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# A GRAMMAR OF NZADI [B.865]

*A Bantu Language of  
the Democratic Republic of the Congo*

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## ABBREVIATIONS

<i>a.</i>	adjective	<i>nc.</i>	noun compound
<i>adv.</i>	adverb	NEG	negative
AFF	affirmative	N	homorganic nasal
AUX	auxiliary	NP	noun phrase
<i>c.</i>	conjunction	<i>num.</i>	numeral
C	consonant	O	object
COND	conditional ( <i>má</i> )	Obl	oblique object/adjunct
<i>d., DET</i>	determiner	<i>prep.</i>	preposition
DO	direct object	PERF	perfect
FUT	future	PRES	present
GL	genitive linker /é/	PROG	progressive
HAB	habitual	<i>pron.</i>	pronoun
<i>i.</i>	interrogative	<i>q.</i>	quantifier
IMP	imperative	RED	reduplication (future)
INF	infinitive	S	subject
IO	indirect object	SBJV	subjunctive
<i>interj.</i>	interjection	TAM	tense-aspect-mood
LOC	locative ( <i>kó</i> )	V	vowel
<i>n.</i>	noun	<i>v.</i>	verb
<i>N-</i>	nasal prefix	<i>vc.</i>	verb complex

Tone marks:	(´)	: H(igh)
	(`)	: L(ow)
	(^)	: HL falling
	(ˇ)	: LH rising
	(ˇ˘)	: LHL rising-falling
	(↓)	: Downstepped H



## CHAPTER 1: INTRODUCTION

- 1.1. Goals of this study
- 1.2. The Nzadi language
- 1.3. Structure of the grammar
- 1.4. Limitations of the study
- 1.5. Acknowledgements
- 1.6. Conventions and abbreviations

### 1.1. Goals of this Study

This study presents a grammar, texts, and lexicon of Nzadi, a virtually unknown Bantu language spoken along the Kasai River in the Democratic Republic of the Congo. During the academic year 2008-2009 we were fortunate to be able to work together when the third author, a native speaker of Nzadi, was a student at the Jesuit School of Theology at Berkeley. In Fall 2008, Simon Tukumu served as a language consultant for an undergraduate field methods course, jointly conducted by the first two authors, and attended by nine Berkeley undergraduate students and one visiting graduate student from Madrid. When the three authors originally met in the Winter of 2008 to see if Simon could serve as the language consultant for Linguistics 140, we were not only unaware of any previous work on Nzadi—or in fact, of any previous mention of the language in the literature: For example, there was (and as of June 2011 still is) no mention of Nzadi in the on-line *Ethnologue* (<http://www.ethnologue.com/>). We later discovered that a Belgian scholar, Nico Bursens, had collected word lists in the area, including Nzadi, which he had sent to the second author for inclusion in the Comparative Bantu On-Line Dictionary (CBOLD) database in the mid 1990s. That was it, the complete record on the Nzadi language.

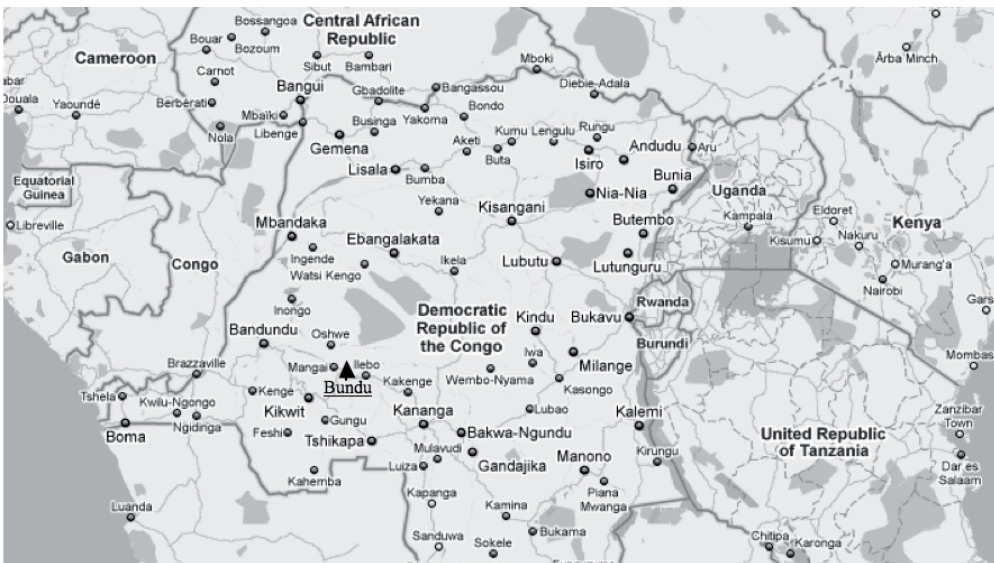


After the course ended, with five of the original field methods students, we decided to continue our investigations as a Study Group during the Spring 2009 semester. Our goal was to add to the previously recorded and analyzed materials which could then be assembled into a grammar of this heretofore unstudied Bantu language. The current grammar is based on information obtained from elicitations as well as three narratives (Texts 1-3) spoken by Simon Tukumu, with all sessions being recorded, transcribed, and analyzed by the members of the project.

While our goal was to cover as much ground as possible the resulting grammar is obviously limited by the logistics (cf. §1.4). As will be seen, the chapters which present the phonology and morphology are more comprehensive than those dealing with syntactic, semantic and pragmatic issues. Our goal has been to cover the basics in hopes that the work will be useful to Bantu scholars, general linguists, and to the speakers of Nzadi themselves. Needless to say, this is a first grammar, which we hope will be followed up by other studies.

## 1.2. The Nzadi Language

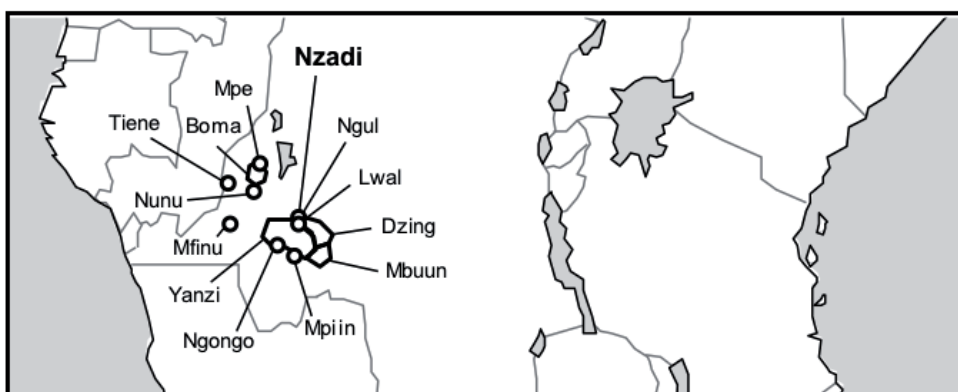
As mentioned, Nzadi is a small Bantu language spoken by fishing communities from Kwamuntu to Ilebo along the North side of the Kasai River in Bandundu Province (Democratic Republic of the Congo). Their villages are interspersed with others consisting of speakers of different languages, particularly Dzing, Mbuun, and Lwal. Simon Tukumu was born in Bundu, shown on the following map, where he lived until the age of 13.



©2010 Google - Map ©2010 AfriGIS (Pty) Ltd, Europa Technologies, Tele Atlas (+ our additional marking of Bundu)

He did his primary school in Bundu and Kikwit, secondary school in Bandundu, and subsequent studies in Bandundu and Kinshasa. He also speaks Dzing, Kikongo (Kituba) and Lingala. It is not known how many Nzadi speakers there are, but based on the number and size of the known Nzadi villages, we estimate several thousand.

Since Nzadi was virtually unknown until our study, it was not indexed within Malcolm Guthrie's Bantu zones A-S. It is clear, however, that Nzadi belongs with other languages in Guthrie's B.80 group, shown on the following map (courtesy of Jouni Maho):



Appropriately, Jouni Maho ([goto.glocalnet.net/mahopapers/nuglonline.pdf](http://goto.glocalnet.net/mahopapers/nuglonline.pdf)) has since designated it as B.865. Simon Tukumu considers it most closely related to Lwal (also unstudied), then perhaps to Dzing. It is not clear and we consider it unlikely that the B.80 languages constitute a genetic subgroup. Although there has been work on some of the B.80 languages, all are in need of further study. These languages seem to have been long in contact with each other and other Bantu languages from which they have either heavily borrowed or otherwise undergone areal changes. As will be seen in the following chapters, Nzadi has undergone much more reduction than some of the surrounding languages. It has significantly shortened words, many of which are now monosyllabic (Chapter 2), and it has lost almost all noun class agreement (Chapter 5) and derivational morphology, e.g. verb extensions (Chapter 6). As a result of the considerable phonetic erosion and morphological attrition, Nzadi has developed a largely isolating syntax, with many short words and particles. Such processes are not unknown in the Northwest Bantu area and borderland: Certain zone A Bantu languages, as well as Grassfields Bantu and other Bantoid languages in Cameroon have also lost syllables and morphemes. However, these languages are not daughters of the Proto-Bantu reconstructed by A. E. Meeussen and others, rather reconstruct to different proto languages. While the historical changes that have taken place in Nzadi definitely give it a “non-Bantu” feel, it is clear that Nzadi derives from a quite canonical Bantu type. Nzadi “feels” like a

simplified Bantu language rather than a Bantu language which has developed West African Benue-Congo characteristics (e.g. Nzadi does not have the “serial verb constructions” attested in Cameroon). In the relevant chapters we indicate the historical relations between specific Nzadi lexical and grammatical morphemes and Proto-Bantu. The chapters are followed by two appendices. The first, researched and written by Simon Tukumu, gives an overview of Nzadi history and culture. In the second, Clara Cohen presents an analysis of the correspondences between Proto-Bantu and Nzadi consonants, vowels, and tones.

### 1.3. Structure of the Grammar

The current study is organized into ten chapters, two appendices, three texts, and an English-Nzadi lexicon. The present chapter introduces the study and how it was done, ending with a discussion of the conventions followed and a list of abbreviations. Below is a brief summary of each of the nine following chapters, focusing particularly on what is of interest in each from a Bantu or general linguistic perspective.

Chapter 2 (“The Sound System”) presents the word and syllable structure of Nzadi followed by the vowel and consonant systems. It will be noted that words are considerably shorter than in canonical Bantu languages, and that they often end in a coda consonant as the result of the loss of the following vowel. The consonant and vowel systems are not particularly complex, although an interesting feature is that vowel length is contrastive in both open and closed syllables.

Chapter 3 (“Tone”) presents the tone system. Nzadi contrasts H (high) and L (low tone), as well as downsteps. It has a great tolerance for contour tones: HL, LH and LHL may all occur on a short or long vowel. A number of general tone rules are discussed (tone spreading, tone absorption, downstep creation), followed by morphologically conditioned tone. Of particular interest are the tonal alternations that take place in the genitive construction.

Chapter 4 (“The Noun”) shows that Nzadi nouns may be prefixless or may have a vowel or nasal prefix, reflecting earlier Proto-Bantu noun class prefixes. Although prefixed nouns usually change their prefix to form a plural, some are invariant, as are prefixless nouns, to which the proclitic *ba* may be added to mark plurality. Derived nominals are rather restricted, although compounding is quite common (and is non-distinct from genitive ‘noun of noun’).

Chapter 5 (“The Noun Phrase”) begins with pronouns, which take the same shape, whether subject, object, oblique, independent, or possessive. This is followed by a discussion of the genitive construction, significant as it is the only place in the grammar that marks a reduced form of the historical Proto-Bantu noun class agreement system. Adjectives and determiners at most show agreement in number and human/non-human, although most adjectives are invariant, as are some determiners. It is seen that invariant nouns can be inherently singular or plural, some occurring with both singular and plural modifiers. Numerals and most quantifiers do not show number or human/non-human agreement. A particularly interesting modifier is the participial productively formed with *ŋga-* plus a verb stem. The chapter ends by presenting the word order properties of noun phrases.

Chapter 6 (“The Verb”) presents the canonical shapes of verb stems, which can be either monosyllabic or bisyllabic. In most cases the latter can be shown to have a frozen causative, reversive or other extension. The problem here is determining which bisyllabic stems are native vs. borrowed from neighboring languages which have undergone less reduction. Inflected verb stems show relics of *-i* and *-e* suffixes in the past tense and subjunctive. The stem undergoes partial prefixal reduplication in the affirmative of the future tense. A striking fact is that lexicalized verb + noun combinations are often found where one would expect a simplex root from Proto-Bantu, e.g. PB *\*-dm-* ‘to cultivate’ vs. Nzadi *o-ker kisál*, lit ‘to do farming’, PB *\*-búmb-* ‘to mould’ vs. Nzadi *o-ker mfjě adziŋ* (lit. to make Dzing pottery).

Chapter 7 (“Tense, Aspect, Mood and Negation”) presents the inflectional properties of the Nzadi verb. Unlike many other Bantu languages, Nzadi does not distinguish degrees of past (or future) tense. A number of distinctions are expressed with additional auxiliaries, many of which are verbs. While the various main clause verb inflections mark negation with proclitics such as *ka* and *sa*, in subjunctive and relative clauses negation requires the use of the affirmative form of the verb *o-tún* ‘to refuse’ or *o-saŋ* ‘to refrain from’. (All negatives require a second marker *bɔ* to occur later in the clause.) The chapter ends with a discussion of the several different copular forms in the language.

Chapter 8 (“Basic Sentence Structure”) describes the different structures of main clauses. Verbs can be intransitive, transitive or ditransitive in Nzadi, the last taking two objects in sequence. In addition, there are various oblique forms: As an alternative to the double object construction, the locative proclitic *kó* can be used to mark ‘to (someone)’. Similarly, the noun *sám* ‘reason’ can mark a benefactive ‘for (someone)’. Adjuncts and adverbials are shown to have relatively free placement within their clause. The chapter ends with a discussion of the obligatory negative marker *bɔ*, appearing post-verbally in the clause, in addition to the proclitic negative marking described in Chapter 7.

Chapter 9 (“Coordination and Subordination”) considers the coordination of different kinds of constituents (noun phrase, verb phrase, full clause), all marked by the same conjunction *yɛ*, then turns to purposive subordination (‘in order that, in order to’), complement clauses (‘I saw that...’), temporal clauses (‘when’, ‘before’, ‘after’), and condition (‘if’) clauses, including counterfactuals.

Chapter 10 (“Information Structure”) pulls together different strategies used to foreground and background elements in the sentence. Non-subject relative clauses are particularly significant and interesting in Nzadi in requiring overt subject marking after the verb. This can take the form of ‘the book that read the child’ or ‘the book that the child read he’, the latter with what appears to be a pronominal copy. Yes-no and WH-questions are shown to optionally take the post-verbal subject structure, and similarly for clefts. Discussion of focus and topic marking is followed by a brief consideration of a few additional utterance types, including greetings and epithets.

The ten chapters are followed by two appendices. In the first, co-author Simon Nsielanga Tukumu provides an overview of the history and culture of the Nzadi people. The second appendix is by Clara Cohen, who systematically presents the Proto-Bantu - Nzadi consonant-

vowel- and tone correspondences. The latter are seen to be particularly conservative, as when Proto-Bantu \**mù-jánà* (> *mù-ánà*) becomes *mwǎân* ‘child’ with a LHL complex contour.

Three narratives then follow which were recorded with Simon Tukumu. Text 1 discusses Nzadi history, particularly how the Nzadi people got to be where they are. Text 2 describes the Nzadi market. Text 3 introduces *okúŋ*, an Nzadi fish which is too delicious to sell. A recipe for cooking it is offered.

The texts are followed by an English-Nzadi lexicon of over 1,000 entries. The only specialized part of the lexicon consists of the names of 26 fish species, collected with Jacob Lowenstein. Although not a huge list, we hope it will be useful to Bantuists, ichthyologists, and specialists of the Kasai River basin.

#### 1.4. Limitations of the Study

As indicated in §1.1, it is our sincere hope that this Nzadi grammar will be of use to scholars of different sorts, and ultimately to the Nzadi community as well (although this might better have necessitated a version of the grammar in French). In §1.1 we hinted at limitations of the study as well. Since we consider ourselves to be serious linguists and know that this kind of study is not ideal, we thought it important to list what these limitations are, as well as the steps we have taken to mitigate their effect on the study:

- (i) We have been able to work with only one speaker. Ideally we would have liked to work with several, particularly as we found variation in a number of places in the grammar (e.g. in the tone of the past tense proclitic /ó/, realized variously as H, HL and L). Because of this limitation we cannot tell if the inconsistencies we observed derive from systematic differences between dialects or age groups, or if they represent free or ideolectal variation. Where we have detected variation we have noted this in the relevant section of the grammar.
- (ii) Most of our information has come from elicitation rather than from direct observation of speakers using the language. We have tried to overcome this in part by collecting narratives, but this does not show how speakers exploit Nzadi in interactional situations.
- (iii) Related to this, we have done the study in Berkeley, not in Nzadi country, and we have worked in translation rather than through the first language.
- (iv) Lastly, there have been limitations of time and distance: Most of the materials were collected during the 2008-9 academic year, when all of us involved had many other obligations as well: Over the past two years the first author has also been engaged in researching and writing drafts of her dissertation, while the second author lives a life of extreme (and enjoyable) multi-tasking. During much of the research period the third author was a graduate student writing a masters thesis during the research period and returned to the DRC in September 2009. Since that time we have been able to consult only over email.

Despite the above limitations, we are quite pleased with what we have been able to accomplish and offer this grammar as a contribution to the documentation of a previously unknown language for which our field methods class received considerable publicity (see §1.5).

## 1.5. Acknowledgements

In this section we would like to thank the many people to whom we are grateful for their contributions and support of this project.

First, as part of the field methods course and study group which followed it, individual undergraduate students provided first drafts on subjects to be covered in individual chapters. Had they not all graduated, perhaps we could have continued working and produced an even better product! We thus would like to thank the following for their contribution to individual chapters and for their dedication to the project:

- Chapter 2: José-Maria Lahoz (Universidad Complutense de Madrid) and Ian Coffman
- Chapter 3: Getty Ritter
- Chapter 4: Chad Hegelmeyer and Massoud Toofan
- Chapter 7: Christina Agoff
- Chapter 8: John Keesling and Dillon Mee
- Chapter 9: Salgu Wissmath
- Chapter 10: Lue Yee Tsang
- Texts: Christina Agoff

We are grateful to the above students also for their contributions to other chapters as well and to the lexicon, since we all collected new lexical items throughout the investigation.

Still concerning the lexicon, we wish to thank Jacob (“Jake”) Lowenstein of the Department of Ichthyology at the American Museum of Natural History, New York, for spending time with us to elicit names of fish species, as the Nzadi are fishermen by trade.

Concerning Appendix B, we were delighted when Clara Cohen approached the second author to inquire whether he had a good topic for a term paper in her graduate course in historical linguistics. The result is the appended study of Proto-Bantu - Nzadi sound correspondences.

Outside Berkeley, we have been grateful for correspondences with several Bantuists who have commented on our project or have offered help in various ways. These include Koen Bostoen and Jacky Maniacky (Musée Royal de l’Afrique Centrale, Tervuren, Belgium), Salikiko Mufwene (University of Chicago), Timothée Mukash Kalel (Université de Kinshasa), Joseph Koni-Muluwa (Université Libre de Bruxelles), and Léon Pierre Mundeke (Centre Linguistique Théorique et Appliquée (CELTA)). For his advice we thank Jean-Marie Hombert (Laboratoire Dynamique du Langage, CNRS/Université de Lyon) and



acknowledge, with thanks, our joint France-Berkeley Fund travel grant which allowed for sustained consultations between Berkeley and Lyon.

In addition to those who physically participated in the project, we are grateful to a number of people and offices on the campus of the University of California, Berkeley. First, we are extremely grateful to the Committee on Research for approving a Humanities Graduate Research Assistantship to the first author so that she could participate as a full partner throughout the project. In both the field methods course and study group which followed, Thera Crane had a number of responsibilities in the documentation process, e.g. recording, transcription, translation, and archiving of texts and elicitation sessions, making presentations to the group and to others, writing up several of the chapters) as well as in her own elicitations, analysis and writing of the final work. Without this support it would have been extremely difficult to bring this project to fruition.

We are also grateful to several others on campus for the enthusiasm shown to us and our project (which combined research and teaching). First, within the Department of Linguistics, Sharon Inkelas, the chair, and the staff, Paula Floro, Belen Flores, Natalie Babler and Ron Sprouse, helped us in numerous ways, both with respect to the students, the language consultant, space, computation, and other matters. Martha Saveedra, Associate Director of the Center for African Studies, was so enthusiastic that she brought the Nzadi project to the attention of Kathleen Maclay, Senior Public Information Representative (UC Berkeley Media Relations), who subsequently did a press release. This in turn led to articles which appeared in the *Daily Californian* (thanks to Deepti Arora) the *San Francisco Chronicle* (thanks to writer Pat Yollin and photographer Mike Kepka), and *Science* (thanks to Greg Miller), and *Bridge* (a publication of the Jesuit School of Theology at Berkeley). The respective links to these stories (and videos) are the following:

[http://www.dailycal.org/article/102438/uc\\_berkeley\\_first\\_to\\_offer\\_remote\\_african\\_language](http://www.dailycal.org/article/102438/uc_berkeley_first_to_offer_remote_african_language)

<http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2008/10/06/BA7I133KE1.DTL>

<http://www.sciencemag.org/content/vol322/issue5901/newsmakers.dtl>

[http://www.scu.edu/jst/whatwedo/publications/upload/bridge\\_spring09-2.pdf](http://www.scu.edu/jst/whatwedo/publications/upload/bridge_spring09-2.pdf)

We also are particularly grateful to Simon Tukumu's sponsors at the Jesuit School of Theology at Berkeley who allowed him to take time from his studies, encouraging him and us at all stages: Father Tony Sholander, Rector, and Father Bill O'Neill, Professor of Social Ethics. We hope that they will also be happy with the results of this study.

We also would like to thank Dr. Kemmony ("Kems") Monaka, a visiting scholar from Botswana in the Department of Linguistics during 2007-8, who originally put the three of us in contact, thereby providing the crucial beginning point for this project.

In short, this project and the resulting grammar represent a team effort which would not have been possible without the tireless efforts of our students and others who contributed along the way. To all of them our sincerest thanks and hope that they will find value in what we have been modestly able to put together as a tribute also to their efforts. We know that

each of the students would personally like to join the first two authors in thanking Simon Tukumu for sharing his knowledge of the Nzadi language with us, for his commitment to the project, and for his friendship.

## 1.6. Conventions and Abbreviations

In this work we have tried to present the data in as clear fashion as possible so that it will have greatest access. Although we did not faithfully follow the Leipzig conventions for glossing linguistic data, in several chapters we provide word by word glosses to help the reader unravel the longer or more complex examples. In our glossing we have strayed a bit from certain practices in two ways: First, in many places we use English glosses like ‘I’ vs. ‘me’ instead of morphosyntactic features, e.g. ‘1sg.’ (first person singular). Similarly, we write ‘of’ instead of ‘genitive’ or ‘GL’ for ‘genitive linker’. Second, we sometimes keep the literal meaning of the form instead of the meaning found in the translation of the full form. For example, the form *sám* is always glossed with its nominal meaning ‘reason’, even if its meaning or function in the phrase or utterance is ‘for (someone)’ or ‘because of (someone, something)’. The WH question phrase *sám* <sup>1</sup>*é* *ĩgé* is translated ‘why?’ although the individual glosses will be ‘reason of what’. Where needed, we do follow the Leipzig convention in using a dot (.) to indicate that a form has two meanings in one. The following sentence exemplifies several of the conventions we follow:

<i>bɔ</i>	<i>ó</i>	<i>mpé</i>	<i>mĩ</i>	<i>ɔŋkàán</i>
they	PAST	me.give	me	book
‘they gave me a book’				

First, we gloss *bɔ* as ‘they’, not as ‘3pl. [+human]’. Second, grammatical glosses are put in small caps, e.g. PAST (tense). Third, ‘me.give’ indicates that *mpé* has both the 1sg. object agreement prefix N- as well as the verb stem. Note that we do not gloss the past tense change of vowel of *o-pá* ‘to give’ → *pé*, although we do gloss the reduplication of the future affirmative form, e.g. *pípé* ‘fut.RED’ (where the reduplicant *pí* precedes the verb stem *pé*). Readers should have little problem following these and other glossing conventions.

Concerning the orthography, the conventions followed are discussed in Chapters 2 and 3. It is perhaps worth repeating the tone marking practices here: A H tone is marked by an acute (´) accent. Tone is left unmarked on syllables which are L, e.g. *o-pá* ‘to give’ is pronounced L-H. However, L pitch is marked when it occurs in combination with H in a contour tone. If the contour is on a single vowel, HL falling tone is marked by a circumflex (ˆ), and LH rising tone by a hatchek (ˇ), e.g. *lɔŋ* ‘teacher’, *nɔ* ‘it’. If the contour occurs over a long vowel, both an acute and a grave accent are used: *swî* ‘red’, *màá* ‘mother’. The rising-falling contour LHL is written three ways, depending on syllable structure: *mwǎàn* ‘child’ (long vowel), *dzũ̀m̀* ‘ten’ (short vowel + nasal consonant), *lwó`* ‘hand, arm’ (short vowel in open syllable).





## CHAPTER 2: THE SOUND SYSTEM

- 2.1. Word and stem structure
- 2.2. Syllable structure
- 2.3. The vowel system
- 2.4. The consonant system
- 2.5. Phonological rules

### 2.1. Word and Stem Structure

From a Bantu perspective, it is striking how short words are: Out of 1,000 lexical entries, 859 (or 85.9%) contain a monosyllabic stem, while 141 (or 14.1%) have a bisyllabic stem. Words from all parts of speech can consist of a free-standing stem of one or two syllables (verbs are cited in their imperative form):

[2.1]	<i>nouns:</i>	nwí	‘bee’	méme	‘deaf and dumb person’
		bwɔ	‘mushroom’	tsébo	‘sneezing’
		mèé	‘oil, fat’	fufú	‘fufu (cassava meal)’
		duu	‘sky’	tufín	‘pus’
		wén	‘sun’	səmêk	‘sibling-in-law’
		bvuur	‘load’	kakál	‘aunt (sister of father)’

<i>verbs:</i>	bvâ	‘fall!’	báńtsa	‘think!’
	dzâ	‘eat!’	sărsa	‘help!’
	láà	‘cook!’	sŏnka	‘write!’
	wěè	‘take!’	bálul	‘turn around!’
	syâŋ	‘laugh!’	táfun	‘chew!’
	mằ	‘stand!’	sákan	‘play!’
<i>other:</i>	dzo	‘quiet’	nŏwε	‘today’
	pε	‘here’	sésêp	‘now’
	bŏ	‘they, them’	bulê	‘blue’
	pyoo	‘black’	tsétsé	‘very quiet’
	dzûm	‘ten’	petpét	‘soft, softness’
	bviir	‘strong, hard’	gangán	‘among’

As seen in the last four examples to the right, many prefixless bisyllabic words are borrowed or involve reduplication; cf. *sàbât* ‘shoe’, *màńgŭl* ‘mango’, *pɔpɔt* ‘mud’, *pεpε* ‘papaya’, *bukbuk* ‘fish (sp.)’, *kamyô* ‘car’ (French *camion* ‘truck’). In the case of bisyllabic verb stems, most are analyzeable as a root + suffix, e.g. *tâŋ* ‘count, read!’, *táŋsa* ‘teach!’ (=cause to count, read), *kâŋ* ‘close!’, *kăŋgul* ‘open!’ (=unclose) (see §4.6.2).

While a stem consists of a root and possible suffix, a word may either be prefixless, as in [2.1], or may have a prefix consisting of a vowel or homorganic nasal (cf. below for orthographic conventions concerning hyphens):

[2.2]	<i>nouns:</i>	okal	‘place’	osisá	‘vein, muscle’
		ekal	‘places’	epéké	‘liver’
		ikóór	‘frog’	iméme	‘sheep’
		ikwɔ	‘banana’	izibà	‘lake’
		adzá	‘water’	asíké	‘horns’
		mbvá	‘dog’	mpɔndó	‘millet’
		ndzɔɔ	‘elephant’	ndikíl	‘poison’
		<i>verbs:</i>	o-bva	‘to fall’	o-báńtsa
	o-dzá		‘to eat’	o-sarsa	‘to help’
	o-láà		‘to cook’	o-sŏnka	‘to write’
	o-wεε		‘to take’	o-balul	‘to turn around’
	o-syâŋ		‘to laugh’	o-táfun	‘to chew’
	o-mat		‘to stand’	o-sakan	‘to play’

<i>other:</i>	obé	‘bad’	o-kpú <sup>l</sup> kpê	‘short’
	ebim	‘already’	ikikër	‘small, thin’
	ípe	‘two’	ísyéme	‘six’
	atá	‘even’	íŋkën	‘other, another’
	mpa	‘new’	mpémbé	‘white’
	ŋge	‘what, which’	ntámá	‘a long time ago’

Again, some of the words with bisyllabic stems are reduplications or borrowings (cf. *avoká* ‘avocado’.) As seen in the examples, the tone of the prefix is low on nouns and verbs (which are cited with the infinitive prefix *o-*). The prefix of certain numerals, quantifiers and a few other forms may be high toned: *ómotúk* ‘one’, *ómo* ‘certain’, *mípi* ‘also, and’, *íŋgizyá* ‘-self’. The fact that the prefix of adjectives is low suggests that adjectives are nouns: *okúùr* ‘old’, *onân* ‘big’, *mpip* ‘dark’, *ndzya* ‘deep’ (cf. §5.4).

Within the lexicon there are five entries with apparent trisyllabic stems and one stem with four syllables: *mbwetéte* ‘star’, *osákátá* ‘a Sakata person’, *simisi* ‘shirt’ (French *chemise*), *o-tambika* ‘to sacrifice’, *o-zabakan* ‘to know each other’, *o-baluluka* ‘to turn (around), intr.’. Among other polysyllabic entries are compounds involving two separate stems, e.g. *ndzó nwi* ‘beehive’ (*ndzó* ‘house’ + *nwi* ‘bee’), *mwă lwō* ‘finger’ (*mwăàn* ‘child’, *lwō* ‘hand, arm’). While it is not always possible to identify the two parts of a compound, certain consonant sequences are found only across stem boundaries, e.g. *oful-mun* ‘breath’, where neither *oful* nor *mun* can be independently identified. If the second stem has a prefix, then there is no question that a compound or phrase is involved, e.g. *òté ŋkò* ‘pestle’ (*òté* ‘stick, tree’, *ŋkò* ‘mortar’), *ŋgal-mbíí* ‘cat’ (where neither *ŋgal* nor *mbíí* have been independently identified). Some such “compounds” are actually genitive constructions: ‘house of bee’, ‘stick of mortar’ (cf. §5.3).

In Nzadi all lexical stems begin with a consonant: Words which begin with a vowel (or syllabic nasal) consist therefore of a prefix + stem. In the case of nouns, these prefixes may differ in singular vs. plural forms, e.g. *okal* ‘place’ (pl. *ekal*), *okáàr* ‘woman’ (pl. *akáàr*), *ebin* ‘door’ (pl. *mbin*). Besides prefixes, other grammatical formatives (“morphemes”) can consist solely of a vowel, e.g. *ó* ‘past tense marker’, *é* ‘genitive linker’, *εε* ‘yes’.

We have seen that a stem can consist solely of a root or of a root + suffix. Another difference between root and stem occurs in a small number of nouns whose stem consists of a frozen, non-productive consonantal prefix + vowel-initial root, e.g. *mwăàn* ‘child’ (pl. *băàn*), *wăâr* ‘canoe’, (pl. *măâr*), *dzĩ* ‘eye’ (pl. *mĩ*). While these words consist of a frozen prefix + root, it is less obvious how to analyze Kikongo borrowings such as the following: *musumbwá* ‘fish (sp.)’ (pl. *misumbwá*), *likémba* ‘plantain’ (pl. *makémba*), *kisál* ‘work’ (plural, *bisál*). The change from singular to plural suggests that the initial CV syllables are prefixes, although they are not native to Nzadi. In other cases (and often alternatively), the plural is formed by adding *ba-* rather than by changing the initial CV, e.g. *likembe* ‘handpiano’ (pl. *ba-likembe*), *lulên* ‘boasting’ (pl. *ba-lulên*). Both such borrowings and

compounds are sometimes at odds with the otherwise general word, stem, and syllable structure of the language.

In this grammar the following orthographic conventions are followed concerning hyphens: If the following stem is “bound” in the sense that it cannot occur without the prefix, the two are written together. If the following stem is “free”, i.e. if it constitutes a word that could stand on its own, the prefix is separated by a hyphen. Thus:

- (i) In nouns the default plural marker *ba-* will be separated from what follows, since the singular can exist on its own, e.g. *siŋ* ‘net’ (pl. *ba-siŋ*), *ekɔ́* ‘cloud’ (pl. *ba-ekɔ́*).
- (ii) In verbs, the infinitive prefix *o-* is separated from the stem, as in [2.2]. While this might seem to follow from the fact that the bare verb stem can occur independently as an imperative, as in [2.1], the hyphen is used also to show that *o-* is more separate from verb stems than, say, the noun prefix *o-*. This is seen, first, by the fact that *o-* harmonizes to [ɔ] before a noun stem with /ɔ/, but not before a similar verb stem. The hyphen captures this fact: *ɔtsɔ́* ‘head’ vs. *o-tsɔ́* ‘to pound’. Second, the infinitive *o-* can be followed by the verb stem or by optional pronoun object agreement (§8.3.7), e.g. first person singular *N-*: *o-pá mĩ* ~ *o-mpá mĩ* ‘to give me’.

The same hyphen notation may be employed to indicate suspected compound boundaries, whether the individual parts are identifiable or not, e.g. *oful-mun* or *ofulmun* ‘breath’, *oŋgbatyem* or *oŋgbatyem* ‘lizard’.

## 2.2. Syllable Structure

As seen in §2.1, stems obligatorily begin with a consonant, while grammatical markers such as noun and verb prefixes may consist of a single V- or homorganic nasal N-. All vowels except /u/ may occur as a prefix: *ibaa* ‘man’, *ebin* ‘door’, *eké* ‘leaf’, *okáàr* ‘woman’, *ɔtɔk* ‘pipe’, *adzá* ‘water’, *mbum* ‘fruit’, *ndɔ́b* ‘fishhook’. VNC sequences also occur: *iŋkɔ́m* ‘fist’, *eŋkúr* ‘owl’, *ontsúŋ* ‘devil’, *ɔmpɔŋ* ‘fish (sp.)’. When not preceded by a vowel, a nasal prefix is syllabic, e.g. when occurring initially: *m.bum* ‘fruit’, *n.dɔ́b* ‘fishhook’. VNCV sequences are syllabified between the vowel and the nasal: *o.mbvul* ‘umbrella’, *i.ŋkɔ́m* ‘fist’, etc.

Concerning stems, syllables must be consonant-initial, possibly NC, and can have any of the shapes CV, CVV, CVC or CVVC, where VV = a long vowel:

[2.3]	<i>CV</i> :	nwí	‘bee’	bwɔ	‘mushroom’
		osó	‘face’	ŋkǎ	‘snail’
		o-dzá	‘to eat’	o-ke	‘to go’
	<i>CVV</i> :	duu	‘sky, up’	měé	‘oil, fat’
		itáá	‘sun’	ndzɔɔ	‘elephant’
		o-láà	‘to cook’	o-yεε	‘to sell’
	<i>CVC</i> :	nûr	‘body’	sôk	‘axe’
		abal	‘belly’	nten	‘snake’
		o-tûm	‘to send’	o-ker	‘to do’
	<i>CVVC</i> :	muur	‘person’	máán	‘wine’
		otáám	‘trap’	ŋkáàm	‘goat’
		o-byéèr	‘to drum’	o-báàn	‘to climb, rise’

As will be discussed in §2.4.2, not all consonants can be a final (coda) of the syllable, plus there are restrictions on V+C combinations.

While most stems are monosyllabic, Nzadi also has bisyllabic stems, many of which are borrowed, involve reduplication, or may be historical compounds. In all cases the second syllable of bisyllabic stems must also be consonant initial. In the following CV schemas, (.) stands for a syllable break:

[2.4]	<i>CV.CV</i> :	tsébo	‘sneezing’	pepê	‘papaya’
		isiké	‘horn’	iziba	‘lake’
		nǔwe	‘today’	okalí	‘yesterday’
	<i>CVC.CV</i> :	pambú	‘worm’	mámpa	‘bread’
		mpɔndó	‘millet’	oyánsi	‘a Yansi person’
		o-sɔnka	‘to write’	o-sarsa	‘to help’
	<i>CV.CVC</i> :	sabât	‘shoe’	semêk	‘sibling-in-law’
		ifakâm	‘stool’	ŋgyovûl	‘question’
		o-balul	‘to turn’	o-kasul	‘to divide’
	<i>CVC.CVC</i> :	dǔŋdǔŋ	‘okra’	taltál	‘mirror’
		tuktuk	‘motorcycle’	ntsumbûl	‘root’
		o-kaŋgul	‘to open’	o-báńtsa	‘to think’

While all of the above are found in Nzadi, syllabic shapes are not equally distributed across the lexicon. In fact, there are significant differences between the shapes of nouns and verbs:

[2.5]	CV	CVV	CVC	CVVC	CVCV	CVCCV	CVCVC	CVCCVC	CVVCVC	totals:
nouns:	78 (16.8)	61 (13.1)	232 (49.9)	38 (8.2)	24 (5.2)	10 (2.2)	11 (2.4)	8 (1.7)	3 (.6)	465
verbs:	48 (18.7)	15 (5.8)	130 (50.6)	14 (5.4)	∅ (0)	15 (5.8)	24 (9.3)	11 (4.3)	∅ (0)	257
totals:	126 (17.5)	76 (10.6)	362 (50.1)	52 (7.2)	24 (3.3)	25 (3.5)	35 (4.8)	19 (2.6)	3 (.4)	722
	616 (85.3)				106 (14.7)					

In [2.5], the first line of each cell refers to the number found with each shape among 465 noun stems and 257 verb stems. The second line in parentheses refers to the percentage of noun- vs. verb stems which have that shape. The following can be noted:

- (i) While all monosyllabic shapes are well attested in both nouns and verbs, nouns have a higher percentage of CVV stems than verbs.
- (ii) The bisyllabic shape CVCV is totally lacking in verbs.
- (iii) All other bisyllabic stem shapes are more robustly represented in verbs than in nouns whose bisyllabic noun stems are often reduplications (e.g. 6 out of the 8 CVCCVC noun stems), borrowed (e.g. at least 5 of the 10 CVCCV noun stems), or perhaps frozen compounds. Note that three bisyllabic stems, all nouns, have a long vowel in their first syllable: *ntsîri* ‘canerat’, *ipááfûl* ‘butterfly’, *màángûl* ‘mango’. The only entry which has a long vowel in its second syllable is *tukiir* ‘fish (sp.)’, perhaps a borrowing. It can thus be said that vowel length is associated with monosyllabicity in Nzadi. Finally, two exceptional borrowed nouns also end with a consonant sequence: *matónd* ‘thanks’, *sukamûnt* ‘gorilla’, both likely to be morphologically complex in the donor language.

