview of the standardization of Basque. If anything, the Basque situation is more diverse and complicated than Oroko. Anywhere from two to eight dialect groupings with up to 25 subvariants have been suggested for Basque (p. 83), versus the 10 dialects with 2–5 groupings for Oroko (see 2.3). The relative similarity of the nominal forms in Basque (p. 88) also compares favorably to the uniformity seen in the noun classes across the Oroko dialects. The degree of variation in the Basque verbal paradigm is quite striking (p. 88) and highlights the need for more study in this area among the Oroko dialects. Given these apparent linguistic similarities, it is noteworthy that the Basque people have apparently achieved some degree of success in standardizing and normalizing their language (p. 90–91).

There are also a number of negative factors present in the Basque situation that are not present in the Oroko situation. First of all, the Basque have had an orthography in a number of the dialects for many years already, and books had been published in four of the dialects. The written varieties highlighted differences and made standardization look impossible. In addition, the population has not been part of the same political unit. Instead, they have felt the impact of both Spanish and French (as languages and political states), which has produced at least some of the differences in their dialects (p. 83). Fortunately, the Oroko people's traditional lands are found entirely within the English

portion of Cameroon. Finally, both Oroko and Basque (p. 85) have been impacted by the immigration of non-native speakers into their larger towns.

There are also a few negative factors among the Oroko which do not exist among the Basque. The dialect boundaries appear to be fuzzier for the Basque than for the Oroko. The Oroko dialects have fairly strong identities that may take precedence over their identity as part of the Oroko (although they verbally agreed to accept whatever standard is proposed, see 4.3.2.2). Basque also has about 600,000 speakers (p. 80) versus Oroko's 120,000 or more (both of these refer only to speakers resident in the native language area). Finally, and probably most importantly, is the strong feeling of reviving the Basque language and culture, extending even into politics, seen in the formation of the Basque Nationalist Party (p. 81). Although members of the elite are beginning to fear that the existence of the Oroko language is being threatened, there does not appear to be a widespread fear at the grass roots. This is probably the biggest factor that is missing for the Oroko to consider a pan-Oroko orthography.

Wölck (1991:44) comments, in regards to standardizing Quechua, that once fully codified and normalized, it would have to compete with Spanish, a test it would be unlikely to overcome. The Oroko people do not want to see Oroko compete with English. Everyone understands that English is and will remain the route to "progress", most notably financial gain. The expressed concern of the Oroko leaders at the language committee organizational meetings was more to have a written system that could be taught to children who might otherwise lose their language. They also expressed interest in seeing Oroko taught in primary school as a stepping stone to literacy in English.

As long as English remains the dominant language, especially in areas of education, technology, and government, the need for one composite normalized standard may be less necessary. Currently, English is seen as the language of education and progress. Learning English will remain a priority for anyone wanting to become integrated into the national life of Cameroon along with its perceived social and economic benefits. In this environment, the political will to produce a composite standard may not be enough, or the result may not be acceptable to the rank and file. In addition, the resulting time needed to become literate in a composite standard may be more than the grass roots are willing to accept.

To conclude, standardizing the Oroko dialects into a single written composite is linguistically possible and logistically preferable. A composite standard would guarantee writers a larger audience and further the unity felt among the Oroko. It would also make the production of literacy materials less time-consuming and more cost effective.

However, the work involved in hammering out a single standard would be immense, both practically and politically. The Eyakwe word list suggests that up to one third of the vocabulary in a standard would be foreign to the individual dialects (see Table 6). All the clans would need to be willing to compromise, and accept a written language that in some way would not look like their own. Because of this discrepancy between the written and spoken languages, Oroko would be harder to teach, harder to read, and harder to write. It is not clear that the political will and correlating perceived benefits are strong enough to make this work (see Maximum Motivation 4.3.1.1). The Oroko clans have strong individual identities and a record of working together at a clan

level, not as a whole Oroko tribe, regardless of what they say they are willing to do. Weber (in press:55) comments that for the Quechua, their language is part of their dialect's identity, and so they are reluctant to make the compromises needed to develop a cross-dialectal standard. Given this environment, standardization efforts will only antagonize them.

That said, it may be that the political will could yet appear, as the Basque once were written off as a language that would disappear (Mahlau 1991:81). Unfortunately, it took the Basque leaders over 60 years from their first standardization conference before an acceptable compromise was reached. It is worth noting that one of the keys to its reported acceptance was the claim that the oral dialects would remain, and that what was being sought was only a written standard (p. 86–7).

5.1.2 Common Conventions

The idea of common conventions is aimed at encouraging the development of as much commonality in the writing conventions of the dialects as possible. Each dialect is given the opportunity to retain its uniqueness, reflecting its spoken form. However, the consistent alternations between the dialects are captured in a single written representation, including a common alphabet and common symbols for phonemes (even if the phonetics vary).

This option more closely reflects the sociolinguistic reality of the Oroko people than a pan-dialectal standard. While the Oroko people recognize that they are part of a single group, they will individually identify themselves by the name of their clan. There is also no recognized name for their language at a level higher than their dialect.

However, it would also still call for the different dialects to incorporate parts of the others into their own. At the original planning meeting one participant commented that the words from the different clans would serve to enrich the vocabulary of the Oroko, aided by a dictionary that would cover all the dialects (Eyakwe 2000a). This idea roughly corresponds to a suggestion by Cerrón-Palomino (1991:38) to turn competing lexical items into synonyms when standardizing a language.

Common conventions would make it easier to read and write across dialects, which in turn would make it easier to teach across dialects. Some of the standardized languages that have been developed, such as efforts in Kurdish and Romani, remain playthings of the educated elite, because of the difficulty in teaching the general population systematically (Matras 1991:121). David Weber (personal communication, June 18, 2002) also reports that the “standardization coupled with the use of IPA-like sound-symbol correspondences” that was promoted by some Quechua elites has resulted in a drop in literacy, and even the elite are now recognizing that their dream is not acceptable to the general populace. The reading of material from other dialects could be encouraged after initial literacy is attained, and common conventions would minimize differences.

On the negative side, limiting standardization efforts to common conventions would encourage the various dialects to develop separately. The production of materials would be much more complex, and the holding of standards more difficult.

Before this option is considered further, the scope of the differences catalogued from the Eyakwe word list will be recapped. What effect would the standardizing

strategies discussed in section 3.3 have on the spelling of the Oroko words from the Eyakwe word list?

In Table 8, entries from the Eyakwe word list were divided into only three groups: identical entries, entries containing apparent cognates, and entries where at least one dialect with a different vocabulary item. Table 27 recaps Table 8 taking into consideration the linguistic recommendations made in CHAPTER 3. These recommendations take the 41% or 334 words that are labeled as apparent cognates in Table 8 and subdivide them into three parts. The first part covers alternations that are consistent and can be written with the same grapheme across all the dialects. This increases the amount of words from the Eyakwe word list that can be spelled identically from 15% (122 words) in Table 8 to 28% (227 words) in Table 27. The second part covers phonemes that have the same underlying form but different surface forms or that vary inconsistently across dialects (3% or 22 words). If certain orthographic rules were employed, these words could be written the same across all dialects, although some exceptions to the rules would still exist. The third part are the remaining apparent cognates where the phonemes are different between dialects (25% or 207 words). Only arbitrary spelling rules could bridge the differences between these entries. The remaining entries are those where at least one dialect has a different vocabulary item. As such, it remains identical between Table 8 and Table 27.

Table 27. Harmonization Impact

| Description of Difference | Table 8 | Revised |
|---|------------------------|-----------|
| 1. Exactly the same, after harmonizing rules for: Alveolar (l/r/d) - 3.3.2.1 Voiced Labials (b/β/w) - 3.3.2.2 Voiceless Labials (f/ϕ) - 3.3.2.3 Glides - 3.3.2.5 Labiovelars (kp/kw, mŋgb/ŋgw) - 3.3.2.8 | 15% (122) 41% (334) | 28% (227) |
| 2. Candidates for further harmonizing: Alveopalatals (y/j/c) - 3.3.2.4 Nasals - 3.3.2.6 Phonological Rule Output - 3.3.1, 3.3.2.6, and 3.3.3 | | 3% (22) |
| 3. Different underlying phonemes Vowel - 3.3.1 Other consonants - 3.3.2.9 Class marker - 3.4 Morpheme - 3.4 Word Length - 3.4 | | 25% (207) |
| 4. Different vocabulary in at least one dialect (37) | 44% (364) | 44% (364) |

Although using common conventions (captured in the first two sections in Table 27) would have some effect on the visual similarities between the dialects, they are not a total solution. The remainder of the differences between dialects (section 3) would need to be dealt with by deciding on arbitrary spellings, at least for some dialects. However, even if all the apparent cognates (sections 1–3) are given standardized spellings, the remaining non-cognates still remain. These non-cognates would include 24–32% of the words between any two dialects from the Eyakwe word list (100% minus the 68–76% apparent cognates from Table 6). Because of the large amount of words represented by sections 3 and 4, the more complex harmonizing rules needed to harmonize section 2 are not worth the extra effort.

5.1.3 Conclusion

Four options have now been introduced: base a standard on one dialect only, develop a composite written form, use common conventions to minimize differences, and finally, write each dialect phonemically. The best orthography option is dependent to a large degree on who is being prioritized, the reader or the writer. Table 28 captures the relative difficulty of the various orthography options (in column 1) for the different users of the orthography. The numbers in the table are an attempt to rank the relative difficulty of the activity that is in each column heading according to what standardization approach is followed. Therefore, the relative ranking of ‘1’ in one column is not equal in difficulty to the ‘1’s in the neighboring columns.

The second column (‘Writer’) designates those who are writing material for others to read. The difficulty is ranked on the basis of the relative amount of orthography training needed. Columns 3 and 4 designate people who are reading materials produced by writers from their dialect. Columns 5 and 6 represent people who are reading materials produced by writers from other dialects. The last four columns are further broken down into ‘new’ (columns 3 and 5) and ‘literate’ (columns 4 and 6). ‘New’ refers to people that are newly literate. These people will have the hardest time learning to read anything that does not have a phonemic alphabet based on their dialect, but will most benefit from common standards when it comes to reading material from other dialects. ‘Literate’ includes those who are attempting to read based on being literate in English or Douala, and presupposes that they will have had more contact with the other dialects. For them,

anything that does not correspond to what they hear will be more difficult, making the composite standard the most difficult.

Table 28. Orthography Users

| | Writer | Reader and writer from same dialect | | Reader and writer from different dialects | |
|--------------------------------|--------|--|----------|--|----------|
| | | new | literate | new | literate |
| A. Standard is another dialect | 3 | 3 | 2 | 2 | 1 |
| A'. Standard is own dialect | 1 | 1 | 1 | — | — |
| B. Composite standard | 4 | 4 | 4 | 1 | 4 |
| C. Common conventions | 2 | 2 | 3 | 3 | 3 |
| D. Each to their own | 1 | 1 | 1 | 4 | 2 |

(key: 1—easiest, 4—most difficult)

From this chart it is apparent that the composite standard is the most difficult for all but a people newly literate in the language who wish to read material written by people from other dialects (which, given a single standard, would be identical to their own). Option D, each dialect writing their own way, is easiest for those who want to read and write only in their dialect, but more difficult for newly literate people who want to read material from other dialects (assuming they want to).

However, these comments do not take into account the time involved in making someone literate. The argument can be made that the time it takes to make someone literate in their dialect using common conventions, and then to train them to read other dialects, may be no more than teaching a composite standard. The biggest difference is that if someone is unable or unwilling to complete an entire program, a program of common conventions or each dialect writing their own way would be more likely to leave a person literate in at least their own dialect, and better prepared to transition into English literacy.

After reviewing all the linguistic and sociolinguistic data there is still no one solution that appears as the best. The Oroko are united sociolinguistically, but their linguistic differences, and the corresponding difficulty in producing an orthography that is easily learned by all dialects, make developing one standard very difficult.

A multi-faceted language development program is an attempt at bringing various factors together. At a beginning level materials should be produced using the lexicons of multiple dialects. It would be most acceptable to the grass roots and the easiest to learn. It would most likely involve splitting the Oroko into at least four quadrants: Londo, Lokundu, a representative from the NW cluster (Longolo, Bima, Lotanga, and possibly incorporating Lokoko and the Balondo ba Nanga clans), and a representative from the SE cluster (Mbonge, Ekombe, and Lolue). The Eyakwe word list would need to be collected from all dialects to verify that the proposed clusters are actually similar enough to use the same materials. Then, each of the dialects or clusters would be written phonemically, according to their own pronunciation and phonology. Allerton (1982:64) in effect argues for this, stating that “we can allow each dialect to represent the actual phoneme it uses in each word.”

However, the Oroko should not abandon the idea of promoting linguistic uniformity. Advanced literacy classes should encourage the reading of materials in other dialects. The high Recorded Text Testing (RTT) scores (see section 4.1.2) cannot be ignored. Since there is apparently a high degree of intercomprehension between the dialects, whether inherent or acquired, this should be exploited. Each dialect would be encouraged to learn to read through the differences in how each dialect is written, just as

they learn to hear the differences. If this is the case, it may be that advanced reading materials would only need to be produced in one standardized dialect.

Although the phonetics differ across dialects, the same alphabet and phoneme to letter correspondences should be consistently employed. As Smalley (1963b:6) writes: “phonemic writing *represents with the same symbol* all of those different phonetic varieties which *function as the same unit* in the language sound system” (italics his). In the case of the Oroko, the language orthographic system should cover all the dialects. This is where the common orthographic principles can combine with oral intelligibility to produce materials that are readable across multiple dialects. Whether or not this will work will depend on the decisions of the Oroko Language Development Committee (OLDC) and the acceptance of the grass roots. If popular literacy is to become a possibility, the rules for writing and the standards applied cannot be too rigid or complex (Weber in press:40).

5.2 Orthographic Recommendations

This section makes recommendations that will form the basis of advice to the Oroko Language Development Committee, based on the above two-stage program. These recommendations attempt to take into consideration the linguistic and sociolinguistic situation of the Oroko. It looks first at the alphabet, move to the phonemes needed, and then deal with tone. Next it deals with the issues surrounding the form of the Oroko words. It then moves on to sentence level issues. For all these issues, strategies that result in further unification of the Oroko dialects are favored.

5.2.1 Alphabet Recommendations

As Cameroon uses both French and English as official languages, it follows that the Roman script should be the basis for the Oroko orthography. However, there are some phonemes found in the Oroko language that are under-represented in the Roman alphabet (see 3.3), including the vowels /ɛ/ and /ɔ/, and the nasal consonants /ɲ/ and /ŋ/. Douala used underlines or diacritics on existing characters (ɛ, ɔ, ɲ, ŋ) to represent these sounds. However, the National Association of Cameroonian Language Committees (NACALCO) follows Tadadjeu and Sadembouo (1979:7, 13) who recommend the use of the graphemes <ɛ>, <ɔ>, <ny>, and <ŋ>. Thus, the recommendation is that these characters need to be added to the Roman alphabet to form the Oroko alphabet. Other letters from the English alphabet that are not used in the Oroko alphabet, such as <h>, <p>, <q>, <r>, <v>, <x>, and <z>, may be used for borrowed words on a case by case basis.

5.2.2 Phonemic Recommendations

This section introduces the standard graphemes that should be consistently used by all the dialects. Short summaries of the conventions for some of the graphemes are also included.

The following tables draw on the discussions in the previous chapters to propose a set of Oroko vowel (Table 29) and consonant (Table 30) graphemes that covers all the dialects. Graphemes that are not needed across all dialects or are not high frequency are marked with an asterisk (*). Implementation rules are discussed for all the shaded phonemes. Due to the lack of an exhaustive phonological study of all the dialects and the imperative input of the Oroko people, this can only be considered a working analysis.

Table 29. Oroko Vowel Graphemes

| | Front | Back |
|--------------------|-------|------|
| + high, - lo | i | u |
| - high, - lo, +ATR | e | o |
| - high, - lo, -ATR | ɛ | ɔ |
| - high, + lo | a | |

Table 30. Oroko Consonant Graphemes

| | labial | coronal | alveopalatal | velar | labiovelar/velarized |
|--------------|--------|---------|--------------|-------|----------------------|
| Stops, - vcd | | t | *c | k | kw |
| Stops, + vcd | b | d | *j | | *gw |
| Continuants | f | s | | | |
| Glides | w | l / *r | y | | |
| Nasals | m | n | ny | ŋ | |
| Pre-nasals | mb | nd | nj | ng | ngw |

The debate of whether to represent /d/, /l/, and /r/ as a single letter or to use two or three letters and devise rules on the environment for each has parallels to the use of <c> and <qu> for /k/ in Spanish speaking areas. The writing of multiple graphemes for the same phoneme is called homophony, and results in greater challenges for writers (Lamuela 1991:69). The question is whether writers will be more confused with the spelling rules or the misalignment with English phonemes. Tauli (1968:131 in Büttner 1991:62) disagrees with Nida's recommendation to follow the Spanish orthography, stating that abandoning the phonemic principle in favor of the national language is absurd and should be combated. Regarding the effect this may have on reading, Feitelson (1965:4ff) states that "certain deviations from a one-letter, one-sound system do not have a significant effect upon learning to read." As long as it is accepted, and pedagogical concerns are addressed, any system will work. Büttner's (1991:63) conclusion is the wisest, "the introduction or modification of a writing system necessarily has to count on

the acceptance of the users.” Taking the above points into consideration, most notably the influence of English, it will probably be most acceptable to include <d> in the alphabet. To encourage consistency, the recommendation is that <d> be written only before <i> and <u> and after <n> and that <l> be written elsewhere (see 3.3.2.1).

Whenever phonemes differ consistently in their phonetic shape across dialects (phone A from one dialect always and only corresponds to phone B in another dialect and vice versa), one phoneme is recommended as the standard, and each dialect will be able to pronounce the phoneme according to their own practice (Venezky 1977:47). Lafont’s eighth orthography constraint suggests that “some spellings allow different readings according to the different varieties of a language” (Lamuella 1991:68). In fact, Lamuela concludes that “this principle is a great help in language planning work because it allows a reduction of spoken language diversity in writing” (p. 69). This is the case regarding the Oroko [f] and [ɸ] (see 3.3.2.3), labiovelars (see 3.3.2.8), and [ɲw] and [ɲ] (see 3.3.2.6). In each case the same phoneme has slightly different phonetic shapes in the different dialects. Given this situation, the same grapheme can be employed for all the dialects, and each dialect can be taught how to pronounce the grapheme according to their own phonetics. Therefore, the recommendation is that <f> be employed for [f] and [ɸ], that <kw> and <ngw> be considered as the cross dialectal versions of the labiovelars, and that the dialects that have the consonant cluster [ɲw] should write it <ɲ>.

The alveopalatals ([y], [j], and [ç]) have some consistent differences between the dialects. Smalley (1963b:10) states “Overdifferentiation may be required for certain dialects of a language in order to accommodate a writing system to more than one

dialect.” Venezky (1977:48) argues that differences between dialects should also be regular changes, and cannot be shown to have an adverse effect on reading. Allerton (1982:63) states that one should “represent in the orthography the maximal number of distinctions.” If standardization were to happen completely across all Oroko dialects, it would be preferable to follow the above advice. However, as there are inconsistent alternations and some neutralization (Mbonge and Londo have /y/ for what is both /j/ and /y/ in Lokundu and /c/ and /y/ in Longolo), the recommendation is that the dialect specific phonemes be written. The dialects that use /c/ will need to decide whether to use <c> (which might be appealed to as a uniquely Oroko symbol, as Bird (2000:21) reports for ɸ in Bamileke) or <ch> as in English.

All nasals before stops should be written <n>, except for <m> before (see 3.3.2.7), as Duala does (Ittmann 1978:13). The alveopalatal nasal /ɲ/ should be written <ny>, following Tadadjeu and Sadembouo (1979:9).

Finally, only phonemic glides /w/ and /y/ should be written. Epenthetic glides need not be written and where glides are underlyingly vowels, the underlying vowels should be written (see 3.3.2.5). However, if the Oroko prefer to write the surface glides in these two situations, the glides should be written.

5.2.3 Tone Recommendations

The biggest question regarding tone is whether or not to mark it. The disadvantage to not writing tone is that this produces homographs (words that are said differently, but spelled the same). Smalley (1963b:11) allows for underdifferentiation, including tone, depending on circumstances. He also acknowledges that in some cases

underdifferentiation may even be desirable. However, Lamuela (1991:69) claims that this results in more difficulty when reading. Bird (1999:1), in an experiment on tone marking in Dschang, took issue with this claim and concluded that “Analysis shows that tone marking degrades reading fluency and does not help to resolve tonally ambiguous words.” At a tone workshop in Cameroon in October 2000, Dr. Keith Snyder commented that many mother-tongue speakers of African tonal languages (even some with linguistic training) had just as much trouble accurately transcribing tone as anyone else. Specific training would be needed to overcome this, further increasing the time and complexity of literacy training. As this effort must be worth the expense, it is useful to look at the amount of ambiguity that would be present if tone is not written.

Table 31 breaks down the tonal pairs in the working lexicon our team has collected (as of November 2000). The table divides the database into three groups based on the parts of speech shown in the first column. The second column (‘Total Words’) gives a count of the words for that part of speech. The third (‘Unique Words’) column indicates how many do not have a tonal pair, with the percentage of non-tonally ambiguous words indicated in the fourth column (‘Percent Unique’). The fifth column records the number of ambiguous tonal pairs, and the sixth column indicates the few vocabulary items that have three or four tonal patterns on the same phonemic representation.

Table 31. Minimal Tone Pairs

| Part of Speech | Total Words | Unique Words | Percent Unique | Words with Tonal Pair | Words with 3–4 Tone Patterns |
|-----------------|-------------|--------------|----------------|-----------------------|------------------------------|
| Noun Stem | 1221 | 1099 | 90% | 53 | 5 |
| Verb Root | 698 | 621 | 89% | 38 | – |
| Other morphemes | 291 | 259 | 89% | 16 | – |
| Total | 2210 | 1959 | 89.5% | 107 | 5 |

The database shows a fairly low percentage of potentially ambiguous vocabulary in the absence of tone marking. A sampling of the tonal pairs is presented in Table 32.

Tones in parentheses indicate floating tones that precede or follow some words. The presence of this floating tone means that, in certain contexts, words like ‘nose’ and ‘twenty’, or the ‘near past’ and ‘far past’ actually have the same surface tone.