### 2.3. The Vowel System

Nzadi distinguishes seven contrasting vowels, which can occur short or long:

[2.6]		front	central	back	front	central	back
	high	i		u	ii		uu
	high-mid	e		o	ee		oo
	low-mid	ɛ		ɔ	ɛɛ		ɔɔ
	low		a			aa	

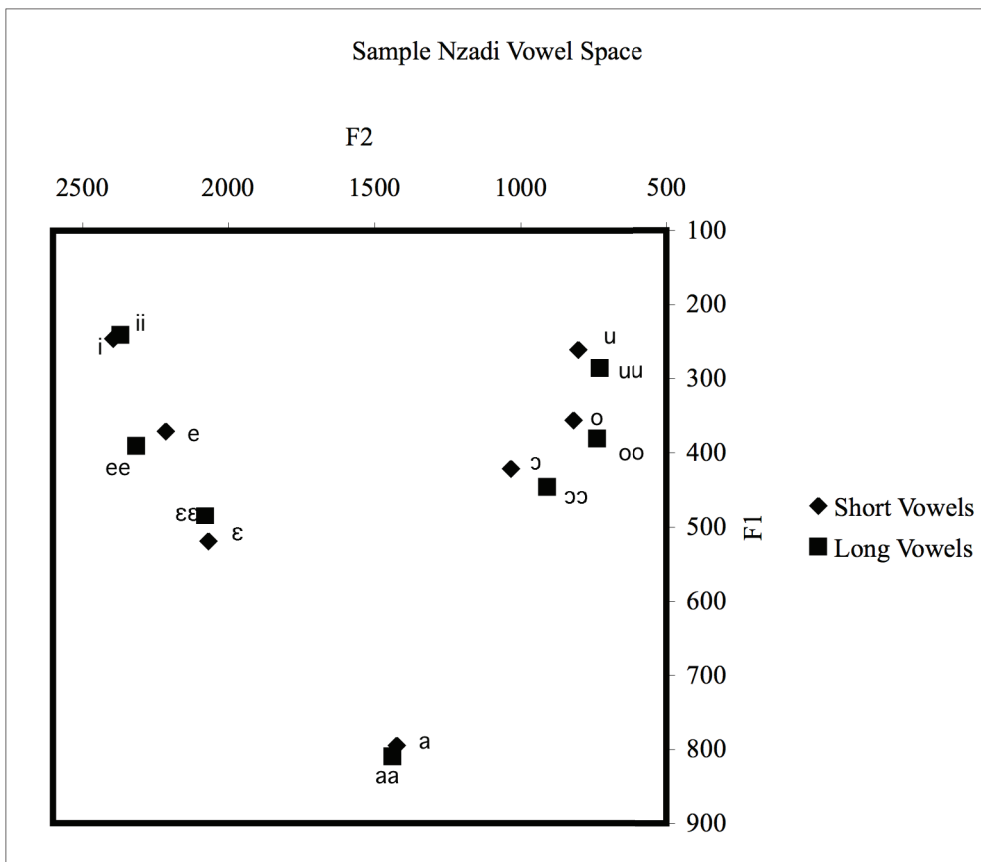
/i, e, ɛ/ are both front and unrounded, /u, o, ɔ/ are back and rounded, and /a/ is central and unrounded. Examples involving open monosyllabic stems are seen in [2.7].

[2.7]	/i, ii/	dzĩ	‘eye’	ndzii	‘cowry, money’
		o-sĩ	‘leave behind’	o-sii	‘frighten’
		o-tsĩ	‘to accept’	o-tsii	‘to float’
	/e, ee/	obé	‘bad’	mbéè	‘friend’
		ŋge	‘which’	ŋgèé	‘pity’
		ntswé	‘fish’	ntswèé	‘facial hairs’
	/ɛ, ɛɛ/	ndyé	‘injury’	ondyéé	‘white man’
		o-kɛ	‘to go’	ɛkèé	‘leaf’
		pɛ	‘here’	o-pɛɛ	‘to look for’
	/u, uu/	otû	‘night’	tuu	‘termite’
		kifu	‘error’	ifuu	‘hole’
	/o, oo/	mpfyô	‘cold’	pyoo	‘black’
		ibvyô`	‘breast’	ogyôó	‘hiccup’
	/ɔ, ɔɔ/	ɔdzɔ	‘good’	ndzɔɔ	‘elephant’
		ekó	‘cloud’	ekɔɔ	‘bee’
		ɔtɔ	‘bow & arrow’	o-tôô	‘to gather, pick’
	/a, aa/	ibá	‘palm tree’	ebáá	‘groundnut paste’
		eká	‘fur’	ŋkáá	‘crab’
		o-lya	‘to pass’	o-lyaa	‘to cry’

An instrumental study by José María Lahoz shows the vowel space of Nzadi speaker Simon Tukumu to be as in [2.8]. In general, long vowels show more extreme formant values, resulting in a triangle slightly bigger than that of short vowels. Thus, /ee/ presents a higher F2 than /e/, such that the long vowel is realized more front than the short one. In addition, the long back vowels are all realized further back than their short counterparts ( $p < .01$  in all cases, except for /uu/, where  $p < .05$ ). The seven long and short vowels have the following distributions in the vowel space.



[2.8]



The table in [2.9] shows the approximate mean values of F1 and F2 for all these vowels.

[2.9] Nzadi Formant Frequencies

	SHORT VOWELS			LONG VOWELS		
		F1		F2		F1
	a	795	1425	aa	810	1440
	ε	520	2070	εε	485	2080
	e	370	2215	ee	390	2315
	i	245	2395	ii	235	2370
	ɔ	420	1035	ɔɔ	445	910
	o	355	820	oo	380	740
	u	260	805	uu	285	730

While some of the stems seen above in [2.7] contrast only in length (and possibly tone), it has been hard to find minimal pairs for some of the vowels. The reason for this can be seen in the following table showing the number of open monosyllabic stems with short vs. long vowels:

[2.10]		<i>i</i>	<i>e</i>	<i>ɛ</i>	<i>u</i>	<i>o</i>	<i>ɔ</i>	<i>a</i>	<i>totals:</i>
	<i>CV:</i>	21	15	25	3	16	15	58	153
	<i>CVV:</i>	15	8	11	18	2	8	23	85
	<i>totals:</i>	36	23	36	21	18	23	81	238

Out of a sample of 238 open monosyllabic stems, 153 or 64.3% are CV vs. 85 or 35.7% which are CVV. In other words, lexical CV entries outnumber lexical CVV by nearly two to one. Despite this, it is puzzling that there are only 3 entries with short /u/, and only two with long /oo/, both of which have an initial Cy consonant: *pyoo* ‘black’, *ogyoo* ‘hiccup’. Still, there can be no question that vowel length is contrastive in open monosyllabic stems.

Vowel length is also contrastive in closed syllables, but, with one exception, only in syllables which end in /m/, /n/ or /r/:

[2.11]	<i>-m :</i>	<i>ntô̄m</i>	‘taste’	<i>ntsó̄ðm</i>	‘fork’
		<i>ŋkám</i>	‘hundred’	<i>ŋkáàm</i>	‘goat’
		<i>itâm</i>	‘cheek’	<i>otáàm</i>	‘trap’
	<i>-n :</i>	<i>ŋkén</i>	‘seed’	<i>mikéén</i>	‘leprosy’
		<i>ekûn</i>	‘firewood’	<i>ekúún</i>	‘hip’
		<i>imăn</i>	‘stone’	<i>máán</i>	‘wine’
	<i>-r :</i>	<i>ikóór</i>	‘frog’	<i>iyór</i>	‘place’
		<i>eŋkûr</i>	‘owl’	<i>okúùr</i>	‘old’
		<i>ekâr</i>	‘incompetent’	<i>okáàr</i>	‘woman’

The one exception that has been noted is *ondáàl* ‘vegetable (sp.)’. As seen in [2.12], short vowels are much more common than long vowels before *-m* and *-n*, with a more even distribution of long and short vowels before *-r*:

[2.12]	-m	-n	-r	nouns	verbs	totals
<i>CVC</i> :	65	54	23	100	42	142
<i>CVVC</i> :	9	21	21	37	14	51
<i>CiiC</i> :	0	0	3	2	1	4
<i>CεεC</i> :	0	1	2	2	1	3
<i>CuuC</i> :	0	4	6	6	3	10
<i>CɔɔC</i> :	1	3	2	6	0	6
<i>CaaC</i> :	8	14	9	22	9	31
<i>totals</i> :	74	75	44	137	56	193

Also seen in [2.12] is that the vowel /aa/ accounts for 31 out of 54 or 57.4% of the CVVC entries. (The vowels /ee/ and /oo/ do not occur in closed syllables—see next paragraph.) Finally, the percentage of CVVC to CVC stems is roughly equivalent in nouns and verbs (27.0% and 25.0%, respectively).

While all seven vowels contrast in open syllables (cf. [2.7]), there are significant restrictions on vowel contrasts in closed syllables. Just as /CooC/ syllables do not exist in Nzadi, short /o/ also does not occur in closed syllables at all:

[2.13]	<i>/CiC/</i>	min	‘mouth’	mbin	‘calabash’
		o-lil	‘to swim’	o-yīb	‘to steal’
		okin	‘entire’	ebim	‘already, previously’
<i>/CeC/</i>	idzên	‘tooth’	oŋgêr	‘thing’	
	o-ker	‘to do’	o-mên	‘to dance’	
	o-lek	‘surpass’	ĩŋkěŋ	‘other, another’	
<i>/CεC/</i>	nten	‘snake’	kyêŋ	‘happiness, joy’	
	o-dêf	‘to borrow’	o-bêl	‘to suffer’	
	o-fêt	‘should, must’	ntêt	‘first’	
<i>/CuC/</i>	ibúl	‘valley’	ekwut	‘ear’	
	o-fur	‘to pay’	o-sùm	‘to buy’	
	dzûm	‘ten’	ofûl	‘still’	
<i>/CoC/</i>	<i>(no examples)</i>				
<i>/CɔC/</i>	lôŋ	‘teacher’	ngɔm	‘drum’	
	iyór	‘place’	mpɔs	‘Saturday, week’	
	o-tɔ	‘to boil’	o-pwɔp	‘to sift’	
<i>/CaC/</i>	imăŋ	‘stone’	ŋgab	‘canoe’	
	osyâŋ	‘to laugh’	o-kât	‘to hold, catch’	
	onân	‘big’	dyâk	‘again’	

As seen from the numbers in [2.14], /CuC/ is overrepresented:

[2.14]	/i/	/e/	/ɛ/	/u/	/o/	/ɔ/	/a/	total
CVC:	49	32	30	116	0	54	95	376

It may therefore be the case that historical \*CoC merged with \*CuC. The story concerning /CeC/ is not as clear. First, note that what we write as CeC is really pronounced with a mid-high central vowel (IPA [ə]), here transcribed with [i]: *ebep* [ebɪp] ‘lip’, *ɲkêm* [ɲkîm] ‘monkey’, *oŋgêr* [oŋgîr] ‘thing’. Since /o/ does not occur in closed syllables, which may have merged with /u/, it is tempting to interpret CeC as the realization of /CiC/. However, (near-) minimal pairs show that such an analysis is not possible:

[2.15]	/i/ vs. /e/	mpip	‘dark’	mpep	‘cave’
		o-dzik	‘to extirpate’	odzek	‘to tremble’
		mpîk	‘slave’	ipek	‘shoulder’
		elim	‘fish (sp.)’	elem	‘glue’
		isín	‘squirrel’	esen	‘louse’
		mpîk	‘slave’	ipek	‘shoulder’
	/e/ vs. /ɛ/	íŋkě̀n	‘(an)other’	ɲkền	‘seed’
		o-yềr	‘to drive away’	idzềr	‘fish (sp.)’
		elem	‘glue’	malềm	‘slowness’
		esen	‘louse’	ntền	‘snake’

For further restrictions on VC rimes, see §2.4.

## 2.4. The Consonant System

Nzadi contrasts the following single consonants in stem-initial position, where parentheses indicate rare or non-contrastive consonants which require discussion:

[2.16]	<i>labial</i>	<i>alveolar</i>	<i>palatal</i>	<i>velar</i>	<i>labiovelar</i>
<i>stops</i>	p b	t d		k (g)	kp (gb)
<i>affricates</i>	(pf) bv	ts dz			
<i>fricatives</i>	f v	s z			
<i>nasals</i>	m	n			
<i>liquid</i>		l (r)			
<i>glides</i>			y		w

As seen, Nzadi distinguishes five classes of stem-initial consonants: (unaspirated) stops, affricates, fricatives, nasals and the oral sonorants /l/, /w/ and /y/. Although five places of articulation are indicated, only the glide *y* (IPA [j]) is palatal, only stops can be velar, and

only stops and the glide /w/ can be labiovelar. What this means is that consonant contrasts are weighted towards the labial and alveolar places of articulation.

The orthographic representation of consonants closely follows the IPA values except for the palatal glide which is written *y* instead of *j*. Where two different consonants are indicated under the place of articulation, the consonant on the left is voiceless, while the consonant on the right is voiced, e.g. /p/ vs. /b/. As seen, voicing is contrasted on stops, affricates and fricatives. The eight contrasting stops are illustrated in [2.17].

[2.17]	/p/:	epim	‘fish (sp.)’	/b/:	ebim	‘already’
		ípe	‘two’		obé	‘bad’
		ipek	‘shoulder’		obek	‘size’
	/t/:	ɔtək	‘pipe’	/d/:	ndək	‘sorcery’
		tuu	‘termite’		duu	‘sky, up’
		etúŋ	‘fly’		ndúŋ	‘pepper’
	/k/:	iŋkǎm	‘fist’	/g/:	ŋgɔm	‘drum’
		ŋkáb	‘paddle’		ŋgab	‘canoe’
		ŋkûl	‘tortoise’		ŋgûl	‘pig’
	/kp/:	okpé	‘sho·rt’	/gb/:	ŋgbee	‘side’

Despite the contrasts in [2.17] there are two issues. First, of 18 entries with stem-initial /g/, only one of them is not preceded by a nasal prefix: *o-gɔŋsa* ‘to expand’. Since historical \**k* and \**g* merge as /k/ in Nzadi (see Appendix B), it is possible that current entries with /g/ are borrowings, perhaps also *o-yuvul* ‘to ask (someone)’ and *ŋgyovûl* ‘question’. Even more limited is /gb/ which has been found in only two entries, in both cases after a nasal: *ŋgbee* ‘side’, *ɔŋgbatyem* ‘lizard’. While there are 10 entries with /kp/, e.g. *ikpí* ‘tick’, *o-kpá* ‘to die’, *okpé* ‘short’, only one has a closed syllable stem, *ɔŋkpěŋ* ‘flea, jigger’, and all except the reduplicated first syllable of *okpú<sup>l</sup>kpé* ‘short’ are followed by /i/, /e/ or /a/.

Affricates and fricatives also contrast in voicing:

[2.18]	[pf]:	mpfùú ‘bird’	/bv/:	ebvúú ‘fish (sp.)’
		mpfúk ‘debt’		ibvuk ‘monkey (sp.)’
		mpfyě ‘cooking pot’		mbvyê ‘wrapping of sth.’
	/ts/:	ntsaa ‘basket’	/dz/:	ndzaa ‘hunger’
		ntsé ‘down, bottom’		ndzéé ‘river’
		o-tswâ ‘to bring’		o-dzwâ ‘to kill’
	/f/:	o-fup ‘to grill’	/v/:	a-vúp ‘dew’
		o-fin ‘to grasp’		viŋ ‘itch’
		o-fûl ‘to still do sth.’		o-vîl ‘to disappear’
	/s/:	oswǒŋ ‘fish (sp.)’	/z/:	izwǒŋ ‘field, farm’
		osya ‘beautiful’		o-zyâ ‘to know’
		o-sâŋ ‘to refrain’		o-zâŋ ‘to lack’

The complication in this case is an asymmetry. While the fricatives /f, v, s, z/ regularly become affricated to [pf, bv, ts, dz] after a nasal (see §2.5.2), /bv/, /ts/ and /dz/ can all occur in the absence of a nasal prefix: *o-bva* ‘to fall’, *o-tsá* ‘to descend’, *o-dzá* ‘to eat’. On the other hand, [pf] only occurs as the realization of /f/ after a nasal, e.g. *ompfî* ‘morning’, *mpfer* ‘flour’.

The following examples show contrasts between /m/ and /n/, /l/ and /d/, and /y/ and /w/:

[2.19]	/m/:	ómǒ ‘(a) certain’	/n/:	ǒ-nó ‘to drink’
		imǎn ‘stone’		onân ‘big’
		mε ‘but’		nε ‘who’
	/l/:	o-lǒŋ ‘to teach’	/d/:	dǒŋdǒŋ ‘okra’
		o-láà ‘to cook’		ndáá ‘story, voice’
		elíŋ ‘shade’		díŋdíŋ ‘middle of night’
	/y/:	o-yεε ‘to sell’	/w/:	o-weε ‘to choose, pick’
		oyá ‘ripe’		o-wá ‘to finish (intr.)’
		iyáâr ‘funnel’		o-wáâr ‘to dress, put on’

In addition to simple stem-initial consonants, consonants other than /kp/, /gb/, /y/ and /w/ can be followed by a /y/ or /w/. Examples:

[2.20]	/py/:	pyoo	‘black’	/pw/:	o-pwɔn	‘to decay’
	/by/:	obyê	‘many’	/bw/:	o-bwâl	‘to harvest’
	/pfy/:	mpfyô	‘cold’	/pfw/:		
	/bvy/:	ibvyô`	‘breast’	/bvw/:	mbwâ	‘path’
	/fy/:			/fw/:	o-fwanan	‘to resemble’
	/vy/:	o-vyâ	‘to call’	/vw/:		
	/my/:	myáá	‘there’	/mw/:	mwǎàn	‘child’
	/ty/:	o-tyên	‘to say, tell’	/tw/:	etwâ	‘bag’
	/dy/:	ndyé	‘injury’	/dw/:	ndwe	‘dream’
	/tsy/:	o-tsyak	‘to pour’	/tsw/:	otswâ	‘to bring’
	/dzy/:	ndzyěm	‘bat’	/dzw/:	o-dzwâ	‘to kill’
	/sy/:	osya	‘beautiful’	/sw/:	oswâ	‘tomorrow’
	/zy/:	o-zyâ	‘to know’	/zw/:	o-zwâ	‘to hear’
	/ny/:	nyê	‘calm’	/nw/:	o-nwaan	‘to fight’
	/ly/:	o-lyaa	‘to cry’	/lw/:	o-lwâ	‘to vomit’
	/ky/:	o-kyá	‘tail’	/kw/:	ɲkwôn	‘bean’
	/gy/:	o-ɲgyen	‘stranger’	/gw/:	ɲgwóm	‘cow’

Of the above sequences, the following occur the most frequently in our lexicon:

[2.21]	/ky/	(10)	/kw/	(16)	/tsw/	(6)
	/by/	(8)	/lw/	(8)	/zw/	(6)
	/ly/	(5)	/bw	(7)	/sw/	(5)
			/mw/	(7)	/gw/	(5)
			/tw/	(6)		

On the other hand, we have found only one or two examples each of the following sequences:

[2.22]	/pfy/	(2)	/byw/	(2)
	/bvy/	(2)	/dw/	(2)
	/vy/	(1)	/fw/	(1)
	/my/	(1)		
	/ty/	(1)		

It is not clear whether the absence of /fy/ and /vw/ is systematic or whether these non-occurrences are accidental gaps.

Note that the above are analyzed as /CyV/ and /CwV/ sequences, rather than /CiV/ and /CuV/. An argument in favor of this representation is that there are cases where these sequences are followed by a contrastively long vowel, e.g. *o-lyaa* ‘to cry’ vs. *o-lya* ‘to pass’), *ondyéé* ‘white man’ vs. *ndyé* ‘injury’. If analyzed as vowel sequences, this would produce the

representations *o-liaa* and *ondiÉÉ* with three vowels in the same syllable, a sequence that doesn't otherwise exist. In addition, if interpreted as glides, we can explain the absence of /wy/ and /yw/ as a prohibition of glide sequences. Note that the sequence [wi] is not found, while [yu] is: *o-yûp* 'to ask (for)', *iyûr* 'family'.

While nasal prefixes are syllabic and tone-bearing in isolation, e.g. *m.bvá* 'dog', *n.dôb* 'fishhook', word-initial VNC appears to be syllabified as V.NC. As such, NC can be considered a complex onset. Consonants which are found in such clusters are illustrated in [2.23].

[2.23]	/mp/:	ompɔŋ	'fish (sp.)'	cf.	mpos	'Saturday, week'
	/mb/:	ambuun	'Mbuun people'		mbũn	'forehead'
	[mpf]:	ompfi	'morning'		mpfer	'flour'
	/mbv/:	ombvul	'umbrella'		mbvût	'response'
	/nt/:	intuntu	'flower'		ntûl	'chest'
	/nd/:	ondûk	'gun'		ndûŋ	'pepper'
	/nts/:	entsaŋga	'island'		ntsun	'odor'
	/ndz/:	ondzîŋ	'idiot'		ndzɔɔ	'elephant'
	/ŋk/:	eŋkûr	'owl'		ŋkûl	'cane'
	/ŋg/:	oŋgul	'tobacco'		ŋguŋ	'bell'
	/ŋkp/:	oŋkpěŋ	'flea, jigger'		ŋkpi	'lion'
	/ŋgb/:	oŋgbatyem	'lizard'		ŋgbee	'side'

A nasal cannot precede another nasal /m/ or /n/, the liquid /l/, or the glides /w/ and /y/. A nasal normally cannot be followed by a fricative. However, besides the name Nzadi, which is how others refer to the language (the self designation is *indzée*), two exceptional borrowings have been noted: *kimvûk* 'group', *oyânsi* 'a Yansi person'. Since /pf/ does not exist without a preceding nasal, the phonetic sequence [mpf] is best analyzed as /mf/. The sequences [mbv], [nts], and [ndz] represent a neutralization of /mbv, nts, ndz/ with /mv, ns, nz/. Finally, the few words with [ny] and [nw] are analyzed as /Cy/ and /Cw/ as in [2.20]: *nyê* 'calm', *nwí* 'bee', *o-nwaan* 'to fight'. Evidence that /ny/ and /nw/ are like /ly/ and /lw/ rather than /nd/ etc., is the fact that there are no glide-initial noun stems which take a VN- prefix. (The compound *onyantsyê* 'gorilla' is likely derived, perhaps from *o-nya* 'to excrete' + *ntsyê* 'bush').

#### 2.4.2. Coda Consonants

Of the 682 entries with monosyllabic stems, 440 or 64.5% have the shape CVC or CVVC. Of these 440, 424 or 96.4% have one of the following eight as their final consonant:



[2.24]

	<i>labial</i>	<i>alveolar</i>	<i>velar</i>
<i>stops</i>	p	t	k
<i>nasals</i>	m	n	ŋ
<i>liquids</i>		l r	

As seen, the typical codas in Nzadi are either voiceless stops, nasals, or liquids. What is interesting in [2.24] is that two consonants now appear that cannot be onsets: /ŋ/ and (trilled) /r/. Recall from [2.11] that CVVC stems can end only in /m/, /n/ or /r/. These can be compared with the representative examples of CVC stems in [2.25]:

[2.25]

/p/:	elep	‘chin’	/m/:	mbum	‘fruit’
	mpip	‘dark’		ntsêm	‘bright’
	o-sup	‘to tease’		o-lwôm	‘to ask’
/t/:	lût	‘spoon’	/n/:	idzên	‘tooth’
	ntêt	‘first’		onân	‘big’
	o-kât	‘to hold, catch’		o-tîn	‘to escape’
/k/:	ondûk	‘gun’	/ŋ/:	ŋguŋ	‘bell’
	mpîk	‘slave’		siŋ	‘net’
	o-lek	‘to surpass’		o-zwôŋ	‘to surround’
/l/:	ebul	‘metal, iron’	/r/:	eŋkûr	‘owl’
	ntâl	‘expensive’		ekâr	‘incompetent’
	o-dzel	‘to wait’		o-ker	‘to do, make’

The following table shows the distribution of vowels before the above eight coda consonants:

[2.26]

	<i>-p</i>	<i>-t</i>	<i>-k</i>	<i>-m</i>	<i>-n</i>	<i>-ŋ</i>	<i>-l</i>	<i>-r</i>	<i>CVC</i>	<i>CVVC</i>	<i>all:</i>
<i>i, ii</i>	1	2	4	9	13	14	4	4	47	4	51
<i>e</i>	3	1	4	2	11	1	7	5	34	0	34
<i>ɛ, ɛɛ</i>	0	3	1	6	12	1	5	3	28	3	31
<i>u, uu</i>	6	3	12	34	12	15	23	21	116	10	126
<i>ɔ, ɔɔ</i>	3	4	4	15	11	13	4	3	51	6	57
<i>a, a</i>	8	4	3	16	20	42	19	13	94	31	125
<i>totals:</i>	21	17	28	82	79	86	62	49	370	54	424

Based on the totals in the bottom row and last columns, the relative lexical frequency of the different coda consonants and internal vowels can be schematized as in [2.27]:

[2.27]	<i>nasals</i>	<i>liquids</i>	<i>stops</i>
	-ŋ > -m > -n	-l > -r	-k > -p > -t
	<i>back vowels</i>	<i>front vowels</i>	
	u > a > ɔ	i > e > ε	
	aa > uu > ɔɔ	ii > εε	

As seen, the three nasal consonants occur the most frequently in codas, followed by the two liquids, and the three stops. Back vowels occur more frequently in closed syllables in lexical entries than front vowels, with /u/ and /a/ being disproportionately represented. While long vowels are much less frequent in closed syllables, the overrepresentation of /a/ (31 out of a total of 54) is quite striking, as is the absence of /ee/. (Neither /o/ nor /oo/ occur in closed syllables, and in fact, there are only two occurrences of /oo/ in the total lexicon: *pyoo* ‘black’, *ogyòó* ‘hiccup’.) Of the eight coda consonants, /-n/ has the least skewed distribution of preceding front and back vowels: 36 vs. 43.

The above accounts for 424 of the 440 CV(V)C stems in the lexicon. The remaining 16 are the following:

[2.28]	/b/ (5)	ŋgab ‘canoe’	okûb ‘color’
		ŋkáb ‘paddle’	o-yíb ‘to steal’
		ndôb ‘fishhook’	
	/s/ (7)	kyes ‘happiness’	makâs ‘anger’ (ma = a borrowed prefix)
		mes ‘table’	mpɔs ‘Saturday, week’
		ŋkîs ‘medicine’	o-pûs ‘to excite, push’
		mpâs ‘pain’	
	/f/ (1)	o-dêf ‘to borrow’	
	/v/ (1)	mpêv ‘spirit’	
	/y/ (2)	mɔy ‘breath, soul’	bôy ‘servant’

Those ending in /b/ are occasionally pronounced with final [p]. While it is not clear if the *b*-final words are native Nzadi forms, the rest are either clear or likely borrowings. It is safe therefore to treat these 16 entries as exceptional.

Aside from the occurrence of one entry with /b/ and none with /p/, the same coda consonants occur at the end of bisyllabic stems:

[2.29]	/b/:	(1)	osakûb	‘log’		
	/t/:	(3)	pɔtpɔt	‘mud’	sabât	‘shoe’
	/k/:	(6)	ómɔtúk	‘one’	o-pasuk	‘explode’
	/m/:	(2)	ifakâm	‘stool’	oŋgbatyem	‘lizard’
	/n/:	(8)	mbatên	‘fish (sp.)’	o-tafun	‘to chew’
	/ŋ/:	(3)	dʒŋdʒŋ	‘okra’	o-kaliŋ	‘to fry’
	/l/:	(35)	ndikîl	‘poison’	o-belul	‘to heal’
	/r/:	(2)	ikíkêr	‘small’	tukîir	‘fish (sp.)’
	<i>total:</i>	60				

Of the above, only final /l/ can be said to be truly general, as a number of verbs end in the non-productive *-Vl* suffix (see §6.2.3). Most of the other entries are either reduplications, borrowings, or frozen compounds.

#### 2.4.3. Intervocalic stem consonants

As seen in [2.5], of 814 lexical entries, 125 or 15.4% have bisyllabic stems. (Seven entries have trisyllabic stems, and one entry has a quadrisyllabic stem—see below.) Ignoring lexical entries which are or appear to be compounds, the lexicon contains 66 bisyllabic and 72 trisyllabic stems whose second syllable begins with a single consonant. Those consonants occurring in three or more entries are indicated below:

[2.30]		<i>labial</i>	<i>alveolar</i>	<i>velar</i>
	<i>stops</i>	b	t	k
	<i>fricatives</i>	f	s	
	<i>sonorants</i>	m	l	

The number of each consonant and examples are provided in [2.31].

[2.31]	/b/	(7)	iziba	‘lake’	o-kabul	‘to split, share’
	/t/	(10)	nzetɔl	‘voyage’	o-kutan	‘to meet’
	/k/	(19)	isíké	‘horn’	o-sakan	‘to play’
	/f/	(6)	tufîn	‘pus’	o-tafun	‘to chew’
	/s/	(7)	ikású	‘kola’	o-kɔsul	‘to cough’
	/m/	(6)	iméme	‘sheep’	ísyéme	‘six’
	/l/	(11)	okali	‘yesterday’	o-kaliŋ	‘to fry’

This leaves the following eight entries which have other intervocalic consonants: *pepê* ‘papaya’, *okpú<sup>h</sup>kpê* ‘short’, *ŋgyovûl* ‘question’, *o-yuvul* ‘to ask (someone)’, *ináána* ‘eight’, *o-fwanan* ‘to resemble’, *ntsîirí* ‘canerat’, *nɔwe* ‘today’.

In addition, there are 49 (non-reduplicated) entries with a consonant cluster in second position. Of these 49 entries, (voiced) NC, Cs, and *nk* sequences account for 40:

[2.32]	NC:	/mb/	(7)	pambú	‘worm’	m-pémbé	‘white’
		/nd/	(4)	mpondó	‘millet’	o-bøndɔl	‘to please’
		/ŋg/	(7)	màáŋgǔl	‘mango’	o-zaŋgul	‘to lift up’
		[ndz]	(1)	mpandzí	‘rib’		
	Cs:	/ts/	(3)	o-dyatsa	‘to lead’	o-zitsa	‘to obey’
		/ks/	(2)	o-vuksa	‘to mix’	o-niksa	‘to grind’
		/fs/	(1)	o-defsa	‘to lend’	cf. o-dêf	‘to borrow’
		/ms/	(1)	o-kumsa	‘to praise’		
		[nts]	(4)	o-báńtsa	‘to think’	o-yuntsa	‘to try’
		/ŋs/	(6)	o-gɔŋsa	‘to expand’	o-bɔŋsa	‘to repair’
		/rs/	(1)	o-sarsa	‘to help’		
		/nk/	(3)	o-sɔnka	‘to write’	o-mɔnka	‘shine, be visible’

In the above table [ndz] is in brackets because it could derive from either /ndz/ or /nz/. While [nts] could also derive from /nts/ or /ns/, we know that the latter is correct because the above verbs all have the structure CVCsa (see §6.2.1). The remaining 9 cases of intervocalic consonant clusters are not systematic and are considered exceptional. Three are likely unanalyzable compounds: *ɔngbatyem* ‘lizard’, *ígyizyâ* ‘self’, *o-lajdil* ‘to supervise’. The remaining are borrowings: *keŋglɔ* ‘bicycle’, *o-pukmun* ‘to tempt’, *mámpa* ‘bread’, *kamyô* ‘car’, *oyánsi* ‘a Yansi person’, *mpaantru* ‘trousers’. In addition to the above 49 entries, the following eight reduplications have been found:

[2.33]	/tp/	(2)	pɔpɔt	‘mud’	petpét	‘softness’
	/kt/	(1)	tuktuk	‘motorcycle’		
	/kb/	(1)	bukbuk	‘fish (sp.)’		
	/nt/	(1)	intúntu	‘flower’		
	/ŋd/	(2)	dɔŋdɔŋ	‘okra’	diŋdíŋ	‘middle of night’
	/lt/	(1)	taltál	‘mirror’		

## 2.5. Phonological rules

A number of phonological rules affect vowels and consonants (also tones—see Chapter 3). Most of these are morphophonemic in the sense that they merge contrasting segments.

### 2.5.1. Vowels

The major processes which affect vowels are vowel coalescence, shortening, centralization, vowel harmony, and nasalization. The first two refer to processes that apply to vowel + vowel

sequences, while the third concerns the realization of /e/ as [ɪ] or [o] in casual speech. In most cases these rules are optional and depend on tempo or speech register: the faster or more casual the speech, the more likely the rule will apply. Given their optionality, they may produce variants in some cases.

### 2.5.1.1. Vowel Coalescence

Whenever two vowels  $V_1$  and  $V_2$  occur in succession, depending on a number of factors, one of three things can happen, as schematized in [2.34]. The exact form that vowel coalescence will take depends not only on tempo, as has been pointed out, but also on the construction.

[2.34]	<i>Coalescence Process</i>	<i>Occurs When</i>	<i>Examples</i>
(i)	$V_1$ deletes without affecting the length of $V_2$	$V_1 + V_2 \rightarrow V_2$	$V_1$ is a non-stem vowel [2.36-39]
(ii)	$V_1$ deletes with compensatory lengthening of $V_2$	$V_1 + V_2 \rightarrow V_2V_2$	$V_1$ is a stem vowel [2.39-40]
(iii)	The two vowels can be realized without modification	$V_1 + V_2 \rightarrow V_1V_2$	[2.38-41, 45]

The vowels /i/ and /u/ are usually not affected by these processes, but instead appear to become shorter, giving the impression of gliding to [y] and [w], respectively.

An example of obligatory  $V_1$  deletion without compensatory lengthening of  $V_2$  occurs when a tense marker /a/, /o/ or /e/ is followed by a non-identical object agreement marker /o/ or /e/. The examples in [2.35] which involve a direct object noun show that the perfect is marked by /â/, the past by /ó/, and the progressive by /ê/:

[2.35]	mì â búl mwǎàn	mì â búl bǎàn	‘I have hit the child’ / ‘... the children’
	mì ó búl mwǎàn	mì ó búl bǎàn	‘I hit the child’ / ‘... the children’
	mì é búl mwǎàn	mì é búl bǎàn	‘I am hitting the child’ / ‘... the children’

When the direct object is a pronoun, an optional object agreement marker may occur (see §8.3.7). As the following examples show, this marker is /o/ when the object is *ndé* ‘him/her’, and /e/ when it is *bǎ* ‘them’:

[2.36]	mì ô búl ndé	mì ê búl bǎ	‘I have hit him/her’ / ‘I have hit them’
	mì ó búl ndé	mì é búl bǎ	‘I hit him/her’ / ‘I hit them’
	mì ó búl ndé	mì é búl bô	‘I am hitting him/her’ / ‘I am hitting them’

As seen,  $a+o \rightarrow o$ ,  $a+e \rightarrow e$ ,  $o+e \rightarrow e$ , and  $e+o \rightarrow o$ . A similar obligatory process occurs when the genitive linker /é/ is followed by a vowel prefix:

- [2.37] osim + é + muur → osim e múùr ‘the person’s rope’  
 osim + é + ibaa → osim ibáà ‘the man’s rope’  
 osim + é + oṅgyen → osim oṅgyêṅ ‘the stranger’s rope’

At first it might seem that /é/ is present only when followed by a consonant, as in the first example; however, the tone changes on the noun show that it is definitely there, but deleted.

While the above vowel coalescences are obligatory, optional vowel deletion without compensatory lengthening occurs when the locative marker *kó* ‘to, at’ is followed by a vowel:

- [2.38] kó + ikóór → kó íkóòr ~ kíkóòr ‘to the frog’  
 kó + etúŋ → kó étúŋ ~ kétúŋ ‘to the fly’  
 kó + okáàr → kó ókáàr ~ kókáàr ‘to the woman’  
 kó + akáàr → kó ákáàr ~ kákáàr ‘to the women’  
 cf. kó + muur → kó múùr ‘to the person’

In other cases optional coalescence is produced with length, e.g. after the conjunction *me* ‘but’, which is borrowed from French:

- [2.39] me ikóór ↓á bva ~ miikóór ↓á bva ‘but a frog has fallen’  
 me etúŋ á bva ~ meetúŋ á bva ‘but a fly has fallen’  
 me okáàr ↓á bva ~ mookáàr ↓á bva ‘but a woman has fallen’  
 me akáàr ↓á bva ~ maakáàr ↓á bva ‘but women have fallen’  
 cf. me muur á bva ‘but a person has fallen’

Similarly, the vowel of the pronouns *yǎ* ‘you sg.’, *ndé* ‘s/he, him/her’, *nǎ* ‘it’, *bǎ* ‘they, them (human)’, and *mǎ* ‘they, them (non-human)’ optionally undergo coalescence with compensatory lengthening, as seen in the following variants:

- [2.40] *perfect:* ya á bva ndé á bva nǎ á bva bǎ á bva mǎ á bva ‘you sg. etc.  
 yáá bva ndáá bva náá bva báá bva máá bva have fallen’  
*past:* ya ó bvê ndé ó bvê nǎ ó bvê bǎ ó bvê mǎ ó bvê ‘you sg. etc.  
 yòó bvě ndóó bvě nòó bvě bòó bvě mòó bvě fell’  
*progressive:* ya é bvě ndé é bvě nǎ é bvě bǎ é bvě mǎ é bvě ‘you sg. etc.  
 yèé bvě ndéé bvě nèé bvě bèé bvě mèé bvě are falling’

The pronouns *mĩ* ‘1st person singular’ and *bĩ* ‘1st person singular’ do not undergo coalescence. In general, the vowel /i/ does not delete, as seen also in the following examples:

- [2.41] tí + ikóór → tí ikóór ‘with a frog’  
 tí + etúnj → tí etúnj ‘with a fly’  
 tí + okáàr → tí okáàr ‘with a woman’  
 tí + akáàr → tí akáàr ‘with women’  
 cf. tí + muur → tí muur ‘with a person’

In general, when the assimilating  $V_1$  is a stem vowel, vowel coalescence is optional, but, if occurring, a long vowel results. This is observed especially clearly when an open syllable stem precedes the genitive linker /é/. As seen, long and short vowels merge in this context:

- [2.42] até + é + mùùr → atéé múùr ‘the person’s saliva’  
 osee + é + mùùr → osee múùr ‘the person’s pain’  
 adza + é + mùùr → adzéé múùr ‘the person’s water’  
 esaa + é + mùùr → esee múùr ‘the person’s food’

As seen, both long and short vowels assimilate before /é/, with the potential mergers. (Below we will see that long vowels shorten before another vowel, also producing mergers.) When the stem vowel is /u/, /o/ or /ɔ/, optional coalescence will either shorten the vowel or convert it to [w]:

- [2.43] otû + é + wàá → otwéé wàá ‘the night of the village’  
 odzó + é + mùùr → odzwéé múùr ‘the person’s snake’  
 ikwɔ + é + mùùr → ikwee múùr ‘the person’s banana’

Since the presence of /é/ sometimes distinguishes singular and plural possession (§5.3.1), in some cases the resulting length will signal the difference:

- [2.44] ntswé + bǝ → ntswé bǝ ‘their fish (sg.)’  
 ntswé + é + bǝ → ntswéé bǝ ‘their fish (pl.)’

Although it sometimes does occur, vowels which meet when two lexical words occur in sequence tend not to undergo coalescence:

- [2.45] [ai] : esúú na o dzé mbvá ikwɔ ‘the day that the dog ate the banana’  
 [ae] : esúú na o dzé mbvá esaa ‘the day that the dog ate the food’  
 [ao] : esúú na o dzé mbvá okpá ‘the day that the dog ate the salt’

### 2.5.1.2. Vowel Shortening

Where vowel coalescence does not occur, vowel shortening will apply to a long vowel which is immediately followed by another vowel, e.g. to *ibaa* ‘man’ in the following:

- [2.46] [ai] : esúú na o dzé iba ikwɔ ‘the day that the man ate the banana’  
 [ae] : esúú na o dzé iba esaa ‘the day that the man ate the food’  
 [ao] : esúú na o dzé iba okpá ‘the day that the man ate the salt’

### 2.5.1.3 Vowel Centralization

In normal speech a short /e/ in open syllable is often centralized to [ɨ]. When preceded by a labial consonant, it may be realized [ɨ] or [ʊ]. This happens especially to /Ca/ verbs when they change to /Ce/ in the past tense. The following are among the examples recorded:

- [2.47] [dzi] : oŋgér o dzé bǔ ‘what did they eat?’  
 [pɨ] : ó pɛ ndé íkwɔ ‘give him a banana!’  
 [pʊ] : kó nɛ baar o pé óŋkáán ‘to whom did the people give the book?’  
 [fʊ] : mi o fɛ ndzɛé ‘I came from the river’

For variations in the realization of vowels in reduplication see §6.4.2.