Table 32: Examples of Tone Pairs in Mbonge

| English | Part of Speech | Mbonge | Tones |
|---------------------|------------------|---------|--------|
| tie tightly | adverb | cúí | HH |
| bitter | adverb | cuí | LH |
| near past | tense | mó | HL |
| far past | tense | mò | L |
| class 3 | agreement marker | mò | L |
| lung | N | èsàsà | LLL |
| mat | N | ésásá | (L)HHH |
| sugarcane | N | lìkòkó | LLH |
| garden | N | lìkòkò | LLL |
| twenty | N | ló | H |
| nose | N | lô | H(L) |
| albino | N | móbóngò | HHL |
| small floating fish | N | móbóngó | (L)HHH |
| toilet | N | mòbòngó | LLH |
| ridge pole | N | mòbóngò | LHL |
| lie | V | làngà | LL |
| read | V | làngá | HH |
| dance | V | sáká | HH |
| want | V | sàkà | LL |

Wolff (1991:26) writes, “Native speakers of Hausa, however, have little or no problem in reading and understanding texts written in the official standardized orthography without the marking of tone and vowel length.” This is in a language where tone and length distinctions can combine to form up to four different tenses, different derivations, and four different lexical distinctions (Wolff’s example shows ‘father’ and ‘mother’ as a tonal pair). Compared to Hausa, Oroko would appear to have far less potential ambiguity.¹⁸

One consequence of not writing tone is that some grammatical morphemes, such as the ‘recent past’, ‘far past’, and three agreement markers (class 3 subject and object and 3s object), are not disambiguated (these morphemes are all verb prefixes). Nida (1963b:27) comments that tone differences between tenses are one thing that needs to be marked. Interestingly enough, in some contexts the tonal differences are neutralized. The question then arises whether it is necessary to mark a difference that is not always realized. Lafont’s Ideographic constraint suggests that differentiating between homonyms is good. It states that “words equal in sound but different in meaning are written in different ways” (Lamuela 1991:68, referencing Lafont 1971:17–23, 31–38). Furthermore, Lafont’s eighth constraint on orthography design, supports keeping a consistent form for morphemes. It states that “morphemes tend always to be written in the same way, overlooking the alternations produced by phonological rules” (ibid.).

¹⁸ Dr. Mary Morgan (personal communication, July 18, 2002) has witnessed Hausa readers scanning texts twice, presumably to disambiguate the tone and length, before being able to read it out loud.

Therefore, the recommendation is that diacritics be put on the far past (mò) and near past (mó) to disambiguate them from each other and from the agreement markers. These diacritics should not be taught as having anything to do with tone, but merely part of the spelling of these morphemes, as the surface tone of the morphemes can often change.

To conclude, tonal processes is one of the things that differs between dialects (see 3.3.3), so not marking it would reduce the potential discrepancies between the dialects. In addition, neither English nor Douala has had tone marked, so the concept would likely meet some resistance. Tadadjeu and Sadembouo (1979:18) recommend that the vernacular languages of Cameroon write tone. However, they do allow languages to only write “necessary” tones. Perhaps the Oroko can be argued to have no “necessary” tones as the simplicity that results from not marking tone (except to disambiguate the /mo/ verb prefixes) will probably prove to be more acceptable than the additional disambiguation (Simons 1994, principle 4).

5.2.4 Word Level Recommendations

This section looks at three issues regarding the form of the written words in Oroko. First, the definition of an Oroko word is discussed. Secondly, guidelines on how words should be spelled are covered. Finally, specific strategies for dealing with numerals and borrowed vocabulary are dealt with.

5.2.4.1 Word Breaks

Nouns, adverbs, and functors (including prepositions, conjunctions, and associative markers) should be written as single words. Clitics should also be written as their own words.

The complexity of the verb in Oroko can create many long words, as in sentence (11).

- (11) a- foko- n- dimb -ise -k -eɛ
 a- foko- n- timb -ise -ak -eɛ
 3S- FUT- 1S- return -CAUS -IMPF-APPL
He will cause it to be returned to me.

Adams (1990:127–8) observes that “poor readers of all ages have special difficulty with long words.” Levinsohn (personal communication, July 18, 2002) reports that Riena Kondo successfully employed long words among the Guahibo. However, as Duala has already set a precedent of writing verb prefixes as separate words, the Oroko people will probably be more interested in seeing the prefixes written separately. This will make it easier for people already literate in Duala, and the decreased length of words will make it more similar to English. It will also allow the verb root to be more readily discernable, as it will start a new word. The increased number of common word forms (both prefixes and the start of word stems) is also beneficial (Venezky 1977:45). This splitting will work except for cases where phonological processes involve the verb prefixes. For example the first person subject agreement marker /n/, which harmonizes in place of articulation with following stops, and in turn voices the following stops. In situations such as this, the prefix should be written together with the verb stem.

5.2.4.2 Spelling Standardization

All questions of spelling standardization will have to be dealt with on a case by case basis by the language committee, or sub-committee if multiple dialects are written. It may be that the speech of certain towns or a particular stratum of the population will be chosen. Either is up to the OLDC to decide. In any case, any reasonable alternative that promotes uniformity across dialects and still remains phonemically accessible should be given preference.

As for word level phonological processes like vowel harmony and glide insertion, they should not be written because of the increased teaching time and minimal payback toward cross-Oroko uniformity.

5.2.4.3 Numerals

Differences in the pronunciation of numerals can be easily handled by using numeric symbols instead of spelling the words (Smalley 1963b:6). Although this goes against the English orthographic convention of writing out most of the smaller numerals, it greatly simplifies the production of numerals for the following reasons:

- The various dialects use different strategies for counting, especially for the numbers above five (see Table 7).
- A reader can use whatever words they are most comfortable with.
- English or Cameroon Pidgin is the more common method of counting, especially for numbers above twenty.

Büttner (1991:60), writing about Quechua in Peru, comments that the parents would reject the introduction of “any kind of numerical system based on native concepts

and native linguistic material.” Although a system of counting that could be used to count to a million already exists, the system is cumbersome and seldom if ever used in commercial transactions. By writing the Roman numerals, the orthography design allows the reader to make their own choice.

5.2.4.4 Borrowed Vocabulary

Lafont’s sixth orthographic constraint suggests that loanwords should in general retain their original spelling, at least temporarily. He further states that “in some cases they are systematically adapted” (Lamuela 1991:58). Cerrón-Palomino (1991:39–40) suggests that loanwords should be written following their degree of assimilation into the language (also Nida 1963b:28).

Thus, recently borrowed words that are spoken according to English phonology should be spelled according to English conventions (e.g. Mbonge would write <churchi> for ‘church’, which is said /cɔci/). Conversely, if a word is fully assimilated, it should be written according to Oroko orthography (e.g. Mbonge would write <kafinda> for ‘carpenter’ and <ngolomendi> for ‘government’). Partially assimilated words remain a challenge, but these could follow the respective orthographies to the degree needed (e.g. Mbonge would write ‘pumbi’ for ‘pump’ even though they have no indigenous phoneme /p/).

Spelling conventions aside, the Oroko Language Development Committee (OLDC) will need to make some decisions on which borrowed words should be accepted into official publications such as a dictionary.

5.2.5 Sentence Level Recommendations

Smalley (1963b:3–4) notes that when a minority language is written with different conventions than a majority language, this can contribute to the rejection of the system. For this reason, the recommendation is that all standard English capitalization and punctuation be adopted in Oroko. In some cases, punctuation may be redundant. For example, the Mbonge dialect uses [ama] to introduce quotations, and the sentence final clitics /i/, /e/, or /ɔ/ as question markers. However, this redundancy will not require much extra effort to teach, learn, or write. Furthermore, the use of question marks and quotation marks will help in transitioning to reading English and in making Oroko look more like English.

Lafont’s seventh orthographic constraint states that “a writing system based on phonemic spellings is usually developed working at word level and neglecting phenomena related to sound contact over word borders” (Lamuela 1991:68). Allerton (1982:66) advocates that “it is probably preferable in most cases to spell out the full forms in the written language.” Nida (1963b:25) suggests that vowels that are elided in normal speech should be written when they cross word boundaries. However, he does allow for the writing of the collapsed form when there is a consistent rule. This is the case for the Oroko verb prefixes, which are closely tied phonologically to the verb stem. For example, when a prefix is added to a vowel initial stem, and the vowel of the prefix harmonizes with the following vowel or deletes, the resulting surface form should be the one written as in the first line of (12). As for the resulting phonological change from the

underlying form, Sampson (1985:200-201) argues that the facts do not support the idea that common written forms for morphemes make reading easier.

- (12) a mε- εn -ε
 a mο-εn -a
 3S PST- see -FV
He saw.

To conclude, the recommendation is that all phonological processes that happen between words (especially in faster speech) should be ignored when writing except for processes between verb prefixes (which are normally written separately) and their stems.

5.3 Implementation

The question now becomes, what next? As Jack Berry (1977:5) says:

None of these choices can be made arbitrarily by the planner. He, rather, must consult at all stages of the planning not only governments and other controlling groups but also what Pike once called ‘the naïve native speaker’s reaction’ and Garvin has since rephrased as ‘the sophisticated native speaker’s reaction’ (Garvin 1954).

This paper cannot be presented to the Oroko Language Development Committee (OLDC) with demands that they accept the proposals as outlined in this chapter. Certain assumptions have been made about the Oroko situation as part of the recommended orthography (see 5.1.3). If the OLDC disagrees with any of the presuppositions of the situation, some of the particulars will need to be altered.

In addition, this paper cannot even pretend to be the final word on the Oroko orthography, as there are many additional facts that need to be collected. Some of the things that still need research include:

- Completion of the 825-word list for all 10 dialects to further confirm or deny the phonological analysis and dialect clusters presented in this paper.

- Compilation and comparison of a list of all the grammatical morphemes across the dialects.
- Based on the above list, an examination of the phonological processes that occur across morpheme boundaries, especially in verbs.

Once the presuppositions of this paper has been based have been verified or corrected, what is the best way to develop and present the actual orthography? One proposal is given below.¹⁹ The details are incomplete pending the input of my teammates and the OLDC, but the proposal attempts to build a framework for future decisions and possible procedures to get there. During the following process, every attempt would be made for our linguistic advisory team to be a catalyst and facilitator in the discussion, as opposed to dictating the options and best conclusions. The goal is for the Oroko be begin thinking through the issues of how to best develop a written language.

Our linguistic team (Scotts and Friesens) would ask for a meeting with the Oroko Language Development Committee (OLDC) to discuss some of the general findings of this paper. Before the meeting we would meet and discuss the sociolinguistic situation with as many leaders as possible to help them reflect on these factors. During the meeting, questions would be asked to verify some of the assumptions made regarding the sociolinguistic situation, such as the role of Duala and English and the motivation for the grass roots to participate in literacy. We would then seek permission to draft an

¹⁹ This proposal took shape after the suggestions and input of Dr. Mary Morgan and Dr. David Weber who both recommended a writer's workshop as the best way to develop and test an orthography.

orthography proposal for discussion before the OLDC. We would ask that each dialect send us a young adult that was respected, educated, and knew their dialect well.

We would then have a workshop with these young adults. The linguistic data listed above could be collected. Together we would list all of the phonemes in the Oroko dialects and discuss the options for representing these phonemes. We would then ask them to write down some of their stories. An attempt would be made to have at least one well known story written by all who were present, to facilitate comparison. The writers would be asked to circle places in the texts where they had difficulty deciding on how to write a particular word or morpheme. These difficulties would be discussed as a group. Writers would also read each other's stories out loud, with notes taken on places where the reader stumbled, hesitated, or had to re-read a sentence.

The hope is that an orthography proposal would naturally arise out of this meeting. Participants would be encouraged to use strategies that would minimize many of the consistent phonetic changes between the dialects. At the end, a sample story would be written in representative dialects, hopefully in no more than four sub-groups: the NW cluster (representing Longolo, Bima, Lotanga, Londo la Nanga, and Lokoko—see Table 3), the SE cluster (representing Mbonge, Ekombe, and Lolue—see Table 3), Londo, and Lokundu.

The second stage would be to call an OLDC meeting. The meeting would start with the group being divided between into the subgroups above. Each sub-group would be given a brief lesson to highlight some of the strategies used in the proposed orthography. The groups would be led by a team composed of a member of our linguistic

team and the original contributor, with the hope that the contributor would be able to lead the session. Members of the OLDC would read the entire story in their dialect, so they could see how the orthography works. Maybe some members of the group could even try their own hand at reading it aloud.

After a reasonable “training” time, the sub-groups would reassemble. The composite story would be distributed and the original contributors of the story would each read one section in their own dialect. Following this, there would be a time of debriefing to highlight how the strategies employed served to reduce the visual differences between the written versions of the different dialects. At the same time, each dialect would retain its unique flavor in the pronunciation of the text and in the inclusion of some vocabulary unique to the dialect. The floor would then be opened for discussion, which would hopefully proceed in a constructive manner. This discussion, although risky, would be integral to the acceptance and honing of the details of the proposal.

This meeting would hopefully bring to light any major obstacles to the proposed orthography. Further testing in a pilot literacy class would also need to be undertaken before the orthography was widely taught. Ideally, this pilot class would show that the children involved with it became literate faster, and made more progress in English after becoming literate in Oroko.

Speakers of all Oroko dialects would be encouraged to work together at all stages of developing a written form for their language and encouraging its use. Efforts should be made to jointly publish materials such as a common alphabet chart that uses words common to all dialects. Advanced literacy classes could encourage the reading of

materials from other dialects. A combined dictionary may be considered. Translations of texts from other languages may only be done in one dialect.

CHAPTER 6

CONCLUSION

The unique situation of the Oroko people is a challenge to orthography development. At this point, it appears that the linguistic differences between the dialects cannot be overcome by a standard orthography alone. The data show definite linguistic similarities, and yet numerous differences also. How the structures and grammatical morphemes of the dialects compare is also unclear. Yet in spite of all this, the data also show that the Oroko have a strong sociolinguistic bond. Whether this bond, which has been used up to this point primarily for political purposes, also carries forward into a language development project, remains to be seen. The initial suggestion is that the Oroko consider writing multiple dialects, especially for beginning literacy. The decision as to whether or not all the dialects will be able to use the same written material for more advanced publications can be delayed until a later date.

Despite these uncertainties, the orthography recommended in this paper is a good starting point. It recognizes the variety found among the Oroko, but calls on them to work together. Bird (1999:28-29) reacts against linguistics who “continue to work in a vacuum, handing down idealized orthographies, while agreeing to let everyone else work out the practical details without further interference.” This paper has attempted, above all, to describe all the variables, both sociolinguistic and linguistic, that need to be addressed to make the orthography practical and acceptable to the Oroko people. Whether the

orthography proposed in this paper is accepted and how it is used is now up to the Oroko themselves. The next step is to encourage literacy among the Oroko people (Weber in press:65). The parts of the orthography that are a hindrance to acceptance by the grass roots will need to be reworked.

The Oroko clans will take ownership of the language development program to varying degrees. The ones that take the most active interest in literacy, and encourage their writers the most, will end up with the most influence on the future shape of the language. Eventually, a common standard may emerge or be encouraged, based on the dialect or dialects that have made the most strides in promoting literacy and publishing interesting material (Pike 1947:213). Adama Ouane (1991:4-5) states that this philosophy of survival of the fittest was used when developing the national languages of Mali. Although he categorically denies that such an approach can work in a multi-dialectal situation, it may in fact be the best way for the Oroko people, given that their culture promotes decision making by consensus and that the dialects are sufficiently different at this time to preclude an all-encompassing unified orthography and writing standard.

APPENDIX 1: List of Gloss Abbreviations

| | |
|---------|-----------------|
| APPL | Applicative |
| C | Concord Prefix |
| CAUS | Causative |
| CL | Noun Class |
| FUT.NR | Near Future |
| FV | Final Vowel |
| IMPF | Imperfective |
| PFT | Perfect |
| PST.FAR | Far Past |
| PST.NR | Near Past |
| S | Singular |
| SF | Surface Form |
| TMLS | Timeless |
| UF | Underlying Form |

APPENDIX 2: Villages of each clan

The following list of villages is from Mbongue (2000:Appendix B). The clans are given in the same order as in Table 2. During the survey described in Mbongue (ibid.), two towns per clan (except for Balondo ba Diko) were visited. Each town gave us their clan's villages as they knew them. These names were compared against the names on topographical maps of Cameroon (Ministry of Higher Education et al. 1975). The key below gives the codes used in the following list of villages.

Key:

- # - Village visited
- ! - Village listed by only one of the two villages visited in each clan
- ** - Biggest villages (only one star if mentioned by only one village)
- () - Alternate spelling on 1:200,000 maps (Buea – Douala, Mamfe)
the brackets are empty if no town was found on these maps

Bakundu – South (25)

Kake
Banga Bekele
Banga Ngonge ()
Boa
Boa Kombumbu ()
Boko (Bopo)
Bole Dipenda ()
Bole I
Bombe
Bongwana
Dibonya /Foe 3 Corners ()
Foe (Bakundu)
Kake Bakoko/Kake II
Kombone
Kombone Mission
Kwakwa ()
Mabonji
Mabonji
Make (Nake)
Make Bakoko ()
Marumba I
Marumba II
Mukake Bongwana
Ngongo

Pete

Bakundu – North (20)

! Biaka
! Bonje
! Mbu II
! Mokwalibe
Ndoi (Ebemi II)
Dipenda
Ibemi (Ebemi Bakundu)
Itoki
Koba
Kokaka
Konye
Kumbe
Makata ()
Mbu I
Mosanja (Moisanja)
Nabamba ()
Sambaliba ()
Supe
Wangale ()
Wone

Mbongue (44)

! Cardbury & Fry ()
! Kongo Quarters
! Lifenja II
! Mofako Mator
! Mofanja Mbongue
! Ngolo Bolo (Konje)
#* Big Bekondo
#* Mbongue
* Bakumba
* Big Butu
* Big Nganjo (Nganjo Bolende)
* Big Ngwandi
3 Corners Bekondo
Bangele ()
Big Butu (Butu)
Bikoki
Bolo Moboka
Dikoro ()
Disoso
Disoni
Ediki
Ifanga
Ifanga Narendi ()
Ile ()

- Lifenja (Lipenja)
 Lobange (Mutondo II)
 Lobangi
 Lokando
 Lokando II ()
 Makobe
 Masaka
 Matondo
 Matondo II (wrong place)
 Mator
 Mator Butu
 Mator Mbonge (Mbonge Meteke II)
 Mbonge Meteke
 Mofako Bekondo
 Mufako Butu (New Butu)
 Njombi ()
 Small Masaka (Masaka)
 Small Nganjo
 Small Ngwandi
 Weme
- Balue (29)
 #* Betenge
 #* Ekwe
 ** Bafaka
 ** Dikome Balue
 ? Bunji
 ? Fundu
 ? Libanyange
 Basonga (Bassunga)
 Bekatako
 Bena
 Bissoro
 Bone
 Dikobi-Balue
 Ebohe
 Itende
 Kita
 Koto
 Kumbe-Balue
 Masore
 Mbange
 Mekoma
 Merendi
 Mofako
 Munyange (Ngwenge)
 Ndonono
 New Difenda
 Ngolo-Metoko
 Pondo (Mukora)
 Weme
- Ngolo (45)
 # Madie I
 #* Toko
 * Meangwe I
 ** Madie II
 ** Meangwe II
 Bareka
 Beoko-Ngolo
 Besingi
 Bikuma
 Boa Yenge
 Boa-Ngolo
 Bokuba (Bokuka)
- Bokuma-Ngolo
 Bonabiaga (Bonabeange)
 Boso
 Bweme
 Dikome-Ngolo
 Iboko
 Ikoi
 Ikoti I (Itoki)
 Ikoti II
 Ilando
 Itoki-Ngolo
 Iwasa
 Iyombo
 Kilikile
 Kuma
 Lipenja-Muketi-Ngolo
 Mabelibeli-Ngolo (Mabalebale)
 Mapanja (between Madie II & Iwasa)
 Mbange
 Meka
 Meta I
 Meta II ()
 Metika (Betika)
 Mobenge (Mobinge)
 Moboka-Ngolo
 Mosakwa ()
 Mosongesele-Ngolo
 Mutingi
 Ndiba
 New Town
 Ngamoki
 Nwamoki
 Toko II
- Bima (21)
 #* Beboka
 #* Mundemba
 * Fabe
 * Manja
 Bareka
 Bekoka
 Boa
 Ekumbako
 Ituka
 Iway
 Kuma
 Mantangmane (Matamani)
 Masaka-Bima
 Mokange
 Mokango
 Mopako (Mufako)
 Mundemba II
 Ndian Town ()
 Ngenye
 Nguma I
- Ekombe (12)
 ! 3 Corners Ekombe
 (near E. Bonji) ()
 ! 3 Corners Ekombe
 (near Waterfalls) ()
 ! Baba Mokange
 ! Banks of Meme (near E. Bonji) ()
 ! Bobiango ()
- # Ekombe Liongo
 #* Ekombe Bonji
 * Mbalangi
 Ediki
 Ekombe Mufako
 Ekombe Waterfalls ()
 Small Ekombe
- Balondo ba Nanga (15)
 #* Ekondo Titi
 #* Ilor
 * Ilwani (Iloani)
 * Kumbe-Balundu
 * Mbongo
 ** Boa-Balundu
 ** Lobe Town
 Bonjare
 Dibonda-Balundu
 Dikome-Balundu
 Diongo (Liongo)
 Ekondo Nene
 Funge
 Loa / Ilowe (Loe)
 Meme
- Batanga (27)
 — Bira Clan —
 ! Mukango
 #* Lipenja I
 Bareka I
 Ekori (Ikoli)
 Esoki
 Lipenja II ()
 Manya
 Mayeke
- Bokaba Clan —
 #* Dibonda I
 Dibonda II
 Itali
 Loa (Lowe)
 Ndoi I (Ndoye I)
 Ndoi II
- Mbange Clan —
 * Bombangi (Bombange)
 Babiabanga
 Ipangi
 Lobe
 Marombi (Malomba)
 Masaka-Batanga
 Mokori / Bareka II ()
- Boku Clan --
 * Mofako-Batanga
 Ijoi (Iyowe)
 Diyenge (Dyenge)
 Kipundu
 Tombel
 Banyo (Banyu)
- Balundu Bariko (3)
 Ikasa Town
 Monsongesele
 Ndian Town

APPENDIX 3: 1987 Census Figures by Village

The following list of villages is from Mbongue (2000:Appendix C). The clans are given in the same order as in Table 2. The names and population figures are from the 1987 population survey of Meme and Ndian divisions done by the Cameroonian government. Eyakwe Joseph assisted in choosing the Oroko towns from the divisions and assigning them to clans. An asterisk indicates towns that are not found in APPENDIX 2.