### 2.5.1.4 Vowel Harmony

Before leaving vowel alternations, a word should be added concerning vowel harmony. Given the historical shortening of words, it is not surprising to find that there is no stem-level vowel harmony, as found elsewhere in Bantu. Of the 52 bisyllabic verb stems in the lexicon, the three vowels /i, u, a/ occur freely in the second syllable: four bisyllabic verbs have /i/, 24 have /u/ and 22 have /a/. The two exceptions are *o-bɔkɔl* ‘to bring up’ and *o-bɔndɔl* ‘to please’. Since an additional 19 verbs have the shape CV(N)Cul, it is tempting to see the *-ɔl* realization of these two verbs as vowel height harmony, i.e. *-ul* → *-ɔl* after *CɔC-*. However, one verb, *o-kɔsul* ‘to cough’, does occur without height harmony. Since the numbers are so small, we cannot have confidence that the process is live in Nzadi. In addition, some of these verbs may be borrowed.

Another harmony does seem more reliable, however. The noun prefixes /e-/ and /o-/ harmonize to *ɛ-* and *ɔ-* when the stem has an identical /e/ or /ɔ/ vowel:



[2.48]		<i>harmony</i>		<i>no harmony</i>
	/e-/ :	ekéé ‘leaf’		ekɔɔ ‘bee’
		esyen ‘thorns’		ekwôm ‘broom’
		ɛbyém ‘mosquito’		etɔk ‘pipes’
	/o-/ :	ɔsɔɔ ‘flamingo’		osyéɛn ‘thorn’
		ɔtsó ‘head’		okɛɛr ‘belly’
		ɔtɔk ‘pipe’		oseɛ ‘pain’

At times the harmony is barely noticeable, particularly when the stem begins with Cw. We thus have recorded both *oswðɔ* ~ *ɔswðɔ* ‘intestines’. It should be noted that the infinitive prefix does not harmonize, e.g. *o-tɔk* ‘to boil’ (vs. *ɔtɔk* ‘pipe’). When the initial consonant is nasal, harmony appears to be optional: *o-nɔ* ~ *ɔ-nɔ* ‘to drink’, also *ómɔtúk* ~ *ómɔtúk* ‘one’, *ómɔ* ~ *ómɔ* ‘certain’.

The last process affecting vowels is nasalization. In Nzadi, although not written in the orthography, a few open syllable stems beginning with /m/ or /n/ have noticeable vowel nasalization. Most of these have a glide; two are clearly related to stems which have lost their final nasal:

[2.49]	/m/ :	mwǎ	[mwǎ̃]	‘small’	cf.	mwǎän	‘child’
		o-mwé	[o-mwé̃]	‘to show’		o-món	‘to see’
	/n-/ :	nwí	[nwí̃]	‘bee’			
		o-nó	[o-nó̃]	‘to drink’			
		o-nwô	[o-nwỗ]	‘to rain’			

### 2.5.2. Consonants

Compared to vowels, there are surprisingly few processes affecting consonants. The main alternation concerns the effect that a nasal has on a following consonant. The occurring NC sequences were presented in [2.23], where it was observed that the postnasal consonant must be a stop or affricate. Nouns which have an *e-* prefix in the singular and a *N-* prefix in the plural potentially exhibit alternations such as those in [2.46].

[2.50]	esaa	‘feather’	ntsaa	‘feathers’
	esáj	‘tear’	ntsáj	‘tears’
	esen	‘louse’	ntsen	‘lice’

As seen, the /s/ of the singular form occurring after the singular prefix *e-* or *ɛ-* becomes [ts] after the plural prefix *n-*. While we expect a similar change of /f/, /v/ and /z/ to [pf], [bv] and [dz], respectively, in the plural, no stems beginning with /v/ or /z/ belong to this singular-plural pairing, and the one *f*-initial noun, *ɛfur* ‘dust’, does not take a nasal in the plural.

We can see a much fuller range of alternations in verbs, where there is a nasal prefix marking first person singular object agreement (cf. §8.3.7):

[2.51]	f → pf	ndé ó fūr	‘he paid’	ndé ó mpfūr mĩ	‘he paid me’
	s → ts	ndé ó sársa	‘he helped’	ndé ó ntsársa mĩ	‘he helped me’
	v → bv	ndé ó vyâ	‘he called’	ndé ó mbvyá mĩ	‘he called me’
	z → dz	ndé ó zĩ	‘he hid’	ndé ó ndzĩ mĩ	‘he hid me’

The other consonants that cannot occur after a nasal are the nasal and oral sonorants /m, n, l, w, y/. When a verb stem begins with one of these consonants, the nasal fails to appear and the object pronoun *mĩ* appears without preverbal agreement:

[2.48]	m → m	ndé ó môn	‘he saw’	ndé ó món mĩ	‘he saw me’
	n → n	ndé ó nũk	‘he shot’	ndé ó nũk mĩ	‘he shot me’
	l → l	ndé ó lõŋ	‘he taught’	ndé ó lõŋ mĩ	‘he taught me’
	y → y	ndé ó yúvul	‘he asked’	ndé ó yúvul mĩ	‘he asked me’
	w → w	ndé ó wéê	‘he chose’	ndé ó wéé mĩ	‘he chose me’

The final issue concerns syllable-final /ŋ/ and /r/. As seen in the following examples, there is some reason to establish a link between monosyllabic *CVŋ* and bisyllabic *CVŋVC* stems:

[2.49]	o-kaŋ	‘to close’	o-kaŋgul	‘to open’
	o-lõŋ	‘to teach’	o-luŋguk	‘to think, learn’
	o-zâŋ	‘to lack’	o-zaŋgul	‘to lift up’

However, if we were to recognize final [ŋ] as /ŋg/, the question would arise as to why there are no stems which end in /mb/, and only one borrowing, *matõnd* ‘thanks’, which ends in /nd/. We can thus only recognize the complementarity: [ŋ] only occurs at the end of a word, while [ŋg] occurs elsewhere.

The same must be said concerning /r/, which occurs only word-finally except for the following, at least the last two of which are clearly borrowings: *o-sarsa* ‘to help’, *ntsĩrĩ* ‘canerat’, *mpaantrũ* ‘pants’, *oká* <sup>l</sup>*é lépre* ‘leprosy’. It would be tempting to relate final [r] to one of the onset consonants. Since among the likely candidates both /t/ and /l/ also occur finally, this leaves /d/, which does not occur as a coda other than in *matõnd* ‘thanks’. Other than this complementary distribution there is, however, no reason to assume that final [r] is a realization of underlying /d/.



## CHAPTER 3: TONE

- 3.1. Basic tonal contrasts
- 3.2. General tone rules
- 3.3. Morphological tone rules
- 3.4. Intonation

### 3.1. Basic Tonal Contrasts

Like most Bantu languages, Nzadi contrasts two tone levels, H(igh) and L(ow). These tones may in turn combine to produce HL (falling), LH (rising) and LHL (rising-falling) contours. In addition, there are contrastive downstepped <sup>↓</sup>H and <sup>↓</sup>HL tones in the language which are mostly derived from contour simplification rules. The examples in [3.1] illustrate the five tonal possibilities on monosyllabic stems. The numbers in parentheses indicate how many of each pattern has been found out of a total of 482 monosyllabic noun stems, which occur either with or without a prefix.

In Nzadi the tone-bearing unit is the syllable. As seen in [3.1], H tone is marked by an acute (´) accent, while L tone is unmarked (unless combining with H to form a contour). HL contours are marked with an acute+grave accent sequence if the syllable has two vowels, e.g. *mbéè* ‘friend’, *ntsóòm* ‘fork’, or with a circumflex (ˆ) if there is only one vowel, e.g. *lôη* ‘teacher’. Similarly, LH contours are transcribed with a grave+acute accent sequence if the syllable has two vowels, e.g. *mèé* ‘oil’, or with a hatchek (ˇ) if there is only one vowel: *bvĩm* ‘theft’. The rising-falling LHL contour is transcribed with a (ˇˆ) sequence written either over a VV, e.g. *mǎân* ‘ground’, on a VN, e.g. *lǎñ* ‘palm leaf’, or with the grave accent floating: *lwǒ* ‘hand, arm’. The choice not to mark syllables which are L was made to minimize accents, especially since most nouns have a L tone V- or N- prefix (§4.1), but L can alternatively be transcribed with a grave accent, e.g. *bwò* ‘mushroom’, *bvùùr* ‘load’ etc. In all

other cases every vowel is marked for a tone. (We chose not to adopt an alternate transcription whereby only the first vowel of a syllable would be marked, e.g. *máan* (H) ‘wine’, *bvùur* (L) ‘load’, *mbêe* (HL) ‘friend’, *měe* (LH) ‘wine’, *mǎàn* ‘ground’.)

[3.1]	<i>H:</i>	(129)	<i>nwí</i>	‘bee’	<i>máán</i>	‘wine’
			<i>wén</i>	‘sun’	<i>mwáán</i>	‘heat, perspiration’
	<i>L:</i>	(169)	<i>bwɔ</i>	‘mushroom’	<i>bvuur</i>	‘load’
			<i>duu</i>	‘sky’	<i>men</i>	‘mouth’
	<i>HL:</i>	(116)	<i>kít</i>	‘chair’	<i>lɔŋ</i>	‘teacher’
			<i>nûr</i>	‘body’	<i>lût</i>	‘spoon’
	<i>LH:</i>	(60)	<i>měé</i>	‘oil, fat’	<i>táá</i>	‘father’
			<i>bvĩm</i>	‘theft’	<i>kĩl</i>	‘pineapple’
	<i>LHL:</i>	(11)	<i>dzĩ</i>	‘eye’	<i>lwǔ</i>	‘hand, arm’
			<i>mǎàn</i>	‘ground’	<i>mwǎàn</i>	‘child’

Tone carries a heavy functional load in Nzadi, both lexically and grammatically. As seen in [3.1], there are very few lexical entries with LHL. However, since the imperative of a L tone verb takes LHL tone (§3.3.3), the following minimal quintuplet involving the stem [kun] can be cited:

[3.2]	<i>H:</i>	<i>ŋkún</i>	‘that very one’
	<i>L:</i>	<i>okun</i>	‘to bury, plant’
	<i>HL:</i>	<i>ekún</i>	‘firewood’
	<i>LH:</i>	<i>ikũn</i>	‘trunk’
	<i>LHL:</i>	<i>kũn</i>	‘bury! plant!’

In addition, the following minimal stem-quadruplets have been found:

[3.3]	<i>H</i>		<i>L</i>		<i>HL</i>		<i>LH</i>	
	<i>mbyé</i>	‘often’	<i>ebye</i>	‘rash’	<i>obyê</i>	‘many’	<i>mbyě</i>	‘bushknife’
	<i>ŋkáá</i>	‘crab’	<i>okaa</i>	‘to be’	<i>ikáà</i>	‘charcoal’	<i>ŋkàá</i>	‘ancestor’
	<i>ŋkúm</i>	‘chief’	<i>okum</i>	‘to knock’	<i>okúm</i>	‘to become’	<i>ŋkũm</i>	‘all, entire’

Minimal stem-triplets are more common:

[3.4]	<i>H</i>		<i>L</i>		<i>HL</i>	
	ebáá	‘paste’	ibaa	‘man’	o-báà	‘to receive’
	ibùl	‘valley’	ebul	‘iron’	o-bùl	‘to hit’
	ɲkáj	‘snake (sp.)’	o-kaŋ	‘to close’	ɲkáj	‘fainting’
	epúú	‘cloth’	epuu	‘louse’	mpúù	‘rat’
	esáj	‘tear’	esaŋ	‘island’	o-sáj	‘to refrain’
[3.5]	<i>H</i>		<i>L</i>		<i>LH</i>	
	ibúm	‘madness’	mbum	‘fruit’	mbùm	‘maggot’
[3.6]	<i>H</i>		<i>L</i>		<i>LHL</i>	
	o-yá	‘to be ripe’	o-ya	‘to come’	yǎ̀	‘you (sg.)’
[3.7]	<i>L</i>		<i>HL</i>		<i>LH</i>	
	ekul	‘leg, foot’	ɲkùl	‘tortoise’	ɲkǔl	‘cane’
	o-lyaŋ	‘to rot’	o-lyâŋ	‘to lick’	ilyǎŋ	‘childhood’
	o-taŋ	‘to drip’	o-tyâŋ	‘to count’	ntǎŋ	‘mat, bed’
[3.8]	<i>L</i>		<i>HL</i>		<i>LHL</i>	
	ebaan	‘bamboo’	o-báàn	‘to climb’	báàn	‘children’
	o-laŋ	‘to like’	o-lâŋ	‘to flatter’	lǎŋ	‘palm leaf’

Although LHL is rare, the following exact minimal pairs have been found:

[3.9]	<i>H</i>		<i>HL</i>		<i>LHL</i>	
	máán	‘wine’			mǎàn	‘ground, soil’
	mwáán	‘heat’			mwǎàn	‘child’
			dzî	‘feed!’	dzǐ	‘eye’
			dzîm	‘lie!’	dzǐm	‘song’
			wáàr	‘dress!’	wǎàr	‘canoe’

Since the majority of Nzadi nouns have a L tone prefix, and since infinitives are marked by a L tone *o-* prefix, all five tones can be preceded by L. The sequences L-H, L-L, L-HL and L-LH have been seen in many of the examples in [3.2]-[3.8]. L-LHL is rare, but also possible. Of the 11 lexical entries with LHL stem tone, only two have a prefix: *ibvyǒ* ‘breast’, *ondǎ̀l* ‘vegetable (sp.)’. Only 11 lexical entries have been found with a H tone prefix, mostly the *i-* of numerals. These produce all of the sequences except H-LHL:

[3.10]	<i>H-H:</i>	íná	‘four’	ísyéme	‘six’
	<i>H-L:</i>	ípe	‘two’	ínki	‘which’
	<i>H-HL:</i>	ísâr	‘three’	ítáàn	‘five’
	<i>H-LH:</i>	ínkĕn	‘(an)other’	ómǎ	‘(a) certain’

Of the 808 non-complex entries in the Nzadi lexicon, 681 or 84.3% have monosyllabic stems. Of the remaining 127 entries, 55 consist of polysyllabic verb stems, 53 of which are all L, the remaining two being H-L:

[3.11]	<i>L-L:</i>	(50)	o-balul	‘to turn’	o-mónka	‘to be visible’
			o-gónsa	‘to expand’	o-sakan	‘to play’
	<i>L-L-L:</i>	(2)	o-tambika	‘to sacrifice’	o-zabakan	‘to know each other’
	<i>L-L-L-L:</i>	(1)	o-baluluka	‘to turn around’		
	<i>H-L:</i>	(2)	o-báńtsa	‘to think’	o-yúńtsa	‘to try’

The remaining 72 non-verb entries show a variety of tone patterns, exemplified below:

[3.12]	<i>H-H:</i>	(6)	isíké	‘horn’	mpémbé	‘white’
	<i>H-L:</i>	(13)	iméme	‘sheep’	ikásu	‘kola’
	<i>H-HL:</i>	(0)				
	<i>H-LH:</i>	(2)	ikíkĕr	‘small’	ipááfŭl	‘butterfly’
	<i>H-<sup>l</sup>HL:</i>	(2)	okpú <sup>l</sup> kpê	‘short’	otí <sup>l</sup> tâl	‘long’
	<i>L-H:</i>	(11)	osisá	‘vein’	mpǝndó	‘millet’
	<i>L-L:</i>	(9)	iziba	‘lake’	entsaŋga	‘island’
	<i>L-HL:</i>	(20)	nzetǝl	‘voyage’	ndikíl	‘poison’
	<i>L-LH:</i>	(1)	embvakǝl	‘afternoon’		
	<i>HL-H:</i>	(2)	ntsíiri	‘canerat’	ntsǝlǝ	‘caterpillar (sp.)’
	<i>LH-L:</i>	(1)	nǝwe	‘today’		
	<i>LH-LH:</i>	(2)	dǝŋdǝŋ	‘okra’	màaŋgŭl	‘mango’
	<i>H-H-H:</i>	(1)	osákátá	‘Sakata person’		
	<i>L-H-L:</i>	(2)	simísi	‘shirt’	mbwetéte	‘star’
	<i>L-L-HL:</i>	(1)	sukamũnt	‘gorilla’		

As can be seen from the numbers, the only reasonably common bisyllabic stem-tone patterns are H-H, H-L, L-H, L-L and L-HL. The last pattern is found on a number of easily recognizable borrowings where the final HL reproduces the stress of the donor language, e.g. *bulê* ‘blue’, *kǝkǝ* ‘coconut’, *pepê* ‘papaya’, *sabât* ‘shoe’, *kamyǝ* ‘car’, *avokâ* ‘avocado’, *kafê* ‘coffee’, *velô* ‘bicycle’. While the source has not been determined in all cases, other bisyllabic words are also likely borrowings from neighboring Bantu languages, especially Kikongo, e.g. *ozabakan* ‘to know each other’, *opukmun* ‘to tempt’, *tufin* ‘pus’, *mabáńtsa* ‘thought’, *mpǝndó* ‘millet’. It is therefore hard to determine which, if any, of the stem-tone

patterns in [3.11] and [3.12] are indigenous—most likely the H-LH and H-<sup>↓</sup>HL patterns found on reduplicated adjectives (cf. §5.4). It is curious that no stems have a H-HL pattern. As also seen, there are only two lexical entries with a downstep tone. However, both of these involve reduplicated adjectives which are clearly derived from the non-reduplicated forms *okpé* ‘short’ and *otál* ‘long, tall, far’. As will be seen in the following sections, downsteps most frequently result from tone rules applying across words. Nzadi downstep has exactly the expected, canonical properties:

- (i) H contrasts with <sup>↓</sup>H only after another H (or <sup>↓</sup>H)
- (ii) <sup>↓</sup>H establishes a ceiling for subsequent tones within the same phrase (i.e. a H will be realized on the same level as a preceding <sup>↓</sup>H)
- (iii) downstep is recursive, such that a sentence can have several <sup>↓</sup>Hs, e.g. *ekún <sup>↓</sup>é mí <sup>↓</sup>nápe* ‘this firewood of mine’.

### 3.2. General Tone Rules

As can be seen from the examples cited in §3.1, a striking property of Nzadi is its tolerance of HL, LH and LHL tonal contours on both long and short vowels. In context, however, it is precisely these tones which are most likely to become simplified. In some cases one or another of the tonal components is lost without any surface effect, in other cases a lowered H tone or downstep (<sup>↓</sup>H) is created.

#### 3.2.1. Tone Absorption

Whenever a HL or LHL contour tone is followed by a tone which begins L, it is simplified, respectively, to H and LH. Similarly, whenever a LH rising tone is followed by a tone that begins H, it is simplified to L. The affected sequences and their outputs are given in [3.13].

[3.13]	<i>L tone absorption:</i>	HL-L	→	H-L
		HL-LH		H-LH
		HL-LHL		H-LHL
		LHL-L	→	LH-L
		LHL-LH		LH-LH
		LHL-LHL		LH-LHL
	<i>H tone absorption:</i>	LH-H	→	L-H
		LH-HL		L-HL

As seen, HL will simplify before L, LH or LHL, while LH will simplify before H or HL. Examples in [3.14] involve juxtaposition of class 1 nouns with a following nominal possessor:



[3.14]	/mbéè/	‘friend’	→	mbéé mùùr	‘the person’s friend’
			→	mbéé tàá	‘the father’s friend’
			→	mbéé mwǎàn	‘the child’s friend’
	/dzĩn/	‘name’	→	dzĩn mùùr	‘the person’s name’
			→	dzĩn tàá	‘the father’s name’
			→	dzĩn mwǎàn	‘the child’s name’
	/ngèè/	‘pity’	→	ngèè wén	‘the sun’s pity’
				ngèè lôŋ	‘the teacher’s pity’

The same change of (L)HL to (L)H occurs before possessive pronouns, all of which begin L:

[3.15]	/mbéè/	‘friend’	→	mbéé mǐ`	‘my friend’
			→	mbéé yǎ`	‘your (sg.) friend’
	/dzĩn/	‘name’	→	dzĩn mǐ`	‘my name’
			→	dzĩn yǎ`	‘your (sg.) name’
cf.	/ngèè/	‘pity’	→	ngèé mǐ`	‘my pity’
				ngèé yǎ`	‘your (sg.) pity’

Absorption of the final L of (L)HL appears to apply whenever two words with these tones follow each other in succession (and without a major break or pause). Thus, the same tonal absorption takes place between a verb and an object noun or between object nouns. In the following sentences, the Ls of *túm* ‘send’, *súm* ‘buy’, and *okáàr* ‘woman’ are all absorbed into the following L tone *o*-prefixes:

[3.16]	/ndé â tùm okáàr òŋkàán/	→	ndé â tùm òkàár òŋkàán	‘he has sent the woman a book’
	/ndé â sùm okáàr òŋkàán/	→	ndé â sùm òkàár òŋkàán	‘he has bought the woman a book’

Absorption of the H of LH is, on the other hand, more complicated. First, it is hard to find words that begin with a H tone, since prefixless H(L) nouns and adjectives have a floating L prefix (§4.3.2). As seen in the following paraphrases of the sentences in [3.17], the LH of *òŋkàán* ‘book’ is not obligatorily absorbed (although it may be in fast speech):

[3.17]	/ndé â tùm òŋkàán kó okáàr/	→	ndé â tùm òŋkàán kókàár	‘he has sent a book to the woman’
	/ndé â sùm òŋkàán sàm é okáàr/	→	ndé â sùm òŋkàán sám <sup>↓</sup> ókàár	‘he has bought a book for the woman’

The (non-)application of absorption before V- and N- prefixes requires some discussion. Since the prefix of some numerals is H and others L, consider the regular application of absorption in the following examples:

- [3.18] /akáàr iwa/ → akáár íwa ‘nine women’  
 /akǒŋ íná / → akǒŋ íná ‘four spears’

The example ‘four spears’ is completely regular: LH + H → L-H. In the case of ‘nine women’, the input has a HL stem followed by a L prefix. We therefore expect absorption to produce *akáár iwa*, with the *i-* prefix remaining L. As shown, however, it is H tone. The reason is that HL absorption applies across a stem+prefix sequence: HL + L-L → H + H-L. Thus, a stem H + prefix L cannot be followed in turn by a L(H) stem. Similar outcomes can be observed in [3.19]:

- [3.19] /mbvá iwa/ → mbvá íwa ‘nine dogs’  
 /akóór iwa/ → akóór íwa ‘nine frogs’

As seen, when the noun stem is /H/, a following L prefix will also become H if it is in turn followed by a L stem. What this means is that it is not just a tautosyllabic HL contour which becomes H before L, but also a H stem + L prefix. If the following stem is H, as expected, no change will occur (recall that the N- prefix has an underlying L tone):

- [3.20] /mbvá ŋkám/ → mbvá ŋkám ‘a hundred dogs’ [ŋ]  
 /akóór ŋkám/ → akóór ŋkám ‘a hundred frogs’ [ŋ]

The situation is quite different with respect to LH absorption. When a LH stem is followed by a L prefix, no absorption should occur. Instead, one of two things will happen. If the following stem is L, the LH tone will be preserved with its H extended to the following prefix:

- [3.21] /akǒŋ iwa/ → akǒŋ íwa ‘nine spears’  
 /amǎn iwa/ → amǎn íwa ‘nine stones’

The LH of the noun stem fails to undergo absorption, thereby producing LH+H on the stem + prefix sequence. Since the L prefix is followed by a L stem, the derived HL undergoes absorption. In [3.22], however, where the following stem is H, a quite different output is observed:

- [3.22] /akǒŋ ŋkám/ → akǒŋ ŋkám ‘a hundred spears’  
 /amǎn ŋkám/ → aman ŋkám ‘a hundred stones’

In this case the LH of the noun stems is simplified to L, i.e. the H is lost. This is accounted for in the rules in the next section.

### 3.2.2. Contour Simplification

While tonal absorption targets the final part of a contour when followed by an identical tone, hence (L)HL before L and LH before H, contour simplification occurs in contexts where the neighboring tone is not identical. We have just seen in [3.22] that a LH which is followed by a L prefix + H stem will be simplified to L. The same is observed in possessive constructions, whether the nouns are simply juxtaposed, or whether first noun requires an /é/ genitive linker (§3.3.2, §5.2):

- [3.23] /mbwǝm okáàr/ → mbwǝm okáàr ‘the woman’s nose’  
 /mbǔn mbéè/ → mbun mbéè ‘the friend’s forehead’
- [3.24] /ikǝŋ é ibaa/ → ikǝŋ ibáà ‘the man’s spear’  
 /ikǝŋ é mùùr/ → ikǝŋ e mùùr ‘the person’s spear’

As discussed in §5.3.1, /é/ conditions a specific set of tonal changes that requires that a preceding LH stem be simplified to L, hence merging with stems which are underlyingly /L/.

A second simplification rule converts LH to <sup>1</sup>H when preceded by H and followed by L, i.e. H-LH-L → H-<sup>1</sup>H-L This is seen in the following progressive forms of L tone verbs:

- [3.25] /mi ê bva + é/ → mi é bvě ‘I am falling’  
 /mi ê diir + ‘/ → mi é diír ‘I am watching’  
 /mi ê sǝnka + ‘/ → mi é <sup>1</sup>sǝnka ‘I am writing’ (< é sǝnka)

As seen, the progressive is characterized by a HL /ê/ marker preposed to the verb + a H tone suffix which combines to make a LH rising tone on the root syllable. In the case of CV verbs, there sometimes is a vowel change, as in the first example (see §6.3). As expected /ê/ undergoes absorption before the L of the verb stem. This produces a H-LH sequence in the first two examples. However, the simplification rule applies to expected *mi é sǝnka* to produce the H-<sup>1</sup>H-L output in the last example.

Since pronouns often have LH tone, they too undergo the downstep contour simplification rule: *fǝtó mĩ* ‘my photograph’ vs. *fǝtó <sup>1</sup>mi mwǎàn* ‘my photograph of the child’. Compare also the realization of /bǝ/ ‘they’ in the following two sentences:

- [3.26] kǝŋgó báán ò dzé bǝ ‘where did the children eat?’  
 kǝŋgó báán ò dzé <sup>1</sup>bó fǔfǔ ‘where did the children eat the fufu?’

The phenomenon of contour simplification is thus quite pervasive in Nzadi. In some cases it is responsible for downsteps as well as alternations which otherwise appear to be exceptional. Some of these alternations which are restricted to specific constructions or are otherwise grammatically conditioned are treated in the next section.

### 3.3. Morphological Tone Rules

Some tonal alternations are reminiscent of the general tones rules discussed in §3.2, but have additional specific properties of their own. Two such cases concern the interaction between subject nouns and tense markers; another concerns the /é/ genitive linker.

#### 3.3.1. Subject Tones

There appears to be considerable variation in how the different stem tones of subject nouns interact with the tense marker which follows them. Consider for example the HL /â/ perfect marker. In [3.27] it can be seen that /â/ undergoes tonal absorption when followed by a L tone verb such as /bva/ ‘fall’:

[3.27]	/ndzɔɔ â bva/	→	ndzɔɔ á bva	‘an elephant has fallen’
	/ŋgwùú â bva/	→	ŋgwuu á bva	‘a hippopotamus has fallen’
	/mbvá â bva/	→	mbvá á bva	‘a dog has fallen’
	/okáár â bva/	→	okáár ↓á bva	‘a woman has fallen’
	/mwǎàn â bva/	→	mwáán ↓á bva	‘a child has fallen’

In the last two sentences the subject noun has a HL or LHL stem which simplifies to H and LH, respectively. The suppressed L tone in turn downsteps the following HL /â/ perfect marker. Contrast this with the corresponding forms in [3.28], where the verb /dzá/ has a H tone:

[3.28]	/ndzɔɔ â dzá/	→	ndzɔɔ â dzá	‘an elephant has eaten’
	/ŋgwùú â dzá/	→	ŋgwuu â dzá	‘a hippopotamus has eaten’
	/mbvá â dzá/	→	mbvá â dzá	‘a dog has eaten’
	/okáár â dzá/	→	okáár a dzá	‘a woman has eaten’
	/mwǎàn â dzá/	→	mwáán a dzá	‘a child has eaten’

In the first three examples the HL of /â/ surfaces as such after a stem that ends L or H. Since it is followed by a H tone, one wonders why it doesn’t simplify to H + ↓H, as was seen in *okáár ↓á bva* ‘a woman has fallen’ in [3.27]. In fact, a HL tense marker never simplifies in this way (cf. the HL reduplicant in the future forms below). More curious than this is the realization of the tense marker in the last two examples: Instead of obtaining downstepped ↓á, which is

expected on the basis of the corresponding forms in [3.27], the tense marker is completely L. It would therefore appear that V tense marker with downstepped <sup>↓</sup>HL is further modified to L.

A similar, but slightly different set of facts characterizes the subject of the future tense. The corresponding forms to [3.27] and [3.28] are given in [3.29].

[3.29]	ndzɔɔ a bvíbvǎ	ndzɔɔ a dzǐdzǎ	‘an elephant will fall/eat’
	ɲgwuu a bvíbvǎ	ɲgwuu a dzǐdzǎ	‘a hippopotamus will fall/eat’
	mbvá á bvíbvǎ	mbvá á dzǐdzǎ	‘a dog will fall/eat’
	okáár <sup>↓</sup> á bvíbvǎ	okáár <sup>↓</sup> á dzǐdzǎ	‘a woman will fall/eat’
	mwáán <sup>↓</sup> á bvíbvǎ	mwáán <sup>↓</sup> á dzǐdzǎ	‘a child will fall/eat’

In this case the tense marker appears to be /á/ which becomes L after both *ndzɔɔ* ‘elephant’ and *ɲgwúú* ‘hippopotamus’, an apparent case of stem+prefix absorption.

This, however, does not explain why stem+prefix absorption do not lower the /ó/ tense marker of the past tense in the following sentences:

[3.30]	ndzɔɔ ó bvê	ndzɔɔ ó dzê	‘an elephant fell/ate’
	ɲgwúú ó bvê	ɲgwúú ó dzê	‘a hippopotamus fell/ate’
	mbvá ó bvê	mbvá ó dzê	‘a dog fell/ate’
	okáár <sup>↓</sup> ó bvê	okáár <sup>↓</sup> ó dzê	‘a woman fell/ate’
	mwáán <sup>↓</sup> ó bvê	mwáán <sup>↓</sup> ó dzê	‘a child fell/ate’

Another variation is that H tone tense markers such as /ó/ and /é/ have also been heard without downsteps, e.g. after *okáár* ‘woman’: *okáár ó sónka oɲkàán* ‘the woman wrote a letter’, *okáár é díir mwáàn* ‘let the woman wait for the child!’ vs. downstep before /á/: *okáár <sup>↓</sup>á sónka oɲkàán* ‘the woman has written a letter’.

Subject pronouns also show variable realizations. In general they should have the same tones as they carry in isolation, namely LHL, L-H or LH:

[3.30]	mǐ̀	‘I, me, my’	bǐ	‘we, us, our’
	yǎ̀	‘you(r) sg.’	byě̀n	‘you(r) pl.’
	ndé	‘s/he, him/his/her’	bǒ	‘they, them, their’ (human)
	nǒ	‘it(s)’	mǒ	‘they, them, their’ (non-human)

In slow speech these forms are sometimes heard in subject position. However, all but the stable L-H of *ndé* is more often realized L, no matter what the tone of the following tense marker:

[3.31]	mi á bva	‘I have fallen’	bi á bva	‘we have fallen’
	ya á bva	‘you sg. have fallen’	byen á bva	‘you pl. have fallen’
	ndé á bva	‘s/he has fallen’	bɔ á bva	‘they (human) have fallen’
	nɔ á bva	‘it has fallen’	mɔ á bva	‘they (non-human) have fallen’

It may therefore be that the language is in flux in this part of the tonal grammar.

### 3.3.2. /kó/ and Genitive /é/

Two constructions have the effect of converting certain following stem tones to HL. The first is the preposition /kó/ ‘at, to’ which is used to express both locative goals and dative recipients. As seen in [3.32], when followed by a noun lacking a prefix, an additional morpheme /a/ may intervene:

[3.32]	<i>L:</i>	muur	‘person’	kó múur	kó a múur	‘to a person’
	<i>H:</i>	nwí	‘bee’	kó nwí	kó a nwí	‘to a bee’
	<i>HL:</i>	lɔŋ	‘teacher’	kó lɔŋ	kó a lɔŋ	‘to a teacher’
	<i>LHL:</i>	mwáàn	‘child’	kó mwáàn	kó a mwáàn	‘to a child’
cf.	<i>LH:</i>	tàá	‘father’	kó tàá	kó <sup>↓</sup> á tàá	‘to father’

As also seen, all stem tones become HL except LH. This is confirmed in the following combinations of kó + pronoun:

[3.33]	<i>LHL:</i>	mǐ̀	‘me’	kó mǐ	kó a mǐ	‘to me’
		yǎ̀	‘you sg.’	kó yǎ	kó a yǎ	‘to you (sg.)’
	<i>LH:</i>	bǐ	‘us’	kó bǐ	kó <sup>↓</sup> á bǐ	‘to us’
		byě̀n	‘you pl.’	kó byě̀n	kó <sup>↓</sup> á byě̀n	‘to you (pl.)’
		bǔ	‘them’	kó bǔ	kó <sup>↓</sup> á bǔ	‘to them’
cf.	<i>L-H:</i>	ndé	‘him/her’	kó ndé	kó a ndé	‘to him/her’

As in the case of nouns, LHL pronouns become HL, while LH pronouns do not change. Unique in the pronominal system is the third person human singular pronoun *ndé* which has L-H tone in isolation. As seen, when directly preceded by *kó*, it becomes H-H. The intervening /a/ is pronounced L unless it is followed by a LH rising tone, in which case it is pronounced <sup>↓</sup>H: *kó <sup>↓</sup>á byě̀n* ‘to you pl.’, *kó <sup>↓</sup>á bǔ* ‘to them’. Although they do not take /a/, the following alternations show that prefixed nouns behave the same way after *kó* as nouns lacking a prefix:

[3.34]	<i>L-L:</i>	ibaa	‘man’	kó íbàà	kíbàà	‘to a man’
	<i>L-H:</i>	íkóòr	‘frog’	kó íkóòr	kíkóòr	‘to a frog’
	<i>L-HL:</i>	ákáàr	‘women’	kó ákáàr	kákáàr	‘to women’
cf.	<i>L-LH:</i>	ɛ̀j̀kpɛ̀n	‘fleas’	kó ɛ̀j̀kpɛ̀n	kéj̀kpɛ̀n	‘to fleas’

As indicated, deletion of the vowel of *kó* is optional (§2.5.1). Either way the prefix vowel is H and the stem becomes HL unless it is underlyingly LH. The only difference between nouns and pronouns concerns *ndé* ‘him/her’. Whereas a L-H noun such as *mbvá* ‘dog’ acquires a HL stem tone after *kó*, i.e. *kó mbvá* ‘to the dog’, *ndé* does not change. The pronoun *ndé* thus appears to be treated as if it were a LH rising tone whose H does not change. Its L does assimilate, as seen in *kó ndé* in [3.33].

The question is how to interpret the above tonal changes. On the one hand they might be viewed as arbitrary, with HL replacing L, H, and LHL stem tones after *kó* (and genitive *é*, to be discussed below). The alternative is to attempt to derive the HL tones from an appropriate, underlying tonal input. The tone of *kó* is clearly /H/. The <sup>4</sup>H realization of /a/ before rising tone stems suggests not only a H tone, but also an intervening L to condition the downstep, i.e. /kó `á/. Perhaps this L tone is responsible for the L tone realization of /a/ in forms like *kó a múùr*. Our suggestion is that the “replacive” HL tone originated from tones spreading, and ultimately shifting from left to right, as schematized in [3.35].

[3.35]	<i>inputs:</i>		<i>outputs:</i>									
	ko	+	a	+	muur		ko	+	a	+	muur	‘to a person’
											^	
	H		L H		L L		H		L		H L L	
	<i>inputs:</i>		<i>outputs:</i>									
	ko	+	a	+	nwi		ko	+	a	+	nwi	‘to a bee’
											^	
	H		L H		L H		H		L		H L H	

As seen in the inputs, nouns without an overt V- or N- prefix still have a floating L prefix (§4.3.2) to which the H of /á/ joins to form the HL which will ultimately replace the L or H tone of the noun stem. In [3.36] we see that the shifting of the HL to the right is blocked by a LH stem:

[3.36]	<i>input:</i>		<i>output:</i>						
	ko	+	a	+	taa		(no change)		‘to father’
					^				
	H		L H		L L H				

As indicated, there is no change: the floating L before /á/ produces the downstep, and LH remains in the output *kó ʼá tàá* ‘to father’. The best guess as to why LH cannot receive the H of /á/ is that a HLH contour is not tolerated in Nzadi, even in an intermediate representation.

A problem arises, however, in [3.34], where the nouns have a L prefix, as well as in the pronominal forms in [3.33] not involving /a/. Here it would appear that it is the H of /kó/ itself which both spreads and removes any trace of L on the noun prefix. Or could it be a floating H tone, as in [3.37]?

[3.37]	<i>inputs:</i>		<i>outputs:</i>	
	ko + + ibaa		ko + + ibaa	‘to a man’
	H H L L		H H L L	
	<i>inputs:</i>		<i>outputs:</i>	
	ko + + ikɔɔr		ko + + ikɔɔr	‘to a frog’
	H H L H		H H L H	

Again, a LH stem resists the shifting of the H tone, which would produce an intermediate HLH:

[3.38]	<i>input:</i>		<i>output:</i>	
	ko + + oŋkpen		ko + + oŋkpen	‘to fleas’
	^		^	
	H H L L H		H H L L H	

If the floating H suggestion is correct, this raises the possibility that the /a/ marker should be analyzed as having L tone followed by this same floating H, i.e. /à ʼ/, rather than a H tone preceded by a floating low, i.e. /` á/.

On the other hand, it may simply be that the H of /kó/ spreads onto a prefix and stem, since the same alternations take place on a noun which is preceded by an underlying /é/ genitive linker. As discussed in §5.3.1, in a ‘N<sub>1</sub> of N<sub>2</sub>’ possessive construction, the two nouns are juxtaposed with no marker if a singular N<sub>1</sub> derives from Proto-Bantu class 1 or 9 (the latter marked by a N- prefix), e.g. *mbum* ‘fruit’. Thus, the N<sub>2</sub> noun does not change in [3.39].