Mixed towns are designated by '(mix)' following the town name.

| | | | | | |
|-----------------------|-------|-----------------------|------|-----------------------|-------|
| <u>Bakundu South</u> | | Sambaliba | 110 | Mbongue Maromba (Mix) | 4164 |
| Bakundu Foe | 1186 | Supé | 1214 | Mbongue Meteke | 304 |
| * Banga Bakundu | 172 | Wone | 1074 | * Metoko Bekondo | 470 |
| Banga Bekele | 973 | Total (13 villages) | 9198 | Mofako | 178 |
| Banga Ngonge (Mix) | 2990 | <u>Mbongue</u> | | Mofako Bekondo | 1271 |
| Boa Bakundu | 2178 | Bakumba | 954 | Mofako Butu | 284 |
| Bole Bakundu | 2885 | Bangele | 143 | Nganjo | 1881 |
| Bomana | 115 | Bekondo 3 Corn. (Mix) | 2715 | Ngolo Bolo | 1252 |
| Bombe | 1087 | Big Bekondo | 2440 | Small Mgwandi | 337 |
| Bopo | 191 | Big Butu | 564 | Weme | 785 |
| Dipenda | 40 | Big Masaka | 766 | Total (39 villages) | 33353 |
| Kake 1 | 685 | Big Ngwandi | 1789 | <u>Balue</u> | |
| Kake 2 (Mix) | 2318 | Bikoki | 240 | Bafaka | 3113 |
| Kombone Mission (Mix) | 2504 | * Bombanda | 872 | Bekatako | 174 |
| Kombone Town | 1315 | * Bombele | 215 | Betenge | 525 |
| Mabonji Bongé | 630 | * Dienyi | 358 | Bisoro | 477 |
| Mabonji Buearo | 457 | Dikolo | 134 | Bona | 71 |
| Marumba 1 | 883 | Disoso | 190 | Bonji Balue | 500 |
| Marumba 2 | 1034 | Dissoni | 40 | Bosunga | 48 |
| Nake (Mix) | 3876 | Ediki Mbongé | 1007 | Diboki | 319 |
| Ngongo | 621 | Ifanga Mbongé | 294 | Difenda | 800 |
| Pete | 1136 | Ifanga Nalende | 193 | Dikome | 3940 |
| Total (21 villages) | 27276 | Illeh | 314 | Ebobe | 201 |
| <u>Bakundu North</u> | | * Kumukumu | 146 | Ekwe | 609 |
| Dipenda | 827 | Lifenja 1 | 183 | Illiba Nyange | 232 |
| Ibemi | 858 | Lifenja 2 | 228 | Itende | 77 |
| Itoki | 309 | Lobange | 444 | Kita | 246 |
| Koba | 921 | Lobongi | 214 | Koto Balue | 358 |
| Kokaka | 635 | Lokando | 259 | Kumbe Balue | 872 |
| Konye | 1299 | Makobe | 260 | Massore | 238 |
| Kumbe | 166 | Massaka 2 | 457 | Mekoma | 185 |
| Mbu | 880 | Matoh (Mix) | 4143 | Mofako | 853 |
| Mosanja | 218 | Matoh Butu | 2055 | Munyange | 52 |
| Ndoi | 687 | Matondo 2 | 810 | Ndonono | 228 |

| | | | |
|---------------------|-------|-------------------------|-------|
| Ngolo Metoko | 248 | Ngenye | 60 |
| Pondo | 564 | Ngumu | 118 |
| Weme | 615 | Total (20 villages) | 7250 |
| Total (25 villages) | 15545 | | |
| <u>Ngolo</u> | | <u>Ekombe</u> | |
| * Beleme | 11 | Baba Ekombe | 172 |
| Beoko | 223 | Ediki Kombone | 1251 |
| Besingi | 196 | Ekombe 3 Corner | 333 |
| Betika | 50 | Ekombe Bonji (Mix) | 4711 |
| Boa | 65 | Ekombe Liongo | 368 |
| Boa Eyenge | 6 | Ekombe Mofako | 121 |
| * Boa Ngolo | 38 | Ekombe Waterfal | 181 |
| Bokuba | 83 | Mbalangi (Mix) | 2130 |
| Bonabianga | 41 | Small Ekombe (Mix) | 2272 |
| Bweme | 116 | Total (9 villages) | 11539 |
| Dikome Ngolo | 277 | <u>Balondo Ba Nanga</u> | |
| Iboko | 31 | Boa Balondo | 335 |
| Ikoi | 196 | Bonjale | 36 |
| Ikoti 1 | 43 | Dibonda | 92 |
| Ikoti 2 | 61 | Dikome Balondo | 111 |
| Ilondo | 63 | Diongo | 200 |
| Itoki | 47 | Ekondo Nene | 67 |
| Iwasa | 266 | Ekondo Titi Town (Mix) | 4493 |
| Iyombo | 98 | Funge | 89 |
| Kilekile | 97 | Illor | 287 |
| Lipenja Mukete | 79 | Iloani | 166 |
| Mabelebele | 45 | Kumbe Balondo | 371 |
| Madie 1 | 347 | Lobe Town | 65 |
| Madie 2 | 394 | Loe | 92 |
| * Madie 3 | 165 | Mbongo | 331 |
| Meangwe 1 | 176 | Meme | 50 |
| Meangwe 2 | 270 | Total (15 villages) | 6785 |
| Meka | 351 | | |
| Meta | 56 | <u>Batanga</u> | |
| Metta Dikouma | 17 | Babiabanga | 35 |
| Mobenge | 127 | Banyu | 43 |
| Moboka Ngolo | 220 | Bareka 2 | 27 |
| Mosongisele | 89 | Batanga Masaka | 49 |
| Motindi | 18 | Bobangi | 96 |
| Ndiba | 51 | Dibonda | 218 |
| Ngamoki | 251 | Dienge | 96 |
| Nwamoki | 109 | Esoki | 193 |
| Toko 1 | 200 | Ijowe | 43 |
| Total (38 villages) | 4973 | Ipongi | 55 |
| | | Itali | 56 |
| <u>Bima</u> | | Lipenja 1 | 187 |
| Bareka | 48 | Lipenja 2 | 158 |
| Beboka | 88 | Lobe | 36 |
| Bekoko | 16 | Manya | 48 |
| Boa | 890 | Mofako Batanga | 130 |
| * Centre | 630 | Ndoi 2 | 82 |
| Ekumbako 1 | 15 | Total (17 villages) | 1552 |
| Ekumbako 2 | 5 | | |
| Fabe | 159 | <u>Balundu Ba Diko</u> | |
| Ituka | 15 | Ikassa | 446 |
| Iwai | 38 | Modongisele | 128 |
| Kuma | 36 | Ndian Town | 757 |
| Masaka Bima | 86 | Total (3 villages) | 1331 |
| Matamani | 7 | | |
| Mofako Bima | 135 | <u>Bakoko</u> | |
| Mokange | 38 | * Bera | 25 |
| Mokango | 85 | * Esukutan | 164 |
| Mundemba | 1496 | * Ikenge | 86 |
| Mundemba Town (Mix) | 3285 | Total (3 villages) | 275 |

APPENDIX 4: Friesen Word List

The following word list is from Friesen and Friesen (2001:13-15). The numbering ('No. ') corresponds to the ALCAM word list used by Dieu and Renaud (1983:132–133). This word list has basic vocabulary common to Cameroonian languages. However, it is not based on the Swadish word list.

| No. | English | Ekombe | Ngolo | Bima | Bakundu | Balondo | Mbonge | Bakoko | Batanga | Balue |
|-----|------------|---------|---------|---------|---------------------|---------|---------|---------|---------|---------|
| 1 | mouth | wana | wana | mombu | wana | owana | wana | mombu | wana | wana |
| 2 | eye | diso | diso | diso | diso | diso | diso | diso | diso | diso |
| 3 | head | morofɔ | moro | molo | moro | morofɔ | molofɔ | moro | moro | moro |
| 4 | hair | ɲoŋga | ɲoŋga | ɲoŋga | ɲoŋga | ɲoŋga | ɲuŋga | ɲoŋga | ɲoŋga | ɲoŋga |
| 5 | tooth | disoŋga | disoŋga | disoŋga | disoŋga | disoŋga | disoŋga | disoŋga | diroŋga | disoŋga |
| 6 | tongue | iyeme | ceme | ceme | iyeme | iyeme | iyeme | jeme | ceme | iyeme |
| 7 | nose | do | moɸiki | moɸiki | do | moɸiki | do | moɸiki | moɸiki | do |
| 8 | ear | dito | ditoi | ditoi | ditoi | dito | dito | dito | ditoi | dito |
| 9 | neck | duwɛru | dibɔru | dibɔlu | dibɔru | dibɔli | dibelu | dibaro | dibɔlu | dibɔlu |
| 10 | breast | dibe | dibe | dibe | dibe | dibe | dibe | dibe | dibe | dibe |
| 11 | arm | mokɔ | mokɔ | mokɔ | mokɔ | mokɔ | mokɔ | mokɔ | mokɔ | mokɔ |
| 12 | nail | esɔsɔ | canda | canda | canda | esasa | esɔsɔ | ɲanda | canda | esɔsɔ |
| 13 | leg | mende | moɸaŋga | moɸaŋga | mofa | moɸaŋga | ɲende | moɸaŋga | moɸaŋgo | ɲende |
| 14 | buttocks | masoso | moŋako | etore | disoto | masoso | dilo | isuli | etore | dilo |
| 15 | chest | ɲgeŋge | ɲgeŋge | ɲgeŋge | ɲgeŋge | ɲgeŋge | ɲgeŋge | ikembe | ɲgeŋge | ɲgeŋge |
| | | | | | | | | kembe | | |
| 16 | navel | diteŋgu | diteŋgu | diteŋgu | diteŋgu | diteŋgu | diteŋgu | diteŋgu | diteŋgu | diteŋgu |
| 17 | intestines | mea | bekia | bekia | mea | bebuŋga | mea | bekie | bekia | besasa |
| 18 | blood | makia | makia | makia | makia | maca | makia | makia | makia | makia |
| 19 | urine | mɲari | mɲari | mɲari | mɲali | mɲali | mɲali | mɲari | mɲari | mɲari |
| 20 | bone | ese | ese | ewese | ese | ese | jua | jua | ewese | ese |
| 21 | skin | ekobo | ɲoro | ɲolo | ekobo | ɲolo | ekobo | ɲolo | ɲolo | ɲgoba |
| 22 | wing | diɸaɸe | eɸaɸa | eɸaɸa | eɸaɸa | diɸaɸe | diɸaɸe | eɸaɸa | eɸaɸa | diɸaɸe |
| 23 | feather | esa | esa | esa | esa | esa | esa | esau | esa | esa |
| 24 | horn | moseba | moseba | moseba | meseba | moseba | museba | moseba | moseba | moseba |
| 25 | tail | mokondo | mokondo | mokondo | mokondo | mokondo | mokondo | ikondo | mokondo | mokondo |
| 26 | person | moto | moto | moto | moto | moto | moto | moto | moto | moto |
| 27 | man | momana | moŋana | mɲana | w ⁿ iana | moina | momana | mɲana | mɲana | momana |
| 28 | woman | marana | ɲwarana | ɲwalana | ɲwarana | ɲarana | ɲalana | morana | nwalana | ɲarana |
| 29 | husband | mome | mome | mome | mome | mome | mome | mome | mome | mome |
| 30 | child | mana | ɲwana | ɲana | ɲwana | ɲana | ɲana | ɲwana | ɲana | ɲana |
| 31 | name | dina | dina | dina | dina | dina | dina | dina | dina | dina |
| 32 | sky | loba | loba | loba | ɲwaloba | oŋaloba | loba | loba | loba | loba |
| 33 | night | boru | buru | bulu | bulu | bulute | bulute | buru | bolu | buru |
| 34 | moon | ɲgɔnde | ɲgɔnde | ɲgɔnde | ɲgɔnde | ɲgɔnde | ɲgɔnde | ɲgɔnde | ɲgɔnde | ɲgɔnde |

| No. | English | Ekombe | Ngolo | Bima | Bakundu | Balondo | Mbonge | Bakoko | Batanga | Balue |
|-----|----------|------------|-----------|-----------|------------|--------------|------------|------------|------------|------------|
| 35 | sun | disengi | loba | loba | nanngu | loba | disenji | loba | loba | loba |
| 36 | wind | ngungga | ngungga | ngungga | ekwili | ngungga | ngungga | ngungga | ngungga | ngungga |
| 37 | cloud | etukutuku | ekutukutu | ekutukutu | ekutukutu | motutu | ekutukutu | | etututu | ekutukutu |
| 39 | rain | mbua | mbuwa | mbua | mbua | mbua | mbua | mbua | mbuwa | mbua |
| 41 | sand | nanngge | nannga | nannga | nanngu | nannga | nanngge | nanngu | nanngu | nanngge |
| 42 | road | njia | njea | njea | njea | njea | njea | ncia | njea | njea |
| 43 | water | maria | maliba | maliba | mariba | maliba | maliba | maliba | maliba | maliba |
| 44 | stream | iliba | iliba | iliba | iliba | iliba | iliba | ewu | iliba | iliba |
| 45 | house | ndabo | ndabo | ndabo | ndabo | ndabo | ndabo | ɲwate | ndabo | ndabo |
| 46 | fire | mea | moa | moa | mowa | muea | ɲea | moa | moa | ɲea |
| 47 | wood | iwori | ico | ico | ico | iwori | iyoli | ijo | ico | iyoli |
| 48 | smoke | motutu | motutu | motutu | motutu | motutu | motutu | motutu | motutu | motutu |
| 49 | ash | mbu | mbu | mbu | mbu | mbu | mbu | mbu | mbu | mbu |
| 50 | knife | dilendi | iwo | iwa | ikɔngɔ | diendi | dilendi | eresi | iwo | irendi |
| 51 | rope | mokɔli | mokɔli | mokɔli | mokɔri | mokɔli | mokɔli | mokɔli | mokɔli | mokɔli |
| 52 | spear | dikɔngɔ | dikɔngɔ | dikɔngɔ | dikɔngɔ | dikɔngɔ | dikɔngɔ | dikɔngɔ | dikɔngɔ | dikɔngɔ |
| 53 | war | bira | bila | bila | bira | bira | bila | bira | bila | bila |
| 54 | meat | ɲama | ɲama | ɲama | ɲama | ɲama | ɲama | ɲama | ɲama | ɲama |
| 55 | dog | mgba | mfa | nva | mgba | nva | mgba | nfa | ɲgwa | mgba |
| 56 | elephant | njeku | njɔku | njɔku | njɔku | njɔku | njeku | ncako | njɔku | njɔku |
| 57 | goat | mboli | mboli | mboli | mboli | mboli | mboli | mboli | mboli | mboli |
| 58 | bird | ino | ino | ino | ino | ino | ino | ino | ino | ino |
| 59 | tortoise | kuerekere | erima | erima | ku | ku | ku | erima | erima | naku |
| 60 | snake | ɲɔ | ɲɔ | ɲɔ | ɲɔ | ɲɔ | ɲɔ | ɲɔ | ɲɔ | ɲɔ |
| 61 | fish | ndɔndi | ndɔndi | ndɔndi | ndɔndi | ɲamamaliba | ndɔndi | ndɔndi | ndɔndi | ndɔndi |
| 62 | lice | ɲa | niya | ɲia | ɲa | ɲa | ɲia | ɲia | ɲia | ɲia |
| 63 | egg | dike | dikei | dikei | dikeɲ | moce | like | dike | dike | dikee |
| 64 | tree | bere | ire | ire | bole | bore | wele | bore | ire | wele |
| 65 | bark | ekuku | ekuku | ekuku | ekuku | ekuku | ekuku | ekuku | ekuku | ekuku |
| 66 | leaf | eya | eca | eca | eca | eyani | eya | eja | eca | eya |
| 67 | root | mili | mokako | mokako | mokako | muri | ɲili | mori | mori | ɲili |
| 68 | salt | ikpa | ikwa | ikpa | ikwa | ikwa | ikpa | ikwa | ikwa | ikpa |
| 69 | fat | diɔmi | dijemu | diemu | diwo | diɔmi | diɔmi | diɔ | diemu | diɔmi |
| 70 | hunger | nja | nja | nja | nja | nja | nja | nca | ɲa | nja |
| 71 | metal | ekɔko | ebo | ebo | eke | ebo | ekɔko | ebo | ebo | ekɔko |
| 72 | one | eyɔko | eyɔko | eyɔko | eyɔko | eyɔko | eyɔko | eyɔko | eyɔko | eyɔko |
| 73 | two | bebe | bebe | beba | bebe | beba | bebe | beba | beba | bebeɛ |
| 74 | three | belalo | beraro | belalo | beraro | beyaro | belalo | berao | belalo | belalo |
| 75 | four | bene | beni | beni | beni | beni | bene | bini | beni | benei |
| 76 | five | beta | beta | beta | beta | beta | beta | beta | beta | beta |
| 77 | six | betaliɔko | betariɔko | betaliɔko | betaliɔko | betariɔko | betaliɔko | motoba | betaliɔko | betaliɔko |
| 78 | seven | betana | betana | betana | betana | betana | betana | moaɲga | betana | betana |
| | | bebe | bebe | beba | bebe | beba | bebe | moba | beba | bebeɛ |
| 79 | eight | bebebesese | wambi | wambi | wambi | betanabelalo | bebebesese | juambi | wambi | bebebesese |
| 80 | nine | eseeyɔko | eyɔkɔese | eyɔkɔese | betanabeni | betanabeni | eseeyɔko | betanabini | mokɔsumado | mokɔasee |
| 81 | ten | dondaro | dondaro | dondaro | londalo | dondaro | dondalo | dondaro | dondaro | dondaro |
| 82 | come | ɸɔ | ija | ya | iya | ɸɔ | fɔ | iya | iya | fɔko |
| 83 | send | loma | loma | loma | loma | loma | loma | loma | loma | loma |
| 84 | walk | kende | ikende | kende | aka | kende | kende | kende | kende | ikendo |
| 85 | fall | kunda | kunda | kunda | kunda | kunda | kunda | kunda | kunda | kunda |
| 86 | leave | bura | cica | cica | cica | aloa | bula | aka | cica | aka |
| 87 | steal | iba | ifa | ifa | ifa | ube | iba | iba | ifa | iba |
| 88 | pour | soa | wea | we | sukua | sɔngɛle | soa | kua | we | soa |
| 90 | bite | da | da | da | da | da | da | da | da | kokara |
| 91 | wash | ɔkie | ɔko | ɔko | ɔko | ɔko | ɔkee | ɔko | ɔko | ɔko |
| 93 | give | ɲɛngɛ | ɲɛa | ɲɛ | beke | ɲɛ | ɲɛngɛ | ɲɛ | ɲɛa | ɲɛngɛ |
| 94 | undress | ude | idwebe | idwebe | ule | idebe | dula | udebe | udwebe | udebe |

| No. | English | Ekombe | Ngolo | Bima | Bakundu | Balondo | Mbonge | Bakoko | Batanga | Balue |
|-----|---------|--------|--------|--------|---------|---------|--------|--------|---------|---------|
| 95 | press | mɪɲa | iteya | ite | banda | mita | mɪɲa | ɲe | amoa | ama |
| 96 | till | kwɔŋga | kɔsɔ | kusa | oloa | furua | duma | kɔsɔ | kɔsɔ | kperɛɛ |
| 97 | bury | fura | fura | fura | fula | fure | fula | fura | fura | fura |
| 98 | burn | ɲaŋga | ɲaŋga | ɲaŋga | ɲaŋga | anɲe | ɲaŋga | ɲaŋga | ɲaŋga | ɲaŋga |
| 99 | eat | da | da | da | da | da | da | da | da | da |
| 100 | drink | ɲua | ɲwa | ɲwa | ɲwa | ɲwa | ɲua | ɲua | ɲwa | ɲa |
| 101 | vomit | ɲoa | coa | coa | coa | yoa | yoa | coa | coa | yoa |
| 102 | suck | ɲaŋga | ɲwaŋga | ɲaŋga | ɲwaŋga | ɲaŋga | ɲaŋga | ɲwaŋga | ɲwaŋga | ɲaŋga |
| 103 | spit | umua | comea | ce'me | ima | ɔme | umua | ɲome | ce'me | umua |
| 104 | blow | unɲea | inɲwea | inɲwe | unɲea | inɲe | unɲee | unɲwe | inɲwea | unɲea |
| 105 | breath | sua | fua | sua | soa | soe | ɲø | foa | sua | eyɔŋgi |
| 106 | birth | ye | ca | ca | ca | ya | ya | ja | ca | ya |
| 107 | die | wa | wa | wa | wa | wa | wa | wa | wa | wa |
| 108 | kill | boloa | boloa | boloa | boloa | boloa | boloa | boloa | boloa | boloa |
| 109 | push | ɲonɲa | tindea | tinde | ɲna | tinde | ɲonɲa | tinde | tindea | tundele |
| 110 | pull | suka | ɔŋɔtɔ | ɔŋɔtɔ | ɔŋɔtɔ | ɔŋɔtɔ | suka | tura | ɔŋɔtɔ | suka |
| 111 | sing | kɔnɔ | kɔnɔ | kɔnɔ | kɔnɔ | kɔnɔ | kɔnɔ | kɔnɔ | kɔnɔ | bobe |
| 112 | play | tonda | saa | saa | saa | tonda | tonda | saa | losa | tonda |
| 113 | fear | bɔŋɔ | bɔŋɔ | bɔŋɔ | wɔŋɔ | bɔŋɔ | bɔŋɔ | bɔŋɔ | bɔŋɔ | wɔŋɔ |
| 114 | want | saka | saka | saka | saka | saka | saka | saka | saka | saka |
| 115 | speak | sɔsɔ | eyoa | bara | sɔsɔ | tɔkɔ | sɔsɔ | taba | eyoa | sɔsɔ |
| 116 | see | ene | ene | ene | ene | ene | ene | ene | ene | ene |
| 117 | show | lumere | imere | imere | imere | imere | dumele | uŋwele | imere | lumele |
| - | wait | undea | efa | induna | unda | inda | undee | efa | efa | undea |
| 118 | hear | boka | oka | oka | oka | oka | boka | oka | oka | boka |
| 119 | know | iyoa | icoa | icoa | icoa | iwoa | iyoa | ijoa | icoa | iyoa |
| 120 | count | lanɲa | danɲa | lanɲa | lanɲa | lanɲa | lanɲa | danɲa | lanɲa | lanɲa |
| - | wipe | tua | yo | tua | tuta | toa | tua | tua | tua | tua |

APPENDIX 5: Eyakwe Word List (Eyakwe 2002)

Lokundu, Longolo and Mbonge words are extracted from Eyakwe (2002). Londo words are from Kuperus (1985). Items separated by commas give alternate forms, either as recorded by Eyakwe (2002) or from Friesen and Friesen (2001).