[3.39]	<i>L:</i>	muur	‘person’	<i>mbum muur</i>	‘the person’s fruit’
	<i>H:</i>	nwí	‘bee’	<i>mbum nwí</i>	‘the bee’s fruit’
	<i>HL:</i>	lɔŋ	‘teacher’	<i>mbum lɔŋ</i>	‘the teacher’s fruit’
	<i>LHL:</i>	mwǎàn	‘child’	<i>mbum mwǎàn</i>	‘the child’s fruit’
	<i>LH:</i>	táá	‘father’	<i>mbum táá</i>	‘father’s fruit’



However, after an  $N_1$  singular deriving from a different Proto-Bantu noun class, e.g. *òkàl* ‘place’, and after all plurals, a genitive /é/ marker is required, which conditions the same tonal changes seen after /kó/:

[3.40]	<i>L:</i>	muur	‘person’	okal e múùr	‘the person’s place’
	<i>H:</i>	nwí	‘bee’	okal e nwî	‘the bee’s place’
	<i>HL:</i>	lôŋ	‘teacher’	okal e lôŋ	‘the teacher’s place’
	<i>LHL:</i>	mwáàn	‘child’	okal e mwáàn	‘the child’s place’
cf.	<i>LH:</i>	tàá	‘father’	okal é tàá	‘father’s place’

As before, a LH stem is not affected. When the  $N_2$  begins with a vowel prefix, the vowel of /é/ deletes, but its tonal effects are still felt:

[3.41]	<i>L-L:</i>	ibaa	‘man’	okal ibáà	‘the man’s place’
	<i>L-H:</i>	ikóór	‘frog’	okal ikóòr	‘the bee’s place’
	<i>L-HL:</i>	okáàr	‘woman’	okal okáàr	‘the woman’s place’
cf.	<i>L-LH:</i>	eŋkpěŋ	‘fleas’	okal eŋkpěŋ	‘the fleas’ place’

The same alternations are observed when /é/ is followed by a pronoun. As with nouns, depending on the  $N_1$ , they either follow the noun directly without tonal change or occur with /é/ and the appropriate tonal changes. As seen in the following examples, the presence vs. absence of /é/ often distinguishes between singular and plural  $N_1$ :

[3.42]	mbum mǐ	‘my fruit’	mbum e mî	‘my fruits’
	mbum yǎ	‘your sg. fruit’	mbum e yâ	‘your sg. fruits’
	mbum ndé	‘his/her fruit’	mbum é ñdé	‘his/her fruits’
	mbum bǐ	‘our fruit’	mbum é bǐ	‘our fruits’
	mbum byěŋ	‘your pl. fruit’	mbum é byěŋ	‘your pl. fruits’
	mbum bǒ	‘their fruit’	mbum é bǒ	‘their fruits’

In general, and excluding LH stems, the same  $N_2$  HL tone is obtained independent of its input tone and of the tone of  $N_1$ . However, two types of variations have been recorded. First, as seen in [3.43], an  $N_2$  L-H is sometimes realized H-L, particularly if its stem consists of a CV syllable, especially in lexicalized or frequent combinations:

[3.44]	<i>L-H:</i>	oté	‘tree’	okal óte	‘the tree’s place’
		iyó	‘market’	okal iyo	‘place of the market’
		ibá	‘palm tree’	mán iba	‘palm wine’ (wine of palm tree)
		adzá	‘water’	etaar ádza	‘water bridge’ (bridge of water)
		otsó	‘head’	εε ótsɔ	‘skull’ (skull of head)
		ndzó	‘house’	du é ndzɔ	‘ceiling’ (sky of house)

In some cases H-L is preferred to the expected stem HL, while in others both forms are acceptable, e.g. *okpá* ‘salt’ → *okal okpá* ~ *okal ókpa* ‘the place of the salt’. A second variation concerns N<sub>2</sub> L-L which is occasionally realized H-L:

[3.45]	<i>L-L:</i>	eso	‘tree’	okal éso	‘place of the dry season’
		ɔsɔ	‘flamingo’	okal ósɔ	‘place of the flamingo’
		ɔtɔk	‘pipe’	okal ótɔk	‘place of the pipe’
		epaŋ	‘compound’	ntsúk épaŋ	‘hedge of compound’

Again, sometimes both realizations are possible, e.g. *etaar* ‘bridge’ → *okal etààr* ~ *okal étaar* ‘place of the bridge’. In most cases when the N<sub>2</sub> has a bisyllabic stem, frequently a borrowing, there is no tonal change, and /é/ or the N<sub>2</sub> prefix is realized H:

[3.46]	<i>L-L:</i>	iziba	‘lake’	okal íziba	‘place of the lake’
	<i>L-H:</i>	mpondó	‘millet’	mpfer é mpondó	‘millet flour’
	<i>L-HL:</i>	ntumbûl	‘root’	okal é ntumbûl	‘place of the root’
	<i>H-L:</i>	makémba	‘plantains’	ilɔŋ é makémba	‘plate of plantains’

Still, the following tonal changes have been noted on polysyllabic N<sub>2</sub> stems:

[3.47]	sokamûnt	‘gorilla’	okal sókamunt	‘place of the gorilla’
	pɔtpôt	‘mud’	okal e pɔtpɔt	‘place of the mud’
	osákátá	‘Sakata person’	okal osákata	‘place of Sakata person’
	ntumbûl	‘root’	okal é ntumbûl	‘place of the root’

### 3.3.3. Verb Tones

The tones on verb stems vary considerably by tense, aspect, and mood, which are treated separately in Chapter 7. In this section we will consider the basic tonal possibilities on verb stems, which bears on the issue of whether it is the syllable or the mora that is the tone-bearing unit. As seen in [3.46], three tonal patterns occur on monosyllabic verb stems in the infinitive:

[3.48]	<i>L-L</i> (82)	<i>L-HL</i> (112)	<i>L-H</i> (12)
	<i>o-ya</i> ‘to be ripe’	<i>o-vyâ</i> ‘to call’	<i>o-yá</i> ‘to be ripe’
	<i>o-dzya</i> ‘to immerse’	<i>o-dzwâ</i> ‘to kill’	<i>o-dzá</i> ‘to eat’
	<i>o-lya</i> ‘to fish with hook’	<i>o-lyâ</i> ‘to pass’	<i>o-fá</i> ‘to come from’
	<i>o-sii</i> ‘to frighten’	<i>o-tsîi</i> ‘to float’	<i>o-kpá</i> ‘to die’
	<i>o-bul</i> ‘to be bitter’	<i>o-bûl</i> ‘to hit’	<i>o-lé</i> ‘to be tired’
	<i>o-kul</i> ‘to carve’	<i>o-kûl</i> ‘to pick fruit’	<i>o-nó</i> ‘to drink’
	<i>o-kum</i> ‘to knock’	<i>o-kûm</i> ‘to become’	<i>o-pá</i> ‘to give’
	<i>o-laj</i> ‘to like’	<i>o-lâj</i> ‘to plaster’	<i>o-sá</i> ‘to put’
	<i>o-lum</i> ‘to throw in air’	<i>o-lûm</i> ‘to remove’	<i>o-tá</i> ‘to bite’
	<i>o-lyaj</i> ‘to rot’	<i>o-lyâj</i> ‘to lick’	<i>o-tsá</i> ‘to descend’
	<i>o-men</i> ‘to swallow’	<i>o-mên</i> ‘to dance’	<i>o-tsó</i> ‘to pound’
	<i>o-saj</i> ‘to allow’	<i>o-sâj</i> ‘to refrain’	<i>o-wá</i> ‘to finish’
	<i>o-suk</i> ‘to dish out’	<i>o-sûk</i> ‘to finish’	
	<i>o-sum</i> ‘to take out’	<i>o-sûm</i> ‘to buy’	
	<i>o-taj</i> ‘to drip’	<i>o-tâj</i> ‘to count’	
	<i>o-tum</i> ‘to bake in ashes’	<i>o-tûm</i> ‘to send’	
	<i>o-yaj</i> ‘to be happy’	<i>o-yâj</i> ‘to dry’	
	<i>o-zij</i> ‘to lose, forget’	<i>o-zîj</i> ‘to be alive’	
	<i>o-zuj</i> ‘to scoop’	<i>o-zûj</i> ‘to go around’	
	<i>o-baan</i> ‘to begin’	<i>o-bâan</i> ‘to climb’	

As indicated by the numbers, both L and HL verb stems are quite numerous and readily produce minimal pairs. On the other hand, H verb stems are few, and only one minimal pair with L has been found: *o-ya* ‘to come’ vs. *o-yá* ‘to be ripe’. No tonal minimal triplet and no minimal pair between H and HL have been found. This is in part due to a syllable structure condition on the H pattern, which occurs only on CV stems. As discussed in §2.2, stems can have any of the shapes CV, CVV, CVC and CVVC. In addition, the stem-initial C can be either a plain consonant or a CG (consonant+glide, i.e. Cw or Cy) sequence. The maximum size monosyllabic stem is thus CGVVC, of which six entries occur in the lexicon including the verbs *o-byéèr* ‘to drum’, *o-nwaan* ‘to fight’, and *o-swáàn* ‘to argue’. As the forms in [3.46] are designed to show, H tone can only appear on a (plain) CV syllable, i.e. not with a Cw or Cy sequence or on a long vowel. (Its vowel is also restricted to /ɛ/, /ɔ/ or /a/.) L and HL, on the other hand, can appear with any syllable shape. Most of the 12 H verb stems can be related to H tone verb roots which were \*CV, as opposed to \*CVC, in Proto-Bantu, e.g. \**dé-* ‘eat’, \**kú-* ‘to die’, \**pá-* ‘give’. The H of CV syllables is thus in complementary distribution with the HL of other syllable shapes. This suggests the following analysis of infinitive verb stems:

[3.49]	<i>L-L</i>	<i>L-HL</i>	<i>L-H</i>
	o-C(G)V(V)(C)	o-C(G)V(V)(C)	o-CV
		/ \	
	L     L   -L	L     H   -L	L     H   -L

As seen, verb roots have either /H/ or /L/ tone. In the infinitive a -L suffixal tone is assigned to the stem. When the verb root is L, the suffixal -L has no overt realization. When the root is H, however, the -L suffixal tone will link, as shown, to a H verb stem which has a CG initial, a long vowel, or a final consonant. The -L suffixal tone will not link to a H verb stem which has the shape CV. What this predicts is that there should not be any (plain) CV stems with HL tone. In fact, eight such verbs are found in the lexicon:

[3.50]	o-sî ‘to leave behind’	o-bî ‘to spoil’	cf. o-bé ‘bad’
	o-sî ‘to accompany’	o-dzî ‘to feed’	cf. o-dzá ‘to eat’
	o-tî ‘to consult a doctor’	o-tsî ‘to accept’	cf. o-tsá ‘to diminish’
	o-zî ‘to hide’	o-dzô ‘to get stung’	

As seen, all but one involve the vowel /i/. which, as can be seen in the forms in [3.48], does not occur on H verb stems. One can thus generalize and state that -L will not link to a verb stem of the shape *Cε*, *Cɔ* or *Ca*. On the other hand, at least two of the eight verbs in [3.48] are derived via an historical *-i* causative suffix: *o-bî* < ‘to make bad’, *o-dzî* < ‘to make eat’. An alternative hypothesis, therefore, is that the infinitive -L tone fails only to link to underived CV stems, at least historically.

What seems less likely is that suffixal -L fails to link because there is no mora to take it. While this may have been the historical explanation, there are too many other environments where HL can be realized on a CV stem. First, there are a few noun stems with this pattern:

[3.51]	mpê ‘uncle’ (mother’s brother)	ntsî ‘mushroom (sp.)’
	tî ‘tea’	otû ‘night’
	itô ‘buttock’	

Second, there are cases of CV stems with LH and even LHL tone, which typically demand more duration (and hence syllable weight) than HL:

[3.52]	ɲkǎ ‘snail’	ómǎ ‘(a) certain’
	pě ‘here’	dzǐ ‘eye’
	ɔŋkǎ ‘shrimp’	

Finally, returning to verb forms, there are other parts of the paradigm, e.g. the past tense, where H tone CV verb roots have no problem accepting a HL pitch assignment, e.g. *mi ó dzê* ‘I have eaten’, *ndé ó kpê* ‘he has died’. In this tense all verbs receive a HL stem tone (§7.2.1),

including L tone verbs, e.g. *o-bva* ‘to fall’, *bɔ ó bvê* ‘they have fallen’. It seems therefore that the H of such infinitives as *o-dzá* ‘to eat’ has more to do with the construction and the nature of the tone assignment than with the mora count.

There is, however, one other part of the paradigm where the mora count does seem at play. In the imperative, stem tone consists of the lexical H or L of the root + a suffixal -HL sequence. In the case of L roots, depending on the CV structure of the root, the expected LHL sequence is sometimes realized, sometimes not:

[3.53]	<i>Root = L</i>		<i>Root = H</i>	
	<i>infinitive/imperative</i>		<i>infinitive/imperative</i>	
	<i>CV</i> :	<i>o-bva</i> <i>bvâ</i> ‘fall!’	<i>o-dzá</i> <i>dzâ</i> ‘eat!’	
		<i>o-ya</i> <i>yâ</i> ‘come!’	<i>o-zî</i> <i>zî</i> ‘hide!’	
	<i>CGV</i> :	<i>o-zwi</i> <i>zwî</i> ‘wake up!’	<i>o-tswâ</i> <i>tswâ</i> ‘bring!’	
		<i>o-dzya</i> <i>dzyâ</i> ‘immerse!’	<i>o-vyâ</i> <i>vyâ</i> ‘call!’	
	<i>CVV</i> :	<i>o-kii</i> <i>kîi</i> ‘defend!’	<i>o-bâà</i> <i>bâà</i> ‘receive!’	
		<i>o-wëe</i> <i>wëë</i> ‘choose!’	<i>o-tsîi</i> <i>tsîi</i> ‘float!’	
	<i>CVC<sub>1</sub></i> :	<i>o-dzik</i> <i>dzîk</i> ‘uproot!’	<i>o-yûp</i> <i>yûp</i> ‘ask!’	
		<i>o-lek</i> <i>lêk</i> ‘surpass!’	<i>o-tît</i> <i>tît</i> ‘avoid!’	
		<i>o-fup</i> <i>fûp</i> ‘grill!’	<i>o-sûk</i> <i>sûk</i> ‘finish!’	
	<i>CVC<sub>2</sub></i> :	<i>o-mëk</i> <i>mëk`</i> ‘try!’	<i>o-kûl</i> <i>kûl</i> ‘pick!’	
		<i>o-mat</i> <i>măt`</i> ‘stand!’	<i>o-kât</i> <i>kât</i> ‘catch!’	
		<i>o-lil</i> <i>lîl`</i> ‘swim!’	<i>o-lôŋ</i> <i>lôŋ</i> ‘teach!’	
		<i>o-men</i> <i>měŋ</i> ‘swallow!’	<i>o-zîm</i> <i>zîm</i> ‘extinguish!’	
	<i>CVVC</i> :	<i>o-yaam</i> <i>yăam</i> ‘embrace!’	<i>o-swáàn</i> <i>swáàn</i> ‘argue!’	
		<i>o-nwaan</i> <i>nwăàn</i> ‘fight!’	<i>o-byéèr</i> <i>byéèr</i> ‘drum!’	
	<i>CVVCV</i> :	<i>o-balul</i> <i>bálul</i> ‘turn!’		
		<i>o-sakan</i> <i>sákan</i> ‘play!’		
	<i>CVCCVC</i> :	<i>o-luŋguk</i> <i>lũŋguk</i> ‘think!’	<i>o-báńtsa</i> <i>báńtsa</i> ‘think!’	
		<i>o-tëndul</i> <i>těndul</i> ‘preach!’	<i>o-yúńtsa</i> <i>yúńtsa</i> ‘try!’	
	<i>CVCCV</i> :	<i>o-sarsa</i> <i>sărsa</i> ‘help!’		
		<i>o-sónka</i> <i>sónka</i> ‘write!’		

Starting with monosyllabic L tone verbs, the imperative of CV and CGV verbs surfaces as HL, while CVV and CVVC verbs surface as LHL. The situation with CVC verbs is more complicated: If the coda is /p/, /t/ or /k/, and the vowel is /i/, /e/ or /u/, the imperative tone will be HL. If the vowel is /ɛ/, /ɔ/ or /a/, or if the final consonant is a nasal or /l/, the imperative tone will be LHL. Only one *r*-final L tone verb imperative was recorded, *kêr* ‘do!’ (from *oker* ‘to do’), suggesting that /r/ may pattern as a stop (from which it is likely historically derived; cf. §2.5.2). Turning to bisyllabic L tone stems, if the first syllable is CVC, the imperative tone will be LH-L; if it is CV, the imperative tone will be H-L. In all cases H tone verbs are realized HL if monosyllabic, H-L in the case of the two attested bisyllabic verbs.

From the above it does seem that there is some sensitivity to the duration of the first stem syllable: In addition to the V vs. VV contrast, low vowels are intrinsically longer than high vowels, as are sonorant consonants longer than obstruents. Our impression, however, is that there may be variation, as we wondered if *dzyá* ‘immerse!’ should instead be transcribed as *dzyǎ̀* or whether the initial dip is due to the voiced obstruent. (The difference is quite slight.) What is clear is that tones tend to bunch up on the initial syllable even if the stem is bisyllabic. Thus, we obtain *lǔnguk* ‘think!’ and *sǎrsa* ‘help!’ instead of *\*lungúk* and *\*sarsá*. It has already been pointed out that bisyllabic verb stems are L-L except for *obánísa* ‘to think’ and *oyúnísa* ‘to try’. In addition, no matter what tone pattern is assigned to the verb within the paradigm, the second syllable never receives a H (or HL) tone. It is realized L without exception, as if it were not a tone-bearing unit.

### 3.4. Intonation

Although tone has a heavy functional load in Nzadi, intonation frequently interacts, even interferes with the lexical tones. This happens particularly when a pause is taken in an utterance, either marking a clause boundary, a left dislocation, or a succession of items enumerated in a list. In this case a H final boundary tone (H%) is inserted. As seen in [3.54], a final syllable with L tone becomes LH, and a final HL syllable becomes H (without producing a downstep):

[3.54]	<i>L-L</i>	mbum	‘fruit’	mbǔm, mi ó pé mwǎ̀àn	‘a fruit I gave the child’
	<i>L-LH</i>	mbǔm	‘maggot’	mbǔm, mi ó pé mwǎ̀àn	‘a maggot I gave the child’
	<i>L-HL</i>	mpúù	‘rat’	mpúú, mi ó pé mwǎ̀àn	‘a rat I gave the child’
	<i>L-H</i>	epúú	‘cloth’	epúú, mi ó pé mwǎ̀àn	‘a cloth I gave the child’

As seen, L and LH stems merge, as do HL and H stems. Syllables which receive the H% tone may also be lengthened, as when forming a list. In the following sentences, all of the nouns are underlying /L-L/ in the first and /L-HL/ in the second:

[3.55]	Tukúmu a sísúm mbǔm... ndzùú...	‘Tukumu will buy fruit... groundnuts...
	ye mfer	and flour’
	Tukúmu ó món ngúl... ñkáám...	‘Tukumu saw a pig... a goat... and a hyena’
	ye okyâñ	

As seen, the H% boundary tone can obscure the lexical tones even to the point of merger between L and LH, HL and H. While it is natural to expect such H%-marked phrase marking in list intonation, the same effects are extremely common marking phrases in natural discourse, as seen in the realization of *baar* ‘people’ and *esaa* ‘food’ in the following sentence:

3.56	bo	a	díír	bàár...	sám	↓ó-lín	ésàá...
	they	HAB	visit	people.H%	reason	to get	food.H%
	ye	bó	kà	láj	↓ó-ker	kisál	bo
	and	they	NEG.HAB	get	to do	work	NEG
	‘they visit people to get food and avoid work’						

Yes-no question intonation is less disruptive, essentially involving the raising of the pitch of the whole utterance. Relative pitches are preserved, including downsteps and the final falling contour of a L before pause:

[3.57]	ba-mbéé a kí <sup>↓</sup> kábul mantete	‘the friends will share the squash’
	↑ba-mbéé a kí <sup>↓</sup> kábul mantete	‘will the friends share the squash?’
	mwaán ↓ó bve kó ntse	‘the child fell down’
	↑mwaán ↓ó bve kó ntse	‘did the child fall down?’
	oŋgbatyem â dzá otúŋ	‘the lizard has eaten the fly’
	↑oŋgbatyem â dzá otúŋ	‘has the lizard eaten the fly?’

Because of the overall pitch raising, a final sequence of Ls, as on *mantete* ‘squash’ will sound like a mid-mid-low sequence. By the same token, an initial sequence of Ls, as on *oŋgbatyem* ‘lizard’ will sound like an all mid sequence.

A similar raising of pitch may have a vocative function, e.g. ↑*Tukúmu!*, or mark excitement or agitation. Pitch-raising may also be used in exclamative utterances: ↑*yǎ bvǐm* ‘you thief!’, ↑*yǎ óndzǐn* ‘you imbecile!’, ↑*ntsón yǎ* ‘shame on you’ (lit. ‘your shame’).

Although Nzadi is a tone language, it is clear that there are phrasal boundary tones and register effects as in yes-no questions. Since intonation has not been studied in great depth, the above few comments will have to suffice.

## CHAPTER 4: THE NOUN

- 4.1. Noun forms
- 4.2. Singular/plural prefix pairings
- 4.3. Invariant nouns
- 4.4. Derived nouns
- 4.5. Noun compounds

### 4.1. Noun Forms

From a Bantu perspective, it is striking how short nouns are: In Nzadi, a noun stem consists of a single syllable which, in most cases, is preceded by a vowel or nasal prefix, e.g.

[4.1]	i-	ibaa	‘man’	ikóór	‘frog’	ikpá	‘death’	(70)
	e-	ebin	‘door’	etáàr	‘bridge’	ebààn	‘bamboo’	(56)
	ε-	εké	‘leaf’	εbe	‘nail’	εpeε	‘grasshopper’	(7)
	u-	---		---		---		
	o-	okáàr	‘woman’	oté	‘tree’	oseε	‘cockroach’	(82)
	ɔ-	ɔtɔk	‘pipe’	ɔtsó	‘head’	ɔsɔɔ	‘flamingo’	(7)
	a-	adzá	‘water’	até	‘saliva’	avúp	‘dew’	(7)
	N-	mbum	‘fruit’	ndzàà	‘hunger’	ɲgwóm	‘cow’	(159)

As seen in the above examples, the vowel prefix can be any of the six surface vowels other than *u-*. However, *è-* occurs only when the root vowel is /*ε*/ and *ɔ-* only when the root vowel is /*ɔ*/, a result of vowel harmony (§2.5.1.4). There thus are only four underlying vowel prefixes, /*i-*/, /*a-*/, /*e-*/ and /*o-*/, the last two becoming *è-* and *ɔ-* before the respective identical root vowel. The numbers in the last column show many entries occur in our lexicon with each



prefix out of a total of 388 basic nouns. As seen, the nasal prefix is the most common. The low numbers of *ɛ-* and *ɔ-* prefixes result from the fact that these are variants of /é/ and /ó/ derived by vowel harmony. The reason why there are only seven entries beginning with *a-* is that *a-* is inherently plural (see below). The above examples also show that noun prefixes are always underlyingly L tone. As elsewhere, an unmarked vowel or nasal carries a L tone. While N- is a prefix, a limited number of nouns have a vowel prefix followed by a nasal+consonant sequence. Of the 32 such nouns found to date, 24 have an *o-/ɔ-* prefix, e.g. *ompfĩ* ‘morning’, *oŋgír* ‘thing’ (see §4.2.2).

Within the lexicon 49 monosyllabic nouns occur without a vowel or nasal prefix, e.g.

[4.2]	bvuur	‘load’	kît	‘chair’	nûr	‘body’
	bwóm	‘fear’	mèé	‘oil’	siŋ	‘net’
	dzĩn	‘name’	men	‘mouth’	tàá	‘father’

In some cases, the historical prefix has fused with what was a vowel-initial root, as seen in certain singular-plural alternations, e.g. *mwǎ̀n* ‘child’, *bǎ̀n* ‘children’, *dzĩ* ‘eye’, *mĩ* ‘eyes’ (cf. §4.2.7).

The 65 noun entries which appear to have stems of more than one syllable are either reduplications, borrowings, or compounds. Some have prefixes and some do not:

[4.3]	iméme	‘sheep’	avokâ	‘avocado’	pɔ̀pɔ̀t	‘mud’
	osisá	‘vein’	mpandzí	‘rib’	fufú	‘fufu’ (cassava meal)
	intúntu	‘flower’	mbwètétè	‘star’	tsébo	‘sneezing’
	ipááfúl	‘mud’	ŋgyovûl	‘question’	pambú	‘worm’

Borrowings from neighboring or vehicular Bantu languages can often be identified by their length or by their CV prefix shapes, e.g.

[4.4]	mutâm	‘trap’	(cf. PB *mɔ̀, class 3)
	likembe	‘hand piano’	(cf. PB *dɪ-, class 5)
	mantete	‘courage’	(cf. PB *ma-, class 6)
	kimvûk	‘group’	(cf. PB *kɪ-, class 7)
	tufĩŋ	‘pus’	(cf. PB *tɔ̀-, class 13)

It should be noted that nouns like *imémè* ‘sheep’, *izibà* ‘lake’, and *isiké* ‘horn’ provide some of the rare cases where a stem has the shape CVCV. While some of the above words can be attributed to Lingala or Kituba, others are not so clear. (Compounds are treated in §4.5 below.)

Returning to the vowel and nasal prefixes, the question is whether they represent noun classes as in other Bantu languages. Singular nouns with a V- prefix typically take a different prefix in the plural, e.g. *okầr* ‘woman’, *akầr* ‘women; *ebin* ‘door’, *mbin* ‘doors’ (§4.2).

Although the noun prefixes and their singular/plural pairings clearly derive from PB noun classes, the only surviving noun class agreement in Nzadi occurs in the genitive construction and in quite reduced form (see §5.3.1). Perhaps more than in other Bantu languages, it is hard to find semantic unity in any of the prefix forms. For example, while some human singular nouns take an /ò-/ prefix, which derives from PB class 1 \**mú-*, other human nouns are marked with other prefixes or lack a prefix. Thus compare the nouns in [4.5].

[4.5]	olúm	‘husband’	ibaa	‘man’
	okáàr	‘woman’	mbéè	‘friend’
	oŋgaŋ	‘doctor’	mpê	‘uncle’ (mother’s brother)
	ondzéé	‘Nzadi person’	ŋkúm	‘chief’
	odzíŋ	‘Dzing person’	tàá	‘father’
	osákátá	‘Sakata person’	lòŋ	‘teacher’

The following counts of body parts/sensations and animals shows some variation in terms of percentages, which is likely due to inheritance (many animal nouns belonged to PB class 9 \*N-) rather than semantic consistency:

[4.6]		<i>singular i-</i>	<i>singular e-/ɛ-</i>	<i>singular o-/ɔ-</i>	<i>singular N-</i>
	<i>Totals:</i>	70	63	89	159
	<i># body parts</i>	11	15	12	11
	<i>%</i>	15.7	23.8	13.5	6.9
	<i># animals</i>	10	13	15	40
	<i>%</i>	14.3	13.6	16.9	25.2

The arguments for recognizing /i-/ , /e-/ , /a-/ , /o-/ and /N-/ as prefixes are, however, quite strong. First, most nouns begin with one of these forms, suggesting that they are bimorphemic, e.g. /i-bàà/ ‘man’, /o-káàr/ ‘woman’, /m-béè/ ‘friend’. Second, there are cases where different prefixes occur with same noun stem with related meanings, e.g.

[4.7]	ndzéé	‘river’	ondzéé	‘Nzadi person’	indzéé	‘Nzadi language’
	ibá	‘palm tree’	mbá	‘palm nut’		
	ikpá	‘death’	o-kpá	‘to die’		
	esim	‘root’	osim	‘rope’		
	isuk	‘bundle’	esuk	‘big bag carried by women over shoulder’		

In other cases, unrelated homophonous noun stems occur with different prefixes:

[4.8]	elùm	‘tongue’	olùm	‘husband’
	epàŋ	‘fence’	ipàŋ	‘machete’
	epúú	‘cloth, shirt’	mpúú	‘rat, mouse’
	avúp	‘dew’	ivúp	‘stump of a plant whose leaves jet out’

The third and most important argument for recognizing /i-/ , /e-/ , /o-/ , /a-/ and /N-/ as prefixes is that they participate in singular-plural pairings. This is the subject of the next section.

## 4.2. Singular/plural prefix pairings

Among the 487 basic noun entries, 407 or 83.6% have a recognizable, historical prefix which in most cases takes the shape V- or N-. While these prefixes are vestiges of an earlier, fully functional noun class system, it is important to emphasize that the only surviving noun class agreement occurs in the genitive construction, and only in an extremely reduced form (see §5.3.1). Still, many count nouns have a distinct singular and plural form in Nzadi. (There also is extensive singular/plural and human/non-human agreement.) The most common plural formation process is to change the prefix, e.g. *òndzée* ‘an Nzadi person’, *àndzée* ‘Nzadi people’, which correspond to PB classes 1 and 2, respectively. Since these singular-plural differences clearly correlate with PB noun class prefixes, we will identify each singular-plural pairing with the number of the corresponding noun classes in the proto language. However, as will be noted, there has been considerable restructuring, and there are a number of cases where the form of specific Nzadi nouns does not correspond to the expected PB noun class.

The schema in [4.9] represents the major singular and plural class pairings in Nzadi.

[4.9]		<i>singular</i>		<i>plural</i>	
	1, 3	o-	—	e-	4
	5	i-	—	a-	2, 6
	7	e-	—	N-	10
	9	N-	—		

As seen, there are four singular prefixes, /o-/ , /i-/ , /e-/ , /N-/ , and three plural prefixes, /e-/ , /a-/ , /N-/ . (Recall that *ɛ-* and *ɔ-* are derived from /e-/ and /o-/ , respectively.) These have been identified with the Bantu noun class numbers 1-7, 9 and 10. While /o-/ and /i-/ are exclusively singular and /a-/ is exclusively plural (or mass-liquid), /e-/ and /N-/ can be either singular or plural. The test for whether a noun is singular or plural is whether it takes singular or plural agreement. For example, the near-speaker demonstrative is *nápe* in the singular, but *mápe* in

the (non-human) plural, e.g. *ikwɔ nápe* ‘this banana’, *akwɔ mápe* ‘these bananas’. In the examples in [4.10], *è-* and *N-* take both singular and plural agreement, depending on semantic number:

[4.10]	<i>ebin nápe</i>	‘this door’	<i>okal nápe</i>	‘this place’	<i>mbvá</i> ↓ <i>nápe</i>	‘this dog’
	<i>mbin mápe</i>	‘these doors’	<i>ekal mápe</i>	‘these places’	<i>mbvá</i> ↓ <i>mápe</i>	‘these dogs’

As seen in the examples to the right, some nouns have a nasal prefix in both the singular and the plural, but can be disambiguated for number on modifiers. Thus, while such nouns are invariant, it is not the case that they lack number, rather they are simply identical in singular and plural, as indicated in [4.9]. Where needed, however, it is possible to disambiguate by adding the general plural proclitic *ba-*, i.e. *ba-mbvá* ‘dogs’ (see §4.3.3).

The above schema also indicates that there are six common singular-plural pairings: *o-/a-*, *o-/e-*, *i-/a-*, *e-/a-*, *e-/N-* and *N-/N-*. As seen, *a-* can be the plural prefix of nouns which are marked *ò-*, *ì-* or *è-* in the singular. Similarly, *N-* can pluralize both singular *è-* and *N-*. Each pairing is illustrated below, followed by consideration of exceptional singular-plural pairs and single-class nouns. The number of noun entries for each pairing is indicated in parentheses.

#### 4.2.1. *o-/a-* (PB 1/2) (12)

This class has relatively few members. Among these are the following:

[4.11]	<i>okáár / akáár</i>	‘woman/women’	<i>okwâ / akwâ</i>	‘younger sibling(s)’
	<i>olùm / alùm</i>	‘husband(s)’	<i>otùŋ / atùŋ</i>	‘relative(s)’
	<i>oŋgaa / aŋgaa</i>	‘owner(s)’	<i>okěl / akěl</i>	‘parent(s)-in-law’

As seen *o-/a-* nouns refer to human beings and thus clearly correspond to PB class 1/2 *\*mù-/ba-*. While such basic nouns are not numerous, the *o-/a-* pairing is used to refer to ethnic groups:

[4.12]	<i>ondzée / andzée</i>	‘Nzadi person(s)’	<i>oyánsi / ayánsi</i>	‘Yansi person(s)’
	<i>ombuun / ambuun</i>	‘Mbuun person(s)’	<i>olwǎl / alwǎl</i>	‘Lwal person(s)’
	<i>osákátá / asákátá</i>	‘Sakata person(s)’	<i>odzíŋ / adzíŋ</i>	‘Dzing person(s)’

Three problems interfere with setting up a general *o-/a-* human singular/plural pairing:

- (i) Some human nouns appear in other classes, as pointed out above. Thus, compare the following singular/plural forms:

- [4.13]    ibaa / abaa    ‘man/men’            mbéè / mbéè    ‘friend(s)’  
            izí / azí        ‘older sibling’        ŋkúm / ŋkúm    ‘chief(s)’

Another human noun, *mpik* ‘slave(s)’ is discussed in §4.2.6 below.

- (ii)        Some human nouns which have *o-* in the singular form their plural with /*e-*/, placing them in the *o-/e-* class (§2.2):

- [4.14]    ondyéé / endyéé    ‘white man/men’        oŋgyeŋ / eŋgyeŋ    ‘stranger(s)’  
            oŋgaŋ / eŋgaŋ    ‘doctor(s)’            ontsum / enstum    ‘young person(s)’

As will be seen in §5.3.1, singulars in the *o-/e-* class are expected to take /*é*/ in the genitive construction vs. singulars in the *o-/a-* class.

- (iii)        Other human nouns lack a prefix, corresponding to PB class 1a:

- [4.15]    tàá    ‘father(s)’            sɛmɛ̀k    ‘brother/sister-in-law(s)’  
            màá    ‘mother(s)’            bɔ̀y      ‘servant(s)’  
            lôŋ    ‘teacher(s)’            méme    ‘deaf and dumb person(s)’

In order to make the plurality clearer, the proclitic *ba-* is often added: *tàà é bĩ~ bà-tàà é bĩ* ‘our fathers’.

Two human nouns lack a V- or N- prefix, but change their initial consonant in the plural:

- [4.16]    muur    ‘person’                mwǎ̀àn    ‘child’  
            baar    ‘persons, people’      bǎ̀àn      ‘children’

These clearly give evidence of earlier PB 1/2 *\*mu-/ba-* prefixes which have become fused to what were historically vowel-initial roots.

There are, in fact, relatively few basic human nouns in the language. Many times a human noun will be a compound whose first element is either *muur* ‘person’ or *mwǎ̀àn* ‘child’ (which may simplify to *mwǎ̀*):

- [4.17]    mwa ibaa / bààn abáà    ‘boy(s)’            muur bvím / baar bvím    ‘thief/thieves’  
            mwǎ̀ okáàr / bààn akáàr    ‘girl(s)’            muur ndòk / baar e ndòk    ‘sorcerer(s)’

#### 4.2.2. *o-/e-* (PB 3/4) (74)

While there are relatively few *o-/a-* nouns, many more fall into the *o-/e-* class. In many, if not most cases, these derive back from Proto-Bantu 3/4 *\*mU-/\*mI-*:

[4.18]	okal / ekal	‘place(s)’	osisá / esisá	‘vein(s)’
	okwâ / ekwâ	‘bone(s)’	osó / esó	‘face(s)’
	okwúm / ekwúm	‘navel(s)’	otáàm / etáàm	‘trap(s)’
	okpá / ekpá	‘yam(s)’	oté / eté	‘tree(s)’
	okwúm / ekwúm	‘navel(s)’	otok / etok	‘pipe(s)’
	oseε / eseε	‘cockroach(es)’	oyáám / eyáám	‘lion(s)’

21 out of the 74 nouns in this grouping have a *oN-/eN-* prefix sequence, where the nasal may very well trace back to the *\*m* of the PB *\*mu-/\*mi-* prefixes:

[4.19]	ombvul / embvul	‘umbrella(s)’	oŋkâp / eŋkâp	‘belt(s)’
	ondy'éé / endy'éé	‘white man/men’	oŋkáán / eŋkáán	‘book(s)’
	ondûk / endûk	‘gun(s)’	ompfi / empfi	‘morning(s)’
	oŋgêr / eŋgêr	‘thing(s)’	ontsûŋ / entsûŋ	‘devil(s)’

#### 4.2.3. *i- / a-* (PB 5/6) (67)

Unlike the previous classes, where singular *o-* corresponds to two different plurals, *a-* vs. *e-*, with one exception, all singular nouns which begin with *i-* have a predictable *a-* as their plural prefix:

[4.20]	ibaa / abaa	‘man/men’	iméme / améme	‘sheep’
	ibúl / abúl	‘valley(s)’	imóŋ / amóŋ	‘knee(s)’
	idzîn / adzîn	‘tooth/teeth’	ipăp / apăp	‘wing(s)’
	ikié / akié	‘egg(s)’	itâr / atâr	‘stone(s)’
	ikóŋ / akóŋ	‘spear(s)’	iyó / ayó	‘market(s)’
	ikóór / akóór	‘frog(s)’	iziba / aziba	‘lake(s)’

The one exception is *intúntu* ‘flower’, whose irregular plural, *entúntu*, suggests a unique 5/4 pairing. Besides ‘flower’, an *in-* prefix has been found only in one other word, *indzéé* ‘Nzadi language’.

The initial [dz] of the following singular nouns, which also lack a syllabic prefix, shows that these derive from Proto-Bantu class 5 *\*dî-*:

[4.21]	dzĩ / mĩ	‘eye’	dzũm̃ / akũm̃	‘ten(s)’
	dzĩñ	‘name(s)’		

As seen, ‘eye’ changes its initial consonant to [m] in the plural (cf. PB class 6 *\*ma-*), while ‘name’ does not have a distinct plural. The plural form of ‘ten’ is irregular: while these forms derive from PB *\*di-kúmi / \*ma-kúmi*, only the plural retains the stem-initial [k], as in *àkúm* <sup>1</sup>*ápe* ‘twenty’, *àkúm* <sup>1</sup>*ásâr* ‘thirty’ (cf. §5.6.1). That the initial *dz-* represents the fusion

of a *\*di-* prefix is seen also from the relatively rare LHL tones on these monosyllabic stems. The noun *dzîm* ‘song’ should also be noted in this context, derived from PB *\*jîmbo*, but probably not in class 5. Finally, it should be noted that *i-* is used to refer to sister Bantu languages, e.g. *isákátá*, *idzîŋ*, *ilwǎl*, *iyánsi*. These cannot be pluralized with *a-* or the meaning would be ‘Sakata people’, ‘Dzing people’ etc. (cf. §4.2.1).

#### 4.2.4. *e-* / *a-* (PB 7/6, ?11/6) (13)

While PB class 7 *\*kɪ-* is expected to form its plural in class 8 *\*bi-*, there is no direct class 8 reflex in Nzadi. Instead, the plural prefix of singular *e-* nouns is either *a-* (this section) or *N-* (§4.2.5). As indicated, our lexicon includes only 13 *e-/a-* basic nouns:

[4.22]	ebip / abip	‘lip(s)’	επεε / apeε	‘grasshopper(s)’
	ekee / akee	‘jaw(s)’	epên / apên	‘thigh(s)’
	ekɔɔ / akɔɔ	‘bee(s)’	esaŋ / asaŋ	‘island(s)’
	ekwut / akwut	‘ear(s)’	esim / asim	‘root(s)’
	elaŋ / alaŋ	‘door(s)’	etaar / ataar	‘bridge’
	elep / alep	‘chin(s)’	etwâ / atwâ	‘bag(s)’
	epaŋ / apaŋ	‘compound(s)’		

It is possible that PB class 6 *a-* replaced the earlier class 8 prefix. However, this would not account for why these nouns are so few. As there is reason to think that *e-* derives as well from PB class 11 *\*dɔ-*, in which case some of these nouns could have been 11/6, the history was likely more complex (cf. the next section). It is also not clear whether to ascribe any significance to the fact that 11 out of the above 13 nouns have a L tone stem.

Five nouns have been found which begin with an *eN-* prefix:

[4.23]	embvakôl	‘afternoon’	entîn	‘haste, speed’
	eŋkum	‘stuttering’	entsaŋga	‘island(s)’
	eŋkûr	‘owl(s)’		

However, since none of them have a distinct plural prefix, we cannot assign the to 7/6, or to 7/10 in the next section.

#### 4.2.5. *e-* / *N-* (PB 7/10, ?11/10) (29)

The next class has the same singular *e-*, but differs in taking a nasal prefix in the plural:

[4.24]	ebaan / mbaan	‘bamboo(s)’	ekéé / ηkéé	‘leaf/leaves’
	ebim / mbim	‘door(s)’	epuu / mpuu	‘louse/lice’
	ebyém / mbyém	‘mosquito(s)’	epwɔn / mpwɔn	‘insult(s)’
	edzâ / ndzâ	‘claw(s)’	esáá / ntsáá	‘feather(s)’
	edzùú / ndzùú	‘groundnut(s)’	esyε / ntsyε	‘caterpillar(s)’
	eká / ηká	‘fur(s)’	etúŋ / ntúŋ	‘fly/flies’

As seen, a stem-initial /s/ will change to [ts] after an *n*- prefix (cf. §2.5.2). There are no *e*-/*N*- stems which begin with /f/, /v/ or /z/, which would be expected to become [pf], [bv] and [dz] in the plural. There also are no nouns which have *eN*- in the singular and *N*- in the plural. While we identify this pairing as 7/10, some of the nouns in it likely derive from Proto-Bantu 11/10 \**dù*-/*N*-.

#### 4.2.6. *N*- / *N*- (PB 9/10) (165)

Nouns in this class pairing have a nasal prefix in both singular and plural and are quite numerous. As in PB, many such nouns refer to animals:

[4.25]	mbvá	‘dog(s)’	ηkòó	‘snail(s)’
	mbvil	‘impala(s)’	ηkùl	‘tortoise(s)’
	ndzɔɔ	‘elephant(s)’	ηkwó	‘chicken(s)’
	ndzyén	‘cricket(s)’	mpfùú	‘bird(s)’
	ηgwóm	‘cow(s)’	mpúú	‘rat(s)’
	ηgwũ	‘hippopotamus(es)’	nten	‘snake(s)’
	ηkáá	‘crab(s)’	ntsúr	‘animal(s)’
	ηkáám	‘goat(s)’	ntswé	‘fish’
	ηkîm	‘monkey(s)’	ntûr	‘ant(s) (sp.)’

Others nouns are, however, also found:

[4.26]	mbá	‘palmtree(s)’	ηkǎl	‘headpad(s)’
	mbyě	‘bushknife/knives’	ηkáb	‘paddle(s)’
	mbín	‘calabash(es)’	ηkûn	‘firewood(s)’
	mbǒŋ	‘brain(s)’	ηkwôn	‘bean(s)’
	mbum	‘fruit(s)’	mpep	‘cave(s)’
	mbvwâ	‘path(s)’	mpó	‘throat(s)’
	ndzó	‘house(s)’	ntáŋ	‘mat(s), bed(s)’
	ηgúm	‘hill(s), mountain(s)’	ntsaa	‘basket(s)’
	ηgwen	‘moon(s), month(s)’	ntsêŋ	‘hoe(s)’



Although class 9/10 nouns have the same singular-plural forms, their semantic number can often be differentiated when modified, e.g. by a demonstrative: *mbvá ònân* ‘big dog’, *mbvá enân* ‘big dogs’. On the other hand, the general plural marker *ba-* can often be used to make the plurality explicit, e.g. *ba-mbvá* ‘dogs’.

It is possible that some present-day 9/10 nouns were originally in other classes. For example, *mpík* ‘slave’ reconstructs as class 1/2 *\*m<sub>o</sub>-pika/ba-pika* in PB. Similarly, *mpandzi* ‘rib’ is reconstructed as 11/10 *\*d<sub>o</sub>-banji/\*m-banji*, showing that the plural form may have been generalized as a new singular.

#### 4.2.7. Singular/Plural Pairings with Initial Consonant Changes

In the preceding subsections a handful of nouns were seen to change their initial consonant in singular-plural forms. The full set of such identified nouns is presented below, along with their proposed PB noun class identifications:

[4.27]	<i>Nzadi</i>			<i>Proto-Bantu</i>		
	<i>singular</i>	<i>plural</i>	<i>gloss</i>	<i>class</i>	<i>singular</i>	<i>plural</i>
	muur	baar	‘person(s)’	1/2	*m <sub>o</sub> -ntu	*ba-ntu
	mwaän	bään	‘child(ren)’	1/2	*m <sub>o</sub> -jánà	*ba-jána
	dzĩ̀	mĩ	‘eye(s)’	5/6	*di-jico	*ma-jico
	dzũ̀	akũm	‘ten(s)’	5/6	*di-kúmi	*ma-kúmi
	wáá	mǎn	‘village(s)’	?/6		
	wǎär	mǎär	‘canoe(s)’	14/6	*bu-játo	*mà-játo

Although one might analyze ‘canoe’ as *ò-är* and identify it with *o-* singulars, the plural would still be quite exceptional. As shown, this noun clearly reconstructs as 14/6 in Proto-Bantu. By the same token, nothing is gained by segmenting nouns such as *mèé* ‘oil’ and *máán* ‘wine’ as *m-èé* and *má-án* (cf. PB class 6 *\*ma-jadi* ‘oil’, *\*ma-jána* ‘palm wine’).

An additional issue concerns the small number of nouns, all borrowings, which have alternating CV- prefixes in singular vs. plural. Among these are the following:

[4.28]	musumbwâ	misumbwâ	‘fish (sp.)’	PB	3/4	*m <sub>o</sub> -/m <sub>i</sub> -
	likémba	makémba	‘plantain(s)’	PB	5/6	*di-/ma-
	kisâl	bisâl	‘work, farming’	PB	7/8	*k <sub>i</sub> -/*bi-
	kífu	bífu	‘error(s)’	PB	7/8	*k <sub>i</sub> -/*bi-

Preserving the singular/plural forms of the donor language, in many cases Kikongo, is very much like maintaining Latin plurals in English, e.g. *alumnus*, *alumni*. As in the English case, Nzadi speakers just as readily ignore the original plurals in favor of zero marking in the plural, or the general *ba-* pluralizer, which were recorded with the following borrowings whose first syllable clearly resembles a Bantu prefix:

[4.29]	mikéén	(ba-) mikéén	‘leprosy, leprosyies’	PB 4	*mí-
	likembe	(ba-) likembe	‘hand piano(s)’	PB 5	*dí-
	mabáńtsa	(ba-) mabáńtsa	‘thought(s)’	PB 6	*ma-
	kimvûk	(ba-) kimvûk	‘group(s)’	PB 7	*kí-
	lulên	(ba-) lulên	‘boasting(s)’	PB 11	*du-

These nouns essentially fall into the next category, being invariant in the singular and plural.

### 4.3. Invariant Nouns

A number of nouns do not distinguish singular/plural forms. This includes a large number of nouns which have the same *N-* prefix in both singular and plural. In this section we consider additional nouns which may or may not have a prefix, but which do not change in the plural—other than by adding the general pluralizer *ba-*, which has two important properties: (i) It is added to what would otherwise be a free standing noun ambiguous in number; (ii) it is never obligatory, e.g. *siŋ* ‘net(s)’, *ba-siŋ* ‘nets’, *mbvá* ‘dog(s)’, *ba-mbvá* ‘dogs’. In considering nouns which do not distinguish singular-plural via different prefixes, it is important to determine whether the lack of a number distinction is a grammatical fact, or whether it can be predicted by the semantics of the nouns in question.

#### 4.3.1. Prefixed Invariant Nouns

In the case of abstract, mass, liquid and certain other nouns, the absence of a number distinction may be due to the fact that they are inherently non-countable, at least in their canonical meanings. The following represent invariant nouns which appear to be basic singulars: *olaam* ‘type of fishing with a long mat’, *ilé* ‘tiredness’, *esaa* ‘food’, *mpfêr* ‘flour’. We have already illustrated the agreement test which distinguishes singular vs. plural on *N-* prefix nouns: *mbvá* <sup>1</sup>*nápe* ‘this dog’, *mbvá* <sup>1</sup>*mápe* ‘these dogs’. Since *o-* and *i-* are unambiguously singular, only a small handful of nouns with these prefixes fail to have a distinct plural. There are, however, 21 invariant nouns with an *e-* prefix in our lexicon. Since we have seen *e-* to be the plural prefix of *o-*, but a singular prefix whose plural is either *a-* or *N-*, these nouns, in isolation, are ambiguous in number. As it turns out, most can appear with either singular or plural modifiers:

[4.30]	ekó napyá	‘that cloud’	ekó mapyá	‘those clouds’
	ekul nápe	‘this foot’	ekul mápe	‘these feet’
	elá okúùr	‘an old lie’	elá ekúùr	‘old lies’
	elúm e mí	‘my tongue’	elúm e bǝ	‘their tongues’
	ekwóm ↓ómótúk	‘one broom’	ekwóm ↓ípe	‘two brooms’

While the above nouns can clearly appear in both singular and plural contexts, a smaller number of invariant *e-* nouns are inherently plural: *efur mápe* ‘this dust’ (plural). While the singular form, *efur nápe*, may be ungrammatical, in other cases singular agreement “individuates” what would normally be an inherent plural, e.g. *etiír ↓mápe* ‘this grass’ vs. *etiír ↓nápe* ‘this piece (e.g. blade) of grass’. A rather revealing comparison between three *N-* prefix nouns is seen in [4.31].

[4.31]	mbvá mǝ	‘my dog’	mbvá é mí	‘my dogs’
	mbvá ↓nápe	‘this dog’	mbvá ↓mápe	‘these dogs’
	mpfer mǝ	‘my flour’	mpfer e mí	‘my flour’
	mpfer nápe	‘this bit of flour’	mpfer mápe	‘this flour’
	*ndzii mǝ		ndzii e mí	‘my money’
	ndzii nápe	‘this piece of money’	ndzii mápe	‘this money’

As above, the singular forms are given on the left and the plural forms on the right. The invariant noun *mbvá* ‘dog’ illustrates the most common situation where an invariant *N-* noun can freely occur with singular and plural modification. In the case of the possessive, *N-* noun singulars are followed directly by the possessor, while *N-* noun plurals require an intervening /é/ genitive linker (§5.3.1). In the second example, the mass noun *mpfer* ‘flour’ can occur either with or without the /é/ marker (as certain other nouns also vary). However, the demonstrative *mápe* shows that it is inherently plural, since the singular takes on the meaning of ‘a bit of’. Similarly, the inherently plural noun *ndzii* ‘money’, which requires /é/ (like a plural), can still occur with singular *nápe* with the meaning ‘a piece of’. *ndzii nápe* thus can mean ‘this coin’ or ‘this paper bill’.

The same kind of nuances are found with nouns that occur with the inherently plural *a-* prefix, of which there are seven in the lexicon. These fall into the following three categories:

[4.32]	<i>expected semantic singular</i>			
	abal nápe	‘this belly’	abal mápe	‘these bellies’
	avoká ↓nápe	‘this avocado’	avoká ↓mápe	‘these avocados’
	<i>nuanced singular</i>			
	adzá ↓nápe	‘this (container of) water’	adzá ↓mápe	‘this water’
	<i>odd or disallowed singular</i>			
	?? aduur nápe		aduur mápe	‘this fatigue’
	?? avúp ↓nápe		avúp ↓mápe	‘this dew’
	?? até ↓nápe		até ↓mápe	‘this saliva’

As seen, *abal* ‘belly’ and *avoká* ‘avocado’, a borrowing, are countable nouns, just like *ekó* ‘cloud’ in [4.30]. On the other, *adzá* ‘water’ is normally plural, but can occur with a singular demonstrative referring to a container of water, e.g. a glass. If one were to point to a puddle of water on the ground, only *dìir adzá ↓mápe* ‘look at this water!’ would be appropriate. The unacceptability of the last three nouns with *nápe* might be more pragmatic than semantic: ‘fatigue’, ‘dew’ and ‘saliva’ do not normally occur individuated, i.e. in containers. While demonstratives agree with the grammatical number of ‘water’, hence taking a plural form, adjectives appear to agree instead with the semantics: *adzá ósya* ‘beautiful water’ vs. *adzá ésyá* ‘beautiful waters’. As indicated in the English plural ‘waters’, the plural form *ésya* refers to multiple bodies or containers of water. The same effect is seen when *ba-* is added: *ba-adzá* ‘waters’ again indicates multiple contained bodies or containers of water.

#### 4.3.2. Prefixless Invariant Nouns

It was established in §4.1 that a minority, but sizeable number of nouns do not have a prefix at all. As a result, such nouns will be identical in both singular and plural. As in the case of invariant nouns with either a *V-* or *N-* prefix, semantic number can be contrasted on modifiers:

[4.33]	kít ↓nápe	‘this chair’	kít ↓mápe	‘these chairs’
	núr ↓nápe	‘this body’	núr ↓mápe	‘these bodies’
	tsya nápe	‘this fire’	tsya mápe	‘these fires’
	mwáán ↓nápe	‘this light’	mwáán ↓mápe	‘these lights’

In other cases, the singular demonstrative implies a container:

[4.34]	máán ↓nápe	‘this (container of) wine’	máán ↓mápe	‘this wine’
	mèé ↓nápe	‘this (container of) oil’	mèé ↓mápe	‘this oil’



[4.37]	abaa bápe	‘these men’	ba-abaa bápe	‘these (individual) men’
	abá <sup>↓</sup> mápe	‘these palmtrees’	ba-abá <sup>↓</sup> mápe	‘these (individual) palmtrees’
	akaa mápe	‘these charcoals’	ba-akaa mápe	‘these pieces of charcoal’
	(ibaa ‘man’, ibá ‘palmtree’, ikaa ‘charcoal’)			

While the above nouns have a corresponding singular, invariant plural nouns can show the same effect: *adzá* <sup>↓</sup>*mápe* ‘this water’ (lit. ‘these water’), *ba-adzá* <sup>↓</sup>*mápe* ‘these waters’, i.e. these bodies of water, ponds etc. In addition, we have noted the following plurals of the singular noun *wàá* ‘village’ discussed in §4.2.7: *mǎn*, *ba-wàá*, *ba-mǎn*. Although this is an isolated example in our material, it may be that the singular-plural distinctions in prefixes will ultimately be leveled with *ba-* taking their place.

#### 4.4. Derived nouns

Although other Bantu languages are potentially rich in derivational processes, Nzadi has surprisingly few derived nouns. While the following isolated noun-verb pairs have been identified, there is no productive process of verb-to-noun derivation in the language. In addition, several of the nouns are likely borrowings (*mabáńtsa*, *ńgyovûl*, *kisâl*, *luzîŋ*):

[4.38]	ntsûk	‘end, limit’	o-sûk	‘to finish’
	entîn	‘haste, speed’	o-tîn	‘to escape’
	ekwôm	‘broom’	o-kwôm	‘to sweep’
	mabáńtsa	‘thought’	o-báńtsa	‘to think’
	obûr	‘birth’	o-bûr	‘to give birth’
	bvuur	‘load’	o-bvuur	‘to be heavy’
	ńgyovûl	‘question’	o-yuvul	‘to ask, interrogate’
	okal	‘place’	o-kal	‘to return, bring back’
	ikpá	‘death’	o-kpá	‘to die’
	ilé	‘tiredness’	o-lé	‘to tire, be tired’
	lôŋ	‘teacher’	o-lôŋ	‘to teach’
	men	‘mouth, beak’	o-men	‘to swallow’
	kisâl	‘work, farming’	o-sâl	‘to work’
	ntswa	‘an order’	o-tswâ	‘to rule’
	luzîŋ	‘life’	o-zîŋ	‘to be alive’
	ndzya	‘deep’	o-dzya	‘to immerse, sink, bury’

Among the above it can be noted that there is only one agentive nominal, *lôŋ* ‘teacher’, and relatively few abstract deverbal nouns, e.g. *ikpá* ‘death’, *ilé* ‘tiredness’. Agentives expressing professions involve relative clauses in Nzadi:

[4.39]	muur na nga ke ndzée	‘fisherman’	lit. ‘a person who goes to the river’
	muur na nga ke opàá	‘hunter’	lit. ‘a person who goes hunting’
	muur na nga ke (~ ker) izwɔŋ	‘farmer’	lit. ‘a person who goes (~ does) field’
	muur na nga pasul ntsúr	‘butcher’	lit. ‘a person who cuts meat’
	muur na nga ker mbul	‘blacksmith’	lit. ‘a person who does metals’

The plurals of the above substitute *baar* ‘people’ for *muur*, e.g. *baar na nga ke ndzée* ‘fishermen’. Other agentives are typically built on genitive or noun + modifier constructions:

[4.40]	muur bvĩm	baar é bvĩm	‘thief/thieves’	lit. ‘person(s) of theft’
	muur kisál ndzó	baar é kisál ndzó	‘servant(s)’	lit. ‘person(s) of housework’
	muur ndək	baar é ndək	‘sorcerer(s)’	lit. ‘person(s) of sorcery’
	muur ŋgadzĩm	baar ngadzĩm	‘liar(s)’	lit. ‘lying person(s)’
	muur ŋgayεε	baar ŋgayεε	‘seller(s)’	lit. ‘selling person(s)’

In many cases, even the headword *muur* ‘person’ would not even be required: *yǎ bvĩm* ‘you thief!’ (lit. ‘you theft’), *mwàán ʹnàpe é ye elá* ‘this child is a liar’ (lit. ‘this child is falsehood’).

It also is hard to show a derivational relationship between nouns and adjectives, since adjectives ARE nouns (§5.4). Thus adjectives may function both as modifiers and as head nouns:

[4.41]	muur obé	‘bad person’	obé mĩ̀	‘my badness’
	duu buléè	‘blue sky’	buléé é dúù	‘the blue of the sky’
	ntswé óbvo	‘fresh fish’	obvo é ntswe	‘freshness of the fish’
	oŋkaan é ʹmpa	‘new book’	mpa oŋkáán	‘newness of the book’
	ikwɔ odzo	‘good banana’	ozdo íkwɔ	‘goodness of the banana’

The same duality characterizes infinitives, which naturally function both as verbs and as nouns. The following sentences show that an infinitive can both be modified and appear as subject of the sentence:

[4.42]	o-dzĩm ʹé ye obé	‘to lie is bad’	o-dzĩm	‘to lie’
	o-lyaa e ndé ó ŋkér mĩ mpàs	‘his crying made me angry’	o-lyaa	‘to cry’

Noun-to-noun derivation is also limited. Noun stems occurring with different prefixes were illustrated in [4.7] and [4.12]. The only quasi-productive relationship concerned ethnicities, which occur with human singular and plural *o-/a-* prefixes and with an *i-* prefix to indicate the language, e.g. *osákátá* ‘a Sakata person’, *asákátá* ‘Sakata people’, *isákátá* ‘the Sakata language’. There is no diminutive derivation by change of prefix. Instead, diminutives are formed by compounding *mwàán /bǎán* ‘child(ren)’ to the noun in question. The final *-n*

of the singular *mwààn* is usually deleted. As seen in the following examples, the resulting meaning always denotes a diminutization, but sometimes with the nuance of referring to a young human being or animal:

[4.43]	<i>mwa íbaa</i>	<i>bàán abáà</i>	‘boy(s)’	<i>ibaa / abaa</i>	‘man/men’
	<i>mwa okáàr</i>	<i>bàán àkáàr</i>	‘girl(s),’	<i>okáàr / akáàr</i>	‘woman/women’
	<i>mwàá mbyě</i>	<i>bàán <sup>l</sup>é mbyě</i>	‘knife/knives’	<i>mbyě</i>	‘bushknife/-ves’
	<i>mwàá ndzɔɔ</i>	<i>bàán <sup>l</sup>é ndzɔɔ</i>	‘baby elephant(s)’	<i>ndzɔɔ</i>	‘elephant(s)’
	<i>mwàá lwǒ`</i>	<i>bàán <sup>l</sup>é lwǒ`</i>	‘finger(s)’	<i>lwǒ`</i>	‘hand(s), arm(s)’
	<i>mwa oté</i>	<i>bàán <sup>l</sup>étê</i>	‘branch(es)’	<i>oté / eté</i>	‘tree(s)’

The last two examples show that some of the meanings are not predictable, although their meanings are clearly diminutive when compared with those of the base nouns. The fact that the genitive linker /é/ intervenes between the two nouns in the plural shows that compounds are indistinguishable from genitives (§5.3.2). (/é/ deletes when the following noun begins with a vowel prefix.)

Just as there are no morphological diminutives in Nzadi, there also is no sex-based morphological gender. Instead, the nouns *ibaa* ‘man’ (pl. *abaa*) and *okáàr* ‘woman’ (pl. *akáàr*) are compounded after the base noun:

[4.44]	<i>izí íbaa</i>	<i>azyé ábaa</i>	‘older brother(s)’	<i>izí / azyé</i>	‘older sibling’
	<i>izí okáàr</i>	<i>azyé àkáàr</i>	‘older sister(s)’		
	<i>ŋka íbaa</i>	<i>ŋka ábaa</i>	‘grandfather(s)’	<i>ŋkàá</i>	‘grandparent’
	<i>ŋká okáàr</i>	<i>ŋká àkáàr</i>	‘grandmother(s)’		
	<i>ŋkwó íbaa</i>	<i>ŋkwó ábaa</i>	‘rooster(s)’	<i>ŋkwó</i>	‘chicken’
	<i>ŋkwó okáàr</i>	<i>ŋkwó akáàr</i>	‘hen(s)’		

Other types of compounds are discussed in the next section.

#### 4.5. Noun Compounds

Out of 572 nouns in the lexicon, 84 or roughly 1/7 of the entries are noun compounds such as the following:



[4.45]	ndzô nwí	‘beehive’	ndzô	‘house’	nwí	‘bee’
	mɛɛ nwí	‘honey’	mɛɛ	‘oil’	nwí	‘bee’
	du é ndzô	‘ceiling’	duu	‘sky’	ndzô	‘house’
	adzá é mbvwâ	‘dew’	adzá	‘water’	mbvwâ	‘path’
	okâl ↓ótsɔ	‘madness’	okâl	‘illness’	ɔtsó	‘head’
	adzá ibvyô	‘milk’	adzá	‘water’	ibvyô	‘breast’
	ɛbe ótsɔ	‘skull’	ɛbɛ	‘shell’	ɔtsó	‘head’
	mpété itîi	‘earring’	mpété	‘ornament’	itîi	‘ear’
	mpfye adzîŋ	‘pottery’	mypfě	‘pot’	adzîŋ	‘Dzing people’
	ntswɛ e dzî	‘eyebrow’	ntswě	‘hair’	dzî	‘eye’
	mwa oté	‘branch’	mwăàn	‘child’	oté	‘tree’

As can be seen, the above examples are transparent ‘N<sub>1</sub> of N<sub>2</sub>’ combinations: noun+noun compounding is non-distinct from the genitive construction. Thus, ‘beehive’ is ‘house of bee’, ‘honey’ is ‘oil of bee’, and so forth. Such compounds/genitive combinations are quite numerous, even when a corresponding basic noun also exists, e.g. *avúp* ‘dew’, *ntâp* ‘branch’.

A number of human and kinship terms are complex lexical items:

[4.44]	taa okùùr	‘uncle’ (father’s older brother)	tâá	‘father’	okùùr	‘old’
	maa okùùr	‘aunt’ (mother’s older sister)	mâá	‘mother’	okùùr	‘old’
	okáár osó	‘first wife’	okáár	‘woman, wife’	osó	‘front’
	ŋgaŋ ndzâám	‘priest’	oŋgaŋ	‘doctor’	ndzâám	‘God’
	okel ibáá	‘father-in-law’	okel	‘parent-in-law’	ibaa	‘man’
	okel okáàr	‘mother-in-law’	okel	‘parent-in-law’	okáàr	‘woman’

Other compounds may involve unpredictable phonetic modifications, a less certain etymology or a combination where one or both parts have not been thus far identified:

[4.45]	ibwá ŋkǒ	‘praying mantis’	obwâ	‘to break’	ŋkǒ	‘snail’
	etaa e dúù	‘ladder’	etaar	‘bridge’	duu	‘sky’
	oká é lépre	‘leprosy’	okâl	‘illness’	lépre	‘leper’
	ntsúr-tii	‘porcupine’	ntsúr	‘animal’	tii	‘?’
	ŋgal-mbíí	‘cat’	ŋgal	‘?’	mbíí	‘?’
	oful-mun	‘breath’	oful	‘?’	mun	‘?’
	ntsáŋ-kǔr	‘ant (big) (sp.)’	ntsáŋ	‘?’	kǔr	‘?’

As seen later in §6.5, many lexical verbal entries also are phrasal, involving a verb + noun.

## CHAPTER 5: THE NOUN PHRASE

- 5.1. General
- 5.2. Pronouns
- 5.3. Genitive constructions
- 5.4. Adjectives
- 5.5. Determiners
- 5.6. Numerals and quantifiers
- 5.7. Participials
- 5.8. Word order

### 5.1. General

This chapter treats the different types of noun modifiers, expansions of the noun phrase, and pronouns. Noun modifiers follow the head noun in Nzadi. While some modifiers and pronouns are invariant, others exhibit singular/plural or human/non-human agreement with the head noun or antecedent. Examples of each possibility are seen in the following table:

[5.1]

	<i>singular</i>		<i>plural</i>	
	<i>human</i>	<i>non-human</i>	<i>human</i>	<i>non-human</i>
<i>pronouns</i> (3rd person)	ndé	nǎ	bǎ	mǎ
<i>demonstratives</i> (e.g. ‘this’)	ná-pe		bá-pe	má-pe
<i>adjectives</i> (some; e.g. ‘big’)	o-nân		e-nân	
<i>adjectives</i> (some; e.g. ‘bad’)	o-bé			

As seen, 3rd person pronouns make a four-way distinction between singular/plural and human/non-human, while demonstratives exhibit a three-way distinction, with humanness being relevant only in the plural. Adjectives fall into two groups: a minority group which distinguish singular/plural vs. the majority which are invariant. As will be seen in the following sections, number and humanness represent semantic contrasts. Not shown in the above table is the possessive construction, which has a grammatical agreement system traceable directly back to the Proto-Bantu noun class system (§5.3).

## 5.2. Pronouns

The basic Nzadi pronoun system is presented in the following table:

[5.2]		<i>singular</i>	<i>plural</i>
	<i>1st person</i>	mĩ̀	bĩ
	<i>2nd person</i>	yǎ̀	byě̀n
	<i>3rd person [+human]</i>	ndé	bǒ
	<i>3rd person [-human]</i>	nǒ	mǒ

As seen, 1st and 2nd person pronouns distinguish only singular and plural, as they are inherently [+human]. 3rd person pronouns, on the other hand, are further differentiated into [+human] and [-human] forms. There is no difference between inclusive vs. exclusive 1st person plural. Thus, *ndzó bĩ* ‘our house’ could refer to the house that I own with you or with someone else.

Unlike most Bantu languages, the above pronouns are the same whether occurring independently or as subject, object, or possessor:

[5.3]	mĩ̀	‘I, me, my’	bĩ	‘we, us, our’
	yǎ̀	‘you (sg.), your (sg.)’	byě̀n	‘you (pl.), your (pl.)’
	ndé	‘he, she, him, her, his, her’	bǒ	‘they, them, their’ (human)
	nǒ	‘it, its’	mǒ	‘they, them, their’ (non-human)

The multifunctional nature of these pronouns can be seen in the following sentences:

[5.4]	mi ó pé ndé nǒ	‘I gave him it’
	bó ó mǒn mĩ̀	‘they saw me’
	bi ó yíb mbvá bǒ	‘we stole their dog’

While 1sg. and 2sg. pronouns have underlying /LHL/ tone, the remaining pronouns are /LH/, with the two tones realized as bisyllabic L-H in the case of *ndé* ‘3rd sg. human’. As seen in the above examples, these tones are frequently simplified in context (cf. Chapter 3).

Nzadi does not distinguish between co-referential and non-coferential (e.g. logophoric) 3rd person pronouns. The following sentences are thus ambiguous as to whether the two pronoun subjects are coreferential or not:

- [5.5] ndé ó tyén ningé ndé e lán yǎ` ‘he<sub>i</sub> said that he<sub>i,j</sub> likes you’  
 he PAST say that he PRES like you  
 bɔ́ ó tyén ningé bɔ́ e lán yǎ` ‘they<sub>i</sub> said that they<sub>i,j</sub> like you’  
 they PAST say that they PRES like you

Reflexivity is expressed by adding *-ńgizyâ* to the above pronouns (which acquire H tone):

- [5.6] mí-ńgizyâ ‘myself’                      bí-ńgizyâ ‘ourselves’  
 yá-ńgizyâ ‘yourself’                      byén-ńgizyâ ‘yourselves’  
 ndé-ńgizyâ ‘himself, herself’              bɔ́-ńgizyâ ‘themselves’ (human)  
 nɔ́-ńgizyâ ‘itself’                              mɔ́-ńgizyâ ‘themselves’ (non-human)

As seen in the following examples, the resulting complex pronoun can assume different functions in the sentence (subject, object, possessor):

- [5.7] mí á diir mí-ńgizyâ kó taltál ‘I’ve looked at myself in the mirror’  
 ndé e dzí mwáàn ndé-ńgizyâ ‘she is feeding her own child’  
 bí-ńgizyâ ó kër nǔ ‘we ourselves did it’ =  
 bí ó kër nǔ bí-ńgizyâ ‘we did it ourselves’  
 bɔ́ ó búl <sup>l</sup>bɔ́-ńgizyâ ‘they hit themselves/each other’

The last example shows that *-ńgizyâ* provides either a reflexive or reciprocal sense in the plural. The reflexive may also express a possessor: *mwáà <sup>l</sup>mí-ńgizyâ* ‘my own child’.

### 5.3. Genitive Constructions

The genitive construction in Nzadi covers the usual relationships between noun phrases: possession, part-whole, composition, attribution, etc. The second noun phrase can be either nominal, Noun<sub>1</sub> of Noun<sub>2</sub> (“N<sub>1</sub> of N<sub>2</sub>”), or pronominal, using one of the pronouns in [5.2].

#### 5.3.1. The Genitive Linker (GL) /é/

There are two variants of the construction, both with the head preceding the dependent noun phrase. In the first, two nouns or a noun + pronoun occur in strict succession: *mbvá mwáàn* ‘the child’s dog’, *mbvá mí* ‘my dog’. In the other, a genitive linker (GL) /é/ ‘of’ occurs before the dependent noun: *ikɔ́r é mwáàn* ‘the child’s frog’, *ikɔ́r é mí* ‘my frog’. Whether the GL is required depends on the nature of the head noun (N<sub>1</sub>). If N<sub>1</sub> belonged historically to

class 1 or 9 in Proto-Bantu, i.e. the singular classes used, respectively, for most humans and many animals, there will be no marker:

[5.8]	<i>PB class 1</i>		<i>PB class 9</i>	
	<i>mwàán</i> mĩ̀	‘my child’	<i>ɲkwó</i> mĩ̀	‘my chicken’
	<i>okáár</i> wáá	‘woman of the village’	<i>ɲgɔm</i> mwáàn	‘the child’s drum’
	<i>oŋgaa</i> ndzó	‘owner of the house’	<i>ntsaa</i> mbum	‘basket of fruit’
	<i>muur</i> ndók	‘sorcerer’ (‘person of sorcery’)	<i>ndzô</i> nwí	‘beehive’ (‘house of bees’)

In this construction the  $N_1 + N_2$  or  $N_1 +$  possessive pronoun undergo only the general tone rules of the language, e.g. simplification of the contours of *mwáàn* ‘child’ and *okáár* ‘woman’ before a L tone in the first two examples. Note that *mwáàn* may become *mwáà* when possessed. Similarly, when it has the meaning ‘wife’, *òkàár* becomes *òkàà* when possessed by a pronoun: *òkàá* mĩ̀ ‘my wife’; cf. *okáár* *muur* ‘a person’s wife’, *àkàár* <sup>l</sup>é mĩ̀ ‘my wives’.

Appropriately, the plurals of the above, which would have been in classes 2 and 10, respectively, require /é/:

[5.9]	<i>PB class 2</i>		<i>PB class 10</i>	
	<i>bàán</i> <sup>l</sup> é mĩ̀	‘my children’	(ba-) <i>ɲkwó</i> é mĩ̀	‘my chickens’
	<i>akáár</i> <sup>l</sup> é wáá	‘women of the village’	(ba-) <i>ɲgɔm</i> é mwáàn	‘the child’s canoes’
	<i>aŋgaa</i> é ndzô	‘owners of the house’	(ba-) <i>ntsaa</i> e mbùm	‘baskets of fruit’
	<i>baar</i> e ndók	‘sorcerers’ (‘people of sorcery’)	(ba-) <i>ndzó</i> é nwí	‘beehives’ (‘houses of bees’)

As seen, /é/ both undergoes and induces construction-specific tone changes on the second noun ( $N_2$ ) or possessive pronoun, which were discussed in §3.3.2. The tonal changes which affect the  $N_2$  or possessive pronoun can be summarized as follows:

- (i) If the stem of the  $N_2$  or possessive pronoun is any tone but LH or a H on a short CV syllable, it will be converted to HL, e.g. *ɲkwó* + é + *mĩ̀* → *ɲkwó* é *mĩ̀* ‘my chickens’.
- (ii) If the stem of the  $N_2$  has a H on a short CV syllable, it can optionally become L, e.g. *aŋgaa* + é + *ndzó* → *aŋgaa* é *ndzô* ‘owners of the house’.
- (iii) If the stem of the  $N_2$  or possessive pronoun has LH tone, it will not change, e.g. *akáár* + é + *wáá* → *akáár* <sup>l</sup>é *wáá* ‘women of the village’.

The tonal changes which affect the  $N_1$  or /é/ are the following:

- (iv) Following the general rule whereby a LH contour simplifies to L before H, if the stem of the N<sub>1</sub> is LH, it will become L before /é/, e.g. (ba-) *mpfũú* + é + *mwáàn* → (ba-) *mpfũù è mwáàn* ‘the child’s birds’.
- (v) If the stem of N<sub>1</sub> is L or LH, and if /é/ is able to produce a HL on the N<sub>2</sub> stem, /é/ will be realized L, e.g. (ba-) *ntsaa* + é + *mbum* → (ba-) *ntsaa e mbùm* ‘baskets of fruit’.
- (vi) If the stem of N<sub>2</sub> is LH, or if it is a CV H tone stem which has become L, /é/ does not become L, e.g. (ba-) *ntsaa* + é + *wàá* → (ba-) *ntsaa é wàá* ‘baskets of the village’, *aŋgaa* + é + *ndzó* → *aŋgaa é ndzò* ‘owners of the house’.

Whenever the N<sub>2</sub> begins with a vowel prefix, the vowel of /é/ drops out. However, the tone often reveals the presence of underlying /é/. In the following examples, /é/ fuses with the *o*-prefix of the N<sub>2</sub>:

- [5.10] (ba-) *mbum* + é + *olwǎl* → (ba-) *mbum ólwǎl* ‘fruits of the Lwal person’  
 (ba-) *mbum* + é + *odzínj* → (ba-) *mbum odzínj* ‘fruits of the Dzing person’  
 (ba-) *mbum* + é + *okáàr* → (ba-) *mbum òkààr* ‘fruits of the woman’

In the first example, the output H tone on the prefix of *ólwǎl* tells us that /é/ is present. In the second example, the change of *odzínj* to *odzínj* tells us that /é/ is present. The only time one cannot detect the deleted [e] is when the N<sub>1</sub> ends L or LH and the N<sub>2</sub> has a HL stem, as in the third example.

The above predictable tone changes conditioned by the GL /é/ occur when the N<sub>2</sub> has a monosyllabic stem. When longer, the HL contour may be stretched over the first two syllables of the N<sub>2</sub> stem:

- [5.11] (ba-) *mbum* + é + *osákátá* → (ba-) *mbum òsákata* ‘fruits of the Sakata person’  
 (ba-) *mbum* + é + *sukamûnt* → (ba-) *mbum e súkamunt* ‘fruits of the gorilla’  
 (ba-) *mbum* + é + *oŋgbatyem* → (ba-) *mbum oŋgbátyem* ‘fruits of the lizard’  
 (ba-) *mbum* + é + *nzetôl* → (ba-) *mbum é ñzetôl* ‘fruits of the voyage’

As seen in the last example, there is no change when the N<sub>2</sub> stem has a L to H pitch change on its first two syllables.

As indicated, the presence vs. absence of the GL /é/ is largely predictable. Although the above examples show its absence when the N<sub>1</sub> is singular vs. its presence when the N<sub>1</sub> is plural, it is not the singular-plural distinction which is relevant, but rather the historical noun class. The following examples show the presence of /é/ after singular nouns whose prefixes suggest reflexes of the indicated PB noun classes:

[5.12]	class 3	osim e mwáàn	‘the child’s rope’	oŋkáp <sup>↓</sup> é mî	‘my belt’
		okyá é ŋkêm	‘the monkey’s tail’	okpá é bí	‘our salt’
	class 5	ikɔŋ e múùr	‘the person’s spear’	itóm é yâ	‘your garden’
		ibá é wáá	‘palm tree of the village’	ikóór é ndé	‘his frog’
	class 7	ekwut e mwáàn	‘the child’s ear’	etwá <sup>↓</sup> é byëñ	‘your pl. bag’
		esáá é mpfùú	‘the bird’s feather’	eka é bǒ	‘their fur’

The GL is uniformly present in the corresponding plural forms:

[5.13]	class 4	esim e mwáàn	‘the child’s ropes’	eŋkáp <sup>↓</sup> é mî	‘my belts’
		ekyá é ŋkêm	‘the monkeys’ tails’	ekpá é bí	‘our salts’
	class 6	akɔŋ e múùr	‘the person’s spears’	atóm é yâ	‘your gardens’
		abá é wáá	‘palmtrees of village’	akóór é ndé	‘his frogs’
	class 7	akwut e mwáàn	‘the child’s ears’	etwá <sup>↓</sup> é byëñ	‘your pl. bags’
	class 10	ntsáá é mpfùú	‘the bird’s feathers’	ŋka é bǒ	‘their furs’

While /é/ is generally required unless N<sub>1</sub> belonged to PB class 1 or 9, there are exceptions. First, there is a small number of nouns which do not accept /é/ even though they should. One of these is the common noun *oŋgér* ‘thing, something’, which has the shape of class 3, but which is followed directly by a possessor noun or pronoun: *oŋgér mî* ‘my thing, mine’, *oŋgér baar* ‘the people’s thing, the people’s’. Four other nouns whose prefix is *on-* (~ *oŋ-*), but which refer to human beings, allow /é/ optionally:

[5.14]	ondyéé wáá	~	òndyéé é wáá	‘white man of the village’	(pl. endyéé)
	ontsum ndzɔ	~	ontsum é ndzɔ	‘young man of the house’	(pl. entsum)
	oŋgyen mǐ	~	oŋgyeŋ é mî	‘my guest’	(pl. eŋgyeŋ)
	oŋgaŋ bí	~	oŋgaŋ é bí	‘our doctor’	(pl. eŋgaŋ)

It may be that there is confusion between the two classes, PB \*1 and \*3, since they both are marked with the same prefix. As indicated, all four nouns have an *en-* or *eŋ-* plural prefix, suggesting a 3/4 pairing. One interpretation is that the /é/ forms are determined by the noun class, while the Ø forms are determined by humanness. One other noun, *ibaa* ‘man’ (pl. *abaa*), is relevant in context since its prefixes suggest a 5/6 pairing. Like the above four nouns, /é/ is optional: *ibaa ndzɔ* ~ *ibaa é ndzɔ* ‘man of the house’. It can be recalled that there are relatively few 1/2 *o-/a-* nouns (§4.2.1). One final irregularity: While *oŋgaa* ‘owner’ cannot take /é/ in the singular, suggesting class 1, its regular class 2 plural *a-* still allows a Ø option: *aŋgaa ndzɔ* ~ *aŋgaa é ndzɔ* ‘owners of the house(s)’.

The question now arises as to how invariant prefixless nouns fall into line with respect to the GL. As the following paradigms show, their ability to take /é/ is largely unpredictable:

[5.15]	siŋ mĩ̀	‘my net’	bvuur e mĩ̀	‘my load’
	siŋ yǎ̀	‘your sg. net’	bvuur e yǎ̀	‘your sg. load’
	siŋ ndé	‘his/her net’	bvuur e ndé	‘his/her load’
	siŋ nǎ̀	‘its net’	bvuur é nǎ̀	‘its load’
	siŋ bí	‘our net’	bvuur é bí	‘our load’
	siŋ byě̀n	‘your pl. net’	bvuur é byě̀n	‘your pl. load’
	siŋ bǎ̀	‘their net’	bvuur é bǎ̀	‘their load’
	siŋ mǎ̀	‘their net’	bvuur é mǎ̀	‘their load’

As indicated, *siŋ* ‘net’ does not take /é/, while *bvuur* ‘load’ requires it. In our lexicon we have found 50 nouns like *siŋ* vs. 24 nouns like *bvuur*, among which the following:

[5.16]	No GL /é/		GL /é/	
	tsyǎ mĩ̀	‘my fire’	bwóm é mĩ̀	‘my fear’
	sók mĩ̀	‘my axe’	dzĩn ʰé mĩ̀	‘my name’
	lút mĩ̀	‘my spoon’	mee e mĩ̀	‘my oil’
	tuu mĩ̀	‘my termite’	wàár ʰé mĩ̀	‘my canoe’
	tǒó mĩ̀	‘my sleep’	kyés ʰé mĩ̀	‘my happiness’

While nouns like *siŋ* ‘mat’ and *tsyǎ* ‘fire’ are invariant, they can in fact take /é/ if a plural meaning is intended, e.g. (*ba-*) *siŋ e mĩ̀* ‘my nets’. (*ba-*) *tsya e mĩ̀* ‘my fires’.

Even though there are twice as many nouns in the first group as in the second, the following table shows some even greater skewing:

[5.17]		<i>All</i>	<i>Borrowings</i>	<i>Bisyllabic</i>
	No GL /é/	: 50	17 (34%)	25 (50%)
	GL /é/	: 24	2 (8.3%)	1 (4.2%)

As seen, most borrowings fail to take the GL /é/, as in [5.18].