Num: This number cross-references to the 2000-word list (SIL Africa Area 2000).

Tone: This is the tone for the previous column. Tones in parenthesis (Mbonge and Londo only) are floating tones. The tone for Lokundu and Longolo was transcribed from tape. The words had been said and then Eyakwe whistled the tone. The tape quality was extremely bad, and the whistling was rushed at times. The tone data for Lokundu and Longolo is, therefore, of marginal quality.

Split: This column contains entries where the dialects have different vocabulary items. The four letters used (k,m,l,n) correspond to the four dialects, as shown in the header row. Blank cells indicate rows where all available entries are considered apparent cognates. Where letters are found in this column, it indicates the dialects that group together as the same. For example: ‘kml’ indicates that Lokundu, Mbonge, and Londo share the same form, and Longolo has a different word. ‘ml,kn’ indicates a split – Mbonge and Londo are different than Lokundu and Longolo. ‘km’ indicates that Lokundu and Mbonge are the same, and Londo and Longolo are both different, or one of them is different and one blank.

| Num | English | Lokundu (k) | Tone | Mbonge (m) | Tone | Londo (l) | Tone | Longolo (n) | Tone | Split |
|------|-------------|-------------|------|--------------|-------|-------------------|-----------------|-------------|------|-------|
| 0002 | ankle | ditɔŋgo | HHL | litɔŋgo | LHH | litɔŋgo | LLL | ditɔŋgo | LHH | |
| 0003 | anus | mɔpako | HHL | mɔpako | | mbea ea mɔpako | (L)LH LL LLL | mɔpako | LHH | |
| 0004 | arm | mokɔ | HL | mokɔ | LL | mokɔ | LL | mokɔ | LL | |
| 0005 | armpit | | | ɲafafe | HHL | bakabaka | LHHH | ekombo | LHH | |
| 0006 | back | mbisa | | mbusa | (L)HL | mbusa | (L)HL | mbusa | HL | |
| 0007 | backbone | motende | LHH | motende | LLL | motende | LHH | motende | LHH | |
| 0010 | belly | mea | HL | mea | LL | mea | LL | mea | LL | |
| 0013 | blood | makia | LHH | makia | LHH | maca, macia | , LLH | makia | LHH | |
| 0014 | body | ɲolo | HL | ɲolo | (L)HL | ɲolo | HL | ɲolo | HL | |
| 0015 | bone | ese | LH | ese | LH | ese | LH | ese, eyese | ,LLH | |
| 0016 | bone marrow | diwɔ | LH | mosɔŋgɔsɔŋgɔ | LLLLL | | | isɔŋgɔ | LLH | |
| 0017 | brain | ɲgɔ | LH | wɔŋgɔ, bɔŋgɔ | ,LH | lɔŋgɔ | HH | rɔŋgɔ | HH | |
| 0018 | breast | dibe | LH-L | dibe | LH | dibe | LH(L) | dibe, riβe | LH | |
| 0023 | cheek | | | lilama | LHH | lilama | LHL | rirama | LHL | |

| Num | English | Lokundu (k) | Tone | Mbonge (m) | Tone | Londo (l) | Tone | Longolo (n) | Tone | Split |
|------|----------------------|--------------|-----------|-------------|---------|----------------------|---------------|---------------------|-------|-------------|
| 0024 | chest | ɲgeɲge | LH-L | ɲgeɲge | LL | ɲgeɲge | (L)LH | ɲgeɲge | HH | |
| 0025 | chin | bokeko | LHL | njeli | LL | njeli | (L)LL | bokoko | LHL | ml, kn |
| 0027 | crown of the head | dibelubelu | LLHH L | mbɔbɔ | H(L)H | | | mbɔβɔ | HL | mn |
| 0028 | ear | ditoi | LH(L) | dito | LH | dito | LH(L) | ditoi, ritoi | LHL | |
| 0029 | elbow | mobeɲge | LLH | mobeɲge | LLH | ɲgɔlɔkɔsɔ | (L)HHHH | moβeɲge | LLH | kmn |
| 0030 | eye | disɔ | HL | disɔ | (L)HL | | HL | disɔ, risɔ | LH | |
| 0031 | eyebrow | ɛfɔfɔ | HLL | efolofolo | LLLLL | efolofolo | LLLLL | ɛfɔrɔfɔrɔ | LLLLH | |
| 0034 | face | boso | LH-L | boso | LH | boso | LH(L) | βoso | LH | |
| 0037 | finger | ine | HL | iyanda | LHH | ɲanda | HL | rikɔɲɔ | LLH | ml |
| 0038 | finger nail | canda, esɔsɔ | , LLL | esɔsɔ | LLL | esasa | LLL | canda, randa | HL | kml, kn |
| 0039 | fist | ɲgoti | HH | ɲgɔti | (L?)HH | | | ɲgoti | HH | |
| 0041 | foot | diko | HL | mbɔ | L | diko | LL | diko | HH | kl |
| 0043 | forehead | dibɔɲɔ | LLH | libɔɲɔ | LLH | libɔɲɔ, mboɲɔ | LLH, LLH | riβɔɲɔ | LLH | |
| 0044 | gall bladder | | | ɲjuɲge | LL | ɲjɔɲgi | LL | ɲjɔɲge | HH | mln |
| 0046 | hair (of head) | ɲoɲga | LL | ɲoɲga | LL | ɲoɲga, ɲuɲga | , LH | ɲoɲga | HH | |
| 0047 | hand | rikɔɲɔ | LLH | likɔɲɔ | LLH | likɔɲɔ | LLH | mokɔ | HH | kml |
| 0048 | head | moro | LH-L | molofo | LHH | morofo | LHL | moro | HH | |
| 0049 | heart | morema | LHL | molema | LHH | molema | LHL | morema | LHL | |
| 0050 | heel | etindo | LHL | etinde | LHH | etindi | LHL | etindo | LHL | |
| 0052 | hunch (of hunchback) | likuna | LHH | likune | LHH | | | dikanda | LLH | km |
| 0053 | intestines | mea, bekia | , LLL | mea | LL | bebuɲga, ewuɲga | , LLH | bekia | LLH | km |
| 0054 | jaw | | | mobeɲgu | LLH | lilama | LHL | rirama | LHL | ln |
| 0057 | kidney | ɸiko | HL | fiko | (L)HL | fiko | HL | piko | HL | |
| 0058 | knee | dibɔɲgɔ | LHH | libɔɲgɔ | LHH | libɔɲgɔ | LHH | dibɔɲgɔ | LHH | |
| 0061 | leg | mofa, mofaa | LH | ɲende | (L)HH | moɸaɲga | LHH | moɸaɲga, riko | , LH | kl |
| 0062 | lip | mombu | LL | mumbu | LL | mumbu | LL | mombu | LH | |
| 0063 | liver | dibe | LL | libe | LL | liba | LL | diβe | HH | |
| 0065 | lung | jaɸa | HH | esasa | LLL | | | βaɸa | HH | kn |
| 0066 | molar tooth | ekeko | HHH | ekiɔko | LLLL | ɛɔko | LL | ekeko | HHH | |
| 0067 | mouth | wana | LH | wana | LH | owana | LLH | wana, mombu | HH | |
| 0068 | muscle | mutu | HL | mosoni | LLL | | | mu | H | kn |
| 0070 | navel | diteɲgu | LHL | diteɲgu | LHH | diteɲgu | LHL | diteɲgu, riteɲgu | LHL | |
| 0071 | neck | dibɔru | LLL | dibelu | LLL | dibɔli | LLL | dibɔru | LLL | |
| 0072 | nose | do | H | do | (L)H(L) | moɸiki | LLH | moɸiki | LLH | ln, km |
| 0075 | penis | eyoko | LLH | eyoko | LLH | eoko | LHH | eyoko | LLH | |
| 0078 | rib | mokaɲga | LHH | mokaɲga | LLH | mokaɲga | LLH | mokaɲga | LLH | |
| 0080 | saliva | bekɔnɔ | HHH | bekɔnɔ | LLL | ɛkɔnɔ | LLL | bekɔnɔ | LLL | |
| 0081 | shin | mboma | HL | mboɲja | LH | mboɲja ea moɸaɲga | LLH LL LHH | mboma | LL | |
| 0082 | shoulder | etuli | LHL | etuli | LHH | etuli | LHL | eturi | LHL | |
| 0086 | skin (of man) | ekobo | LLL | ekobo, ɲolo | LLL | ɲolo, ekobo | HL, LLL | ɲoro | HL | kml, mln |
| 0088 | small of back | eseɲge | LLH | isiɲge | LLH | | | isiɲge | LLH | |
| 0090 | thigh | eyɔnɔ | LHL | eyɔnɔ | LHH | elofo | LHL | eyɔnɔ | LHL | kmn |
| 0094 | throat | ɲgɔ | LH | ɲgɔmi | LH | kiɲgo | HH | ɲgɔ | LH | kmn |
| 0097 | tongue | iyeme | LHL | iyeme | LHL | iyeme | LHL | ceme | HL | |
| 0098 | tooth | disoɲga | LLH | disoɲga | LLH | disoɲga | LLH | disoɲga, risoɲga | LLH | |

| Num | English | Lokundu (k) | Tone | Mbonge (m) | Tone | Londo (l) | Tone | Longolo (n) | Tone | Split |
|------|---------------------------|------------------|-------------|----------------|-------------|-----------|------|-------------------|------------|-------|
| 0099 | umbilical cord | ɲgɔbi | LL | ɲgɔbi | LL | | | ɲgɔβi ca ɲwana | LLLLH | |
| 0102 | vein | mosisa | LLH | mosisa | LLH | mosisa | LLH | mosisa | LLH | |
| 0103 | waist | ejue | LH | eue, buwe | LLH, | ewe | LH | ecugwe | LLH | |
| 0104 | white hair | ɲue | HL | ɲue | LL | ɲowe | HL | ɲue | HL | |
| 0105 | wrist | ditɔŋgo | | laso | LL | | | | | |
| 0107 | breath (n) | yɔŋgi | LLL | eyɔŋgi | | | | eyɔŋgi | LLH | |
| 0108 | excrement | loa | HH | loa | (L)HH | loa | HH | doa | HH | |
| 0109 | footstep | etombo | | etombo | LHH | | | etombo | LHL | |
| 0112 | hunger (n) | nja | LH | nja | L | nja | (L)L | nja | HL | |
| 0113 | nasal mucus | dibɔmbɔ | LLH | ewɔmbɔ | LLH | liɔmbɔ | LHH | dibɔmbɔ | LLH | |
| 0114 | phlegm | ekɔ | LHL | ekɔ | LH | eka | LHn | ekaŋ | HH | |
| 0116 | scar (n) | ebaŋgo | LLL | ebaŋgo | LLL | ebaŋgo | LLL | ebaŋgo | LLL | |
| 0118 | sleep (n) | iyɔ | LHL | iyɔ | LH | iyɔ | LH | iyɔ | LH | |
| 0119 | smell (n) | wumbi | LH | esunju | LLH | iyumba | LLL | kaŋgo | HL | kl |
| 0120 | tears (n) | bekeli ba lua | LLL H LL | misɔli | HHL | lisɔli | HHL | misɔri | HHL | mln |
| 0121 | thirst (n) | ɲgɔɔ | | fese | LL | ɸese | HH | ɲgɔɔ | LH | kn,ml |
| 0123 | urine | miyali,miali | HHL | mijnali | HHL | mijnali | | mijnari | HHL | |
| 0125 | wrinkle (on skin) (n) | mijnuea | | mejningiteli | LHHLH | | | ɲiβirana | LLLL | |
| 0127 | bald, be | libana | LLH | libana | LLH | | | dirua eɸoɸoa | LLH LLH | km |
| 0128 | bent, become (w/age) | kɔtɔmɔ | | kunama | HHL | | | | | |
| 0130 | drunk, be | sɔkɔ | HH | sɔkɔ | HH | | | riɲwa | LHH | km |
| 0134 | naked | moɲombo | LHL | mosombo | LHH | | | mosomba | LHH | |
| 0135 | old, be (not young) | unu | LL | una | LL | una | HL | dinua | LHH | |
| 0136 | sated, be | deca | | ula | HH | ule | HL | asarɔri | LLHH | ml |
| 0138 | sleepy, be | tunɲga | LL | lɔŋgɔ | LL | | | ditunɲga | LLH | kn |
| 0141 | tired, be | njei | HH | kota | HH | kota | HL | dicee | LLH | ml |
| 0144 | apply (ointment), besmear | ɔkise | HHH | ɔkise | HHL | | | ɔkɔ | LL | |
| 0145 | nbathe (intr.) | ɔkɔ | HH | okee | HHL | | | ɔkɔ | LH | |
| 0146 | bathe (tr.) | ɔkise | HHH | soeɛ, ɔkise | LLL, HHL | soswa | LL | sosa | LL | km,ln |
| 0147 | bear (child), give birth | ca, ja | H | ya | H | ya | L | ca, dica | H | |
| 0149 | belch | ukuma | HHH | lekɔ | HH | | | βea | LH | |
| 0154 | breath (v) | soa | | ɲo, soa | , LL | soe | LL | fua | | |
| 0163 | comb (v) | sasoa | HH | sasoa | LLL | | | casoa | LLH | |
| 0167 | cry, weep | cea | LL | eya | LH | | | cea | LH | |
| 0170 | drink | ɲwa, nwa | H | ɲua | HH | ɲwa, ɲwaa | , HL | ɲwa | H | |
| 0171 | eat | da | H | da | H | da, daa | , HL | da | H | |
| 0172 | faint | sembe | HH | sembe | | ɔtɔ | HL | sembe | HH | kmn |
| 0173 | feel,hear | oka, okalanea | HHHH | boka | HH | oka | HL | oka | HH | |
| 0177 | incisions, make (facial) | sasa | HH | sasa | HH | | | sasa | HH | |
| 0178 | look, see | tata | | ɲgɔ | HH | ɲgɔ | HL | tata | HH | kn,ml |
| 0182 | rest (v) | awɔmere | | wɔmere | HHL | ɔme | HL | ɲwere | HH | |
| 0184 | scratch | akoa | | usua | LLL | seɛ | HL | ikoa | LHH | kn |
| 0185 | see | ene | HH | ene | HH | ene | HL | ene | HH | |
| 0186 | shiver | ɲinɲga | LH | ɲinɲga | LL | kpakpama | LLL | ɲinɲga | LH | kmn |

| Num | English | Lokundu (k) | Tone | Mbonge (m) | Tone | Londo (l) | Tone | Longolo (n) | Tone | Split |
|------|------------------------|-------------------|------|------------|-------|--------------------|--------|-----------------|-----------|-------|
| 0188 | sleep (v) | naŋga | LH | naŋga | LL | naŋga | LL | naŋga | LH | |
| 0192 | suck | ɲuaŋga, ɲwaŋga | HH | ɲaŋga | HH | ɲaŋga | HL | ɲwaŋga | HH | |
| 0193 | swallow (v) | mɛ | | ma | L | mɛ | L | mɛ | LH | |
| 0194 | swim | ɲara | | ɲalɔa | HHL | | | ɲarɔa | HHH | |
| 0196 | touch (v) | asie | | mita | LH | sike | LL | ɲɛŋge | HH | |
| 0197 | urinate | ɲa | | ɲa | HH | | | ɲa | HH | |
| 0199 | wake up (tr.) | tokoa | | sɛŋgise | HHL | sɛŋge | HL | tokoa | HHH | kn,ml |
| 0201 | wear (clothes) | weme | | wama | HH | ama | HL | weme | HH | |
| 0203 | yawn (v) | βawa | | uŋge | HH | aŋga | HL | cuŋge | HH | mln |
| 0204 | nabcess (n) | makia | | emɔli | LLH | | | cɔrɔ | HH | |
| 0207 | cough (n) | ekɔsili | | ekɔsili | LHHL | likanŋo | LLL | ekɔsiri | LHHH | kmn |
| 0210 | fever (not malaria) | euwa | | ekpili | LLL | ewa | LH | egwa | LH | klm |
| 0213 | hernia | motɔre | | motɔle | | | | motɔre | LLH | |
| 0214 | hiccough (n) | risekuseku | | lisekuseku | LHHHL | isekuseku | LHHHL | esekuseku | LHHH | |
| 0216 | illness | ɲambe | | ɲambe | LH | | | ɲambe | LH | |
| 0218 | itch (the itch) | aŋgia | | ɲɔɔ | LL | lokwe | LL | mokaŋgi | LHL | |
| 0219 | leprosy | morɔŋŋɔ ? | | lianŋi | LLH | okoni | LHL | etɔndɔ | LHL | |
| 0222 | pain (n) | boŋwaki | | bowaki | LLL | boaki | LL | bocoaki | LLHL | |
| 0223 | pimple | mɔɲa | | mɔɲa | LL | | | cɔrɔ | HH | km |
| 0225 | pus | roia | | lia | HH | | | roria ? | LLH | |
| 0226 | ringworm | ekaso | | ekaso | LLL | ekaso | LLL | ekaso | HHL | |
| 0228 | sore (n) | φora | | efoki | LLH | boaki | LLL | eyora | LHH | kn |
| 0231 | wound (n) | φora | | fola | (L)HH | φola | HH | eyora | LHH | |
| 0243 | cough (v) | kɔsia | | kɔsia | HHL | kɛse | HL | kɔsia | HHH | kmm |
| 0244 | die | wa | | wa | H | wa, owaa | , LHL | wa | H | |
| 0250 | lick | tɛmbe | | fɛnde | HH | | | tɛmbe | HH | kn |
| 0251 | sneeze (v) | sema | | isima | HHL | sima, sime | HH, HL | sema | HH | |
| 0252 | vomit (v) | coa, joa | HH | yoa | HH | yoa, yuwa | , HL | coa | HH | |
| 0255 | baby | mokenŋgere | LHH | mokenŋgele | LHHH | mokenŋgele | LHHH | ɲwana motiti | HH LHH | kml |
| 0256 | boy | moreka | LLL | moleka | LLL | moleka | LLL | moreka | LLL | |
| 0257 | child | ɲwana | HL | ɲana | (L)HL | ɲana, ɲwana | , HL | ɲwana | | |
| 0261 | female, woman | ɲwarana | HHL | ɲalana | HHL | ɲarana, ɲwarana | , HHL | ɲwarana | | |
| 0262 | friend | mɔe | HL | mue | (L)HL | mɔe | HH(L) | ɲwinda | HH | kml |
| 0263 | girl | ɲɔndɔ | LL | ɲɔndɔ | LL | ɲɔndɔ | (L)LL | ɲɔndɔ | HH | |
| 0264 | male,man | nwiانا | HHL | momana | HHL | moina,muina | , LHL | mɔɲana | HHH | |
| 0266 | person | moto | LL | moto | LL | moto | LL | moto | LL | |
| 0270 | bachelor | moramba | LLL | mokɔɔ | LLL | | | moramba | LLH | kn |
| 0271 | barren woman | ekomba | LLL | ekomba | LLL | ekomba | LLL | ekomba | LLH | |
| 0278 | cripple (n) | | | eyemekeli | LHHHH | | | ereki | HLH | |
| 0280 | deaf mute | ɛβɔβɔ | LLL | ebobo | LLL | | | ekpokpo | HHL | |
| 0282 | enemy | mokɔkɔ | | mokɔkɔ | HHH | | | mokoikoi | LLHH L | |
| 0284 | giant | ewaŋgi | LLL | ewaŋgi | | | | ewaŋgi | LLH | |
| 0296 | orphan | ɲue | LH | ɲue | LL | | | ɲue | LL | |
| 0297 | owner | moweri | LHL | mowele | LHL | ɲwaale | LHL | mowere | LHL | |
| 0298 | poor man | mɔβueβue | | mobuebue | LLHLH | | | mobuebue | LLHLH | |
| 0300 | rich man | mori | | moli | LL | | | mori | LL | |
| 0301 | servant | mɔβoreri | | moboleli | LLLL | | | mɔβoreri | LLLL | |
| 0303 | slave | mɔfa | LL | mɔfa | LL | mɔfa | LL | mɔfa | LL | |