[5.18]	pòtpót mĩ̀	‘my mud’	pepé mĩ̀	‘my papaya’
	sùkámúnt mĩ̀	‘my gorilla’	lósó mĩ̀	‘my rice’
	tùfín mĩ̀	‘my pus’	sabát mĩ̀	‘my shoe’
	kòkó mĩ̀	‘my coconut’	kafé mĩ̀	‘my coffee’

The two borrowings which take /é/ are *kyés* ‘happiness’ (from Kikongo) and *fùfù* ‘fufu (cassava meal)’, the latter also being the only prefixless bisyllabic noun to take /é/. While borrowings are in fact bisyllabic, the remaining monosyllabic borrowings do not take /é/: *més mĩ̀* ‘my table’, *bóy mĩ̀* ‘my servant’, *tí mĩ̀* ‘my tea’.



This leaves borrowed nouns which have identifiable frozen CV- prefixes (cf. §4.1, §4.27). Most of these take /é/, while five nouns have been found which take the possessor directly. The last two nouns below show both variants:

[5.19]	<i>No GL /é/</i>		<i>GL /é/</i>	
	likembe mǎ`	‘my handpiano’	lukán ↓é mî	‘my group’
	likémba mǎ`	‘my plantain’	kífu e mî	‘my error’
	mantete mǎ`	‘my squash’	luzíj ↓é mî	‘my life’
	kimvúk mǎ`	‘my group’	mawét ↓é mî	‘my sweetness’
	musumbwá mǎ`	‘my fish (sp.)’	makás ↓é mî	‘my anger’
			matond e mî	‘my thanks’
			lulén ↓é mî	‘my boasting’
	mikéén mǎ`	‘my leprosy’	~ mikéén é mî	‘my leprosy’
	kisál mǎ`	‘my work’	~ kisál ↓é mî	‘my work’

If used with a plural meaning, the first five nouns do take /é/: (*ba-*) *likembe e mî* ‘my handpianos’, (*ba-*) *likémba e mî* ‘my plantains’ etc.

It should be noted that the GL is required whenever a modifier occurs between the head noun and the possessor, even if the N<sub>1</sub> would normally not take a GL:

[5.20]	mwáán ↓mí ↓nápe	~	mwáán ↓nápe e mî	‘this child of mine’
	mbvá ↓mí ↓ómotúk	~	mbvá ómotúk é mî	‘my one dog’

### 5.3.2. Compounds and Genitives

The same distribution of /é/ is found in noun-noun compounds, which are non-distinct from N<sub>1</sub> of N<sub>2</sub> genitive constructions. Depending on the N<sub>1</sub>, /é/ will either be present or absent in the singular:

[5.21]	<i>No GL /é/</i>		<i>compare:</i>	
	ndzô nwí	‘beehive’	ndzó mǎ`	‘my house’
	(ndzó ‘house’ + nwí ‘bee’)			
	muur ndók	‘sorcerer’	muur mǎ`	‘my person’
	(muur ‘person’ + ndók ‘sorcery’)			
	ntsúk épaŋ	‘hedge fence’	ntsúk mǎ`	‘my limit’
	(ntsúk ‘hedge, limit’ + épaŋ ‘compound’)			
	mpúú endyéé	‘rabbit’	mpúú mǎ`	‘my rat’
	(mpúú ‘rat’ + endyéé ‘white men’)			

[5.22]	<i>With GL /é/</i>		<i>compare:</i>	
	mɛɛ e nwî	‘honey’	mɛɛ e mî	‘my oil’
	(mɛ̀é ‘oil’ + /é/ + nwí ‘bee’)			
	etaar e mbvwâ	‘road bridge’	etaar e mî	‘my bridge’
	(etaar ‘bridge’ + /é/ + mbvwâ ‘path, road’)			
	ikwɔ́ é makémba	‘plantain’	ikwɔ́ e mî	‘my banana’
	(ikwɔ́ ‘banana’ + /é/ + makémba ‘plantains’)			
	adzá é mívzwâ	‘dew’	adzá é mî	‘my water’
	(adzá ‘water’ + /é/ + mbvwâ ‘path, road’)			

It should be recalled that the /é/ is frequently elided. In some cases one can tell that it is present only by its tonal effect: /òtḗ/ ‘stick’ + /é/ + /ɲkó/ ‘mortar’ → *oté ɲko* ‘pestle’.

Although /é/ is generally predictable based on the N<sub>1</sub>, the N<sub>2</sub> appears to determine its presence or absence in some cases, e.g. *okyáɲ mpó* ‘necklace’, lit. ‘ring of throat’ (cf. *okyáɲ é mî* ‘my ring’, *mpó mĩ* ‘my throat’). Although /é/ is usually present, as in plural N<sub>1</sub> of N<sub>2</sub> possessives, it is sometimes absent in plural compounds. Thus compare (*ba-*) *ndzô nwí* ‘beehives’ vs. *baar e ndôk* ‘sorcerers’. In the first case the structure appears to be [ (*ba-*) [N<sub>1</sub>-N<sub>2</sub>]<sub>sg</sub> ]<sub>pl</sub>, where the same singular form is kept in the plural, marked by the optional proclitic *ba-*.

When the whole compound is possessed, some compounds require /é/, while others do not:

[5.23]	<i>No GL /é/</i>			
	ndzô nwí mĩ	‘my beehive’	ndzô ‘house’	nwí ‘bee(s)’
	muur kisál mĩ	‘my servant’	muur ‘person’	kisál ‘work’

[5.24]	<i>With GL /é/</i>			
	mèé mba e mî	‘my palm oil’	mèé ‘oil’	mbá ‘palmnut’
	ntsúk épaɲ e mî	‘my hedge fence’	ntsúk ‘hedge’	épaɲ ‘compound’

In some cases there is variation in the placement of the possessor within vs. after the compound:



However, given that ‘buffalo’ is literally ‘forest cow’, *ηgwóm osúr* <sup>l</sup>*é mî* can also mean ‘the cow of my forest’. In contrast, *ηgwóm mĩ osúr* can only mean ‘my buffalo’.

Finally, in most cases where one or both parts of a compound cannot be identified, the possessor generally follows without /é/:

[5.30]	<i>nduj-ηgbé mĩ</i>	‘my back’	<i>nduj</i>	‘?’	<i>ηgbé</i>	‘?’
	<i>ηgal-mbíí mĩ</i>	‘my cat’	<i>ηgal</i>	‘?’	<i>mbíí</i>	‘?’
	<i>ntsaj-kũr mĩ</i>	‘my ant (sp.)’	<i>ntaj</i>	‘?’	<i>kũr</i>	‘?’
	<i>ntsáá mpwóp</i>	‘my armpit’	<i>ntsáá</i>	‘?’	<i>mpwóp</i>	‘?’
	<i>ηkpi-ηkóp mĩ</i>	‘my leopard’	<i>ηkpi</i>	‘lion’	<i>ηkóp</i>	‘?’
<i>but cf.</i>	<i>ntsúr-tii e mî</i>	‘my porcupine’	<i>ntsúr</i>	‘animal’	<i>tii</i>	‘?’

### 5.3.3. Headless Genitives and Genitive Sequences

It is possible for the head noun (N<sub>1</sub>) not to be expressed in a genitive construction. In this case the determiner *na* is required. Consider first cases where the possessor is a pronoun:

[5.31]	<i>na e mî</i>	‘mine’	<i>na é bí</i>	‘ours’
	<i>na e yâ</i>	‘yours sg.’	<i>na é byën</i>	‘yours pl.’
	<i>na e ndé</i>	‘his/hers’	<i>na é bǒ</i>	‘theirs’ (human)
	<i>na é nõ</i>	‘its’	<i>na é mǒ</i>	‘theirs’ (non-human)

Also observe the genitive linker /é/ in the above. While it is generally required, it may assimilate to the vowel of *na*: *naa mî*, *naa yâ*, etc. The same construction is used with noun possessors:

[5.32]	<i>na e mwáàn</i>	‘the child’s’	<i>na e báàn</i>	‘the children’s’
	<i>na e múùr</i>	‘a person’s’	<i>na e báàr</i>	‘the people’s’
	<i>na é ndzàám</i>	‘God’s’	<i>na ibáà</i>	‘the man’s’
	<i>na é ηgwùú</i>	‘the hippo’s’	<i>na okáàr</i>	‘the woman’s’

We have also found the following forms as alternates to the plurals in the first two lines of [5.32]: *na a bǎàn*, *na a baar*. Not only is /é/ missing, but the two nouns have their base tones. Whether the /a/ in these alternates is a relic of the PB class 2 augment is not clear. While dispreferred, we have also occasionally elicited headless genitives without /é/, e.g. *na mĩ* ‘mine’, which can also be expressed as *oηgér mĩ* ‘mine’ (literally, ‘my thing’).

The marker *na* can also optionally cooccur with an expressed N<sub>1</sub>:

- [5.33]      enkáán (na) e báàn      ‘books of the children’  
               mbvá na e báár bàpyá      ‘the dog of those people’  
               okáár na e mî =okáá mĩ      ‘my wife’ (=okáá mĩ)  
               petpét ébáàn      ‘softness of the bamboo’  
               ~ petpét na ebáàn      (< na + é + ebáàn)

Although there is temptation to translate the *na* variants as ‘the books those-of the children’, etc., there doesn’t necessarily seem to be any noticeable difference in meaning. Beside the expected form *mwáàn muur* ‘the person’s child’, both *mwáàn na muur* and *mwáàn na e múùr* have been recorded with the same meaning.

The marker *na* is particularly often observed in sequences of three or more genitives, although here too it is optional:

- [5.34]      mwáàn òkáár na é wáà      ‘the child of the woman of the village’  
               mbvá mwáàn na e ñkùm      ‘the dog of the child of the chief’  
               enkáàn é báàn na ibáà      ‘the books of the children of the man’

While the phrases in [5.34] have the right-branching structure [N<sub>1</sub> of [N<sub>2</sub> of N<sub>3</sub>]], it is also possible to get a tripartite left-branching genitive, [[N<sub>1</sub> of N<sub>2</sub>] of N<sub>3</sub>]. Thus note the first two examples in [5.35] which contrast left- vs. right-branching structures:

- [5.35]      fòtó mĩ mwáàn      ‘my photo of the child’  
               fòtó mwáàn mĩ      ‘my photo of the child’ / ‘the photo of my child’  
               fòtó byèn mwáàn mĩ      ‘your pl. photo of my child’  
               fòtó mĩ mwáàn byèn      ‘my photo of your pl. child’

The last two examples show that each noun can be possessed, producing a [[N<sub>1</sub> of N<sub>2</sub>] of [N<sub>3</sub> of N<sub>4</sub>]] structure. Again, *na* may appear, e.g. *fòtó mí na e mwáàn byèn* ‘my photo of your pl. child’.

#### 5.4. Adjectives

As in many Bantu languages, adjectives constitute a subclass of nouns. As such they have the same morphology and similar syntax. Like nouns, most adjectives have a V- or N- prefix:

[5.36]	ekâr	‘incompetent’	okpé	‘short’	mpa	‘new’
	epúl	‘uncovered’	okúùr	‘old’	mpémbé	‘white’
	ikíkër	‘small’	onân	‘big’	mpìp	‘dark’
	ikyê	‘slow, soft (voice)’	osâl	‘smooth’	ndzya	‘deep’
	obé	‘bad’	osya	‘beautiful’	ŋkyee	‘shallow’
	obvo	‘fresh’	otál	‘long, tall, far’	ntâm	‘old’
	odzó	‘good’	oyá	‘ripe’	ntsêm	‘bright’

Of the above, the following five have a different prefix when agreeing with a plural noun:

[5.37]	muur okúùr	‘old person’	baar ekúùr	‘old people’
	ibaa okpé	‘short man’	abaa ekpé	‘short men’
	ibá onân	‘big palmtree’	abá enân	‘big palmtrees’
	mbvá ósya	‘beautiful dog’	mbvá ésyá	‘beautiful dogs’
	mwaán otál	‘tall child’	bàán etál	‘tall children’

As seen, these have an *o-/e-* pairing, corresponding to PB 3/4 (cf. §4.2).

Others adjectives maintain the same V- or N- prefix whether modifying a singular or plural noun:

[5.38]	ibá ikíkër	‘small palmtree’	abá ikíkër	‘small palmtrees’
	mwaán òbé	‘bad child’	bàán òbé	‘bad children’
	mbum obvo	‘fresh fruit’	(ba-)mbum obvo	‘fresh fruits’
	mbvá ódzó	‘good dog’	(ba-)mbvá ódzó	‘good dogs’
	oŋkáán ’mpa	‘new book’	eŋkáán ’mpa	‘new books’

A smaller group of adjectives lack a prefix:

[5.39]	bùlê	‘blue’	nyê	‘calm’	swî	‘red’
	bviir	‘strong, hard’	petpét	‘soft’	tsé	‘clean, neat’
	dzó	‘quiet’	pyòò	‘black’	zyé	‘white’

These too remain invariant when modifying singular vs. plural nouns: *muur bviir* ‘strong person’ (pl. *baar bviir*), *mbvó pyoo* ‘black dog’ (pl. *(ba-) mbvó pyoo*), *mes tsé* ‘clean table’ (pl. *(ba-) mes bviir*). Like nouns, such adjectives have a floating L tone prefix which is seen by the effect a H tone adjective has on a preceding H tone noun stem:

[5.40]	mbvá	‘dog’	mbvâ zyé	‘white dog’
	ndzô	‘house’	ndzô tsé	‘clean house’
	ndzée	‘river’	ndzée dzó	‘quiet river’

The following adjectives in [5.41] have reduplicated variants with a high vowel [i] or [u] in their first syllable and a distinct L-H-<sup>↓</sup>HL tone pattern:

[5.41]	òbyê	‘many’	obí <sup>↓</sup> byê
	òkpé	‘strong, hard’	òkpú <sup>↓</sup> kpé
	ònân	‘big’	òní <sup>↓</sup> nân
	òtál	‘long, tall, far’	òtí <sup>↓</sup> tál

A fifth adjective, *ikikër* ‘small, thin, narrow’, appears reduplicated but has no corresponding non-reduplicated form.

While most adjectives do not reduplicate, any adjective can be repeated for emphasis:

[5.42]	mwaán òbé	‘bad child’	mwaán òbé òbé	‘a very bad child’
	mbum obvo	‘fresh fruit’	mbum obvo obvo	‘very fresh fruit’
	muur bviir	‘strong person’	muur bviir bviir	‘a very strong person’
	ba-mes tsé	‘clean tables’	ba-mes tsé tsé	‘very clean tables’

(Note in the last example that the second *tsé* does not cause the first *tsé* to become *tsê*, hence apparently does not have a floating L prefix.)

In addition, *òbyê* ‘very’ can be added for intensification: *ntál òbyê* ‘very expensive’ (cf. *baán obí<sup>↓</sup>byê* ‘very many children’).

Further evidence that adjectives are nouns is seen from the fact that they can be the head of an N<sub>1</sub> of N<sub>2</sub> construction. As seen in [5.43], some take the GL /é/, again according to the PB noun class from which they presumably derive:

[5.43]	<i>No GL /é/</i>		<i>compare:</i>	
	mpémbé ndzô	‘whiteness of house’	ndzô mpémbé	‘white house’
	mpa oŋkaán	‘newness of the book’	oŋkaan é mpa	‘new book’
	zyé mbvá	‘whiteness of dog’	mbvâ zyé	‘white dog’
	ŋkyee ndzée	‘shallowness of river’	ndzée ŋkyee	‘shallow river’

[5.44]	<i>With GL /é/</i>			
	obé é mwaán	‘badness of child’	mwaán obé	‘bad child’
	bviir e múùr	‘strength of person’	muur bviir	‘strong person’
	dzó é ndzée	‘quiet of the river’	ndzée dzó	‘quiet river’
	obvo é íntswé	‘freshness of the fish’	ntswé obvo	‘fresh fish’

While adjectives are generally placed directly after the noun, whether singular or plural, the following cases involving an intervening GL have been noted:

[5.45]	<i>With GL /é/</i>		<i>compare:</i>	
	baar e bviir	‘strong people’	muur bviir	‘strong person’
	ebin é buléè	‘blue door’	ndzée buléè	‘blue river’
	oŋkaan é mpa	‘new book’	oŋkaán mípi	‘new book’

What this suggests is that the correct glosses are ‘people of strength’, ‘door of blue’ and ‘book of new’. These are however the only ones of the above adjectives that have been found to take the GL /é/, the last only optionally.

While the above illustrates adjectives in an attributive function, adjectives may also be used predicatively, e.g. after the copula *ye*. In [5.46] the present tense marker /é/ becomes *é* by tone absorption and should not be confused with the GL (cf. §7.2.3):

[5.46]	mes é ye mpfyô	‘the table is cold’
	muur nápe é ye bviir	‘this person is strong’
	ba-ndzó é ye zyé	‘the houses are white’
	nǒ kà ye mpúr bo	‘it is not sharp’

When used attributively without an overt head noun, *na* precedes: *na onân* ‘the big one’ (pl. *na enân*).

## 5.5. Determiners

The determiner system in Nzadi consists of an extensive paradigm of demonstratives plus a few individual words which can mark the referentiality of a noun phrase.

### 5.5.1. Demonstratives

The demonstrative paradigm is presented in [5.47].

[5.47]	<i>near speaker</i>	<i>near hearer</i>	<i>far</i>	<i>‘that particular’</i>
<i>singular</i>	↓nápe ~ ne	↓nyá	napyá	ninyâ
<i>plural [+human]</i>	↓bápe ~ pe	↓byá	bapyá	bibyâ
<i>plural [-human]</i>	↓mápe ~ me	↓myá	mapyá	mimyâ

As seen in the headings, Nzadi demonstratives can locate noun phrase referents in one of three ways: near the speaker, near the hearer, and far from both the speaker and the hearer. In addition, there is a [±human] distinction in the plural demonstratives, but not in the corresponding singulars.



There are two sets of ‘near speaker’ demonstratives: the long forms  $\downarrow n\acute{a}p\epsilon$ ,  $\downarrow b\acute{a}p\epsilon$ ,  $\downarrow m\acute{a}p\epsilon$  and the short forms  $n\epsilon$ ,  $p\epsilon$ ,  $m\epsilon$ :

- [5.48]       $m\acute{w}\acute{a}\acute{a}n \downarrow n\acute{a}p\epsilon$      $m\acute{w}\acute{a}\acute{a}n n\epsilon$     ‘this child’  
                $o\eta k\acute{a}\acute{a}n \downarrow n\acute{a}p\epsilon$      $o\eta k\acute{a}\acute{a}n n\epsilon$     ‘this book’  
                $b\acute{a}\acute{a}n \downarrow b\acute{a}p\epsilon$          $b\acute{a}\acute{a}n p\epsilon$         ‘these children’  
                $e\eta k\acute{a}\acute{a}n \downarrow m\acute{a}p\epsilon$      $e\eta k\acute{a}\acute{a}n m\epsilon$     ‘these books’

Although we have found the long forms to be more common in texts and in elicitations, the two sets are interchangeable.

While the other demonstratives  $\downarrow ny\acute{a}$ ,  $\downarrow by\acute{a}$ ,  $\downarrow my\acute{a}$  and  $n\acute{a}p\acute{y}\acute{a}$ ,  $b\acute{a}p\acute{y}\acute{a}$ ,  $m\acute{a}p\acute{y}\acute{a}$  look to be parallel short vs. long forms, they mark the indicated semantic difference:

- [5.49]       $m\acute{w}\acute{a}\acute{a}n \downarrow ny\acute{a}$     ‘that child’ (near you)                       $m\acute{w}\acute{a}\acute{a}n n\acute{a}p\acute{y}\acute{a}$     ‘that child’ (far)  
                $o\eta k\acute{a}\acute{a}n \downarrow ny\acute{a}$     ‘that book’ (near you)                       $o\eta k\acute{a}\acute{a}n n\acute{a}p\acute{y}\acute{a}$     ‘that book’ (far)  
                $b\acute{a}\acute{a}n \downarrow by\acute{a}$         ‘those children’ (near you)                       $b\acute{a}\acute{a}n b\acute{a}p\acute{y}\acute{a}$         ‘those children’ (far)  
                $e\eta k\acute{a}\acute{a}n \downarrow my\acute{a}$     ‘those books’ (near you)                       $e\eta k\acute{a}\acute{a}n m\acute{a}p\acute{y}\acute{a}$     ‘those books’ (far)

However, it is the last column of [5.47] which contains what was probably the historical long form of the near hearer demonstratives, as they are clearly forms with a reduplicative *Ci*-prefix. Instead, these now have the meaning ‘that/those particular’:

- [5.50]       $m\acute{w}\acute{a}\acute{a}n niny\acute{a}$         ‘that particular child, that very child’  
                $o\eta k\acute{a}\acute{a}n niny\acute{a}$         ‘that particular book, that very book’  
                $b\acute{a}\acute{a}n biby\acute{a}$             ‘those particular children, those very children’  
                $e\eta k\acute{a}\acute{a}n mimy\acute{a}$         ‘those particular books, those very books’

In the above examples the child(ren) and book(s) can be near the hearer or far from both the speaker and the hearer.

Note that the ‘near hearer’ demonstratives may also be pronounced with a long vowel:  $\downarrow ny\acute{a}\acute{a}$ ,  $\downarrow by\acute{a}\acute{a}$ ,  $\downarrow my\acute{a}\acute{a}$ . Both these and the ‘near speaker’ forms have been written with  $\downarrow$  in [5.47], since a downstep will always be present if they are preceded by a H tone, e.g. *oté* ‘tree’, *oté*  $\downarrow n\acute{a}p\epsilon$  ‘this tree’, *oté*  $\downarrow ny\acute{a}(\acute{a})$  ‘that tree (near you)’. This indicates the likelihood of an historical L tone prefix fusing with the demonstrative root. Thus, the ‘near speaker’ demonstrative forms may have derived from  $*nV-\acute{a}-p\epsilon$ ,  $*bV-\acute{a}-p\epsilon$ ,  $*mV-\acute{a}-p\epsilon$ , with the meanings ‘that of here, those of here’. A somewhat more complicated fusion must have produced the ‘near hearer’ forms.

While the examples in [5.48-50] show singular-plural demonstrative agreement with nouns which are overtly marked for singular vs. plural, demonstratives may also disambiguate number when the noun is invariant:

[5.51]	lónj ˌnápe	‘this teacher’	lónj ˌbápe	‘these teachers’
	siŋ nápe	‘this net’	siŋ mápe	‘these nets’
	ekwɔm nyá	‘that broom’ (near you)	ekwɔm myá	‘those brooms’ (near you)
	eŋkúr napyá	‘that owl’ (far)	eŋkúr mapyá	‘those owls’ (far)
	ŋkúm ninyâ	‘that particular chief’	ŋkúm bibyâ	‘those particular chiefs’

In the above examples, the demonstrative agrees with the intended singular vs. plural meaning of the noun, which optionally can be marked by the *ba-* clitic in the plural (§4.3.3). In contrast, the following inherently plural mass/liquid nouns show the following nuances:

[5.52]	efur mápe	‘this dust’	ba-efur mápe	‘these (different) dusts’
	avúp ˌmápe	‘this dew’	ba-avúp ˌmápe	‘these (different) dews’
	etiír ˌmápe	‘this grass’	ba-etiír ˌmápe	‘these grasses/kinds of grass’
	etiír ˌnápe	‘this piece/blade of grass’		
	adzá ˌmápe	‘this water’	ba-adzá ˌmápe	‘these (bodies of) water’
	adzá ˌnápe	‘this (container of) water’		

As seen, the clitic *ba-* individuates a plural, hence giving meanings such as ‘different groups of’, ‘different types of’, etc. As also seen in the above, the inherently plural nouns *etiír* ‘grass’ and *adzá* ‘water’ can take a singular agreement, in which case they refer to a discrete container or subpart of the mass/liquid.

Demonstratives may also be used without a head noun: *nápe* ‘this one’, *bápe*, *mápe* ‘these’: *nápe á bva* ‘this one has fallen’, *mi ó súm ˌmápe* ‘I bought these’.

Although there is a three-way distinction in demonstratives, the related deictics ‘here’ and ‘there’ exhibit only a two-way contrast between *pe* ‘here’ (near speaker) and *pyá* ‘there’ (far from speaker):

[5.53]	mi ô sé ˌnó pe	‘I put it here’	(near speaker)
	mi ô sé nɔ pyá	‘I put it there’	(far from speaker)

If there is a need to express a long distance, the adjectival noun *otál* ‘distance, length, long, far’ can be used: *mi ô sé nɔ otál* ‘I put it far away’. There is, however, a non-deictic existential ‘there’ which corresponds to the *ninyâ*, *bibyâ*, *mimyâ* series: *lɔsɔ ŋga mbyé o ki pípyá* ‘how much rice was there?’

Both *pe* and *pyá* are frequently used with the clitic *kó* ‘to, at’: *kópe* ‘here’, *kópyá* ‘there’.

### 5.5.2. Other Determiners

Although Nzadi does not have a grammaticalized definite or indefinite article system, there are several markers that have similar functions. Indefiniteness can be marked by *ómɔ̃* ‘(a) certain’, which is invariant, whether modifying a singular or plural, human or non-human:

- [5.54]    muur ómǎ    ‘a certain person’    mbvá ómǎ    ‘a certain dog’  
           baar ómǎ    ‘certain people’        ba-mbvá ómǎ    ‘certain dogs’

*ómǎ* is clearly related to the numeral *ómǎtúk* ‘one’, which is frequently used with a singular noun to introduce an indefinite noun phrase, particularly new information. The following sentences are taken from Texts 2 and 3, respectively.

- [5.55]    bi    a    máŋ    yɛ    okal    ómǎtúk    naŋga    súm    <sup>1</sup>bí    iyó  
           we    HAB    have    with    place    one    where    buy    we    market  
           ‘We have a place where we do the market.’

- [5.56]    okúŋ    é    yě    ntswé    ómǎtúk    ntǎm.  
           òkúŋ    PRES    be    fish    one    tasty  
           ‘òkúŋ is a tasty fish.’

Out of context there is of course potential ambiguity with the numeral interpretation: *ntswé ómǎtúk* ‘one fish’, *okal ómǎtúk* ‘one place’.

Another modifier that correlates with indefiniteness is *íŋkěŋ* ‘(an)other’:

- [5.57]    muur    íŋkěŋ    ‘another person’  
           baar    íŋkěŋ    ‘other people’  
           siŋ    íŋkěŋ    ‘another net’  
           ba-siŋ    íŋkěŋ    ‘other nets’

As seen, *íŋkěŋ* takes the same shape after singular and plural, human and non-human nouns. The following sentences illustrate both the partitive meaning ‘some other’, but also the idea of ‘other’ in the sense of ‘different’:

- [5.58]    baar    íŋkěŋ    ó    ki    a    mónka    ‘(some) other people were visible’  
           ó    mpe    mí    ikwo    ɲkěŋ    ‘give me some other/another banana’

In the second sentence the request may be for a different banana (to replace the one the speaker has) or for an additional banana (to add to the one that the speaker has or has eaten).

What ties the above meanings together is that the noun phrase is indefinite (or non-referential). In this sense *íŋkěŋ* stands in opposition to another determiner, *kún*. Besides the series *nìnyá*, *bìnyá*, *mìnyá* in [5.47] *kún* marks a previously referred to noun phrase which one might translate variously as in [5.59]:

- [5.59]    muur kún    ‘that particular person’, ‘the person in question, aforementioned’  
            baar kún    ‘those particular people’, ‘the people in question, aforementioned’  
            siŋ kún    ‘that particular net’, ‘the net in question’, ‘the aforementioned net’  
            ba-siŋ kún ‘those particular nets’, ‘the nets in question’, ‘the aforementioned nets’

While *íŋkě̀n* can mean ‘a different (person, thing)’, in some cases *kún* may be translated as ‘the same’: *kà yí muur kún bɔ* ‘he is not that person/the same person’. An example of the use of *kún* in context is cited from Text 3:

- [5.60]    kó wàá é bǐ bi a    máŋ ye    ntswé ómótúk naŋga tún    bǐ oyεε.  
            in village of us we HAB have with fish one which refuse we to sell  
            ‘In our village we have a fish we refuse to sell.’  
            ntswé kún <sup>↓</sup>dzín e nǒ okúŋ.  
            fish that name of it òkúŋ  
            ‘The name of that particular fish is *okúŋ*.’

As seen in the above examples, *kún* is invariant, whether modifying singular or plural, human or non-human nouns. The variant *ŋkún* is also heard: *okáàr kún ~ okáár ŋkún* ‘the woman in question’, *akáàr kún ~ akáár ŋkún* ‘the women in question’, *ntswé kún ~ ntswé ŋkún* ‘that particular fish’. The HL tone on *ntswé kún* shows that *kún* has a L tone prefix (cf. *ntswé* ‘fish’).

While usually occurring without further modification, *kún* may be followed by another determiner from the demonstrative series: *kó nítáŋ kún nápe* ‘at this particular time’. *muur kún ninyá* ‘that very person’. All of the following mean ‘at that particular time’: *kó nítáŋ kún*, *kó nítáŋ ninyá*, *kó nítáŋ kún ninyá*.

### 5.5.3. Interrogative ‘Which’

The general interrogative determiner is *naŋgó* ‘which’, which has two plurals: *baŋgó* (human), *maŋgó* (non-human):

- [5.61]    muur naŋgó            ‘which person?’  
            baar baŋgó            ‘which people?’  
            siŋ naŋgó            ‘which net?’  
            ba-siŋ maŋgó        ‘which nets?’  
            bɔ lúm ntáŋ naŋgó    ‘when (which time) did they leave?’

Besides the L-H tone pattern in [5.61], the same forms can be pronounced L-L in isolation or at the end of an utterance. When followed by something, the interrogative determiners are always pronounced with L-H tone:

- [5.62]      *muur nanǵó mwàán ʼó môn*      ‘which person did the child see?’  
                  *kó ndzǵ nanǵó mwàán ʼó kê*      ‘to which house did the child go?’

Used in isolation the interrogative determiner means ‘which one(s)?’.

Although we write these as one word, the second part, *ǵó* means ‘where’ by itself: *mwàán ʼó kê ǵó* ‘where did the child go?’ It is thus possible to view these forms as *na + ǵó* as having had the original meaning ‘that/those of where?’

The forms *nanǵó*, *banǵó*, and *manǵó* formally fit into the demonstrative paradigm (with a [±human] distinction in the plural). Besides these, the following alternative expressions of ‘which’ have been noted:

- (i)      *nε* ‘who’ has been observed with human nouns, especially *muur* ‘person’: *muur nε* ‘which person?’, *baar nε* ‘which people?’ (lit. ‘person who?’, ‘people who?’). Note that *muur nε* is ambiguous, as it could also mean ‘whose person?’. The same is true of *mwàán nε* ‘which child?’ which may be said but is avoided because the first sense which comes to mind is ‘whose child?’ The plurals are more clear as the GL /é/ would be needed to express a possessive: *baar e né* ‘whose people?’, *bàán ʼé nε* ‘whose children?’. Since the base meaning of *nε* is ‘who’, it cannot be used with a non-human. Also, the form *banε* ‘who (plural)?’ is not used in the sense of ‘which’.
- (ii)      *ǵge* ‘what’, on the other hand, can be used with nouns other than humans: *mbvá ǵge* ‘what dog?’, *oté ǵge* ‘what tree?’, *eté ǵge* ‘what trees?’. In some cases, the GL /é/ has been found to optionally appear or be elided except for its H tone: *oté éǵge* ‘what tree?’, *okal + é + ǵge* → *okal ǵge* ‘what place, where?’. Just as *nε* is most commonly used with the generic human noun *muur* ‘person’, *ǵge* is especially used with generic nouns such as *oǵǵér* ‘thing’, *okal* ‘place’, *sám* ‘reason’, *ntáǵ* ‘time’, *esuu* ‘day’, the last two commonly used with the sense of ‘when’:

- [5.63]      *oǵǵér ǵgé o dzé bǵ*                      ‘what did they eat?’                      (‘what thing?’)  
                  thing what PAST eat they  
                  *okal ǵgé ó dzik ndé ndzii*                      ‘where did he bury the money?’ (‘what place?’)  
                  place what PAST bury he money  
                  *bàán ó túl ntáǵ ǵge*                      ‘when did the children arrive?’ (‘what time?’)  
                  children PAST arrive time what  
                  *sám ʼé ǵgé bàán á lyá*                      ‘why do the children cry?’                      (‘what reason?’)  
                  reason of what children PRES cry

In the above we have translated *ǵge* as ‘what’, since a question like *mbvá ǵge* ‘what dog?’ is not normally used to ask ‘which out of a group of dogs’. Rather, ‘what dog?’ could either be a question out of the blue, as in ‘what (kind of) dog is this?’ or can be a response

questioning the existence, as in ‘What dog? I don’t see any dog!’ It also can be an emphatic repeat question, ‘WHAT dog?’ (I didn’t hear you). As seen in the examples, *ɲge* has H tone if followed by another word, but L tone before pause.

- (iii) The last alternative is the determiner *ɲki*, which precedes the noun: *ɲki muur* ‘which person?’, *ɲki baar* ‘which people?’. What this means is that certain nouns will have three possible means of expressing ‘which’:

[5.65]	‘which person’ [+human]	‘which thing?’ [-human]
	<i>muur naŋgó</i>	<i>oŋgér naŋgó</i>
	<i>muur ne</i>	<i>oŋgér ɲge</i>
	<i>ɲki muur</i>	<i>ɲki oŋgér</i>

In §10.2 it will be seen that *ɲge* is also optionally used in relative clause formation.

## 5.6. Numerals and Quantifiers

### 5.6.1. Numerals

The numerals 1-10 are shown in [5.66].

[5.66]	<i>ómɔ́túk</i>	‘one’	<i>ísyéme</i>	‘six’
	<i>ípe</i>	‘two’	<i>ntsaamǒn</i>	‘seven’
	<i>ísâr</i>	‘three’	<i>ínáána</i>	‘eight’
	<i>íná</i>	‘four’	<i>iwa</i>	‘nine’
	<i>ítáàn</i>	‘five’	<i>dzǔ̀m̀</i>	‘ten’

As seen, the tone of the vowel prefix /ó-/ of ‘one’ and the /i-/ of ‘two’ through ‘six’ and ‘eight’ is H, making numerals different from nouns. (The vowel prefix of *iwa* ‘nine’ is L, as is the nasal prefix of *ntsaamǒn* ‘seven’.) While none of these prefixes alternate in form, *dzǔ̀m̀* ‘ten’ has a plural form *akúm* ‘tens, -ty’ used to express decades:

[5.67]	<i>dzǔ̀m̀</i>	‘ten’	<i>akúm</i> ↓ <i>ísyéme</i>	‘sixty’
	<i>akúm</i> ↓ <i>ípe</i>	‘twenty’	<i>akúm</i> <i>ntsaamǒn</i>	‘seventy’
	<i>akúm</i> ↓ <i>ísâr</i>	‘thirty’	<i>akúm</i> ↓ <i>ínáána</i>	‘eighty’
	<i>akúm</i> ↓ <i>íná</i>	‘forty’	<i>akúm</i> <i>iwa</i>	‘ninety’
	<i>akúm</i> ↓ <i>ítáàn</i>	‘fifty’	<i>ɲkám</i>	‘hundred’

As seen, ‘twenty’ = 2 x 10, ‘thirty’ = 3 x 10, and so forth. The initial L of the LHL tone of *dzǔ̀m̀* suggests the fusion of an historical noun class 5 prefix. The plural appropriately has a

class 6 *a*- prefix. As seen from the downsteps in the above forms, /a-kûm/ preserves both the initial /k/ and underlying HL tone of PB *\*-kômi* ‘ten’.

Numbers falling between the decades are formed by combining the forms in [5.67] with the numerals 1-9 in [5.66], using the preposition *yε* ‘and’. The numbers 11-19 and 21-29 illustrate:

[5.68]	<i>dzũm yε ómótúk</i>	‘11’	<i>akúm ípe yε ómótúk</i>	‘21’
	<i>dzũm yε ípe</i>	‘12’	<i>akúm ípe yε ípe</i>	‘22’
	<i>dzũm yε ísâr</i>	‘13’	<i>akúm ípe yε ísâr</i>	‘23’
	<i>dzũm yε íná</i>	‘14’	<i>akúm ípe yε íná</i>	‘24’
	<i>dzũm yε ítáàn</i>	‘15’	<i>akúm ípe yε ítáàn</i>	‘25’
	<i>dzũm yε ísyéme</i>	‘16’	<i>akúm ípe yε ísyéme</i>	‘26’
	<i>dzũm yε ntsaamõn</i>	‘17’	<i>akúm ípe yε ntsaamõn</i>	‘27’
	<i>dzũm yε ínáána</i>	‘18’	<i>akúm ípe yε ínáána</i>	‘28’
	<i>dzũm yε iwa</i>	‘19’	<i>akúm ípe yε iwa</i>	‘29’

Thus, ‘11’ = 10 + 1, ‘12’ = 10 + 2 etc. The same principles apply to derive higher numbers:

[5.70]	<i>ɲkám ómótúk yε ómótúk</i>	‘101’
	<i>ɲkám ómótúk yε ípe</i>	‘102’
	<i>ɲkám ómótúk yε dzũm</i>	‘110’
	<i>ɲkám ómótúk yε akúm ípe</i>	‘120’
	<i>ɲkám ómótúk yε akúm ípe yε ísâr</i>	‘123’
	<i>ɲkám ípe</i>	‘200’
	<i>ɲkám iwa</i>	‘900’

We did not find a word for ‘thousand’ in Nzadi. Instead, the French word *mille* is used.

Numerals follow the noun, which appears in the singular with ‘one’, otherwise plural:

[5.71]	<i>muur ómótúk</i>	‘one person’	<i>ekwá dzũm</i>	‘ten bones’
	<i>baar ípe</i>	‘two people’	<i>akáár dzũm yε iwa</i>	‘19 women’
	<i>aman ísâr</i>	‘three stones’	<i>eseé akúm ípe yε íná</i>	‘24 cockroaches’
	<i>ekal íná</i>	‘four places’	<i>ndzáá ɲkám</i>	‘100 claws’
	<i>etok ítáàn</i>	‘five pipes’	<i>eté ɲkám íná yε ísâr</i>	‘403 trees’

Once again, numerals can disambiguate number on invariant nouns: *siɲ ómótúk* ‘one net’, *siɲ ípe* ‘two nets’; *mbvá ómótúk* ‘one dog’, *mbvá ísâr* ‘three dogs’, etc.

Ordinals are expressed with the determiner *na* + the numeral: *muur na ípe* ‘the second person’, *muur na ísâr* ‘the third person’, *muur na dzũm* ‘the tenth person’ etc. Cf. *muur óntet*

‘the first person’, *baar óntet* ‘the first people’; *muur ntsúk* ‘the last person’, *baar é ntsúk* ‘the last people’ (*ntsúk* ‘end, limit’).

### 5.6.2. Quantifiers

Recall from §5.5.2 that the determiners *ómɔ* ‘(a) certain (unknown)’ and *íjčkĕn* ‘(an)other, some other, different’ and the numeral *ómɔtúk* ‘one’ are used as indefinites, ultimately partitives meaning ‘some’:

[5.72]	<i>muur ómɔtúk</i>	‘a/one person’		
	<i>muur ómɔ</i>	‘a certain person’	<i>baar ómɔ</i>	‘certain people’
	<i>muur íjčkĕn</i>	‘another person’	<i>baar íjčkĕn</i>	‘other people’

As seen in [5.73], the quantifier *áňkǔm*, preceded by *nɔ* (sg.), *bɔ* (pl. human), or *mɔ* (pl. non-human) means ‘whole’ in the singular, ‘all’ in the plural:

[5.73]	<i>muur nɔ áňkǔm</i>	‘the whole person’	<i>baar bɔ áňkǔm</i>	‘all the people’
	<i>oňkáán nɔ áňkǔm</i>	‘the whole book’	<i>eňkáán mɔ áňkǔm</i>	‘all the books’

Because of vowel elision, these forms are often heard as *nǎňkǔm*, *bǎňkǔm* and *mǎňkǔm*. As an alternative *o(ň)kin* means ‘whole’ in both singular and plural: *oňkaan óňkin* ‘a/the whole book’, *eňkaan óňkin* ‘whole books’.

The meaning ‘each, every’ is expressed by *kóntsɔ*, where *kó* is likely derived from the preposition *kó* ‘at, to, for’:

[5.74]	<i>ndé ô tâŋ kó ntsɔ oňkáán</i>	‘he read every book’
	<i>kó ntsɔ esúù mi a zwí kó ntâŋ ísyéme</i>	‘every day I wake up at six o’clock’
	<i>kó ntsɔ mbal bɔ má yǎ, mi a tyén ye bǔ</i>	‘every time they come, I talk with them’

The quantifier *obyê* is used with plural and mass/liquid nouns to mean ‘many, much’: *bàán obyê* ‘many children’, *eňkáán obyê* ‘many books’, *esaa obyê* ‘much food’. In combination with *ŋga*, the related word *mbyê* means ‘how much, how many’: *ŋga mbyé bàán ʹó dzé* ‘how much did the children eat?’.

## 5.7. Participials

The last modifier type to be considered is what we refer to as participials. Any verb can form a participial by prefixing *ŋga-*. Depending on the tone of the verb stem, the following tonal variants are found:



[5.75]	H	:	o-dzá	‘to eat’	→	L-H	:	nga-dzá	‘eaten, eating’
						H-L	:	ngá-dza	
	HL	:	o-láà	‘to cook’	→	L-HL	:	nga-láà	‘cooked, cooking’
						H-HL	:	ngá-láà	
	L	:	o-bva	‘to fall’	→	L-L	:	nga-bva	‘fallen, falling’
						H-L	:	ngá-bva	
			o-diir	‘to watch’	→	L-L	:	nga-diir	‘watched, watching’
						L-HL	:	ngá-díir	
						H-HL	:	ngá-díir	

As seen, *nga-* can have either L or H tone. If the verb stem is /H/, it will come out interchangeably as L-H or H-L. Similarly, if the verb stem is /HL/, both L-HL and H-HL are possible. When the verb stem is /L/, there are three possible tone patterns, again all interchangeable.

As seen in the glosses in [5.75], the *nga-* forms correspond sometimes to the present participial and sometimes to the past participial in English. The accompanying noun phrase may refer to the subject, as in [5.76], or to the object, as in [5.77].

[5.76]	mwaán	ngá-mât	‘a standing child, a child standing’	(o-mat ‘to stand’)
	muur	nga-yεε	‘seller, the person selling’	(o-yεε ‘to sell’)
	muur	nga-sûm	‘buyer, the person buying’	(o-sûm ‘to buy’)
	muur	nga-láà	‘cook, the person cooking’	(o-láà ‘to cook’)
	oté	nga-bva	‘a falling/fallen tree’	(o-bva ‘to fall’)
[5.77]	ndzii	nga-yíb	‘money stealing, stolen money’	
	fufú	nga-láà	‘cooked fufu’	
	kil	ngá-dza	‘a partially eaten pineapple, a pineapple eaten into’	

Since the following examples are derived from verbs which can be transitive or intransitive, it is not clear if the noun undergoing the action originates as subject or object:

[5.78]	mbín	ngá-bwâ	‘broken calabash’	(o-bwâ ‘to break’)
	ebin	ngá-kâŋ	‘closed door’	(o-kâŋ ‘to close’)
	ebin	ngá-kâŋgul	‘open door’	(o-kaŋgul ‘to open’)
	mpfyè	ngá-pásul	‘broken pot’	(o-pasul ‘to break’)

The last two examples show that a bisyllabic verb will have a H-L stem in this construction.

In the following examples both the subject and the object are expressed:

[5.79]	muur $\eta$ ga-dzá fufú	‘a/the person eating fufu’
	$\eta$ ga-dzá muur fufú	(=same)
	mwaán $\eta$ ga-súm ntswé	‘a/the child buying fish’
	kĩl $\eta$ ga-dzá mpfũ	‘pineapple eaten into by the bird’
	muur $\eta$ ga-yɛɛ mbum	‘fruit salesman, person selling fruit’

The general rule appears to be that the noun of a noun+participial will be interpreted as the subject of the corresponding verb unless the semantics allows it to be interpreted as object. Thus, *muur  $\eta$ ga-bûl* means ‘beating person’ not ‘beaten person’, while *fufú  $\eta$ ga-láà* can only mean ‘cooked fufu’.

The participial is clearly related to perfect or present-tense relative clauses, which can be marked by the determiner *na*, the WH-element  *$\eta$ ga* (<  *$\eta$ g + a*), or both (§10.2):

[5.80]	oté na $\eta$ gá bva	‘the tree which has fallen’
	= oté na á bva	
	= oté $\eta$ gá bva	

The first two variants in [5.80] are unambiguous subject-relative clauses. While the last variant most closely resembles the participial, even producing ambiguous interpretations in some cases (e.g. ‘the tree which has fallen’ vs. ‘the fallen tree’), the participial has properties that differ from relative clauses:

- (i) It can occur without an overt subject, e.g. *fufú  $\eta$ ga-dzá* ‘eaten-into fufu’ vs. a relative clause (*\*fufú na ( $\eta$ ga) dzá* is ungrammatical). Even if the subject is indefinite and non-specific, it must be expressed: *fufú na  $\eta$ ga dzá bɔ̃* ‘edible fufu’ (literally, ‘fufu that they eat’).
- (ii) Although the infinitive must be used when the nominalized verb appears without an additional argument, a modified participial can occur in any noun phrase position, e.g. subject:

[5.81]	o-yíb <sup>↓</sup> é ye obé	‘to steal is bad’
	o-yíb ndzii é ye obé	‘to steal money is bad’
	ndzii $\eta$ ga-yíb <sup>↓</sup> é ye obé	‘stealing money/money stealing is bad’

The bare participial cannot occur as subject (*\* $\eta$ ga-yíb <sup>↓</sup>é ye obé* is ungrammatical).

While a nominal subject precedes the participial, a pronominal subject follows as a possessive:

- [5.82]    *ŋga-dzá mĩ*                    ‘me (by) eating’  
           *ŋga-dzá ʰmĩ fufú*            ‘me (by) eating fufu’  
           *ŋga-dzá ʰmĩ fufú é yâ*    ‘me (by) eating your fufu’

If these had been relative clauses the pronoun would have had to precede the verb: *mĩ na ŋga dzá* ‘I who have eaten’.

- (iv)      A participial can be used with the verb *o-kaa* ‘to be’:

- [5.83]    *o-kaa ŋgá-mât*            ‘to be standing’      *cf.*    *o-mat*    ‘to stand’  
           *o-kaa ŋgá-sîm*            ‘to lie down’            *o-sim*    ‘to stretch, lengthen’  
           *o-kaa ŋga-diir*            ‘to be awake’            *o-diir*    ‘to watch, observe’

This construction is quite general. Compare: *okaa ŋga-bva* ‘to be falling’, *okaa ŋgá-dza* ‘to be eating’, *okaa ŋga-láá fufú* ‘to be cooking fufu’.

For discussion of relative clauses, see §10.2.

## 5.8. Word Order

As seen in the preceding sections, modifiers generally follow the noun in Nzadi. An exception is *ĩŋki* ‘which’ (§5.5.3). In addition, demonstratives have been occasionally observed to precede the noun, especially when a second modifier is present:

- [5.84]    *nápe mbvá mĩ*            ‘this dog of mine’  
           *nápe mbvá onân*        ‘this big dog’  
           *nápe mbvá ómɔ́túk*    ‘this one dog’

In other cases a preceding modifier is instead appositional, with a comma intonation required between it and the following noun: *na e mí, mbvá ê tá yǎ* ‘mine, the dog bit you’, *ómɔ́túk, mbvá ê tá mĩ* ‘one, a dog bit me’. The more usual case is for multiple modifiers to follow the noun.

### 5.8.1. Multiple Modifiers

Of the major modifier types this section presents the sequential ordering of co-occurring possessives, adjectives, demonstratives and numerals. The acceptable orders are illustrated below:

[5.85]	POSS + ADJ	:	mbvá ↓mí ònân	‘my big dog’
	POSS + DEM	:	mbvá ↓mí ↓nápe	‘this my dog’
	POSS + NUM	:	mbvá ↓mí ómótúk	‘my one dog’
	ADJ + DEM	:	mbvá ònân ↓nápe	‘this big dog’
	ADJ + NUM	:	mbvá ònân ↓ómótúk	‘one big dog’
	DEM + ADJ	:	mbvá ↓nápe onân	‘this big dog’
	DEM + NUM	:	mbvá ↓nápe ómótúk	‘this one dog’
	NUM + ADJ	:	mbvá ómótúk onân	‘one big dog’
	NUM + DEM	:	mbvá ómótúk ↓nápe	‘this one dog’

The above orders can be summarized as in [5.86]:

[5.86] Noun + POSS + { ADJ, DEM, NUM }

As seen in the examples, adjectives, demonstratives and numerals may occur in any order after the noun without any apparent difference in meaning.

This leaves the possessive which is more complicated. With a head noun such as *mbvá* ‘dog’, there is no GL /é/, hence *mbvá mĩ* ‘my dog’. In no case can such an “unmarked” genitive noun or possessive pronoun follow a modifier. Thus, *\*mbvá ònân mĩ*, *\*mbvá nápe mĩ*, and *\*mbvá ómótúk mĩ* are all ungrammatical. What is found instead is the following:

[5.87]	ADJ + na + é + POSS	:	mbvá ònân na e mí	‘my big dog’
	DEM + na + é + POSS	:	mbvá ↓nápe na e mí	‘this dog of mine’
	NUM + na + é + POSS	:	mbvá ómótúk na e mí	‘my one dog’

In these examples *na e mí* ‘that of me, mine’ begins a separate phrase: ‘the big dog mine’ ‘this dog mine’, ‘the one dog mine’. In some cases the sense is one of a reduced relative clause (cf. *mbvá onân ↓é ye na e mí* ‘the big dog which is mine’). Phrases without *na* are marginally acceptable:

[5.88]	ADJ + é + POSS	:	mbvá ònân ↓é mí	‘my big dog’
	DEM + é + POSS	:	mbvá ↓nápe e mí	‘this dog of mine’
	NUM + é + POSS	:	mbvá ómótúk é mí	‘my one dog’

One interpretation is that the sequence of modifier + é + possessive is a phrase on its own: ‘dog my big one’, ‘dog my this one’, ‘dog one of mine’. In other words we have the three distinct bracketings in [5.89]:

- [5.89] [ Noun POSS DEM ] : [ mbvá ↓mí ↓nápe ] ‘this my dog’  
 [[ Noun DEM ] of POSS ] : [[ mbvá ↓nápe ] na e mî ] ‘this dog of mine’  
 [ Noun [ DEM of POSS ] ] : [ mbvá [ ↓nápe e mî ] ] ‘the dog this one of mine’

The same facts are observed when the modified noun independently takes the GL /é/:

- [5.90] POSS + ADJ : itóm é mí ònân ‘my big garden’  
 POSS + DEM : itóm é mí ↓nápe ‘this my garden’  
 POSS + NUM : itóm é mí ↓ómótúk ‘my one garden’
- [5.91] [ Noun POSS ADJ ] : [ itóm é mí ↓nápe ] ‘this my garden’  
 [[ Noun ADJ ] of POSS ] : [[ mbvá ↓nápe ] na e mî ] ‘this dog of mine’  
 [ Noun [ ADJ of POSS ] ] : [ mbvá [ ↓nápe e mî ] ] ‘the dog this one of mine’

### 5.8.2. Genitive Sequences

Genitive nouns have the same word order properties as possessive pronouns. However, in this case there is a potential for ambiguity:

- [5.92] GEN + ADJ : mbvá mwàán ònân ‘child’s big dog, dog of big child’  
 GEN + DEM : mbvá mwàán ↓nápe ‘this dog of the child, dog of this child’  
 GEN + NUM : mbvá mwàán ↓ómótúk ‘child’s one dog, dog of one child’

The intended meanings can be disambiguated when the two nouns differ in number:

- [5.93] GEN + ADJ : mbvá bàán ònân ‘the children’s big dog’  
 GEN + DEM : mbvá bàán ↓nápe ‘this dog of the children’  
 GEN + NUM : mbvá bàán ↓ómótúk ‘the children’s one dog’
- [5.94] GEN + ADJ : mbvá mwàán ènân ‘the child’s big dogs’  
 GEN + DEM : mbvá mwàán ↓mápe ‘these dogs of the child’  
 GEN + NUM : mbvá mwàán ↓ípe ‘the child’s two dogs’

In [5.92] the genitive has been changed to the plural noun *bàán* ‘children’, while the modifier remains singular. In [5.93] the genitive remains singular, while the modifier has been changed to the plural. (Recall from §4.2.6 that class 9/10 nouns such as *mbvá* ‘dog(s)’ are identical in singular and plural, although the plural can be further individuated by the clitic *ba-*.)

When the head noun is directly followed by a modifier, the genitive noun must be preceded by the GL /é/:

- [5.95] GEN + ADJ : mbvá onán ↓é mwáàn ‘big dog of the child’  
 GEN + DEM : mbvá nápe e mwáàn ‘this dog of the child’  
 GEN + NUM : mbvá ómótúk é mwáàn ‘one dog of the child’

Both nouns can be independently modified:

- [5.96] mbvá onán ↓é báán ekyê ‘the big dog of the small children’  
 mbvá ↓nápe e báán bapyá ‘this dog of those children’  
 mbvá ómótúk é báán ↓ípe ‘the one dog of the two children’

Compare also:

- [5.97] ηκόρ ↓máán ‘cup of wine’  
 ηκόρ ònán ↓é máàn ‘big cup of wine’  
 ηκόρ ònán ↓é máán ↓é swî ‘big cup of red wine’

Genitives may also occur in sequence, with and without modifiers:

- [5.98] okal é éñkáán é báán ‘the place of the books of the children’  
 eñkáán é báán ↓é báár bapyá ‘the books of the children of those people’  
 fotó ndzó ñkúm ‘the photo of the chief’s house’ [ N<sub>1</sub> of [ N<sub>2</sub> of N<sub>3</sub>]]  
 fotó ndzó é ñkúm ‘the chief’s photo of the house’ [ [ N<sub>1</sub> of N<sub>2</sub> ] of N<sub>3</sub>]

The last two examples show how the GL /é/ may disambiguate between genitive structures: As long as each genitive modifies a preceding class 1 or 9 noun, there is no GL. If, however, the genitive modifies a complex genitive, as in the last example, a GL must occur. The respective right- vs. left-branching structures are shown in brackets to the right of the glosses.

### 5.8.3. Conjunction Within the Noun Phrase

Nouns, pronouns, modifiers, and whole noun phrases can be conjoined with either *ye* or *tí*, both meaning ‘and’ or ‘with’:

- [5.99] mbvá é yè onán ye okúùr ‘the dog is big and old’  
 ndzó é ye zyé ye pyoo ‘the house is white and black’  
 = ndzó é ye zyé tí pyoo  
 mí ô món ibaa ye okáàr ‘I saw a man and a woman’

Other than possible stylistic preferences, there does not seem to be any ordering restriction when pronouns are conjoined with each other or with a noun:

[5.100]	mi tí yǎ`	‘me and you sg.’	yǎ tí mǐ`	‘you sg. and me’
	mi tí ndé	‘me and him/her’	ndé tí mǐ`	‘him/her and me’
	mi tí mwǎàn	‘me and the child’	mwǎàn tí mǐ`	‘the child and me’

As in the case of genitive sequences, the presence vs. absence of the GL /é/ can potentially disambiguate scope:

[5.101]	okáár ndzii	‘rich woman’	(‘woman of money’)
	ibaa ye okáár ndzii	‘a man and a rich woman’	
	ibaa ye okáár <sup>↓</sup> é ndzî	‘a rich man and woman’	(both are rich)

Both *ye* and *ti* are also used to express oblique objects and, in the case of *ye*, coordinate verbal structures (§9.3).

## CHAPTER 6: THE VERB

- 6.1. Monosyllabic verb stems
- 6.2. Bisyllabic verb stems
- 6.3. Inflected verb stems
- 6.4. Reduplicated verb stems
- 6.5. Lexicalized verb combinations
- 6.6. Transitivity

### 6.1. Monosyllabic Verb Stems

Like nouns, most verb stems contain a single syllable root, always consonant-initial. Monosyllabic roots may have any of the shapes CV, CVV, CVC, CVVC, and can be schematized as CV(V)(C). A *w* or *y* glide may also follow the initial consonant. The examples given in [6.1] illustrate the three tone patterns occurring in the infinitive with monosyllabic roots. The numbers at the top of the table indicate the number of unique occurrences of the tone pattern in our lexicon, not including verbs that appear only in verb + noun combinations.

As seen in these examples, unlike noun prefixes, the infinitive prefix *o-* does not harmonize when the root vowel is /ɔ/. Thus we have the minimal pairs *o-tsɔ* ‘to pound (yams)’ vs. *ɔtsɔ* ‘head’, and *o-tɔk* ‘to boil’ vs. *ɔtɔk* ‘pipe’. In addition, bisyllabic *CɔCVC-* roots do not trigger prefix harmony, hence *o-sɔnka* ‘to write’ and *o-kɔsul* ‘to cough’. As will be seen in Chapter 7, the past tense marker /ɔ/ is a separate particle and does not harmonize with an /ɔ/ verb stem vowel, nor do the progressive /ê/ and subjunctive /e/ markers harmonize with an /ɛ/ stem vowel.



[6.1]	L-L	82	L-HL	108	L-H	12
	o-bva	'to fall'	o-bâk	'to protect'	o-dzá	'to eat'
	o-diir	'to visit, watch'	o-bî	'to spoil, damage'	o-fá	'to come from'
	o-dzel	'to wait for'	o-bwâl	'to harvest'	o-kpá	'to die'
	o-fur	'to pay, reward'	o-dêf	'to borrow'	o-lé	'to be tired'
	o-kaŋ	'to tie, close'	o-kât	'to hold, touch'	o-nó	'to drink'
	o-lyaa	'to cry'	o-làà	'to cook'	o-pá	'to give'
	o-men	'to swallow'	o-lwâ	'to vomit'	o-sá	'to put'
	o-nwaan	'to fight'	o-mên	'to dance'	o-tá	'to bite'
	o-pɛɛ	'to look for'	o-môn	'to see, find'	o-tsá	'to descend'
	o-suun	'to jump'	o-sûm	'to buy'	o-tsó	'to pound'
	o-taŋ	'to drip'	o-tâŋ	'to read, count'	o-wá	'to finish (intr.)'
	o-wum	'to run'	o-tít	'to avoid, abstain'	o-yá	'to be ripe'
	o-ya	'to come'	o-tûm	'to send'		

While there are large numbers of infinitives with /L/ and /HL/ verb roots, which may contain long or short vowels in both open and closed syllables, only the 12 verbs given above occur with a level H tone. Many of these verbs correspond to PB CV- verb roots, e.g. \**dí-* 'eat', \**kú-* 'die', \**pá-* 'give'.

Most monosyllabic verb stems consist of a single lexical root morpheme, but there are some that suggest a possible morphological analysis. This is seen in the following verb pairs:

[6.2]	o-bva	'to fall'	o-bvii	'to fell'	( 'make fall' )
	o-dzá	'to eat'	o-dzî	'to feed'	( 'make eat' )
	o-môn	'to see'	o-mwê	'to show'	( 'make see' )
	o-zwô	'to bathe (intr.)'	o-zwê	'to bathe (tr.)'	( 'make bathe' )
	o-dzô	'to get stung'	o-dzwî	'to sting (tr.)'	( 'make get stung' )
	o-dzó tsyă	'to burn (intr.)'	o-dzwî tsyă	'to burn (tr.)'	( 'make burn fire' )

As indicated in the parenthetical glosses to the right, the second column of verbs suggest an earlier causative suffix cognate with PB \*-i. (The PB verb \**bón-* 'see' is often irregular as seen above in the loss of \**n* in the causative.) The fact that there is a tone change between the H stem of *odzá* 'to eat' (from monosyllabic \**dí-a*) and the HL stem of *o-dzî* 'to feed', suggests that the latter had an additional tone-bearing unit. Another case concerns *obî* 'to spoil, destroy', which is related to the adjectival noun *obé* 'bad', hence 'spoil' = 'make (be) bad'. The following comparisons are much more speculative:

[6.3]	o-kaa	‘to be, remain, live’	o-kii	‘to defend’	(‘make//let/cause to be’ ?)
	o-pá	‘to give, offer’	o-pîi	‘to throw away’	(‘make give’ ?)
	o-sá	‘to assemble, gather’	o-sî	‘to accompany’	(‘make assemble’ ?)
	o-tsa	‘to descend’	o-tsiî	‘to float’	(‘make descend’ ?)

In any case, whatever is left of PB causative *\*-i* is frozen on only a few verbs and is non-productive.

The same is true of the few verbs that have incorporated the PB reciprocal extension *\*-an-*: *o-nwaan* ‘to fight’ (< *\*du-an-*). In addition to *o-nwaan*, two bisyllabic verbs with *-an* have been found: *o-fwanan* ‘to resemble’, *o-sakan* ‘to play’. These are treated in the next section.

## 6.2. Bisyllabic Verb Stems

While the majority of verb stems are monosyllabic, 55 verb stems have been identified which are bisyllabic (and, with two exceptions, have a L-L tone pattern in the infinitive; see §6.2.7). As discussed in §6.2.7, many of all of these verbs may be borrowings from neighboring languages. Bisyllabic verbs are limited to the following patterns.

### 6.2.1. CVCsa

All of these consist of a short-vowel CVC syllable followed by *-sa*. Sixteen such verbs have been found:

[6.4]	o-bántsá	‘to think, meditate, believe’	o-mantsá	‘to finish (tr.)’
	o-bõṅsa	‘to repair, fix’	o-niksa	‘to grind’
	o-defsa	‘to lend’	o-paṅsa	‘to brush, wipe, rub’
	o-dyatsá	‘to lead’	o-sarsá	‘to help, save, rescue’
	o-gõṅsa	‘to expand’	o-taṅsa	‘to teach’
	o-kaṅsa	‘to fold’	o-vuksá	‘to mix, put together’
	o-kumsá	‘to praise’	o-yúntsá	‘to try’
	o-lutsá	‘to overflow’	o-zitsá	‘to obey’

While most of the CVC verb roots do not occur without *-sa*, the few that do clearly indicate that *-sa* was historically a causative suffix (cf. *-is-a* in neighboring languages):

[6.5]	o-def	‘to borrow’	→	o-defsa	‘to lend’	(‘cause to borrow’)
	o-kaṅ	‘to tie, close’	→	o-kaṅsa	‘to fold’	(‘cause to close’)
	o-nik	‘to scrape off’	→	o-niksa	‘to grind’	(‘cause to scrape off’?)
	o-tâṅ	‘to read, count’	→	o-taṅsa	‘to teach’	(‘cause to read’)

Historically, *o-kumsa* ‘to praise’ is likely derived from PB *\*kúm-* ‘be honored’ and *o-mantsa* ‘to finish (tr.)’ from PB *\*man-* ‘finish’, neither of which exist as simple roots in Nzadi (cf. *o-wá* ‘to finish (intr.)’ and *o-súk* ‘to finish (intr.)’).

### 6.2.2. CVCka

Two bisyllabic verb stems ending in *-ka* have been found:

- [6.6]    *o-mɔ̃nka* ‘to shine, be visible’    cf.    *o-môn* ‘to see’  
           *o-sɔ̃nka* ‘to write’

It is significant that these are also the only forms we have found where a nasal is not homorganic to the following consonant, suggesting that a vowel has been deleted between the /n/ and the /k/. This idea finds support from the corresponding PB *\*bón-ík-a* ‘be visible’ (cf. *\*bón-* ‘see’), *\*cón-*, *\*cón-ík-a* ‘draw a line, write’. It is likely that these derive from the homophonous stative and impositive extensions *\*-ík-*.

### 6.2.3. CVCul

Nineteen verbs have been found where the second syllable ends in *-ul*:

- |       |                 |                           |                 |                            |
|-------|-----------------|---------------------------|-----------------|----------------------------|
| [6.7] | <i>o-balul</i>  | ‘to turn’                 | <i>o-pasul</i>  | ‘to break (tr., intr.)’    |
|       | <i>o-bɛlul</i>  | ‘to heal’                 | <i>o-sakul</i>  | ‘to clear brush’           |
|       | <i>o-fuŋgul</i> | ‘to open’                 | <i>o-sukul</i>  | ‘to clean’                 |
|       | <i>o-kabul</i>  | ‘to share, split’         | <i>o-tobul</i>  | ‘to pierce’                |
|       | <i>o-kaŋgul</i> | ‘to open, uncover, untie’ | <i>o-yindul</i> | ‘to think’                 |
|       | <i>o-kasul</i>  | ‘to divide’               | <i>o-yuŋgul</i> | ‘to sift’                  |
|       | <i>o-kɔ̃sul</i> | ‘to cough’                | <i>o-yuvul</i>  | ‘to ask s.o., interrogate’ |
|       | <i>o-kulul</i>  | ‘to peel, strip bark’     | <i>o-zaŋgul</i> | ‘to lift up’               |
|       | <i>o-lulul</i>  | ‘to forgive’              | <i>o-tendul</i> | ‘to preach’                |
|       | <i>o-pakul</i>  | ‘to thatch’               |                 |                            |

As seen, *-ul* may be preceded either by a simple consonant or a nasal cluster. Of the above nineteen verbs only four clear simple roots were found to correspond semantically:

- |       |                 |                            |                  |                            |
|-------|-----------------|----------------------------|------------------|----------------------------|
| [6.8] | <i>o-bɛlul</i>  | ‘to heal’                  | cf. <i>o-bɛl</i> | ‘to suffer’                |
|       | <i>o-kaŋgul</i> | ‘to open, uncover, untie’  | cf. <i>o-kaŋ</i> | ‘to close, cover, tie’     |
|       | <i>o-kulul</i>  | ‘to peel, strip bark’      | cf. <i>o-kul</i> | ‘to scrape’                |
|       | <i>o-yuvul</i>  | ‘to ask s.o., interrogate’ | cf. <i>o-yûp</i> | ‘to ask s.o., interrogate’ |

While the last pair has the same meaning with and without *ul*, the first indicates the likely historical source as the PB transitive reversive extension *\*-ud-*, which frequently harmonizes to *-ɔl* after a root vowel /ɔ/. As seen above, *o-kɔsul* ‘to cough’ has non-harmonizing *-ul*, while two additional verbs have been found to undergo such height harmony:

[6.9]     *o-bəkɔl* ‘to bring up, bring to’     *o-bəndɔl* ‘to please’

#### 6.2.4. CVCuk

Only three verbs have been found to correspond to the PB intransitive reversive extension *\*-uk-*: *o-lugguk* ‘to think, study, learn (intr.)’, *o-pasuk* ‘to explode (intr.)’ (borrowed; cf. *o-pasul* ‘to break (tr.)’, and *o-baluluka* ‘to turn (around) (intr.)’ (also apparently borrowed from Kikongo).

#### 6.2.5. CVCil

Three bisyllabic verb stems have been found ending in *-il*:

[6.10]     *o-laŋdil* ‘supervise’     *o-sɔnkil* ‘to write (to)’     *o-kwikil* ‘to believe’

Because of its unique, non-homorganic sequence [ŋd], the verb *o-laŋdil* is likely to be a complex verbal expression *laŋ + dil* (see §6.5), but we have not been able to verify its parts. The verb *o-sɔnkil* is related to *o-sɔnka* ‘to write’ and is used only when a recipient is expressed as an object:

[6.11]     *ndé á sɔnka oŋkàán (kó múúr)* ‘he wrote a letter (to someone)’  
             *ndé á sɔnkil muur (oŋkàán)* ‘he wrote someone (a letter)’

While no other verbs have been found to have such an alternation, *-il* is a transparent reflex of the PB applicative *\*-id-* ‘to/for’ extension. Since Kituba and other languages in the area retain the applicative, the verbs in [6.10] may turn out to be borrowings.

#### 6.2.6. CVCan

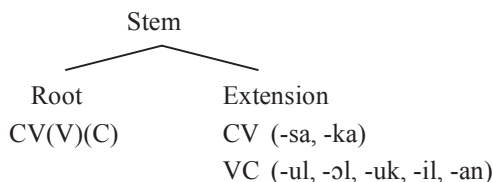
Two verbs have been found with a second syllable containing the PB reciprocal *\*-an-* extension:

[6.12]     *o-fwanan* ‘to resemble’     *o-sakan* ‘to play’

A third verb ends in *-un*, but is considered monomorphemic: *o-tafun* ‘to chew’ (PB *\*tákun-*).

## 6.2.7 Morphological Analysis of Bisyllabic Stems

To summarize, a small number of verbs have bisyllabic stems with recurrent second parts, suggesting the following morphological analysis:



We must ask whether the verbs which have *-sa*, *-ka*, *-ul* ~ *-ɔl*, *-il*, *-uk*, or *-an* are frozen historical Nzadi verbs stems or whether they are borrowings from a neighboring, more conservative Bantu language. Some, for example, *o-belul* ‘heal’ and *o-pasul* ‘break’ appear to be borrowings from Kikongo. In general, however, it is much harder to spot borrowings of verbs than borrowings of nouns, where the shape of the noun class prefixes provides evidence (cf. §4.1). One thing can be noted about bisyllabic verb stems: With the exception of *o-báńtsa* ‘to think, meditate, believe’ and *o-yúńtsa* ‘to try’, they are always L tone. Thus, all of the other bisyllabic stems have L-L tone in the infinitive, including those that are clearly related to H or HL monosyllabic infinitive stems:

[6.13]	o-kulul ‘to peel, strip bark’	cf.	o-kûl ‘to scrape’
	o-mônka ‘to shine, be visible’	cf.	o-môn ‘to see’
	o-tańsa ‘to teach’	cf.	o-tâń ‘to read, count’
	o-yuvul ‘to ask s.o., interrogate’	cf.	o-yûp ‘to ask s.o., interrogate’

As seen in Chapter 7, these and other verbs take different tones in different parts of the verbal paradigm. However, aside from *o-báńtsa* and *o-yúńtsa*, a lexical tonal contrast has not been found on bisyllabic verb stems.

## 6.3. Inflected Verb Stems

The above outline of Nzadi verb structure shows how verb stems are realized in the infinitive, where there is a three-way tonal contrast between L, HL, and H. In other contexts, verbs take their tone from the tense, aspect, or mood features. Often this results in merger of the HL and H tone patterns; sometimes it results in a merger of all three tone patterns (see Chapter 7). In certain verb forms, e.g. the past tense and the subjunctive, some CV(V) stems change their vowel, e.g.

- [6.14] byen â dzá fufú ‘you (pl.) have eaten the fufu’ (perfect)  
 byen ó dzé fufú ‘you (pl.) ate the fufu’ (past)  
 byen e dzé fufú ‘(may you pl.) eat the fufu!’ (hortative/subjunctive)

As observed, the verb stem *dzá* ‘eat’ changes to *dzé* in both the past tense and the plural imperative (which is built on the subjunctive). The progressive or *e*-present tense (§7.2.3) takes the same form as the subjunctive, but has a different tone pattern. These changes suggest an earlier *-i* or *-e* suffix as found in other Bantu languages. However, it is only CV(V) verbs that may undergo such a change; that is, neither monosyllabic CV(V)C stems nor bisyllabic stems acquire such a change. The generalizations concerning CV(V) verbs are given in §6.3.1-5. Tones in the ‘Subjunctive/Progressive’ column are given as they are in the subjunctive; for progressive tone patterns, see. (§7.2.3).

### 6.3.1. *Ca Verbs*

All short *Ca* verbs obligatorily become *Ce* in both the past tense and the subjunctive/progressive. Tones here are given as in main clauses and subject relative clauses.

[6.15]	<i>Infinitive</i>		<i>Past tense</i>	<i>Subjunctive/Progressive</i>
	o-bva	‘to fall’	bvê	bvê
	o-dzá	‘to eat’	dzê	dzê
	o-fá	‘to come from’	fê	fê
	o-kpá	‘to die’	kpê	kpê
	o-pá	‘to give’	pê	pê
	o-sá	‘to put’	sê	sê
	o-tá	‘to bite’	tê	tê
	o-tsá	‘to descend’	tsê	tsê
	o-wá	‘to finish’	wê	wê
	o-ya	‘come’	yê	yê

### 6.3.2. *Ce and Cɔ Verbs*

*Ce* and *Cɔ* verbs change, respectively, to *Ce* and *Cwe*. The change is generally optional in the past tense and obligatory in the subjunctive/progressive:

[6.16]	<i>Infinitive</i>		<i>Past tense</i>	<i>Subjunctive/Progressive</i>
	o-ke	‘to go’	kê ~ kê	kê
	o-lé	‘to be tired’	lê ~ lê	lê
	ɔ-nó	‘to drink’	nô ~ nwê	nwê
	ɔ-pó tǔó	‘to sleep’	pǔ	pǔ ~ pwê
	ɔ-tsó	‘to pound’ (e.g. yams)	tsǔ ~ tswê	tswê

As seen, the verb *o-pó* ‘to sleep’, which occurs with the noun *tǔó* ‘sleep’ is exceptional: It remains *pó* in the past, but optionally changes to *pwê* in the subjunctive. Since *ɔ-pó* cannot appear on its own, perhaps there is a pressure to maintain the same vowel as *tǔó*.

### 6.3.3. Caa Verbs

*Caa* verbs change to *Cee*, optionally in the past tense, obligatorily in the subjunctive:

[6.17]	<i>Infinitive</i>		<i>Past tense</i>	<i>Subjunctive/Progressive</i>
	o-báà	‘to get’	báà ~ béè	béè
	o-kaa	‘to be’	káà ~ kii	kii
	o-láà	‘to cook’	láà ~ léè	léè

As seen, the verb *okaa* ‘to be’ is exceptional in forming its derived stem as *kii* rather than *kee*.

### 6.3.4 Cwa and Cya Verbs

*Cwa* and *Cya* verbs change, respectively, to *Cwi* and *Ci*, optionally in the past tense and obligatorily in the subjunctive. In the case of *o-lyaa* ‘to cry’, vowel length is preserved:

[6.18]	<i>Infinitive</i>		<i>Past tense</i>	<i>Subjunctive/Progressive</i>
	o-dwâ	‘to paddle’	dwâ ~ dwî	dwî
	o-dzwa	‘to kill’	dzwâ ~ dzwî	dzwî
	o-dzya	‘to bury’	dzyâ ~ dzî	dzî
	o-dzyâ	‘to know’	dzyâ ~ dzî	dzî
	o-kwa	‘to be sufficient’	kwâ ~ kwî	kwî
	o-lwâ	‘to vomit’	lwâ ~ lwî	lwî
	o-lya	‘to pass’	lyâ ~ lî	lî
	o-lyâ	‘to fish with a hook’	lyâ ~ lî	lî
	o-lyaa	‘to cry’	lyââ ~ lîi	lîi
	o-tswâ	‘to bring’	tswâ ~ tswî	tswî
	o-twâ	‘to insult’	twâ ~ twî	twî
	o-vyâ	‘to call’	vyâ ~ vî	vî
	o-zwâ	‘to sense’	zwâ ~ zwî	zwî

### 6.3.5. Other Verbs

There is no vowel change if the basic verb stem ends in a consonant, a long vowel other than /aa/, or an /a/ in its second syllable:

[6.19]	<i>Infinitive</i>		<i>Past tense</i>	<i>Subjunctive/Progressive</i>
	o-môn	‘to see’	môn	môn
	o-kâp	‘to warn’	kâp	kâp
	o-pɛɛ	‘to look for’	pɛɛ	pɛɛ
	o-wɛɛ	‘to choose’	wɛɛ	wɛɛ
	o-táŋsà	‘to teach’	táŋsà	táŋsà
	o-sónkà	‘to write’	sónkà	sónkà

## 6.4. Reduplicated Verb Stems in the Future Tense

The Nzadi future affirmative is formed by partial reduplication; a syllable consisting of the onset of the first root syllable plus a vowel (usually *i*, but see below) appears before the root. (For details on the tone of the future tense, see §7.2.4.) [6.20] illustrates *Ci*-reduplication:



[6.20]	<i>Infinitive</i>		<i>Future Tense</i>
	o-báàn	‘to climb’	bībáàn
	o-bûl	‘hit’	bībûl
	o-bva	‘to fall’	bvībvă
	o-dīir	‘to watch, visit’	dīdīir
	o-dzá	‘to eat’	dzīdzá
	o-kε	‘to go’	kīkĕ
	o-ker	‘to make’	kīkĕr
	o-nó	‘drink’	nīnó
	o-sónka	‘to write’	sí <sup>1</sup> sónka

#### 6.4.1. Reduplication with Glide Onsets

Glides in *Cw* and *Cy* onsets are in general not reduplicated. Only one example *kwô-kwóm* ‘sweep (fut.)’ shows this pattern. The glide may be realized as the vowel in the reduplicated segment, such that *Cw* reduplication may be realized as *Cu-* or as *Ci-*. This optionality is not obvious in *Cy* initial verbs because they are realized as *Ci-* in reduplication in either case.

[6.21]	<i>Infinitive</i>		<i>Future Tense</i>
	o-kwa	‘to be sufficient’	kīkwă =kúkwă (*kwikwa)
	o-lyaa	‘to cry’	līlyăă (*lyilyaa)
	o-lwâ	‘to vomit’	līlwá, =lūlwá (*lwilwa)
	o-nwô	‘to rain’	nīnwó =nūnwó (*nwinwo)
	o-zwâ	‘to hear’	zīzwá =zūzwá

Similarly, a verb with a *w* onset can optionally reduplicate with *wu-*:

[6.22]	<i>Infinitive</i>		<i>Future Tense</i>
	o-wá	‘to finish’	wūwá =wīwá

This optional *Cu-* reduplication pattern may be less favored than the *Ci-* pattern.

#### 6.4.2. Other Optional Future Reduplication Patterns

Certain vowels have optional harmonizing reduplicative forms, at least in closed syllables: *CɔC* may reduplicate as (tensed) *Co-*; *CeC* (phonetically *C[ə]C*) may reduplicate as *Cə-*; *CɛC* may also reduplicate with *Cə-*. Because these optional patterns are somewhat dispreferred, it is not known whether they extend to open syllables and long vowels.

[6.23]	o-kót	‘to enter’	kókót	=kíkót
	o-sɔnka	‘to write’	só <sup>l</sup> sɔnkà	=sí <sup>l</sup> sɔnkà
	o-dzek	‘to tremble’	dzádzək	=dzídžək
	o-dɛf	‘to borrow’	dádɛf	=díɛf

### 6.5. Lexicalized Verb Combinations

A surprising number of verbal concepts with simple verb reconstructions in Proto-Bantu, usually found expressed in a single lexical item in Bantu languages, can or must be expressed in Nzadi with complex verb + complement forms, indicating that a number of common Proto-Bantu roots may have been lost in Nzadi. For example, ‘to shave’ (PB \**bég*) is expressed in Nzadi as *o-lúm ntswèé* (lit. ‘to remove facial hair’). Similarly, ‘to forge’ (PB \**túd*) is *o-ker bvùir* (lit. ‘to make strong’), and ‘to mould’ (PB \**bÚmb*) is *o-ker mpfyě àdziŋ* (lit. ‘to make Dzing pottery’). Patterns found in lexicalized verb constructions are discussed in this section; see §3.2 for the relevant tonal processes.

[6.24]	o-báá mpúr	‘to get hurt’	o-báá ‘get’ + mpúr ‘wound’
	o-ke osó	‘to precede’	o-ke ‘go’ + osó ‘face, ahead, forward, first’
	o-ker ntín	‘to hurry’	o-ker ‘make, do’ + ntín ‘haste’
	o-lúm ntswèé	‘to shave’	o-lúm ‘remove’ + ntswèé ‘facial hair’
	o-túl okúür	‘to age’	o-túl ‘become’ + okúür ‘old’

The most common light verbs used in complex verbal expressions include *o-báá* ‘receive, get, become’, *o-kaa* ‘to be’, *o-ke* ‘to go’, *o-ker* ‘to make, do’, *o-lúm* ‘to leave, remove’, *o-sá* ‘to put’, *o-túl* ‘to become’, and *o-zwá* ‘to hear, sense, perceive (other than by seeing)’. A sample of verb combinations using *o-sá* ‘to put’ is given in [6.25].