| Num | English | Lokundu (k) | Tone | Mbonge (m) | Tone | Londo (l) | Tone | Longolo (n) | Tone | Split |
|------|-------------------|------------------|-----------|-------------------------|--------|-----------------|----------|----------------------|-------------|-------|
| 0305 | stranger | moke | LL | moke | LL | moke | LL | moke | LL | |
| 0307 | twin | riase | LHL | liasa | LHH | liasa, liese | LHL, LHL | riase | LHL | |
| 0310 | white man | mokara | LLL | mokala | LHH | mokala | LHH | mokara | LHH | |
| 0311 | widow | mokpisi | LHH | mokpisi | LHH | | | mokpisi | LHH | |
| 0314 | age-group | korɔ | HL | kɔlɔ | (L)HL | kɔlɔ | HL | korɔ | HL | |
| 0315 | ancestor | morimo | LHH | molimo | LHH | | | sɔmgbe | | km |
| 0328 | family | ɲgɔβi | LL | ebolo | LHH | ilɔŋgo | HHL | ɲgɔβi | LL | kn |
| 0329 | father | sese | HH | tata | (L)HL | tata | HL | sese | HL | kn,ml |
| 0333 | father, your | sese | | sɔmgbe | HL | | | sese wa | HHL | kn |
| 0336 | girlfriend | eyɔŋge | LLL | eyɔŋge | LLL | | | ekɔmbɔ ca ɲwarana | LLLH HHL | km |
| 0345 | his father | samgbe | HL | samgbe | HL | sɔŋge | HH(L) | sese wa | | kml |
| 0346 | his mother | ɲamgbe | LH | ɲamgbe | LH | ɲaŋge | LH(L) | ɲamgbe wa | | |
| 0347 | husband | mome | HL | mome | HL | mome, moome | , LHL | mome | | |
| 0348 | mother | iya | HL | ɲamgbe | LH | ɲaŋge | LH(L) | ɲamgbe | | mln |
| 0352 | mother, your | ɲɔmgbe | LH | ɲɔmgbe | LH | ɲɔŋge | LHL | ɲɔmgbe | | |
| 0354 | my mother | iya | HL | iya | (L)HL | iya | HL | mama owam ba | | kml |
| 0361 | sibling | ɲanabua | HHLH | ɲanabua | (L)HLL | ɲwanabua | HH LL | moaβe | | kml |
| 0369 | wife | nwari | LL | ɲali | (L)HH | | | ɲwari | HH | |
| 0373 | chief, headman | kijɛ | HL | keji, keni | (L)HH, | muli | LL | keji | | kmn |
| 0378 | fisherman | moroko ndɔndi | LHL HH | molokondɔndi, moloki | , LHH | mobodwa ɲama | LHLLL | moroka ndɔndi | LHH LHH | kmn |
| 0379 | hunter | mosɔŋgɔ | LLL | mosɔŋgɔ | LLL | mɔsɔŋgɔ | LLL | mosɔŋgɔ | LLH | |
| 0386 | sorcerer | ɲweri | HL | ɲeli | (L)HL | molemba | LLL | ɲweri | HL | kmn |
| 0387 | thief | ɲwiɸe | | ɲibe | (L)HL | mube | HL | ɲwife | HL | |
| 0389 | traveler | mokendeken de | LLHLL | mokendekende | LLHLL | | | mokendeken de | LLHLL H | |
| 0391 | witch | moremba | LLL | molemba | LLL | molemba | LLL | moremba | | |
| 0394 | animal | ɲama | LL | ɲama | LL | ɲama | LL | ɲama | | |
| 0395 | antelope | kaβe | HL | kabe | (L)HL | kabe | HL | kaβe | | |
| 0397 | bat | iwiri | LLL | ikufekufe | LLLLL | | | ekufekufe | LLLLL | mn |
| 0399 | bat, fruit | moeme | LHL | ɲeɲe | HL | | | moeme | LHL | |
| 0400 | bedbug | eβa | LH | eba | LH | | | eβari | LHH | |
| 0401 | bird | inɔ, inɔɔ | LH | inɔ | LH | inɔ, inɔɔ | , LLH | inɔ, inɔɔ | LLH | |
| 0402 | buffalo | | | ɲjibo | LL | ɲjibo | (L)LL | ɲjibo | LL | |
| 0406 | chameleon | | | eyɔŋgokoli | LHHHL | | | ereroawa | LHLL | |
| 0407 | civet cat | mba | L | mba | L | mba | (L)L | mba | L | |
| 0408 | cobra | mbamba | LL | mbamba | LL | | | esɔkɔ | LLL | km |
| 0409 | crab | sokpe | LL | sokpe | LL | apɔŋge | LLH | ekakayo | | km |
| 0410 | crocodile | ɲgando | LH | ɲgando | LH | ɲgando | (L)LH | ɲgando | LH | |
| 0412 | dove | sinje | LH | ndua | LL | | | ndua | LH | mn |
| 0413 | duck | erera | LLL | elela | LLL | | | erera | LLL | |
| 0414 | eagle | | | eyɔŋgu | LHH | eyɔŋgu | LHH | cɔŋgu | HL | mln |
| 0416 | elephant | ɲjɔku | LL | ɲjeku | LL | ɲjɔku, ɲjeku | , (L)LL | ɲjɔku | LL | |
| 0417 | fish | ndɔndi | LL | ndɔndi | LH | ɲamamaliba | | ndɔndi | LL | kmn |
| 0418 | fowl | kuβa | HL | kua | (L)HL | kua | HL | kuβa | HL | |
| 0419 | frog | esari | LHL | akɔŋgɔ | LHH | diŋgɔŋgɔ | LLH | esari | LHL | kn,ml |
| 0421 | gecko | | | iselele | LHHH | | | rɔmbira saŋg | LHHH | |
| 0427 | hawk | yɔri | HL | eyɔli | LHL | iyɔli | LHL | yɔri | HL | |
| 0431 | iguana | ɲgɔmbe | LL | ɲgɔmbe | LL | | | ɲgɔmbe | LL | |

| Num | English | Lokundu (k) | Tone | Mbonge (m) | Tone | Londo (l) | Tone | Longolo (n) | Tone | Split |
|------|-----------------|--------------|---------|--------------------|---------|-----------|---------|--------------|---------|---------|
| 0433 | kite | kombe | HH | kombe | (L)HH | kombe | HH | kombe | HH | |
| 0435 | leopard | ɲgɔ | L | ɲgɔ | L | ɲgɔ | (L)L | ɲgɔ | L | |
| 0436 | lion | ɲgia | LL | ɲgia | LL | ɲgia | (L)HL | ɲgia | LL | |
| 0437 | lizard | eweketambe | LLHLL | eyete | LHH | | | ewoto | LHH | |
| 0438 | mole | ko | H | ko | (L)H | ko | H | ko | H | |
| 0441 | monitor lizard | esɔɔɲgɔ | LHHH | eyoli | LLL | | | caɲgarakeri | LLLH | |
| 0442 | monkey | kema | HH | kema | (L)HL | kema | HL | kema | HL | |
| 0444 | mudfish | ikono | LLH | ɲgu | (L)H | | | ikono | LLH | kn |
| 0446 | owl | eremba | LLL | isekelemba | LLLLL | | | esikeremba | LLLLL | |
| 0447 | pangolin | ija | LH | iya | LH | | | ica | LH | |
| 0448 | parrot | koso | HL | koso | LL | koso | LL | koso | LL | |
| 0450 | pigeon | ekoɸe | LLL | ekuku | LLL | | | ekuku | LHH | mn |
| 0451 | porcupine | ɲgomba | LH | ɲgomba | LH | ɲgomba | (L)LH | ɲgomba | LH | |
| 0453 | python | kuma | HL | mbɔmɔ, kuma | , (L)HL | kuma | HL | mbɔmɔ | HH | kml, mn |
| 0454 | rabbit | | | itilibo | LLLL | | | | | |
| 0455 | rat | ɸo | L | etolo | LLL | fo | H(L) | po | H | kln |
| 0457 | snake | ɲɔ | H | ɲɔ | (L)H(L) | ɲɔ, ɲɔ | , H(L) | ɲɔ | H | |
| 0459 | squirrel | ekereke | LHHH | sebe | LL | | | ekereke | LHHH | kn |
| 0460 | toad | ekpɔkpɔ | HHH | ekpangɔlɔlɔ | LHLLL | | | ekpɔkpɔ | LHH | kn |
| 0461 | tortoise (land) | ku | HL | ku | (L)H | ku | H(L) | erima, naku | ,HH | kml |
| 0462 | turtle (water) | ku ja mariɸa | H L LHH | eyafa | LLH | | | ku ca mariɸa | H L LHH | kn |
| 0465 | weaver-bird | ɲgaka | HLL | ɲgaka | LL | | | ɲgaka | HH | |
| 0472 | cat | aɲwa | LH | aɲa | LH | | | aɲwa | LH | |
| 0477 | cow | ɲaka | LH | ɲaka | LL | ɲaka | LL | ɲaka | LL | |
| 0478 | dog | mgba | H | mgba | (L)HL | nva, mfa | , (L)H | mfa, ɲgwa | L | |
| 0479 | domestic animal | eruke | LHH | eluke | LHH | | | eruke | LHH | |
| 0482 | goat | mboli,mbori | HL | mboli | (L)HL | mboli | (L)HL | mboli,mbori | HL | |
| 0491 | pig | ɲgoa | LH | ɲgoa | LH | ɲgwea | (L)LH | ɲgoa | LH | |
| 0492 | ram | esoka | LLL | esoka | LLL | | | esoka | LLL | |
| 0493 | rooster (cock) | kɔkɔɔɔ | HLH | kɔkiliko | LHHL | | | mome wa kuɸa | LH LHH | |
| 0494 | sheep | morɔɲgi | HLH | molo | HL | mulɲgu | LHL | morɔɲgi | HHL | |
| 0496 | turkey | | | kagge | (L)HL | | | | | |
| 0497 | ant | siako | LHL | siako | HHL | caku | HL | sicako | HHL | |
| 0501 | bee | ɲoi | HL | ɲo | (L)H(L) | ɲawo | HL | ɲoi | HL | |
| 0502 | butterfly | ekorokoro | LLLLL | ikolokolo | LLHLL | | | ekorokoro | LLHLLH | |
| 0503 | caterpillar | eroki | LLL | eloki | LLL | | | ekɔɲgwe | LHL | km |
| 0505 | cockroach | ito | HL | fɛɲjufɛɲju | HHHH | | | itoo | HH | kn |
| 0509 | fly (n.) | iki | HL | iki | LL | ɲiki | LL | iki | LL | |
| 0511 | grasshopper | | | anatandie | LHLHH | mosombe | LLL | ɲganja | LL | |
| 0512 | insect | etanda | LLL | etanda | LLH | | | etanda | LLH | |
| 0513 | jigger | ekurumbe | HHHL | ekulumbe | LHLH | | | ndaw | HH | km |
| 0517 | maggot | mokuu | LLH | moku | LH | | | mokuu | LLH | |
| 0519 | millipede | ɲgɔɲgɔɔɔki | HHHL | ɲgɔkɔlɔkɔ | LHHL | ɲgɔkɔlɔkɔ | (H)LLHL | ɲgɔɲgɔɔ | LHL | |
| 0520 | mosquito | mokirani | LHHL | mokilani, mokelani | , LHHL | ikungu | LLL | rikombe | LHL | km |
| 0522 | snail | kɔ | H | kɔ | (L)H | kɔ | H | kɔ | H | |
| 0523 | spider | riɸoɸe | LLL | libobe | LLL | libobe | LLL | diɸeɸo | LHL | |
| 0524 | termite | seeke | HLL | wakaka | LLL | | | kwakaka | HHL | mn |
| 0525 | tick | riwo | LH | libo | LH | | | riɸea | LHL | km |

| Num | English | Lokundu (k) | Tone | Mbonge (m) | Tone | Londo (l) | Tone | Longolo (n) | Tone | Split |
|------|-------------------------------------|-------------------|------|------------------------|--------|--------------------|---------------|----------------------|-------------|-------------|
| 0526 | tsetse fly | eβoko | LLL | eboko | LLL | | | eβoko | LLH | |
| 0527 | wasp | roŋgeŋga | LLL | likpi, mofafalonggo | LLL | | | eŋgaŋga | LLL | kn |
| 0528 | worm | ɲokpe | LL | aŋɔki | LLL | | | etanda | LLH | |
| 0529 | beak, bill, (bee stinger) | moseke | LLL | moseke | LLL | moseke | LLL | moseke | LLL | |
| 0533 | elephant's trunk | ekɔte | LLH | ekɔte | | | | moaŋgo | LHL | km |
| 0535 | feather | esa | LH | esa | LH | esa | | esa | LH | |
| 0538 | fur | meɔ | LH | miɔ | LH | | | meɔ | LH | |
| 0541 | horn | meseba, moseβa | LHH | museba, moseba | LHH | moseba | LHH | moseba, moseβa | LHH | |
| 0542 | hump (of cow) | riφundu | LHL | likune, likuŋga | | | | rifundu | LHL | kn |
| 0544 | tail | mokondo | LLH | mokondo | LLH | mokondo | LLH | mokondo | LLH | |
| 0547 | wing | eφaφa | LLH | diφaφe | LLH | diφaφe | LLH | eφaφa,rifafa | LLH | |
| 0548 | anthill | | | esombali | LLLL | | | esombari | LLHH | |
| 0552 | footprint | riko | LL | likɔki | LLH | | | riko | LH | kn |
| 0553 | herd (of cattle or sheep) (n) | | | liyaŋga | | | | mokanda | LLH | |
| 0554 | hole | eφɔndɔ | | eyoko | LHH | eyuku | LHH | eyoko | LHH | mln |
| 0555 | nest | rumbu | | lumbu | HH | | | rumbu | HH | |
| 0556 | shell | ekpiri | | ekpele | HLH | ekobo | LLL | ekpere | LLH | kmn |
| 0557 | spider's web | | | etambotambo | LHHHL | | | mesinŋa ma riβeβo | LLLH LHH | |
| 0560 | bark (as dog) (v) | boma | HH | boma | HH | | | kanda | HH | km |
| 0561 | cackle | | | kɔkɔ | HH | kɔkɔ | HL | kɔkɔ | HH | |
| 0562 | crow (as a rooster) (v) | βeka | HH | tɔŋgɔ | HH | | | diβeka | LHL | kn |
| 0564 | fly (v) | erua | LHH | uŋga | HH | kolwa | LL | derua | LHH | kn |
| 0568 | lay (eggs), excrete | ɲa | H | ɲa | L | ɲaa | HL | ɲa | H | |
| 0571 | bamboo | ekoko | LLH | ekoko | LLH | aŋaŋaŋ | LHH | ekokambo | LLH | km |
| 0574 | bush | ndiko | LH | ndiko | LH | moliki | LLH | moriki | LLH | km,ln |
| 0575 | coconut palm | moβaŋga | HHH | moaŋga | LLH | moaŋga | LLH | moβaŋga | LLH | |
| 0579 | grass | esumbu | LLH | esumbu | LLH | esumbu | LLH | esumbu | LHH | |
| 0581 | mould (n) | riβume | LLH | iyɔŋjɔ | LLH | | | diβuma | LHH | kn |
| 0583 | raffia | ritutu | LLL | likɔ | LH | moka | LL | ritutu | LLL | kn |
| 0590 | tree | bole, βore | LH | wele | LH | bole | LH | ire, bore | LH | |
| 0593 | bean | rikoni | LLH | kondi | (L)HL | kondi | HL | rikoni | LLH | kn,ml |
| 0595 | cocoyam, taro | ende | LH | nda | (L)H | mɔseŋgu | LLH | ende | LH | kmn, kmn |
| 0597 | cola nut | riβeu | LLH | libe | LH | | | ribeu | LLH | |
| 0602 | groundnut | ɲgɔndɔ | LH | ɲgɔndɔ | LH | mbaasaŋ | (L)LHH | ɲgɔndɔ | LH | kmn |
| 0605 | maize | mgbi | L | mgbi | L | kpawo | LL | mgbwi | LH | kmn |
| 0609 | oil palm | ria | HL | mosɔ, lia | LL, HH | | | ria | HL | |
| 0610 | okra | riβune | HHH | libuna | LHH | | | ribune | HHH | |
| 0612 | orange | nasari | HHH | ɲasali | (L)HHH | anasali | LLHH | nasari | LLH | |
| 0613 | palm nut | mbia | HL | mbia | LL | | | mbia | HL | |
| 0615 | pineapple | | | esɔme | LLL | ekoko ea mokala | LLL HH LHH | esɔme | LLH | mn |
| 0616 | plantain | mokere | LHH | mokere | LHH | mokere | LHH | mokere | LHH | |
| 0617 | pumpkin | riβoke | LLH | liboke | LLH | | | diboke | LLH | |
| 0621 | sugar cane | esoŋgo | LLL | likoko | LLH | ekoko | LLL | rikoko | LLH | mln |

| Num | English | Lokundu (k) | Tone | Mbonge (m) | Tone | Londo (l) | Tone | Longolo (n) | Tone | Split |
|------|------------------------|--------------------|-----------|--------------------|---------------|------------|-------|--------------------|-------------|---------|
| 0622 | sweet potato | motika | LHH | motika | LHH | | | areke | LHL | km |
| 0624 | yam | ekue | LLH | lisua | LLL | eyo | LH(L) | risua | LHH | mn |
| 0625 | bark (of tree) | ekuku | LLL | ekuku | LLL | ekuku | | ekuku | LLL | |
| 0626 | base of tree trunk | tina | HH | tina | (L)HH | | | tina | HH | |
| 0628 | branch, stick | moraße | LHL | elabe | LHH | elabe | LHL | moraße | LHL | |
| 0629 | bud | | | njoko | LL | | | ndembutemb u | LLLL | |
| 0633 | leaf | eca, eja | | eya | LH | eyani | LHL | eca | LH | |
| 0639 | root | mokako, mori | | njili | LL | muri | LL | mokako | LHL | kn, kml |
| 0640 | seed | eφuma | | ndondo | LL | mbuma | (L)LH | ndondo | HH | kl, mn |
| 0644 | stump | eku | | eku | LL | | | eku | HL | |
| 0645 | thorn | rjoi | | njenje | (L)HH | njenje | (L)HH | ricoi | LLH | kn, ml |
| 0650 | sprout (v) | keke | | busa | HH | tua | HL | βusa | HL | mn |
| 0654 | bend, crook, curve (n) | kotomo | | kotomo | HHL | | | kotomo | HHH | |
| 0655 | boundary | nwe | | moyo | LL | | | nwe | L | kn |
| 0656 | bridge | ripangi | | likala, lipangi | LLL, LLH | likala | LLL | dikara | LHH | km, ln |
| 0659 | cave | bokoko | | ikoka, ile | LLL, | | | ikoka | LHH | mn |
| 0661 | country | mboka | | ekombo | LLL | | | mboka | HL | kn |
| 0662 | course of river | eβu | | litombo | LHH | | | ditombo | LHL | mn |
| 0665 | dew | βekeri | | bekeli | LLL | ekeli | LLL | bekeri | LLL | |
| 0666 | dirt | runga | | njingo | LL | mungu | LL | njwngi | LH | |
| 0667 | dust | moβu | | ndondi | LL | | | eφuφu | LHH | |
| 0670 | fire | mowa, moa | | nja | (L)HH | muea, nwea | , HH | moa | HH | |
| 0671 | flame | | | elolo | LLL | | | iyeme ya moa | LHH L HH | |
| 0672 | flat rock | eβaraβanja | LHHH H | elabanja | LHHH | | | eβaranja | LHHH | |
| 0675 | forest | motindi | LLL | nanga | (L)HH | moliki | LH | ndima ndiko | LLLH | |
| 0680 | ground | mojere | LLL | mujele | LLL | mojere | LLL | mojere | LLH | |
| 0682 | hill, mountain | mokori | LLH | mokoli | LLH | mokoli | LLH | mokori | LLH | |
| 0685 | lake | mbo | H | mbo | (L)H(L) | | | mboo | H | |
| 0687 | life | ronge | LH | longe | LH | winda | LL | ronge | LH | kmn |
| 0692 | moon | njonde | LL | njonde | LL | njonde | (L)LL | njonde | LL | |
| 0695 | mud | esanja | LHH | motambi | LLL | | | esanja | LHL | kn |
| 0699 | place (n) | woma | HL | ejaka, uma | LLH, (L)HL | uma | HL | oma, βoti | HL, LL | |
| 0701 | pool | ndiβa | LL | eseku | LLH | | | ndiβa | LL | kn |
| 0702 | rainbow | njuβarendi | LHHH L | njualendi | LHHH | | | njuβarendi | | |
| 0704 | river, stream | iliba, iriβa | LHH | iliba | LHH | iliba | LHH | iliba, iriba | LHL | |
| 0706 | road (path) | njea | LH | njea | LH | njea, njia | , LLH | njea | LH | |
| 0708 | sand | nangu | HH | nange | LL | nanga | LL | nanga | HH | |
| 0714 | slime | mokono | LLL | jolo | LL | | | mokono | LLH | kn |
| 0715 | smoke | motutu | HLL | motutu | HHL | motutu | HHL | motutu | HHL | |
| 0718 | star | teteri | HHL | teteli | HHL | teteli | HHL | teteri | HHL | |
| 0719 | stone | bore | LH | bolale | LHH | waale | LHL | bore | LH | |
| 0721 | sun | nangu, roβa | ,HL | disenji | LHH | loba | HL | loba, loβa | HL | kn |
| 0724 | valley | eyongo | LHL | eyongo | LHL | eongo | LHH | eyongo | LHL | |
| 0725 | water | mariba, marifβa | LHH | maliba | LHH | maliba | LHH | maliba, marifβa | LHH | |