[6.25]	o-sá ákyě	‘to lay eggs’	o-sá ‘put’ + ákyě ‘eggs’
	o-sá míbyě	‘to stab’	o-sá ‘put’ + míbyě ‘knife’
	o-sá mpúr	‘to sharpen’	o-sá ‘put’ + mpúr ‘sharpness’
	o-sá mpwǎn	‘to tease’	o-sá ‘put’ + mpwǎn ‘insults’
	o-sá ŋkɔɔn	‘to snore’	o-sá ‘put’ + ŋkɔɔn ‘snoring, snores’
	o-sá ontsél	‘to bark (dog)’	o-sá ‘put’ + ontsél ‘noise’
	o-sá tsyǎ	‘to heat’	o-sá ‘put’ + tsyǎ ‘fire’

A number of lexicalized verb combinations occur with less common verbs, as well:

[6.26]	o-bên áduur	‘to rest, stretch’	o-bên ‘pull’ + aduur ‘fatigue’
	o-sim áduur	‘to rest’	o-sim ‘lengthen, stretch’ + aduur ‘fatigue’
	o-tá ndzáám	‘to swear’	o-tá ‘bite’ + ndzáám ‘God’
	o-twi mwáán	‘to perspire, dawn’	o-twi ‘exit’ + mwáán ‘heat, sweat, daylight’
	o-tó dzĩm̀	‘to sing’	o-tó ‘pick up’ + dzĩm̀ ‘song’

Several complexes have verbs which do not occur without their complement:

[6.27]	o-lé ndwe	‘to dream’
	o-pò t̀d̀	‘to sleep’

### 6.5.1. *Types of Complex Verbal Expressions*

Complex verbal expressions in Nzadi can be categorized along several lines, including the part of speech of the complement and its semantic role. Complements such as those in [6.28] may be adjectives (but note that the noun/adjective distinction in Nzadi is blurry; cf. §5.4), adverbs [6.29], nouns [6.30], prepositional phrases (instrumentals, locatives, etc.) [6.31], participles [6.32] and infinitive verbs [6.33].

[6.28]	o-ker bviir	‘to forge’	o-ker ‘make, do’ + bviir ‘strong’
	o-tùl okúur	‘to age’	o-tùl ‘become’ + okúur ‘old’
[6.29]	o-ker mpil ómõtúk	‘to imitate’	o-ker ‘make, do’ + mpil ‘manner’ + ómõtúk ‘one’
[6.30]	o-ker tsébo	‘to sneeze’	o-ker ‘make, do’ + tsébo ‘sneezing, sneeze’
	o-lúm épwe	‘to skin’	o-lúm ‘remove’ + épwe ‘skin’
	o-káár lukân	‘to decide’	o-káár ‘take’ + lukân ‘decision’
	o-zwâ áduur	‘to be tired’	o-zwâ ‘sense’ + aduur ‘fatigue’
[6.31]	o-fél yé mbwǎm	‘to blow nose’	o-fél ‘blow’ + yé ‘with’ + mbwǎm ‘nose’
	o-ke yé muur	‘to accompany’	o-ke ‘go’ + yé ‘with’ + muur ‘person’
	o-kaa kóntse	‘to be seated’	o-kaa ‘be’ + kó ‘at’ + ntse ‘down, bottom’
	o-sá <sup>l</sup> kibvúu	‘to insert’	o-sá ‘put’ + kó ‘at’ + bvuu ‘inside’
[6.32]	o-kaa ngá mât	‘to be standing’	o-kaa ‘be’ + ngá-mât ‘standing’ (o-mat ‘stand’)
	o-kaa ngá díir	‘to be awake’	o-kaa ‘be’ + ngá-díir ‘watching’ (o-diir ‘watch’)

[6.33]	o-lîŋ o-ker	‘to dare’	o-lîŋ ‘want’ + o-ker ‘to do’
	o-tûn ó-laŋ	‘to hate’	o-tûn ‘fail, refuse’ + o-laŋ ‘to love’
	o-tûn o-môn	‘to be blind’	o-tûn ‘fail, refuse’ + o-môn ‘to see’

Single verbs found in multiple lexicalized compounds in our database generally take the same type of complement.

### 6.5.2. Thematic Roles in Complex Verbal Expressions

Nominal complements may act as direct objects [6.34] or as instrumentals [6.35]:

[6.34]	o-bvul ntswèé	‘to shave’	o-bvul ‘peel’ + ntswèé ‘facial hair’
	o-sá mpúr	‘to sharpen’	o-sá ‘put’ + mpúr ‘sharpness’
[6.35]	o-lyá siŋ	‘to fish with net’	o-lyâ ‘fish’ + siŋ ‘net’
	o-tá mpen	‘to touch’	o-tá ‘bite’ + mpen ‘fingers’
	o-sá míbyě	‘to stab’	o-sá ‘put’ + mbye ‘knife’

Or they may describe manner or goal:

[6.36]	o-kε kifu	‘to limp’	o-kε ‘go’ + kifu ‘error, limping’
	o-kε duu	‘to ascend’	o-kε ‘go’ + duu ‘sky, up’
	o-kε osó	‘to precede’	o-kε ‘go’ + osó ‘face, ahead, first’
	o-lya dzyen	‘to walk’	o-lya ‘pass’ + dzyen ‘walking’

## 6.6 Transitivity

It is also noteworthy that a large number of Nzadi verbs may be either transitive or intransitive. For example, all of the verbs in [6.37] may be used transitively or intransitively.

[6.37]	o-balul	‘to turn (around)’	o-tûl	‘to arrive, to bring out’
	o-kal	‘to return’	o-twâ	‘to exit, to take out’
	o-bî	‘to spoil’	o-zî	‘to hide’
	o-pasul	‘to break’	o-kε ntó	‘to lose, be lost’

Similarly, many verbs take complements that are not direct objects, as was seen above in [6.35] and also in [6.38] below:

[6.38]	nkóp a zúúr adzá	‘the cup is full of water’
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The transitive / intransitive alternation may also account for the dual meaning of the copular verb *o-mâŋ*, which functions as both ‘to have’ (*ye* ‘with’ may cooccur) and ‘to be’:

- [6.39]      *mi a máŋ (ye) onkááŋ*      ‘I have a book’ (lit. ‘I am/have (with) book’)  
               *mi a máŋ táá*                      ‘I am a father’

The use and distribution of *o-mâŋ* forms is discussed in detail in §7.5.

The possibility of multiple valencies and thematic roles may be indicative of a more general tendency in Nzadi for fluidity of word classes, as seen in [6.40] for *òbé* ‘bad’:

- [6.40]      *mbvá obé*                      ‘bad dog’ (adjective)  
               *òbé é múùr*                    ‘the person’s badness’ (noun)  
               *ndé ó kër nõ òbé*      ‘he did it badly’ (adverb)

Nzadi’s fluid treatment of word class membership appears to be a major feature of the language.

## CHAPTER 7: TENSE, ASPECT, MOOD AND NEGATION

- 7.1. Overview
- 7.2. Basic (“Simplex”) TAM
- 7.3. Complex TAM expressions
- 7.4. Modals and modal-like auxiliaries
- 7.5. Copula

### 7.1. Overview of Verbal Inflection

Nzadi sentences are inflected for tense, aspect, and mood (TAM), and for negation, but not for person (subject) or number. We make a distinction between “simplex” and “complex” TAMs. Simplex TAMs are formed with a TAM marker followed by the verb stem, which takes a tone pattern specific to that TAM and may also undergo vowel changes. Nzadi also has a number of periphrastic complex tenses made up of simplex tenses and infinitive or other forms of the main verb.

Tenses distinguished in Nzadi include past, present, and future. Unlike many other Bantu languages, Nzadi makes no obligatory distinctions between degrees of past time, e.g. a hodiernal (today) and a prehodiernal past, although near past and distant past can be expressed periphrastically and in complex TAMs. The main “aspectual” distinction is that of anteriority (“perfect” aspect), although numerous aspects are expressed in complex TAM constructions. Nzadi does not systematically distinguish between progressive and habitual aspects, although the *e*-PRESENT is often used for progressive meanings (§7.2.3), and some complex TAM constructions are specifically progressive in meaning.

Important mood distinctions include negation (negative polarity), imperative mood, and subjunctive/hortative mood. In addition, the distinction between the two present tense forms

(§7.2.3) appears to be at least partially epistemic in nature. The two main modal verbs in Nzadi express weak obligation and possibility, respectively other modal meanings are expressed periphrastically (§7.4).

There appears to be a strong pragmatic component to TAM choice in Nzadi. The simple glosses given in this chapter, which aim only to give a broad overview of forms and functions, should not be assumed to fully capture TAM meanings and uses.

The forms given in this chapter represent main clauses only. Relative clauses appear to be able to express the full range of TAM distinctions, but in many cases have different tone patterns (see §10.2.5).

## 7.2. Basic (“Simplex”) TAM

As seen in the following table, Nzadi makes seven simplex tense/aspect distinctions: PAST, Present Perfect (PERF), two present tenses (*a*-PRES, *e*-PRES), Future (FUT), imperative (IMP) and subjunctive/hortative (SBJV). The markers listed above appear before the verb, which may receive a TAM-specific tone pattern.

[7.1]	TAM	Marker	Stem Tone Pattern	Stem Vowel Change	Section
	Past	ó	HL	yes (see §6.3)	§7.2.1
	Present Perfect	â	basic stem	no	§7.2.2
	<i>a</i> -PRESENT	a	HL	no	§7.2.3
	<i>e</i> -PRESENT	ê	L → LH H, HL → H L-L → <sup>↓</sup> H-L H-L → H-L	yes (see §6.3)	§7.2.3
	Future	a	L → H-LH H, HL → HL-H L-L, H-L → H- <sup>↓</sup> HL (redup.)	no, but CV- reduplicative prefixing (see §6.4)	§7.2.4
	Imperative (2sg)	--	HL / LHL	no	§7.2.5
	Subjunctive / Hortative	e (ke)	HL	yes (see §6.3)	§7.2.6

Recall that monosyllabic verbs carry one of three tone patterns in the infinitive: /L/, /H/, and /HL/ (§6.1). All but two of the bisyllabic verbs in our database have /L-L/ tone, the other two being /H-L/ (see Chapter 6 for further details). The stem-tone patterns in [7.1] should be interpreted as follows: If only one tone pattern is given, all verb stems take this tone, e.g. HL in the past. Rules are given where tones are modified. For example, in the *e*-PRESENT, /L/ verbs become LH, while both /H/ and /HL/ verbs are realized H. Stem-vowel changes are discussed in the respective sections (and in §6.3). The H-toned *á* of the *a*-PRESENT and the

future only surfaces as H after a few subject-tone patterns; it usually appears as L-toned *a*, because of tone absorption processes (see §3.2.1).

All examples are given with the 1sg. person marker, realized in the affirmative as *mi* and the negative as *mĩ*, which simplifies to *mĩ* before a L tone. For an overview of other subject tone interactions with TAM markers, see §3.3.1.

An example is given with all major syllable structures in [7.2] for past tense; thereafter, only one example is given for each stem tone pattern. In every subsequent example where only one pattern is given, a bimoraic syllable takes the same tone pattern as its monomoraic counterpart, spreading the pattern over both moras, hence *mi ó kĕ* ‘I went’ (CV), *mi ó liĩ* ‘I cried’ (CVV), *mi ó dzík* ‘I buried’ (CVC), and *mi ó diĩr* ‘I visited’ (CVVC).

It should be noted that the above tone patterns represent only the most typical cases; the realization of tone on verbal auxiliaries appears to be variable.

Negation of simplex TAMs generally employs the negative prefix *ka-*, which coalesces with the TAM marker, often giving it a L tone (except for the *e*-PRESENT). The future negative marker is *sá*, and the (2sg.) negative imperative marker is *pá*. Other negations may be realized periphrastically with the verbs *o-tún* ‘to refuse’ and *o-saŋ* ‘to refrain from’. The negative patterns of all simplex tense markers are discussed along with their affirmative patterns below. Negation may also be realized with *bɔ* alone, i.e. without *ka-*, but this pattern appears to be somewhat marginal.

### 7.2.1. Past Tense (PAST)

The affirmative past tense is formed with a H-toned tense marker *ó*. A HL falling tone is assigned to the verb stem, thereby neutralizing the underlying tonal contrasts of /L/, /H/ and /HL/ verb roots (as well as /L-L/ and /H-L/). In some CV(V) verbs, there is also an optional or obligatory change to the stem vowel; past tense stem vowel changes are detailed in §6.3.



[7.2]	<i>Infinitive</i>		<i>Aff. Past Tense</i> (‘I X-ed’)	<i>Tone Pattern</i> (Marker + Stem)
<i>L</i>	o-ke	‘to go’	mi ó kē	H # HL
	o-lyaa	‘to cry’	mi ó lyàà (~ líi)	H # HL
	o-dzik	‘to bury’	mi ó dzík	H # HL
	o-diir	‘to visit’	mi ó díir	H # HL
<i>H</i>	o-dzá	‘to eat’	mi ó dzê	H # HL
	<i>HL</i> o-zî	‘to hide’	mi ó zî	H # HL
	o-láà	‘to cook’	mi ó láà (~ lèè)	H # HL
	o-tâŋ	‘to count’	mi ó tâŋ	H # HL
	o-báàn	‘to climb’	mi ó báàn	H # HL
	<i>L-L</i> o-balul	‘to turn’	mi ó bálul	H # H-L
	o-sonka	‘to write’	mi ó sónka	H # H-L
	o-tendul	‘to preach’	mi ó téndul	H # H-L
	<i>H-L</i> o-báńtsa	‘to think’	mi ó báńtsa	H # H-L

While there is some variation in the tonal realization of the /ó/ past tense marker, the above represents the most typical case.

Corresponding negative past forms are illustrated in [7.3]. As seen, past tense negation is marked by a negative marker *ka*, which coalesces with the past marker *o* (here realized with L tone). Verb stems maintain their underlying tone, as in the infinitive. As with most negative utterances, the negative particle *bɔ* is required. (See §8.5 for a description of *bɔ* placement in negative sentences.) When followed by *bɔ*, HL stems simplify to H by tone absorption. For a fuller description of tone absorption and contour simplification across words, see §3.2.

[7.3]	<i>Infinitive</i>		<i>Negative Past</i> (‘I didn’t X’)	<i>Tone Pattern</i> (Marker + Stem + bɔ)
<i>L</i>	o-ke	‘to go’	mǐ ko ke bɔ	L # L # L
	o-lyaa	‘to cry’	mǐ ko lyaa bɔ	L # L # L
	o-dzik	‘to bury’	mǐ ko dzik bɔ	L # L # L
	o-diir	‘to visit’	mǐ ko diir bɔ	L # L # L
<i>H</i>	o-dzá	‘to eat’	mǐ ko dzá bɔ	L # H # L
	<i>HL</i> o-zî	‘to hide’	mǐ ko zí bɔ	L # H # L
	o-láà	‘to cook’	mǐ ko láá bɔ	L # H # L
	o-tâŋ	‘to count’	mǐ ko táŋ bɔ	L # H # L
	o-báàn	‘to climb’	mǐ ko báán bɔ	L # H # L
	<i>L-L</i> o-balul	‘to turn’	mǐ ko balul bɔ	L # L-L # L
	o-sonka	‘to write’	mǐ ko sɔnka bɔ	L # L-L # L
	o-tendul	‘to preach’	mǐ ko tendul bɔ	L # L-L # L
	<i>H-L</i> o-báńtsa	‘to think’	mǐ ko báńtsa bɔ	L # H-L # L

The past tense is used to refer to completed past situations that do not necessarily have a lingering result in the present. There appears to be no gradation of past time marked by distinctive tense morphemes, although the present perfect (see §7.2.2) is often used to describe situations that occurred relatively recently.

### 7.2.2. (Present) Perfect (PERF)

The present perfect (also referred to as the “anterior”) is formed with a HL marker *â*, followed by the basic stem tones. When followed by a L-toned stem, *â* simplifies to *á*:

[7.4]	<i>Infinitive</i>		<i>Affirmative Perfect</i> (‘I have X-ed’)	<i>Tone Pattern</i> (Marker + Stem)	
	<i>L</i>	o-lyaa	‘to cry’	mi á lyaa	H # L
	<i>H</i>	o-dzá	‘to eat’	mi â dzá	H # H
	<i>HL</i>	o-láà	‘to cook’	mi â láà	H # HL
	<i>L-L</i>	o-balul	‘to turn’	mi á balul	H # L-L
	<i>H-L</i>	o-báńtsa	‘to think’	mi â báńtsa	H # H-L

The negative is formed by the marker *ka-* which coalesces with the *a* of the PERF marker. (The result is a merger with the negative of a *a*-PRESENT; see §7.2.3). Stems are realized with a H-L pattern. Monosyllabic HL simplifies to H when followed by the L-toned negative particle *bɔ*.

[7.5]	<i>Infinitive</i>		<i>Negative Perfect</i> (‘I haven’t X-ed’)	<i>Tone Pattern</i> (Marker + Stem + bɔ)	
	<i>L</i>	o-lyaa	‘to cry’	mǐ ka lyáá bɔ	L # H # L
	<i>H</i>	o-dzá	‘to eat’	mǐ ka dzá bɔ	L # H # L
	<i>HL</i>	o-láà	‘to cook’	mǐ ka láá bɔ	L # H # L
	<i>L-L</i>	o-bálul	‘to turn’	mǐ ka bálul bɔ	L # H-L # L
	<i>H-L</i>	o-báńtsa	‘to think’	mǐ ka báńtsa bɔ	L # H-L # L

The semantic and pragmatic functions of the present perfect are complex. It can be used to describe a completed situation that occurred in the recent past, especially a situation with consequences in the present time. As in many Bantu languages, it may also be used with change-of-state verbs to indicate an ongoing state:

[7.6]	nɔ á kwa	‘It is sufficient’	(lit. ‘it has sufficed’)
	mi â lé	‘I am tired’	(lit. ‘I have (become) tired’)

However, change-of-state verbs appear to be less pervasive in Nzadi than in many Bantu languages, and most present states/situations are expressed with a present tense (see §7.2.3 for further discussion).

The perfect may be used in narratives to express situations that took place before the main reference time of the narrative. In the following example, the narrative has been introduced as describing how the Nzadi people (habitually) hold their market. The narrator then discusses events that take place in preparation for the market:

[7.7] ... bɔ á ker kisál kó ndzèè. bɔ â báà ntswé késúú iyó.  
 they PERF do work at river they PERF get fish at.day market  
 ‘...they have done work at the river. They have gotten fish on market day.’

bɔ â dwâ ŋkíí tíí ↓kííyo yɛ bɔ á baan iyó  
 they PERF paddle oar up.to at.market and they PERF begin market  
 They have paddled up to the market and they have begun the market...’

Although describing habitual actions, these verbs are expressed using the present perfect. The verbs that follow, describing actions that take place during the market itself, are in the present (habitual) tense.

In narratives about past events, the perfect also appears to be able to refer to events that took place (immediately) prior to the past reference time. The following example from Text 1 tells about Nzadi history. The narrator has just stated that the Nzadi ancestors came from the south:

[7.8] ... bɔ â báán. o báán bǒ bɔ â báán ndzèé kasái.  
 they PERF go.up PST go.up they they PERF go.up river Kasai  
 ‘...they went upriver. When they went upriver, they went up the Kasai River,

tíí bɔ á kɛ kosí baar tíí ↓kó wàá ómótúk,  
 and they PERF go to.leave people up.to at village one  
 and they went to leave people off at a certain village,

bɔ a bvyá nô ŋkénya kó mbíí ílebô...  
 they HAB call it Nkenya at near Ilebo  
 they call it Nkenya, near Ilebo.’

Uses in narratives and the variations observed in elicitation suggest that in general, the temporal distinction between present and perfect in Nzadi may be less than rigid.

Note that perfect semantics can also be expressed with the present tense of *o-mâŋ* ‘to be, to have’ followed by perfect *á*, as in the following excerpt from Text 1:

[7.8b]	mi	a	mánj	á	yúntsà	o-tyén	ye	ndám	akúùr
	I	PRES	have	PERF	try	INF-talk	with	a.few	elders
	I have tried to talk with a few elders								

### 7.2.3. Present Tenses (Habitual, Simple Present, and Progressive) (a-PRES and e-PRES)

Two markers, L-toned *a* and HL-toned *ê*, are used with present meanings, which include habitual, simple present, and progressive. They are glossed and referred to in this chapter as *e*-PRESENT and *a*-PRESENT.

The *a*-PRESENT is formed with the L-toned *a* marker and a HL falling tone on the stem:

[7.9]	<i>Infinitive</i>		<i>Aff. a-PRESENT</i>	<i>Tone Pattern</i>	
			(‘I X/am X-ing’)	(Marker + Stem)	
	<i>L</i>	o-lyaa	‘to cry’	mi a lyàà	L # HL
	<i>H</i>	o-dzá	‘to eat’	mi a dzâ	L # HL
	<i>HL</i>	o-láà	‘to cook’	mi a láà	L # HL
	<i>L-L</i>	o-balul	‘to turn’	mi a bálul	L # H-L
	<i>H-L</i>	o-báńtsa	‘to think’	mi a báńtsa	L # H-L

As shown in [7.10], the *e*-PRESENT has a TAM marker *ê*. Additionally, the stem vowel of CV(V) verbs may change, as detailed in §6.3.

[7.10]	<i>Infinitive</i>		<i>Aff. e-Present</i>	<i>Tone Pattern</i>	
			(‘I am X-ing / X’)	(Marker + Stem)	
	<i>L</i>	o-lyaa	‘to cry’	mi é lií	L # LH
	<i>H</i>	o-dzá	‘to eat’	mi ê dzé	HL # H
	<i>HL</i>	o-láà	‘to cook’	mi ê léé	HL # H
	<i>L-L</i>	o-balul	‘to turn’	mi é <sup>↓</sup> bálul	H # <sup>↓</sup> H-L
	<i>H-L</i>	o-báńtsa	‘to think’	mi ê báńtsa	HL # H-L

The tonal realization depends on the stem tone pattern: A H tone is added to the first stem syllable, following the basic stem tone, so that L-toned stems have a LH pattern on the first syllable in the *e*-PRESENT. As a result of this suffixal H tone, both H- and HL-toned verb stems have a H tone on the first syllable. The L tone of *ê* is absorbed before the LH of L-toned stems, and simplifies to *é* (see §3.2.1). Since H- and HL-toned stems have a H tone on the first syllable, *ê* does not simplify. The LH-L pattern of bisyllabic L-toned stems results in a downstepped H on the first stem syllable (see §3.2.2 for contour simplification rules). The result of these rules is that *e*-PRESENT forms have a HLH(L) pattern overall, realized as H-<sup>↓</sup>H-L in bisyllabic L-toned verbs.

The negative of the *a*-PRESENT has a form identical to that of the present perfect negative:

[7.11]	<i>Infinitive</i>		<i>Negative a-PRESENT</i> (‘I don’t X / I’m not X-ing’)	<i>Tone Pattern</i> (Marker + Stem + bɔ)
<i>L</i>	o-lyaa	‘to cry’	mĩ ka lyáá bɔ	L # H # L
<i>H</i>	o-dzá	‘to eat’	mĩ ka dzá bɔ	L # H # L
<i>HL</i>	o-láà	‘to cook’	mĩ ka láá bɔ	L # H # L
<i>L-L</i>	o-balul	‘to turn’	mĩ ka bálul bɔ	L # H-L # L
<i>H-L</i>	o-báńtsa	‘to think’	mĩ ka báńtsa bɔ	L # H-L # L

The *e*-PRESENT negative is formed with the negative marker *ka-*, which coalesces with the *ê* marker to produce *kê*. Unlike the other negations (e.g. past, see §7.2.1), this coalescence does not result in a L toned TAM marker. As a result, *kê* is downstepped after LHL *mĩ*. There is no downstep after a L-toned subject, hence *mĩ* <sup>↓</sup>*kê* *dzé* *bɔ* ‘I am not eating’ but *muur* *kê* *dzé* *bɔ* ‘the person is not eating’.

Stem vowel changes are retained in the negative *e*-PRESENT, and stem tones also remain the same as in the affirmative *e*-PRESENT.

[7.12]	<i>Infinitive</i>		<i>Negative e-Present</i> (‘I’m not X-ing’)	<i>Tone Pattern</i> (Marker + Stem + bɔ)
<i>L</i>	o-lyaa	‘to cry’	mĩ <sup>↓</sup> ké lii bɔ	<sup>↓</sup> H # LH # L
<i>H</i>	o-dzá	‘to eat’	mĩ <sup>↓</sup> kê dzé bɔ	<sup>↓</sup> HL # H # L
<i>HL</i>	o-láà	‘to cook’	mĩ <sup>↓</sup> kê léé bɔ	<sup>↓</sup> HL # H # L
<i>L-L</i>	o-balul	‘to turn’	mĩ <sup>↓</sup> ké <sup>↓</sup> bálul bɔ	<sup>↓</sup> H # <sup>↓</sup> H-L # L
<i>H-L</i>	o-báńtsa	‘to think’	mĩ <sup>↓</sup> kê báńtsa bɔ	<sup>↓</sup> HL # H-L # L

### 7.2.3.1. Semantics of the *e*-Present and the *a*-Present

In the absence of further context, the *a*-PRESENT is interpreted as expressing habitual and simple present meanings, as shown in [7.13] (taken from Text 2, and glossed as HAB). The *e*-PRESENT has a more progressive meaning, shown in [7.14].

[7.13] bɔ a tswá entúŋ. bɔ a tswá enjéér obyê  
 they HAB bring vegetables they HAB bring things many  
 ‘They bring vegetables. They bring many things.’

[7.14] mi ê dzé ńtswé  
 I PROG eat fish  
 [What are you doing?] ‘I am eating fish’

The *a*-PRESENT is generally preferred for non-stative habitual/iterative meanings:

- [7.15]      bɔ a sɔ́nka oŋkàán      ‘they’re writing a book [this year]’  
              \*bɔ é ˌsɔ́nka oŋkàán      *intended*: ‘they’re writing a book [this year]’

Additionally, the progressive (non-habitual) sense of the *e*-PRESENT is fairly strong in its negative form.

However, uses with more specified contexts suggest that with non-habitual semantics, the distinction between the *a*-PRESENT and the *e*-PRESENT may actually be modal in nature. The *e*-PRESENT is used with epistemic certainty, i.e. when the speaker is certain that the situation is occurring:

- [7.16]      bɔ a pɔ́ tɔ́ɔ      ‘they are sleeping’ *context: the speaker doesn’t see them*  
              bɔ é pɔ́ tɔ́ɔ      ‘they are sleeping’ *context: the speaker sees them*
- [7.17]      bɔ a lyâ      ‘they are fishing’ *context: the speaker knows they’ve gone to the river with the intention of fishing, but doesn’t see them*  
              bɔ é ǎ      ‘they are fishing’ *context: the speaker sees them fishing*
- [7.18]      bɔ a sɔ́nka      ‘they are writing’ *context: the speaker knows they are in a classroom, and is making a confident guess about what they are doing, but doesn’t want to make a strong assertion of knowledge*  
              bɔ é ˌsɔ́nka      ‘they are writing’ *context: the speaker sees or hears them writing, or is otherwise certain*

Although the evidence for the epistemically-certain *e*-PRESENT is generally that of sight, this is not necessarily the case. It is for this reason that the distinction is described as epistemic and not evidential.

- [7.19]      ...bɔ é ˌsɔ́nka      ‘[they told me that] they are writing’ *context: speaker just got off the phone with the writing people*  
              bɔ é báán      ‘they are going upriver’ *context: the statement is made at 12pm. The people in question left in a boat at 11am, and the speaker knows that they won’t reach their destination until 1pm.*

There are other ways of mitigating the epistemic certainty implicated by the use of the *e*-PRESENT, such as the use of the verb *o-báńtsa* ‘to think, believe’. However, epistemic certainty is still involved:



Finally, it is also interesting to note that while many Bantu languages have a bias towards expressing stative (and similar) meanings with inchoative (e.g. ‘to become’) verbs, Nzadi seems to prefer verbs that take the present tense:

[7.25]	<i>Verbs with Stative Event Semantics</i>		
	o-pɔ̀ tɔ̀ɔ̀	‘to sleep’	NOT ‘to fall asleep’
	o-mâŋ	‘to have’	NOT ‘to get’

#### 7.2.4. Future (FUT)

The affirmative of the future tense is formed through a process of prefixing reduplication in which the stem onset consonant is reduplicated, and an *î* is inserted:

[7.26]	RED → C <sub>i</sub> î / __ C <sub>i</sub> X
--------	--

Certain stem vowels may optionally reduplicate as well; see §6.4 for a full description of the future reduplicative process.

Like the *e*-PRESENT, reduplication with monosyllabic stems results in a HLH tone pattern that is sequenced differently, depending on the stem tone pattern: Before monosyllabic L-toned stems, the L tone of the reduplicant (C<sub>i</sub>î) is absorbed into the LH stem (HL-LH → H-LH); H-initial monosyllabic stems remain H and the HL falling pattern is realized on the reduplicant (HL-H → HL-H). With bisyllabic stems, the HL tone on the reduplicant causes downstep on the first stem syllable (HL-LH-L → HL-<sup>↓</sup>H-L).

[7.27]	<i>Infinitive</i>		<i>Affirmative Future</i> (‘I will X’)	<i>Tone Pattern</i> (Marker + Redup + Stem)	
	<i>L</i>	o-lyaa	‘to cry’	mi a lílyàá	L # H-LH
	<i>H</i>	o-dzá	‘to eat’	mi a dzîdzá	L # HL-H
	<i>HL</i>	o-láà	‘to cook’	mi a líláá	L # HL-H
	<i>L-L</i>	o-balul	‘to turn’	mi a bíbálul	L # H- <sup>↓</sup> H-L
	<i>H-L</i>	o-báńtsa	‘to think’	mi a bí <sup>↓</sup> báńtsa	L # H- <sup>↓</sup> H-L

The future negative has a unique marker of negation, *sâ*. The subject marker *mi* takes its affirmative tonal form *mi* (as opposed to *mĩ*, as seen in the negatives above). The *sâ* marker simplifies to *sá* before L-toned stems. The stem, which is not reduplicated, appears with its basic tone, with HL tones simplifying to H before the negative marker *bɔ̀*.



[7.28]	<i>Infinitive</i>		<i>Negative Future</i> (‘I won’t X’)	<i>Tone Pattern</i> (Marker + Stem + bɔ)
<i>L</i>	o-lyaa	‘to cry’	mi sá lyaa bɔ	H # L # L
<i>H</i>	o-dzá	‘to eat’	mi sâ dzá bɔ	HL # H # L
<i>HL</i>	o-láà	‘to cook’	mi sâ láá bɔ	HL # H # L
<i>L-L</i>	o-balul	‘to turn’	mi sá sɔnka bɔ	H # L-L # L
<i>H-L</i>	o-báńtsa	‘to think’	mi sâ báńtsa bɔ	HL # H-L # L

The future form can be used for any situation that will hold in the future. It sometimes alternates with the *e*-PRESENT (progressive) when describing situations that will occur in the very near future.

The uncertain nature of the future leads it to behave differently in certain modal contexts, and in the future anterior, as will be shown below.

### 7.2.5. Imperative (IMP)

The imperative form is confined to second-person singular uses. (As seen in §7.2.6, the hortative construction must be used in the plural.) The affirmative imperative is formed with the bare verb stem and a HL suffixal tone. Certain L-toned verbs have a rising-falling pattern: LHL for monosyllabic stems; LH-L with bisyllabic stems.

[7.29]	<i>Infinitive</i>		<i>Imperative</i> (‘X!’)	<i>Tone Pattern</i>
<i>L</i>	o-kɛ	‘to go’	kɛ̀	LHL
	o-lyaa	‘to cry’	lyǎà	LHL
	o-dzik	‘to bury’	dzík	HL
	o-diir	‘to visit’	dĩr	LHL
<i>H</i>	o-dzá	‘to eat’	dzâ	HL
	<i>HL</i>	o-zî	‘to hide’	zî
o-láà		‘to cook’	láà	HL
o-táŋ		‘to count’	táŋ	HL
o-báàn		‘to climb’	báàn	HL
<i>L-L</i>	o-balul	‘to turn’	bálul	H-L
	o-sɔnka	‘to write’	sɔnka	LH-L
<i>H-L</i>	o-báńtsa	‘to think’	báńtsa	H-L

The falling/rising-falling patterning in L-toned verbs can be summarized as in [7.30].

[7.30]	<i>L stem shape</i>	<i>Conditions</i>	<i>Imp. Tone</i>
	<i>CV</i>	kě̀ ('go!')	LHL
		all others	HL
	<i>CGV</i>		HL (a few LHL)
	<i>CVC</i>	lax vowel	LHL
		tense vowel + (p, t, k, r)	HL
		continuant coda (ŋ, l)	LHL
	<i>CVVC</i>		LHL
	<i>CVCVC</i>		H-L
	<i>CVCCV</i>		LH-L

For further discussions and examples, see §3.3.3, example [3.51].

The negative imperative consists of a negative imperative marker *pâ* (which simplifies to *pá* before a L tone) and the basic stem forms:

[7.31]	<i>Infinitive</i>		<i>Negative Imp.</i>	<i>Tone Pattern</i>
			'Don't X!'	(Marker + Stem)
	<i>L</i>	o-lyaa 'to cry'	pá lyaa	H # LL
	<i>H</i>	o-dzá 'to eat'	pâ dzá	HL # H
	<i>HL</i>	o-láà 'to cook'	pâ tô	HL # HL
	<i>L-L</i>	o-balul 'to turn'	pá balul	H # L-L
	<i>H-L</i>	o-báńtsa 'to think'	pâ bńtsa	H # H-L

All of these meanings may also be expressed periphrastically, using the verb *o-saŋ* 'to refrain from' and the infinitive form of the verb. (See §7.2.6 below for more on *o-saŋ* usage in negative subjunctive contexts.)

A double negative command has been attested with the negative marker *pâ* along with the verb *o-saŋ* 'to refrain from'. A single case of this form was recorded, where, as seen, the meaning is still negative:

[7.32] pá saŋ o ya 'don't come!' (lit. 'don't refrain from coming')

#### 7.2.6. Subjunctive / Hortative (SUBJ / HORT)

The subjunctive and hortative modes are expressed by the subjunctive marker *e*, along with subjunctive stem forms and a HL falling tone pattern on the stem. The only way of expressing a plural imperative is with the hortative, e.g. *byen e dzê* 'may you (all) eat!', or simply, 'eat! (2pl.)'. This use is exemplified in [7.33]. In the subjunctive/hortative mood, some stem vowels change in monosyllabic verbs. These changes are discussed in §6.3.

[7.33]	<i>Infinitive</i>		<i>Hortative (2pl)</i> (‘may you all X!’)	<i>Tone Pattern</i> (Marker + Stem)	
	<i>L</i>	o-lyaa	‘to cry’	byen e líi.	L # HL
	<i>H</i>	o-dzá	‘to eat’	byen e dzê	L # HL
	<i>HL</i>	o-láà	‘to cook’	byen e léè	L # HL
	<i>L-L</i>	o-balul	‘to turn’	byen e bálul	L # H-L
	<i>H-L</i>	o-báńtsa	‘to think’	byen e báńtsa	L # H-L

The hortative is used with all other persons, as well, e.g. *bi e dzê* ‘let’s eat!’.

The negative hortative is formed periphrastically, using the hortative form of verb *o-saŋ* ‘to refrain from’ followed by the infinitive form of the verb. As predicted by tone-absorption rules (§3.2.1), a H tone spreads to the L-toned prefix of L-toned infinitives. This pattern is also seen with, e.g., persistent forms (§7.3.6). Note also that the infinitive forms are truly infinitives, and do not show the past/subjunctive vowel changes.

[7.34]	<i>Infinitive</i>		<i>Neg. Hortative (2pl)</i> (‘may you all not X!’)	<i>Tone Pattern</i> (Marker + <i>sâŋ</i> + <i>Inf.</i> )	
	<i>L</i>	o-lyaa	‘to cry’	byen e sâŋ ó-lyaa	L # H # H-L
	<i>H</i>	o-dzá	‘to eat’	byen e sâŋ o-dzá	L # H # L-H
	<i>HL</i>	o-láà	‘to cook’	byen e sâŋ o-láà	L # H # L-HL
	<i>L-L</i>	o-balul	‘to turn’	byen e sâŋ ó-balul	L # H # L-L-L
	<i>H-L</i>	o-báńtsa	‘to think’	byen e sâŋ o-báńtsa	L # H # L-H-L

The subjunctive marker (*e*) has an alternate form *ké* which is weaker in its injunctive effect vs. *e* which usually expresses a command:

[7.35]	<i>with e</i>		<i>with ké</i>
	byen e yê	‘come (pl.)!’	byen ké yê ‘may you come, you may come’
	bɔ e lûm	‘they should leave!’	bɔ ké lûm ‘may they leave’

*ké* appears to be particularly common in subordinate subjunctive clauses, such as in [7.36].

[7.36]	mi	ó	léé	fufú	sám	ya	ké	dzê
	I	PAST	cook	fufu	reason	you	SBJV	eat
	‘I cooked fufu in order that you might eat’							

A detailed discussion of uses of the subjunctive in subordinate clauses is found in §9.4.2.

## 7.3. Complex TAM Expressions

In addition to their standing alone, the simplex TAMs in §7.2 may combine with other auxiliaries to form complex TAM expressions. Many of these encode aspectual distinctions that may be employed along with past, present, or future tense meanings. The most common auxiliary verb is *o-kaa*, ‘to be’, which in these contexts shortens to *ka* (or *ki*). Other auxiliaries used include the modal *o-fêṭ* (‘should’), *o-lîṭ* ‘to want’, *o-mâṭ* ‘to be, have’ and *o-fûl* ‘still’. All of these appear to be inflected for tense in the same way as other verbs. Two other auxiliaries are not inflected for tense: *tí pi* ‘not yet’, and *oṅkâṭ* ‘just’. Full paradigms are given for a few of the complex expressions below; others may be assumed to follow the same patterns unless otherwise indicated.

## 7.3.1. ‘Already’ / ‘Not Yet’

That a situation has “already” occurred is expressed in Nzadi by what appears to be a combination of the present perfect *â* marker and the infinitive form of the verb. As in many of the complex expressions of tense, a downstepped H tone appears on the infinitive *o-* of L-toned verbs, seemingly influenced by absorption of the previous H tone, and an apparent H tone floating before the verb stem. (See §3.3.1 for discussion of similar phenomena.) The prefix tone of H-toned stems remains L.

[7.37]	<i>Infinitive</i>		‘Already’: PERF <i>â</i> + INF (‘I have already X-ed’)
	<i>L</i>	<i>o-lyaa</i> ‘to cry’	mi á <sup>↓</sup> ó-lyaa
	<i>H</i>	<i>o-dzá</i> ‘to eat’	mi á o-dzá
	<i>HL</i>	<i>o-láà</i> ‘to cook’	mi á o-láà
	<i>L-L</i>	<i>o-balul</i> ‘to turn’	mi á <sup>↓</sup> ó-balul
	<i>H-L</i>	<i>o-báńtsa</i> ‘to think’	mi á o-báńtsa

The semantic negation of ‘already’ is ‘not yet’, expressed in Nzadi by *tí pii ... bô*.

[7.38]	<i>Infinitive</i>		‘Not yet’: <i>tí pii</i> + <i>stem</i> + <i>bô</i> (‘I have not yet X-ed’)
	<i>L</i>	<i>o-lyaa</i> ‘to cry’	mi tí píi lyaa bô
	<i>H</i>	<i>o-dzá</i> ‘to eat’	mi tí pii dzá bô
	<i>HL</i>	<i>o-láà</i> ‘to cook’	mi tí pii láá bô
	<i>L-L</i>	<i>o-balul</i> ‘to turn’	mi tí píi balul bô
	<i>H-L</i>	<i>o-báńtsa</i> ‘to think’	mi tí pii báńtsa bô

As seen, *tí pii* appears as H + H before L and H + L before H. That *tí* and *pii* are separate words is seen from the fact that the post-verbal subject appears between them in non-subject relative clauses (where negation is normally now allowed; cf. §10.2):

[7.39] fufú na tí mí pii dzá bɔ  
 fufu DET I eat SBJV  
 