| Num | English | Lokundu (k) | Tone | Mbonge (m) | Tone | Londo (l) | Tone | Longolo (n) | Tone | Split |
|------|---------------------------|-------------|-------|---------------------|---------------|-------------------------|---------------|----------------|-------|------------|
| 0726 | waterfall | ikoka | LLL | liyowa | LHH | | | diyowa | LHL | mn |
| 0729 | wood | ico, ijoo | LH | iyoli | LLH | iwori, ile | , LH | ico | LH | |
| 0730 | world | ekondo | LLL | mokondo | LLL | mokondo | LLL | ekondo | LLL | |
| 0733 | cloud | ekutukutu | LLHLL | ekutukutu | HLHLL | motutu | | ekutukutu | LLHLL | kmn |
| 0734 | cold | euwa | LLH | bokandi | | ewa | LH | ewa | LH | kl |
| 0736 | dry season, hot season | eyomi | LHH | lokpe | LL | iyo | LH(L) | yoi | LH | |
| 0740 | flood (n) | jua | HH | jua | (L)HL | | | makui | HHH | km |
| 0742 | hail | ritanana | LHHL | litana | LHHL | | | ritanana | LHHL | |
| 0747 | moonlight | ɲwɛri | HL | ɲɛli | (L)HL | ɲwɛli | HL | ɲwɛri | HL | |
| 0748 | rain | mbua | LH | mbua | (L)HL | mbua | (L)HL | mbuwa, mbua | | |
| 0749 | rainy season | ikuku | LHL | efufa | LLL | nikuke | LHL | ekukpe | kl | |
| 0755 | storm | ekpiri | LLL | mokpili | LLL | ekuli | LLL | ekpiri | | |
| 0763 | darkness | ekikia | LHLL | ikikia | LLLL | befidifidi | LLHLL | ekikia | LHLH | kmn |
| 0766 | day before yesterday | wasifɛ | HHL | wasube | HH(L)H | wasiba | HHL | kwasiɛ | HLH | |
| 0767 | day; daytime | wɛɲa, ɲwɛse | HH | bɛɲa | (L)HH | bɛɲa | HH | kwɛɲa | HH | |
| 0770 | evening | mokoko | LLL | mokoko | LLL | mokoko | LLL | mokoko | LLL | |
| 0772 | morning | eɸɔɔ | LHH | efɔɔefɔɔ | LHHLH H | muusu | HL | eɸɔɔ | LHH | kmn |
| 0774 | night | bulu, buru | HHL | bulute | LHL | bulute, bulite | , LHH(L) | buru | LH | |
| 0775 | noon, afternoon | ɲwɛse | HH | ɲɛse | (L)HH | ɲwɛse | LL | ɲwɛse | HH | |
| 0776 | now | rike | LL | inanani, inenani | , H(L) HLL | nina | HL | rikerike | LLLL | kn |
| 0777 | olden times | koɸa | LH | koba | LH | koba | LH | koɸa | LH | |
| 0781 | time | ɸɔnda | HH | ete | LH | ete | LH | ete | LH | mln |
| 0782 | today | nina | HL | yɔboni | LLL | eawo | LHL | kwɛɲa bo | HHL | |
| 0783 | tomorrow | jana | HH | efɔɔ | LHH | eana | LHH | cana | HH | kl |
| 0784 | year | ɲwa | HL | ɲa | (L)H | ɲwa | H(L) | ɲwa | H | |
| 0785 | yesterday | jana | HH | yana | LL | eana | LHH | cana | HH | |
| 0788 | earlier | ɲwa | | fenja | HH | | | burere | LHH | |
| 0791 | bag | ekpa | | ekpa | LL | ekpa | LL | ekpa | LH | |
| 0792 | bed | rinɔɲɔ | | linɔɲɔ | LLL | linɔɲɔ | LLL | dinɔɲɔ | LLH | |
| 0794 | bell | ɲɔɲika | | ɲɔɲdika | HHH | ɲɔɲikanɲ | LHHH | ɲɔɲika | HHH | |
| 0795 | boat | gwaro | | walo | (L)HL | walo | HL | kwaro | HL | |
| 0799 | cane (stick) | ndɔɲɔ | | ndɔɲɔ | LHH | mole | LH | ndɔɲɔ | HH | kmn |
| 0802 | chair | eboɲɔ | | eboɲɔ | LLH | eboɲɔ | LLH | eɸɔɲɔ | LLH | |
| 0803 | circle, ring | erende | | elende | LLL | | | ɲwɔɲɔge | LH | km |
| 0805 | door | muna | | muna | LL | muna | LL | muna | LL | |
| 0807 | fence | boka | | boka | LH | | | boka | LH | |
| 0809 | gift | ewe | | nde | L | nde | (L)L | nde | H | mln |
| 0811 | handle | mokɔ | | mofembe | | mofembe | LLH | mokɔ | LL | ml,km |
| 0812 | hat | itau | | ikpoto | (L)HHH | ikpoto | LHH | itang | LH | ml |
| 0814 | heap (n) | mokiri | | mokili, ɲindi | , (L)HH | mundi | LL | mokiri | LHH | kmn, ml |
| 0815 | hook (n) | iyɔɸi | | iyɔɸi | LHH | iyɔɸi | HHH | iyɔɸi | LHH | |
| 0816 | hut | riɸondo | | libondo | LHH | | | diɔkɔ | LLH | km |
| 0817 | iron,metal | ekɛ, ekɔkɔ | | ekɔkɔ | HHH | ebo | | ebo, ekɔkɔ | LLH | ln,kmn |
| 0819 | lamp | etɔnika | | itonika | HHHH | otilikanɲ, otonikanɲ | HHHH, HHHH | etɔnika | LHHH | |
| 0822 | load (n) | muna | | muna | LL | muna | HH | ɲwina | HH | |
| 0824 | mat | esasi | | esasa | (L)HHH | esasa | LHH | esasa | LHH | |
| 0829 | pocket | ekpa | | kolo | LH | | | riɸara | LHL | |

| Num | English | Lokundu (k) | Tone | Mbonge (m) | Tone | Londo (l) | Tone | Longolo (n) | Tone | Split |
|------|------------------------|--------------------|------------|-------------------|-------------|--------------------|---------|-------------------|--------------|--------|
| 0833 | ring | jati | | njati | (L)HH | ɲaki | HL | iyəndə ya ine | LLH HH LL | km |
| 0835 | rope | mokəri | | mokəli | LLH | mokoli, mokəli | , LLH | mokəli, mokəri | LLH | |
| 0836 | rubber | riɲəŋgə | | liɲəŋgə | LHH | liɲəŋgə | LHL | riɲəŋgə | LHL | |
| 0840 | shoe | etambi | | ilati, etambi | HHL, HHH | | | etambi | HHH | |
| 0850 | tobacco | ɲweni | LH | ɲeni | LH | ɲweni | LH | ɲweni | LH | |
| 0854 | wax | itwa | LH | ituwa, itua | , LLL | | | itua | LHL | |
| 0859 | compound | esiŋgi | LHH | esiŋga | LHH | | | isiŋgi | LHH | |
| 0865 | farm (n) | eyonda | LHH | eyanŋa | LHH | menani | LHH | eyonda | LHH | kn |
| 0866 | fork (in road etc.) | mata | LH | mata | LH | | | mata ma njea | HH L HH | |
| 0867 | grave | morima | LLH | molima | LLL | | | morima | LHH | |
| 0869 | house | ndabo, ndaβo | HL | ndabo | HL | ndabo, ndawo | , (L)HL | ndabo, ndaβo | HL | |
| 0877 | room | ritəŋgə | LHH | litəŋgə | LHH | litəŋgə | LHH | ikura | LHH | kml |
| 0881 | village | mboka | HL | mboka | (L)HL | moki | LH | mboka | HL | kmn |
| 0889 | egg | dikeɲ, rikeu | LH | like | LH | moce | LH | dikei, rikei | LLH | kmn |
| 0890 | fat (of animals) | diwə, riwə | LH | diəmi | LHL | diəmi | LHH | dijemu, diwəmi | LHH | |
| 0892 | food | moreri | LHH | moleli | LHH | moleli | LHH | moreri | LHH | |
| 0893 | fruit | eɸuma | LLH | efuma | LLH | efuma | LLH | eɸuma | LLH | |
| 0894 | garden | | | likoko | LLL | | | rikoko | LLH | |
| 0898 | harvest (n) | | | efate | LHH | moboti | HHL | eɸate | LHL | mn |
| 0899 | honey | ɲoi | LH | bo | L | bo | L | ɲoi | LH | kn,ml |
| 0900 | leftovers (food) | βəkuru | LLH | bekulu | LLH | | | bekuru | LLH | |
| 0901 | lump | ɲweŋge | LL | mbəndə | (L)HH | | | ikama | LLH | |
| 0906 | oil | mosoa | LHH | mosoa | LLL | mosoa | LLH | mosoa | LLH | |
| 0908 | palm-wine | βerəŋga | LLL | eləŋgi | LLL | | | berəŋga | LLH | |
| 0910 | pepper | ndəŋga | HH | ndəŋga | (L)HH | mokale | LHL | ndəŋga | HH | kmn |
| 0911 | salt | ikwa, ikpa | , LH | ikpa | LH | ikwa | LH | ikwa | LH | |
| 0913 | vegetable | riβura | LLH | libula | LLH | | | riβura | LLH | |
| 0914 | wine (alcohol) | mimba | HH | mimba | (L)HH | mimba | HH | mimba | HH | |
| 0915 | ashes | mbu | H | mbu | H | mbu | (L)H | mbu | H | |
| 0916 | basket | erunŋa | LHH | motonda | LHH | motonda | LHH | irunŋa | LHH | kn,ml |
| 0917 | bottle | eɸosi | HHH | ekpemi | HHH | | | eɸosi | LHH | kn |
| 0919 | broom | itaŋga | LLH | itaŋga | LLH | | | eyəi, iyanjo | LLH, LHL | km |
| 0920 | calabash | mbambe | LH | ikpoki, mbambe | , LH | mbambe | (L)LH | ekuŋgu | LHH | kml |
| 0921 | charcoal | ɸindi | HH | findi | (L)HL | findi | HH | kando | HL | kml |
| 0923 | cooking stone | risoso | LHL | lisoso | LHH | | | risoso | LHL | |
| 0925 | embers | kando | HL | makando | LHH? | bekando | LHL | kando | HL | |
| 0926 | fireplace | ru | HL | lu | (L)H | lu | H(L) | ru | H | |
| 0928 | grinding stone | βore wa ndəŋga | HH H HL | ikə | HH | | | bore | LH | kn |
| 0929 | knife | ikəŋgə, erendi | LLH | dilendi | LLL | diendi, malendi | , LHH | iwə, ikəŋgə | , LHH | kml,kn |
| 0933 | pestle | mbəɾəkə | LLL | ɲene | (L)HL | | | mbəɾəkə | LLL | kn |
| 0935 | pot (for water) | mbea ja mari βa | HLLL HH | mbea | (L)H | mbea | (L)LH | mbea | LH | |

| Num | English | Lokundu (k) | Tone | Mbonge (m) | Tone | Londo (l) | Tone | Longolo (n) | Tone | Split |
|------|----------------------------|-----------------|------------|--------------------|-------------|----------------------|-------------|-----------------|------------|-------|
| 0937 | spoon | toko | HL | toko | (L)HL | toko | HL | ikpaŋ, toko | LH, | |
| 0938 | upper grind- ing stone | moriki | LLL | ŋgɔkɔ | LL | | | moriki | LLH | kn |
| 0941 | boil | tɔkɔ | LH | okɛ | HH | kilɛ | LL | tɔkɔ | LH | kn |
| 0944 | cook | kirɛ | LH | kilɛ | LL | kilɛ | LL | kirea | LLH | |
| 0945 | cover | kutea | HH | kutumene | HHLL | kute | HL | kutea | LHH | |
| 0946 | cut (tr.) | kese | HH | lena | HH | lena | HL | rena | HH | mln |
| 0948 | fry | aŋga | HH | aŋga | HL | fala | HL | aŋga | HH | kmn |
| 0950 | mix (v) | saŋga | HH | kitene | LLL | sɔbene | HHL | kitenere | HHHH | mn |
| 0951 | peel (v) | ondoa, ɸɔmbɔ | LHH, LH | fɔmbɔ | LL | tɔndɔ | LL | ondoa | HHH | km,kn |
| 0953 | pound | tia | HH | tɔlɔ | LL | tɛkɛ | LL | tia | HH | kn |
| 0955 | roast (v) | ɸumba | LH | ue | LL | | | duwea, bumba | LLL, LL | mn,kn |
| 0957 | sieve (v) | eŋgɔ | LH | sekele | LLL | sekele | LLL | disekere | LLLL | mln |
| 0958 | stir | ɸuŋgua | LHH | abise | HHL | | | aɸise | LHH | mn |
| 0960 | take from cooking fire | ɸoa | HH | foa, kiroa | HH | | | diɸoa | LHL | mn |
| 0964 | hoe | joŋgo | HL | ekɔli | HHL | esɔni | LLL | coŋgo | HL | kn |
| 0967 | winnow (n) | diɸeɸe | LLH | ifeɸeni | LLLL | | | eɸeɸeni | LLLLH | |
| 0972 | feed (animals) | rese | HH | lise | HH | | | rese | HH | |
| 0980 | pick (fruit) | ɸata | HH | fata | HH | | | ɸata | HH | |
| 0981 | plant (v) | ona | HH | ona | HH | ona | HL | dona | HH | |
| 0990 | transplant | | | onole | HHL | | | ɸandoa | LHH | |
| 0993 | bury | fula, ɸura | LH | fula | LL | fure, fure, furwe | , LL, LL | fura, ɸura | LH | |
| 0994 | chop into pieces | sere | HH | sese | HH | see | HL | disere | LHH | |
| 1001 | dig,till | oloa, ruma | , HH | duma | LL | furua, fula | LL, LL | kɔsɔ, ruma | HH | klm |
| 1005 | grind | sia | LH | sia | LL | sia | LL | disia | LHH | |
| 1009 | light (v) | toere | LHH | kole, kota | LL | kota | LL | toŋga, toere | LH | kn,ml |
| 1016 | put away, store,undress | ule, arore | , LHH | dula | LL | idebe, ile | , HL | idwebe | LHH | km,ln |
| 1018 | sharpen (as a knife) | eɸa | LH | olise | | eba | LL | eɸise | LHH | klm |
| 1020 | sweep | aŋga | HH | yoŋgo | HH | oŋgo | HL | oŋgoa | HHH | mln |
| 1022 | tie up | kata | HH | kata | HH | kata | HL | kata | HH | |
| 1023 | untie | kakoa | HHH | unjua | LLL | unjwa | HL | kotoa | HHH | ml |
| 1028 | axe | iyondo | LHL | iyondo | LHL | eyondo | LHL | iyondo | LHL | |
| 1030 | birdlime | mokambo | LLH | mokambo | LLL | | | mokambo | LLH | |
| 1039 | gun | mokumba | LLH | mokomba | LLH | mokumba | LLH | mokumba | LLH | |
| 1042 | hunting | risoŋgɔ | LLL | bokanda, bofalo | LHH, LHL | | | bosoŋgɔ | LLL | kn |
| 1045 | net | riɔtɔ | LHL | liɔtɔ | LHH | ikonggi | LHL | diɔtɔ | LHL | kmn |
| 1048 | sword | | | njomba | LH | | | njomba | LH | |
| 1050 | trap (n) | erambi | LHH | ilambo | LHH | ilambi | LHH | itambi | LHH | |
| 1051 | trap, falling | | | likua | LLL | | | dikuwa | LLL | |
| 1052 | catch | uwara | HHH | banda | HH | uwala | LHL | iwira | HHH | klm |
| 1054 | defend | awenere | LHHH | sebee | HHL | | | awanere | LHHH | kn |
| 1058 | gather | kosoɸene | LHHH | kosene | LLL | kosene | LLL | dikosene | LLHH | |
| 1059 | hunt (v) | ɸara | HH | fala | | lɔ | H | bosoŋgɔ | LLH | km |
| 1060 | seize | koana ŋgija | LHH HL | koana | LLL | | | | | |
| 1061 | set (trap) | we erambi | LLLL | lamba | HH | lamba | HL | ramba | HH | |
| 1063 | slaughter | | | be | L | be | L | kakoa | HHH | ml |

| Num | English | Lokundu (k) | Tone | Mbonge (m) | Tone | Londo (l) | Tone | Longolo (n) | Tone | Split |
|------|-----------------------|-------------|------|-----------------------|------------|-------------|----------|-------------|--------|---------|
| 1066 | bead | mosaŋga | LHH | mosaŋga | LHH | | | mosaŋga | LHH | |
| 1067 | cloth | eɸaɸe | LLH | eɸaɸe | LLH | eɸaɸe | LLH | eɸaɸe | LLH | |
| 1072 | needle | ndɔndɔki | LLL | ndɔndɔki | LLL | | | ndɔndɔki | LLL | |
| 1075 | sew | βea | LH | bea | LL | lɔndɔ | LL | rɔndɔ | LL | km,ln |
| 1077 | weave | tuma | LH | silɑ / tuma | LL | silɑ / tuma | LL, LL | tuma | LL | |
| 1080 | beam, rafter | morɑŋgi | LLH | mokɔkɔ | LLH | | | mokɔkɔ | LLL | mn |
| 1084 | floor | eβɔndɔ | LHH | ebɔndɔ | LHH | | | | | |
| 1087 | ladder | mokpara | LLL | mokpolo | LLL | ekadako | LLLL | mokeŋgo | LLL | km |
| 1090 | nail (n) | atɔni | LLL | ebo | LL | | | itɔni | LHL | kn |
| 1091 | plank (n) | eβambu | LHH | ekuka | LLH | | | eβambo | LHH | kn |
| 1098 | thatch (n) | sou | LH | sɔ | (L)H | sewu | LL | sauŋ | LH | |
| 1101 | wall | βoriβo | LLL | elombo | LLL | elombo | LLH | moriβo | LLL | ml,kn |
| 1104 | work (n) | ndutu | LL | ndutu | LL | ndutu | (L)LL | ndutu | LL | |
| 1105 | build | roŋga | HH | loŋga | HH | loŋga | HL | roŋga | HH | |
| 1110 | make round, cut | keŋgiranise | HHHH | ingilise | HLLL | | | ingira | HHH | mn |
| 1112 | mend; repair | toŋga | LH | tambole | LLL | | | kekera | HHH | |
| 1120 | belongings | risaŋga | LLH | lisango | LLH | lisango | LH | disaŋga | LHH | |
| 1121 | debt | βorumbu | LHH | bolumbe | LHH | bolumbe | LHH | borumbu | LHH | |
| 1124 | inheritance | | | elikalika | LHHHH | | | esaŋgo | LLH | |
| 1125 | money | ikɔ | LL | ikɔ | LL | fandi | HL | ikɔ / kaβa | LH, LL | kmn |
| 1126 | payment | motango | LHH | motango | LHH | | | motango | LHH | |
| 1128 | price | erua | LLL | elua | LLL | elua | LLL | erua | LLL | |
| 1134 | buy | anda | LL | anda | LL | anda | HL | anda | LH | |
| 1143 | sell | kaβise | LHH | kabise | LHH | kaba | LL | kaβise | LHH | |
| 1144 | dance (n) | mosaki | LHL | mosaki | | masaki | LHH | mosaki | LHL | |
| 1146 | drum, big | motembe | LHL | matembe | LHL | | | ritembe | LHL | |
| 1147 | drum, medium | moromba | LLH | molomba | LHH | | | moromba | LLH | |
| 1148 | drum, small | ikɔmɔ | LLL | ikɔmɔ | LLL | ikɔmɔ | LLL | ikɔmɔ | LLL | |
| 1149 | drum, talking | isimi | HHL | ilimbi | HHH | | | motɛke | LHH | |
| 1155 | song | mokɔni | LHL | mosɔkɔ | LLL | mokɔni | LHL | mokeke | LLL | kl |
| 1159 | dance (v) | saka | HH | saka | HH | saka | HL | saka | HH | |
| 1163 | sing | kɔnɔ | HH | kɔnɔ | HH | kɔnɔ | HL | kɔnɔ | HH | |
| 1166 | curse (n) | rituma | LLH | mauka, lituma, e boma | , LLH, LHH | mauka | LLL | rituma | LLH | kmn, ml |
| 1167 | devil | emisi | LHH | elimo | | muuu | LHL | esisako | LLLL | |
| 1170 | ghost | emisi | LHH | esisako | LLLL | muuu | LHL | esisako | LLLL | mn |
| 1171 | God | obase | LLL | obase | LLL | obase, oase | LLL, LLL | oβase | LLL | |
| 1181 | witchcraft | borembe | LLL | bolemba | LLL | bolemba | LLL | borembe | LLL | |
| 1193 | death | du | H | lu | (L)H | loo | LH(L) | rɔŋ / ru | H, LH | |
| 1198 | hardship, distress | repa | HL | lepa | | | | bue | LH | km |
| 1199 | kindness | | | bolɔlɔ | LLL | molema | LHL | morema | | ml |
| | | | | | | bolɔlɔ | LLL | mosaŋgi | | |
| 1201 | marriage | boruka | LHL | boluka | LHH | boluka | LHL | boruka | LHL | |
| 1203 | mistake | riβuse | LLH | libuse | LLH | | | dusa | LL | km |
| 1205 | polygamy | risoŋgono | LHHH | lisoŋgono | LHHH | | | riseŋgeni | LHHH | |
| 1207 | theft | wiɸe | HL | wiba | | | | wiβa | HL | |
| 1208 | war | bira, βira | LH | bila | LH | bira | LH | bila, bira | LH | |
| 1212 | accept; recieve; take | awa | LH | kamana | LLL | kama | LL | awa | LH | ml,kn |
| 1216 | beg (for money) | ɔmbɔ | HH | tiŋga | HH | tinge | HL | ɔmbɔ | HH | ml,kn |
| 1217 | bless, forgive | namise, | LHH | namise, | LLL | | | namise | LHH | |

| Num | English | Lokundu (k) | Tone | Mbonge (m) | Tone | Londo (l) | Tone | Longolo (n) | Tone | Split |
|------|-----------------------------|-------------------|-------------|------------------|-------|-----------|--------|--------------|-----------|--------|
| 1219 | bring up (a child) | rakise βomboā | HHH | lakise boŋgoā | HHL | | | βomboā | LLH | |
| 1224 | divide | kaβa | LL | kaba | LL | kabene | LLL | kaβa | LL | |
| 1227 | dress (some one) | gwese | HH | wamise | | taŋwebe | LLL | wemise | LLL | mn |
| 1228 | drive away | ita | HH | ita | HH | ite | HL | ita | LH | |
| 1233 | exchange | eŋgorene | LHHH | seŋgolene | | | | soŋgore | HHH | |
| 1234 | fight | ana | LH | ana | LL | ana | HL | ana | LH | |
| 1236 | get | rua | HH | lua | LL | | | rua | LH | |
| 1237 | give | beke, iŋia | HHH | ɲeŋge | LL | iŋe | HL | iŋea | HHH | kn |
| 1242 | help | oŋgoene | HHHH | oŋgoene | HHLL | | | oŋgoene | HHHH | |
| 1245 | inherit | tene | HH | likana | HHL | | | tene | HH | kn |
| 1247 | judge | kaise | HHH | kōmise | | kōmō | HL | kōmō | HH | mln |
| 1249 | kill | boloa, boroa | HHH | boloa | HHL | bolwa | HL | boloa, boroa | HHH | |
| 1254 | marry | ruka | HH | luka | HH | luka | HL | saka | LH | kml |
| 1256 | meet | βoanea | HHH | boanee | HHLL | boene | HHL | kuma | LH | kml |
| 1259 | play (v) | saa | LH | tonda | HH | tonda | HL | saa, sa | LH | ml,kn |
| 1264 | quarrel | taŋga | HH | saŋgoa | | | | motaygo | LHH | kn |
| 1267 | return (give back) (tr) | timbise | LHH | timbise | LLL | | | timbere | LHH | |
| 1269 | send | loma, roma | HH | loma | HH | loma | HL | loma, roma | HH | |
| 1274 | show | imere | HHH | dumele | HHL | imere | LHL | imere | LHH | |
| 1277 | spy (v) | φete | LH | bemeē | LLL | tōdōmō | HLL | diβemere | LLHH | mn |
| 1278 | stand | unwa | HH | ima | HH | imana | LHL | iŋwa | HH | |
| 1279 | steal | iφa | HH | iba | HH | ube, uba | , HL | iφa, diiφa | HH | |
| 1284 | take | nōŋgō | LH | koa | LL | kwaa | HL | koa, nōŋgō | LH, HH | mln,kn |
| 1287 | teach | ekore | HHH | okole | HHL | | | ekore | HHH | |
| 1288 | threaten | sisā | LH | kimee | HHL | | | kimea | HHH | mn |
| 1289 | tickle (v) | ŋōŋgire | LHH | ŋōŋgilise | | | | ŋōŋgire | HHH | |
| 1291 | wait for | unda | HH | undee | HHL | inda | HL | efa, undea | HH | |
| 1295 | agreement | ekoaro | LLLH | ekoalo | LLLH | | | ekoaro | LLHH | |
| 1296 | announcement | reŋga | HH | leŋga | (L)HH | | | reŋga | HH | |
| 1301 | law | mbenda | HH | mbenda | (L)HH | mbenda | (L)HH | mbenda | HH | |
| 1302 | lie (n) (falsehood) | morayga | LLL | elayga | LLH | elayga | LLH | morayga | LLH | |
| 1303 | name | dina, rina | HL | dina | (L)HL | dina | HL | dina | HL | |
| 1304 | news | ŋjambe | LL | ŋjambe | LL | ŋjambe | (L)LL | ŋjambe | LL | |
| 1306 | oath | βeri | HL | beli | | ŋjibidi | (L)LLL | beri | HL | kmn |
| 1308 | promise (n) | rikaki, moriko | LLH, LHL | likake | LLH | | | rikaki | LLH | |
| 1309 | proverb | mokana | LLH | lifaygo | LLH | | | rikana | LLH | kn |
| 1316 | whisper (n) | kundu | LL | esambo | LLL | | | iŋŋiŋene | LHHH | |
| 1317 | word | eyara | LLL | eyala | LLL | eyala | LLL | iyara | LHH | |
| 1319 | advice (N, not V) | mareā | LHH | maleā | LHH | | | mareā | LHH | |
| 1323 | answer (v); reply | awa | LH | koalo | LHL | | | awa | LH | kn |
| 1324 | argue | φenda | LL | fenda | LL | | | φenda | LL | |
| 1325 | ask | jua / tōre | HH | iyole | HHL | iyele | LHL | tōre / cuwa | HH HH | kn,ml |
| 1328 | boast, brag, praise oneself | isase | HLH | sasa | | sase | HL | imereke | LHHH | kml |
| 1329 | call (v) | erea | HHH | bele | HH | bele | HL | erea | HHH | kn,ml |
| 1330 | chat (v) | koa | LH | koa | | koa | LL | koa | LH | |
| 1335 | explain | | | saŋgole | LLL | | | saŋgore | LHH | |

| Num | English | Lokundu (k) | Tone | Mbonge (m) | Tone | Londo (l) | Tone | Longolo (n) | Tone | Split |
|------|---------------------|---------------|-------|----------------------|-------|------------|------|--------------|------|---------|
| 1340 | grumble | φiri | HL | uŋguŋa | LLL | uŋguŋa | LHL | iŋguna | LHH | mln |
| 1343 | insult (v) | roa | HH | lola | HH | lola | HL | diroa | LHL | |
| 1344 | lie (v) (tell lies) | raŋga | | laŋga | LL | ɔŋɔ | HL | morangga | LLL | kmn |
| 1345 | listen | oka | HH | bokanee | HHLL | | | oka | LH | |
| 1347 | pray | kane | HH | kane | HH | | | kane | HH | |
| 1350 | say, speak | sɔsɔ, ɔmɔ | LH | sɔsɔ | LL | tɔkɔ | LL | eyoa, taɸa | HH | km |
| 1351 | shout (v) | kanda | HH | kanda | HH | kanda | HL | kanda | HH | |
| 1354 | stutter | kukuma | HHH | kukuma | HHL | | | kukuma | LHH | |
| 1357 | tell someone | βea | HH | sɔsɔɛ | LLL | | | βea | HH | kn |
| 1358 | thank | soma | HH | soma | HH | kɔmɛ | HL | soma | HH | kmn |
| 1362 | eagerness, zeal | okaya | LHH | kanda, lua | , LL | | | ndiŋgi | HH | |
| 1363 | fear (n) | wɔŋgɔ, bɔŋgɔ | HH | bɔŋgɔ | (L)HH | bɔŋgɔ | HH | bɔŋgɔ, βɔŋgɔ | HH | |
| 1367 | jealousy | ŋgɔŋgi | LH | ŋgɔŋgi | | | | ŋgɔŋgu | LH | |
| 1368 | knowledge | riβie | LHH | libie | LHH | libie | LLH | riβie | LLH | |
| 1369 | laughter | rɔ | L | lɔlɔ | LL | lɔlɔ | LL | rɔ | H | |
| 1371 | madness | ŋweŋe | HL | ŋeŋe | | mɔŋe | HL | ŋweŋe | HL | |
| 1372 | meaning | janda | HH | ndaŋgo | LL | | | ndaŋgo | LH | mn |
| 1373 | pity (n) | rokiri | LLL | lokili | LLL | | | rokiri | LLH | |
| 1374 | shame | isɔ | LH | isɔ | LH | isɔsɔ | LHL | isɔ | LH | |
| 1376 | stupidity | erema | LLH | wemo | | | | emoa | LHH | mn |
| 1378 | truth | mbare | HL | mbale | (L)HL | naŋaŋge | HLH | mbare | HH | kmn |
| 1379 | wisdom | riomo | LHH | likenju, bokenju | , LHH | | | riβie | LHH | |
| 1381 | angry, be | kua | HH | tata | LL | | | φiri | HL | |
| 1388 | mad, be | eja, ŋweŋe | HH HL | libe eleggalengga | LLLLL | | | ŋweŋe | HL | kn |
| 1394 | startled, be | ŋiŋga | LH | kpasima | LLL | kpesemese | LLLL | kpesima | HHL | mln |
| 1396 | surprised, be | maŋaka | LHH | maŋaka | LHH | | | maŋaka | LHH | |
| 1401 | admire | | | simoa | | | | tata | HH | |
| 1406 | believe | ruβe | HH | lube | HH | | | ruβe | HH | |
| 1409 | choose | βɔsɔ | LH | bɔsɔ | LL | φɔsɔ | LL | φɔsɔ | LH | |
| 1410 | come on suddenly | | | esulesule | | | | | | |
| 1411 | count (v) | laŋga, raŋgoa | HH | laŋga | HH | laŋga | HL | daŋga, raŋga | HH | |
| 1417 | find,want | saka | LH | saka | LL | saka | LL | saka | LH | |
| 1419 | frighten | sisa | LH | sisa | LL | sisa | LL | sisa | LH | |
| 1420 | hate (v) | bosiŋga | LHH | kɔ | H | kɔ | L | kɔ | L | mln |
| 1422 | hide (intr.) | sɔmɔ | HH | sɔmɔ | LL | sɔmɔ | LL | sɔmɔ | LH | |
| 1426 | know | icoa, ijoa | HHH | iyoa | HHL | iwoa, iywa | , HL | icoa | LHH | |
| 1427 | laugh (v) | ɔjɔ | LH | ɔyɔ | LL | ɔlɔ | HL | ɔcɔ | LH | |
| 1428 | learn | ekoa | HHH | okoa | HHL | okwa | HL | ekoa | HHH | |
| 1432 | measure (v) | mene | LH | mele | LL | mene | LL | mere | HH | |
| 1436 | plan (v) | | | kima | | kima | HL | ŋjake ̃ n̄ | LH | ml |
| 1442 | satisfy | | | kule | HH | | | idua | HHH | |
| 1443 | smile (v) | riŋweŋgese | LHHH | ongɔna | LHH | | | ɔcɔ | LH | |
| 1445 | suffer | tekera | HHH | tikila | HHL | tuka | HL | tekera | HHH | klm |
| 1447 | try | keka | LH | keka | LL | keka | LL | keka | LH | |
| 1452 | write | tira | LH | tila, lete | LL, ? | lete | LL | tira | LH | kmn, lm |
| 1456 | his-her (human) | eyei | LLH | eye | | | | eyei | LLH | |

| Num | English | Lokundu (k) | Tone | Mbonge (m) | Tone | Londo (l) | Tone | Longolo (n) | Tone | Split |
|------|------------------|-------------------------|-----------|---------------------|-------------|-------------|---------|---------------------|-----------|------------|
| 1457 | I | mba | H | mba | H | mba | (L)H(L) | mba | H | |
| 1459 | our | eyasu | LHH | eyasu | | | | eyasu | LHH | |
| 1460 | self | mɔiti | LHH | mene | HH | | | mene | LH | mn |
| 1462 | their (human) | eyaβu | LHH | yabu | | | | eyabu | LHH | |
| 1463 | them | bɔ | H | bɔ | H | | | bɔ | H | |
| 1466 | thing | joma | HL | ema | HH | ema | HL | coma | HL | |
| 1467 | this | enje | HL | eni | | | | enje | HL | kn |
| 1469 | we (incl.) | ise | HL | ise | HH | se | H(L) | ise | HL | |
| 1471 | you (pl.) | ɪne | HL | ɪne | HH | ɲe | H(L) | ɲe | H | |
| 1472 | you (sing.) | we | L | owa | LH | oa | LH | gwe | H | |
| 1473 | your(s) (pl.) | eyanu | LHH | eyanu | | | | eyanu | LHH | |
| 1474 | your(s) (sg.) | eyaβe | LHL | eyabe | | | | eyaβe | LHL | |
| 1480 | down | ose | LH | wase, ose | LH, | ose | LH | ose | LH | |
| 1484 | outside | oβoka | LHL | lota | LH | eboka | LHL | esɪŋgi | LHH | kl |
| 1486 | under | ose | LH | ose | LH | | | ose | LH | |
| 1488 | again | eφete | LHL | fɛke | LL | | | eφeete | LHL | kn |
| 1489 | all | besusu | LHL | susu | HH | | | esusu | LHL | |
| 1491 | because | | | linalama, eβanja | HHHL | | | cɔkɔ | HH | |
| 1496 | how? | ne | H | nawe | HL | | | neε | H | kn |
| 1499 | neuter | jɔ | H | efala | LLL | | | eφara | LHL | mn |
| 1500 | no | aye | HH | aye, iʔi | LH | | | iʔi | HH | km, mn |
| 1505 | perhaps | nɔkɔ | LH | menɛke | LLL | | | benoma | HLH | |
| 1511 | what? | jaa | H | njame | HH | | | ca | H | |
| 1513 | where? | owe | HH | owe | H(L)H | | | owe | HH | |
| 1515 | who? | nja | H | nja | H | nja | (L)H | nja | H | |
| 1522 | (000.5) half | eφasi | | ebasi, esuŋgu | LLL, LHH | esuŋgu | LHL | esuŋgu | LHL | km, mln |
| 1523 | (001) one | eyɔkɔ | LHH | eyɔkɔ | LHH | eyɔkɔ | LLL | eyɔkɔ, mɔkɔ | ,LH | |
| 1524 | (002) two | bebe, βeβe | HH | bebe | H(L)H | beba | HL | bebe | HL | |
| 1525 | (003) three | beraro | HHH | belalo | HLH | beyaro | LHL | beraro | HLH | |
| 1526 | (004) four | beni, bene | HL | bene | H(L)H | beni, bini | , HL | beni | HL | |
| 1527 | (005) five | beta | HH | beta | HH | beta, betaa | , HHL | beta | HL | |
| 1528 | (006) six | betaliɔkɔ, betariɔkɔ | HHLH H | betaliɔkɔ | HHLHH | betariɔkɔ | HHLLL | betariɔkɔ | HHLH H | |
| 1532 | (010) ten | londalo, rondalo | HLH | dondalo | HLL | dondaro | HHL | dondaro, rondaro | HLH | |
| 1537 | (015) fifteen | okɔrɔ | LHL | okɔlɔ | LHL | ɔkɔlɔ | LHL | okɔrɔ | LHL | |
| 1558 | (1,000) thousand | ikori | LHH | ikoli | HHH | ikoli | LHH | ikori | HHH | |
| 1559 | colour | | | lɔki | (L)HH | | | rɔki | HL | |
| 1560 | whiteness | boφuφi | LHH | bofufi, fue | , LL | | | boφuφi | LHH | |
| 1561 | black, be | inda | HH | inda | HH | inda | HL | diinda | HL | |
| 1568 | red, be | roma | HH | loma | LL | loma | LL | diroma | LLH | |
| 1573 | red, make | romise | HHH | lomise | | | | romise | LHH | |
| 1574 | white, make | φuφise | HHH | fufise | | φuφa | HL | φuφise | HHH | |
| 1575 | bigness | bokɔri | LLH | bokɔli | | bɔnɛnɛ | LHL | bokɔri | LHH | kmn |
| 1576 | fatness | mokuku | LLL | mokuku | LLL | | | mokita | LLH | km |
| 1577 | height | bojawwi | LLH | bowabi | LLH | | | bocawi | LLH | |
| 1579 | smallness | botiti | LHH | botiti | | botiti | LHH | botiti | LHH | |
| 1580 | weight | boriri | LLH | bolito | | boletu | LLH | boriri | LHH | kn, ml |
| 1581 | wideness | takama | HHH | efota | LLH | | | kɔrɔ | HH | |
| 1582 | big | kɔrɔ | HH | kɔlɔ | LL | kɔlɔ | LL | kɔrɔ | HH | |
| 1585 | few | bɔkɔ | LHH | tɔle | LH | | | yomoma | | |

| Num | English | Lokundu (k) | Tone | Mbonge (m) | Tone | Londo (l) | Tone | Longolo (n) | Tone | Split |
|------|-----------------------------|-------------|------|-------------------|-------|------------|--------|-------------|-----------|-------|
| 1588 | heavy, be | rira | LH | lita | LL | leta | LL | dirira | LLH | kn,ml |
| 1593 | light, be (not heavy) | sesere | HHH | foama | | feme | HL | diwoa | LHH | |
| 1594 | little small, be | tita | HH | titia | HHL | tita | HL | dititia | LHHL | |
| 1595 | long, be | tomba | HH | waba | LL | awa | LL | cawa | LH | mln |
| 1597 | round, be | kingirana | HHHH | ingilana | | tunggulene | LLLL | diingira | LLHL | |
| 1598 | short, be | kutua | HHH | kutua | HHL | kutwa | HL | tui | HH | kml |
| 1600 | thick | ira | HH | lifama | LLL | | | tika | HH | |
| 1606 | lengthen | tombise | LHH | wabise | | | | cawise | HHH | mn |
| 1608 | shorten | kuture | HHH | kutule | | | | tuisse | HHH | km |
| 1614 | bump (n) | iφendo | LLH | ikpoki | | | | ekpoki | LLH | mn |
| 1616 | heat (n) | boyaki | | boyaki | LHL | lia | LH | boyaki | LHH | kmn |
| 1620 | rust (n) | | | wonjo, wunjo | , LL | | | manjareri | HHHL | |
| 1621 | slipperiness | ɲəkɔɔ | LHH | bɔɲɔli | | ɔɔɲɔ | LHL | ɲɔɔ | LH | |
| 1623 | strength | ɲgɪɲa | HL | ɲgɪɲa | (L)HL | ɲgɪɲa | (L)HL | ɲgɪɲa | HL | |
| 1624 | able, be | φore | HL | fole | HH | φede | HL | diφore | LHL | |
| 1626 | abundant, be | okune | LHL | tumbene, okune | HHL | φua | HL | diφua | LHL | km,ln |
| 1627 | accustomed, be | ijoea | HHHH | iyoea | HHLLL | | | dicoanee | LHLH L | |
| 1628 | alone, be | wiiti | HHL | iti / mbaiti | LH | | | mbaiti | HHH | |
| 1630 | bad, be | bɔkɔ | HH | beba | HH | | | diβɔkɔ | LHL | kn |
| 1631 | barren, be (of land) | | | komba / koɲa | LL | | | koɲa | HL | |
| 1637 | clean, be | saɲga | HH | saɲga | LL | | | disaɲga | LHL | |
| 1638 | cold, be | diwɔ | LH | kanda | HH | ɲala | LL | dɪɲara | LLH | ln |
| 1639 | crooked, be | kɔɔwɔmɔ | HHH | kɔɔwɔmɔ | HHL | | | diweɲgama | LHHL | km |
| 1641 | different, be | isio | LLH | isio | LHH | | | esakene | HLHH | km |
| 1642 | difficult, be | kamba | LH | kamba | LL | kamba | LL | dikamba | LLH | |
| 1644 | dry, be | wese | HH | wese | LL | | | dikora | LHL | km |
| 1645 | empty, be | | | efue | LLH | | | dimaise | LHHH | |
| 1646 | enough | tiɲgene | HHH | tiɲgene | LLL | | | tiɲgene | HHH | |
| 1649 | fast, be | | | fandama | HHL | | | dɪɲakama | LHHL | |
| 1653 | full, be | dironda | LHH | londa | HH | londa | HL | dironda | LHL | |
| 1654 | good, be | rɔɔ | HH | lɔɔ | LL | lɔɔ | LL | dirɔɔ | LHH | |
| 1658 | hot, be | ya | H | ya | H | ya | L | diya | LH | |
| 1660 | last, be (final) | rikanea | HHHH | komee | LLL | liɲwene | LLL | dimanea | LHHH | |
| 1667 | many | okune | LHL | tumba | HH | fua | HL | φua | HH | ln |
| 1668 | new, be | ekɔɔɔɔ | LHHH | mokɔɔɔɔ | LHHH | | | ekɔɔɔɔ | LHHH | |
| 1670 | only | be | H | ɲga | L | | | bee | LH | kn |
| 1674 | quiet, be | sai | LL | sai | LL | | | da sai | LH LH | |
| 1675 | resemble (in appearance) | akana | HHH | akana | HHL | kita kwene | LL, LL | akene | HLH | kmn |
| 1676 | right, be correct | bomene | LHH | bomene | LLL | bomene | LLL | dibomene | LHHH | |
| 1678 | rotten, be | bɔ | H | bɔɔ | | | | diβɔ | LH | |
| 1683 | sharp, be | dora | LHH | ola | HH | ola | HL | doora | LHL | |
| 1684 | shrivelled, be wrinkled | ɲukea | LHH | ɲukea | | | | ɲiβiri | HHH | km |
| 1687 | slippery, be | dɪɲɔkɔɔ | LLLL | ɲɔɔ | LL | ɲɔɔ | HL | dɪɲɔɔ | LHH | |
| 1690 | soft, be | dije | LL | bɔbɔ | LL | ye | L | dice | LH | klɪ |
| 1691 | sour, be | dikaka | LLL | kaka | | kaka | LL | dikaka | LLH | |
| 1693 | straight, be | | | imana | | ijwene | HHL | diɲwanea | LLHL H | |
| 1694 | strong, be | direra | LLL | leta | LL | leta | LL | direra | LLH | |
| 1695 | sweet, be | diteme | LLH | ɲeɲe | LL | ɲeɲge | LL | diteme | LLH | kn,ml |

| Num | English | Lokundu (k) | Tone | Mbonge (m) | Tone | Londo (l) | Tone | Longolo (n) | Tone | Split |
|------|---------------------------|-------------|------|------------|------|---------------------|----------------|---------------|-------|-------|
| 1697 | tight, be | diβoβoa | LHHH | tika | HH | | | dikata | LHL | |
| 1698 | torn, be | dija | LH | komboa | | | | dija | LH | kn |
| 1700 | unripe, be | erumba | LLL | etumba | | | | esa tani | HLHL | km |
| 1702 | weak, be | | | βolomɔ | | sombolo | LLL | onoki | LLH | |
| 1703 | wet, be | diwɔ | LHL | jala | LL | jala | LL | dicekerene | ml | |
| 1704 | whistling (adj.) | rondo | HH | ungakee | | | | ombire | LLH | |
| 1708 | begin | botea | LHH | botee | LLL | | | βotea | LLH | |
| 1713 | burn (intr.) | yangga | HH | yangga | HH | ange | HL | yangga, uwea | HHH | |
| 1716 | cease | reni | HH | lene | HH | | | kasa | HH | km |
| 1718 | cooked, become | kireβe | LHH | kilama | | | | diβea | LLH | |
| 1719 | cool off, become cold | woise | LHH | jalise | | jala | LL | jarise | LHH | mln |
| 1722 | dry up, evaporate | wesise | HHH | wesise | HHH | osa | HL | wesise | HHH | kmn |
| 1723 | dry (tr.) | wese | HH | wese | HH | famba | LL | wese | HH | kmn |
| 1724 | equal, become | ditingai | LLLL | tingana | LLL | | | tinganea | LHHH | |
| 1726 | finish | mare | LL | mise | LL | ma | L | maise | LHH | |
| 1732 | hurry, be in a | | | biakee | | | | | | |
| 1736 | lean (v) (become leaning) | ekemee | HHHH | ekemee | HHHL | ekeme | LHL | ekere | LHL | |
| 1744 | smell (bad) (intr.) | umba | LH | umba | LL | umbelene | LHHL | imba | HH | |
| 1745 | smooth, make | ɲɔŋgɔrɔɲɔ | LHHH | ɲolia | LLL | | | ɲɔβɔrɔɲɔ | LLHH | |
| 1746 | soft, become | dije | LLH | bobo | LL | | | diceise | LLHH | kn |
| 1747 | split (intr.) | sara | HH | salaba | | | | sara | LH | |
| 1751 | straighten | uɲware | HHH | imalise | | | | iɲware | LLH | kn |
| 1753 | swell (v intr.) | ronda | HH | uɲa | | | | ronda | HH | kn |
| 1754 | swell, cause to | rondise | HHH | uɲise | | | | rondise | HHH | kn |
| 1760 | end (n) | bekueri | LLHH | bekomeli | LLHH | dikome | HLH | bemaneri | LHHH | kml |
| 1762 | here | wanga | HL | wani | HH | ano | HL | wangea | LLH | |
| 1763 | journey (n) | ikendɔ | LLL | ikende | LLL | lokende | LLL | ikendɔ | LHL | |
| 1764 | left (dir.) | riɔsi | LLL | loɔɔ | LL | | | momɔɔ | LLH | kn |
| 1767 | middle | watiwati | LHHL | watewate | LHLH | tete | HL | watiti | LHL | |
| 1772 | side | ɲwiri | HL | fesi | LL | efasi, mbamba, muli | LLL, (L)HL, HL | φeɔ | HH | kl,ml |
| 1776 | there | one | HL | wane | LL | angaa | HHL | one | HL | kmn |
| 1780 | far | su | HL | cu | H | | | o caweri | L LHL | km |
| 1784 | slow, be | wengere | LLL | wolomɔ | LLL | | | wengere | LLH | kn |
| 1785 | surround | meseɔ | LLL | olene | HHL | | | daβea | LLH | |
| 1796 | bow, bend (v) | reɲgemee | HHHH | ondɔe | | beleme | LLL | reɲgemee | HHHL | kn |
| 1797 | bring | yana | HH | fɔɲɔ | LL | φɔɲɔ | HL | iyana | HHH | kn,ml |
| 1798 | carry away | akanaka | HHHH | akana | | | | akanaka | HHHH | |
| 1799 | carry in arms | seβe | HH | sebe | | teke | HL | seβe | LH | kmn |
| 1801 | carry on head | tɔŋgɔ | HH | tɔŋgɔ | HH | tɔŋgɔ | HL | tɔŋgɔ | HH | |
| 1804 | chase | ita | HH | kute | | | | koma | HH | |
| 1806 | climb, ascend | φotoa | LHH | tɔtɔ | LL | ondwa | HL | ondoa | LLH | ln |
| 1807 | close | riβa | LH | liba | LL | liba | LL | riβa | LH | |
| 1808 | come | iya, yaka | HH | fɔ | H | ya, φɔ | L, L | iɲa, nde, iya | LH | kl,ml |
| 1809 | come from | uwea | HHH | uwee | HHL | uwa | HL | iweri | HHH | |
| 1815 | curve, bend (v) (tr.) | koɲomɔ | HHH | felamise | | ɲika | LL | wengama | HHH | |

| Num | English | Lokundu (k) | Tone | Mbonge (m) | Tone | Londo (l) | Tone | Longolo (n) | Tone | Split |
|------|--|-------------|------|----------------|-------|-----------|------|-----------------|--------|--------|
| 1816 | descend, go down | ɔndo | HH | ɔndo | HH | ɔndo | HL | ɔndo | HH | |
| 1817 | dive (v) | siβa | LH | siba | | siba | LL | siβa | LH | |
| 1818 | drag, pull | ɔngɔto | HHH | suka | LL | ɔngɔto | LHL | ɔngɔto | HHH | kl |
| 1822 | follow | koma | HH | koma | HH | koma | HL | koma | HH | |
| 1823 | get lost | bɔ | H | bɔ | H | bɔ | H | diβɔ | LH | |
| 1825 | go | akaka | HHH | aka | LL | kende | LL | akaka | LHH | kmn |
| 1826 | go away | arɔa | LHH | aloa | HHL | alwa | HL | arɔa | LHH | |
| 1827 | go back, return | timba | LH | timba | LL | timba | LL | timba | LH | |
| 1830 | go in | kpea | HH | kpee | LL | kpee | HL | kwea | HH | |
| 1831 | go round | kira | LH | aba | HH | | | aβa | HH | mn |
| 1834 | jump (v) | siβa | LH | embele | HHL | fema | HL | siβa | HH | kn |
| 1836 | lean (intr.) | ekemeɛ | HHHH | ekele | HHL | | | ekemea | HHHH | |
| 1839 | somewhere (original list: leave something somewhere) | oma wɔkɔ | HLHH | uma | LL | | | oma wɔkɔ | HHHH | |
| 1842 | lift | ombe | HH | ombe | HH | | | ombe | HL | |
| 1844 | load (v) | kaŋga | LH | kaŋgeɛ | LLL | kaŋga | LL | kaŋgea | LHH | |
| 1845 | lower (v) | ɔndɔre | HHH | ɔndɔle, ɔndele | , HHL | | | ɔndɔre | LHH | |
| 1847 | move away, migrate | | | onja | HH | | | aβa | LH | |
| 1849 | open (v) (as a box) | riβoa | LHH | liboa | LLL | buŋwa | HL | riβoa | LHH | kmn |
| 1852 | pass (tr.) | φesa | LH | tomba | HH | aka | HL | φesa | kn | |
| 1857 | push | ɥna | HH | ɥɔŋga | | tinde | HL | tindea, tundere | HHH | ln |
| 1858 | put down | surise | HHH | mata | LL | lika | HL | soa ose | LHLH | |
| 1861 | remain, stay | te | H | te | L | tee | HL | te | | |
| 1862 | rise up (intr.) | uŋwanea | HHHH | tokole | HHL | | | ombe | | |
| 1863 | run | isuma | HHH | bia | HH | bia | HL | isuma | kn, ml | |
| 1867 | sit | sumama | HHH | lia | LL | | | sumama | LHH | kn |
| 1873 | squat | ɥɔŋgama | HHH | ɥɔŋgama | HHL | ɥuŋgama | HHL | maɥuŋge | LHH | |
| 1874 | stamp (with feet) | | | ndale | | | | riko | HL | |
| 1885 | unload | kaŋgoa | LHH | fumbua | | | | φumbua | HHH | mn |
| 1886 | unload from head | surise | LHH | sune | HH | | | sune | HH | |
| 1887 | walk | aka, kende | , LH | kende | HH | kende | LL | ikende, kendeke | HH | |
| 1890 | beat | oβa | HH | oba | HH | oba | HL | oβa | HH | |
| 1894 | break (tr.) | boa | HH | boa | HH | boa | HL | boa | HH | |
| 1895 | burst | | | basa | HH | | | turua | HHH | |
| 1896 | burst open | | | basa | HH | | | turua | HHH | |
| 1897 | choke | uka | HH | uke | | | | ikwa | LH | |
| 1899 | destroy, spoil | bɔkise | HHH | tiba | HH | bukese | HHL | bɔkise | HHH | kl |
| 1908 | press | banda, mija | , LH | mija | LL | mita | LL | iteya, mete | LH | km, ln |
| 1909 | shoot | aŋgoa | LHH | aŋgoa | LLL | aŋgwa | HL | diφeφe | LLH | kml |
| 1911 | smash, break | rarea | LHH | lalee | LLL | | | rarea | LHH | |
| 1913 | stab | tuβa | HH | tuba | HH | | | tuβa | HH | |
| 1914 | throw | φimba | HH | fimba | LL | φimba | LL | φimba | HH | |
| 1920 | bar (door) (v) | riβa | LH | mbiŋgo | LL | | | riβa | LH | kn |
| 1925 | blow up, inflate | uŋgea | HHH | uŋgee | HHL | inje | | iŋgwea, uŋgea | HHH | |
| 1927 | contract, | mija | LHH | katise | | | | rerise | LHH | |

| Num | English | Lokundu (k) | Tone | Mbonge (m) | Tone | Londo (l) | Tone | Longolo (n) | Tone | Split |
|------|----------------------------------|-------------------|-----------|------------|------|-----------|-------|-------------|------|-------|
| | tighten (tr.) | | | | | | | | | |
| 1928 | create | weka | LH | keme | LL | | | weka | LH | kn |
| 1929 | dip | suβa | HH | ina | LL | | | ina | LH | mn |
| 1930 | disappear | ɲəŋgɔ | HH | ɲəŋgɔ | HH | | | ɲəŋgɔ | HH | |
| 1931 | drip | sɔŋjɔ | HH | tɔndɔ | HH | tɔ | HL | tɔndɔ | HH | mn |
| 1936 | fill | rondɛ | HH | londe | HH | | | rondɛ | HH | |
| 1940 | fold (v) | kuna | LH | ɲika | LL | ukula | LHL | ukura | HHH | ln |
| 1943 | hang up | kere | LH | ange | HH | kele | LL | φeta | HH | kl |
| 1944 | hold | koφa, uwara | HH | kofa | LLL | kofa | HL | koφa | HH | |
| 1945 | increase (tr.) | | | kɔlise | LLL | | | diφuise | LLHH | |
| 1950 | lose (tr.) | bɔre | HH | ɔbɔʔ | | bɔle | HL | bɔre | HH | |
| 1951 | make | bora | HH | bola | LL | bola | LL | bora | HH | |
| 1952 | melt (tr.) | | | ɲəŋgise | | | | ɲəŋgɔ | HH | |
| 1957 | prepare | bɔŋgisaneke | LHHH H | sakee | LLL | | | bɔŋgisane | LHHH | kn |
| 1958 | produce, give out | diβota | LH | liyonda | LLL | bule | HL | rionda | LLH | mn |
| 1959 | protect | sina | LH | sine | LL | | | keŋga | HH | km |
| 1960 | quench, extinguish | bɔre / rime | HH | lima | HH | lime | HL | bɔre | HH | kn,ml |
| 1964 | rub,wash | ɔkɔ | HH | ɔkee | HHL | ɔkɔ | HL | ɔkɔ | HH | |
| 1965 | scatter (intr.) | φaŋge | HH | faŋgee | | φake | LL | φaka | HH | |
| 1966 | scatter (tr.) | | | faŋga | HH | | | φaka | HH | |
| 1967 | scrape | soroa | HHH | ɔmbɔ | HH | ɔmbɔ | HL | ɔmbɔ | HH | mln |
| 1971 | shake (tr.) | βinda | HH | ɲiŋgise | LLL | ɲiŋge | LL | ɲiŋgise | HHH | mln |
| 1972 | shave (v) | soroa | HHH | sina | HH | solwa | HL | soroa | HHH | klm |
| 1977 | split (tr.) | sara | LH | sala | LL | sala | LL | sara | LH | |
| 1979 | spread (as di- sease or fire) | φaŋga | HH | koloa | LLL | | | φaŋganea | HHHH | kn |
| 1980 | sprinkle | φaφa | LH | seseɛ | LLL | sesele | LLL | mama | LH | ml |
| 1981 | squeeze | amoa | HH | amoa | HHL | ama | HL | ama | HH | |
| 1984 | stick (v -intr.) | bara | | kamba | HH | | | bara | HH | kn |
| 1985 | stick (v) (tr.) | | | kambise | | | | bara | | |
| 1987 | stretch | eɲoa | HHH | eɲoa | HHL | ɔɲue | HHL | eɲoa | HHH | |
| 1991 | tear (tr.) | ɲa | HH | kamboa | HHL | ɲatwa | HL | ɲa | LH | klm |
| 1995 | wash (tr.) | sosa | LH | sosa | LL | soswa | LL | sosa | LH | |
| 1997 | wind (v) | ekwili, diφeφe | LHH | ŋguŋga | LL | ŋguŋga | (L)LL | ŋguŋga | LH | mln |
| 1998 | wipe | tuta, dituta | LH | tua | LH | toa, tua | , LL | yo, siroa | LLH | kml, |

APPENDIX 6: Sample Mbonge Text

The following story was collected by Michael Scott from Mokwe Silas of Big Bekondo, Cameroon in January 2000. It was translated and transcribed by Eyakwe Joe.

The transcription has been modified to fit the orthographic recommendations in this paper.

Ngɔ e laka mboli. One momana fe a lu ngɔ. A mo lua dikɛɛ.
A leopard eats goats. This man also has a leopard. He has a plantain stalk.

A mo lua mboli. Nga a ma bula nina o maliba, e buleli ea a maliba ama
He has a goat. If he reaches a stream, on reaching the stream he says

“How?” Nga mɔ a mati dikɛɛ or nga anji ngɔ
“How (shall I cross)?” If he leaves the plantain stalk or if he takes the leopard

a tombani mone ɲili maliba one, mboli eni e ko da dikɛɛ dini,
and crosses to the other side of the water, the goat will eat the plantain stalk,

kwɔta-kwɔta. Nji ko kuma dikɛɛ. Nga mba nanji
“munch-munch.” I know that I won’t see the plantain stalk. If I take

mboli, mati na ngɔ eni, ndombani dikɛɛ, ngɔ
the goat, and leave it with this leopard, and cross with the plantain, the leopard

mboli, how? Ama “Esekpo,” ama, “Ngo bɔɛne bema beni.”
(will eat) the goat, how? “No doubt,” he said, “I will lose these things.”

A manja dikɛɛ na mboli a maakana. Matimbeli a
(So) he took the plantain and the goat and carried them away. On returning he

mo timbana mboli. A manja ngɔ a maakana.
brought back the goat. (Then) he took the leopard and went with it.

Free translation:

Everyone knows that leopards eat goats. Once there was a man who had a leopard, a plantain stalk and a goat. When he reached a stream, he wondered how he would cross. If he left the plantains and took the leopard across, the goat would eat the plantains and he would not have any plantains left. If he left the goat and leopard, and took the plantains across, the leopard would eat the goat. He thought to himself “Both ways I lose something.” Finally, he took the plantains and the goat across. Then he brought the goat back and took the leopard across.

REFERENCES

- Adams, M. J. 1990. *Beginning to read: thinking and learning about print*. Cambridge, MA: The MIT Press. As quoted in Weber in press.
- Allerton, D. J. 1982. Orthography and dialect. *Standard languages: spoken and written*, ed. by W. Haas, 57-69. Manchester: Manchester University Press.
- Berry, Jack. 1977. 'The making of alphabets' revisited. In *Fishman 1977*:3-16.
- Bird, Steven. 1999. When marking tone reduces fluency: an orthography experiment in Cameroon. *Language and Speech* 42:83-115.
- . 2000. Orthography and identity in Cameroon. *Notes on Literacy* 26:3-34.
- Bradley, Karen. 1992. Letter to Yoders.
- Büttner, Thomas Th. 1991. Aspects of language planning in Ashaninka (Eastern Peru). In *Von Gleich and Wolff 1991*:55-64.
- Buys, Dieke. 1983. *Samen de bass worden: Naar een model van een participatief ontwikkelingsproject*. (Leiden Development Studies, 5.) Leiden: Institute of Social and Cultural Studies, University of Leiden. As quoted in Kuperus 1985:8.
- Cameroon Government. 1987. *National Census, Meme and Ndian divisions*. Government of Cameroon: Yaoundé, Cameroon.
- Casad, Eugene. 1974. *Dialect intelligibility testing*. Norman, OK: Summer Institute of Linguistics of University of OK.
- Cerrón-Palomino, Rodolfo. 1991. Normalization in Andean languages. In *Von Gleich and Wolff 1991*:33-41.
- Dieu, Michel, and Patrick Renaud. 1983. *Atlas linguistique de l'Afrique Centrale (ALAC): Atlas linguistique du Cameroun (ALCAM). Situation linguistique en Afrique centrale: Inventaire préliminaire: le Cameroun*. Paris: ACCT (Agence de coopération Culturelle et Technique) and Yaoundé: CERDOTOLA (Centre régional de Recherche et de Documentation sur les Traditions orales et pour le développement des Langues Africaines) and DGRST (Délégation générale à la Recherche Scientifique et Technique).

- Ejedepang-Koge, S. N. 1971. The tradition of a people: Bakossi. A historico socio-anthropological study of one of Cameroon's bantu peoples. Yaoundé, Cameroon.
- Eyakwe, Joseph. 2000a. Planning meeting for Oroko language development held in CCAS Kumba. Unpublished minutes.
- . 2000b. Minutes for the general assembly meeting of Oroko language development held in Hon N.N. Mbile's house on the 6th of October 2000. Unpublished minutes.
- . 2002. 2000-word list (Mbonge, Lokundu, and Longolo). Unpublished.
- Feitelson, Dina. 1965. The alphabetic principle in Hebrew and German contrasted with the alphabetic principle in English. Paper presented at the International Reading Association Preconvention Workshop. As quoted in Venezky 1977:47.
- Fishman, Joshua A. (ed.) 1977. Advances in the creation and revision of writing systems. The Hague, The Netherlands: Mouton and Co.
- Friesen, Dan. 2001. Final prosody write-up. Unpublished manuscript.
- Friesen, Dan, and Lisa Friesen. 2001. Extendibility survey of Oroko (Orɔkɔ). Unpublished manuscript.
- Friesen, Dan, Michael Scott, and Rebecca Scott. 2001. Tone Description of Mbɔŋgɛ. Unpublished manuscript.
- Friesen, Lisa. 2002. Valence change and Oroko verb morphology (Mbonge dialect). Unpublished master's thesis, University of North Dakota, Grand Forks.
- Garvin, Paul L. 1954. Literacy as a problem in language and culture. Report of the fifth annual round table meeting on linguistics and language teaching, ed. by Hugo J. Mueller, 117-129. Washington, D.C.: Georgetown University Press.
- Grimes, Barbara F. (ed.) 2000. Ethnologue: languages of the world. 14th ed. Dallas, Texas: Summer Institute of Linguistics. Cited July 24, 2002. Available from http://www.ethnologue.com/show_language.asp?code=BDU and http://www.ethnologue.com/show_language.asp?code=NGO.
- Gudschinsky, Sarah C. 1973. A manual of literacy for preliterate peoples. Ukarumpa, Papua New Guinea: Summer Institute of Linguistics.
- Guthrie, Malcolm. 1953. The Bantu languages of western equatorial Africa. London: Oxford University Press for the International African Institute. As quoted in Kuperus 1985:10.

- Hedinger, Robert, 1992. Verbal extensions in Akɔɔse. *Afrika and Übersee*, Band 75:227-251.
- Helmlinger, Paul. 1972. *Dictionnaire duala-français suivi d'un lexique français-duala*. Paris: Klincksieck.
- Higgs, Theodore. (ed.) 1984. *Teaching for proficiency, the organizing principle*. Lincolnwood, IL: National Textbook Company.
- Ittmann, Johannes. 1978 (1939). *Grammaire du Duala*. Trans. L. A. Boumard. Douala: Collège Libermann.
- Johnston, H. 1919 Vol. 1, 1922 Vol. 2. *A comparative study of the Bantu and semi-Bantu languages*. Oxford: Clarendon. As quoted in Kuperus 1985:18-19.
- Kuperus, Juliana. 1985. *The Londo word: its phonological and morphological structure*. Tervuren, Belgique: Musée Royal de l'Afrique Centrale.
- Lafont, R. 1971. *L'ortografia occitana. Sos principis*. Montpelhièr: Centre d'Estudis Occitans. As quoted in Lamuela 1991.
- Lamuela, Xavier. 1991. A characterization of alphabetical writing systems. In Von Gleich and Wolff 1991:65-78.
- Mahlau, Axel. 1991. Some aspects of the standardization of the Basque language. In Von Gleich and Wolff 1991:79-94.
- Matras, Yaron, and Gertrud Reershemius. 1991. Standardization beyond the state: the cases of Yiddish, Kurdish and Romani. In Von Gleich and Wolff 1991:103-123.
- Mbongue, Joseph. 2000. *A rapid appraisal survey of Oroko*. Edited by Dan Friesen. Yaoundé, Cameroon: CABTAL (Cameroon Association For Bible Translation and Literacy).
- Meeussen, A. E. 1967. Bantu grammatical reconstructions. *Africana Linguistica* 3:79-212.
- Ministry of Higher Education and Scientific Research, Institute of Human Science. 1975. *Map of Cameroon; Buea- Douala NB-32-IV, 1:200,000*. 1st ed. National Geographic Centre: Yaoundé, Cameroon.
- Ministry of Higher Education and Scientific Research, Institute of Human Science. 1973. *Map of Cameroon; Buea-Mamfe NB-32-X, 1:200,000*. 2nd ed. National Geographic Centre: Yaoundé, Cameroon.

- Neba, Aaron S. 1987. *Modern geography of the republic of Cameroon*, second edition. Camden, NJ: Neba Publishers.
- Nida, Eugene A. 1960. *The role of language in contemporary Africa*. Practical Anthropology Supplement.
- . 1963a. What is phonemics? In Smalley 1963a:18-21.
- . 1963b. Practical limitations to a phonemic alphabet. In Smalley 1963a:22-30.
- Ouane, Adama. 1991. Language standardization in Mali. In Von Gleich and Wolff 1991:1-10.
- Pike, Kenneth. 1947. *Phonemics: a technique for reducing languages to writing*. Ann Arbor: The University of Michigan Press.
- Roberts, James. 1991. Grammar sketch of Lolue. Unpublished notes.
- Sampson, G. 1985. *Writing systems, a linguistic introduction*. London: Hutchinson. As quoted in Weber in press.
- SIL Africa Area. 2000. 2000-word list. Unpublished manuscript.
- Simons, Gary. 1983. *Language variation and limits to communication*. Dallas, Texas: Summer Institute of Linguistics.
- . 1994. Principles of multidialectal orthography design. *Notes on Literacy* 20(2):13–34.
- Smalley, William A., et al. 1963a. *Orthography studies: articles on new writing systems*. London: United Bible Societies.
- . 1963b. Writing systems and their characteristics. In Smalley 1963a:1-17 .
- . 1963c. How shall I write this language? In Smalley 1963a:31-52.
- . 1963d. A problem in orthography preparation. In Smalley 1963a:53-59.
- Tadadjeu, Maurice, and Etienne Sadembouo. (ed.) 1979. *General alphabet of Cameroon languages*. Yaoundé, Cameroon: University of Yaoundé.
- Tauli, V. 1968. *Introduction to a theory of language planning*. Uppsala: Acta Universitatis Upsaliensis, Studia Philologiae Scandinavicae Upsaliensia. As quoted in Büttner 1991:62.
- Venezky, Richard L. 1977. Principles for the design of practical writing systems. In Fishman 1977:37-54.

- Vernon-Jackson, Hugh O. H. 1967. *Language, schools, and government in Cameroon*. New York: Teachers College Press.
- Von Gleich, Utta and Ekkehard Wolff (eds.) 1991. *Standardization of national languages: Symposium on Language Standardization, 2-3 February 1991*. Hamburg, Germany: UNESCO Institute for Education and Graduiertenkolleg Mehrsprachigkeit und Sprachkontakte (Research Centre for Multilingualism and Language Contact), University of Hamburg.
- Weber, David J. in press. *Writing Quechua*. UCLA: Latin American Studies Center. (The English version of Weber, David J. 1994. *Ortografía: Lecciones del quechua*. Serie Lingüística Peruana 32. Yarinacocha, Pucallpa, Perú: Instituto Lingüístico de Verano.)
- Wimbish, John S. 1989. *WORDSURV: A program for analyzing language survey word lists*. Occasional Publications in Academic Computing, number 13. Dallas, TX: Summer Institute of Linguistics.
- Wölck, Wolfgang. 1991. *The standardization of Quechua: Some problems and suggestions*. In Von Gleich and Wolff 1991:43-54.
- Wolff, H. Ekkehard. 1991. *Standardization and varieties of written Hausa (West Africa)*. In Von Gleich and Wolff 1991:11-32.

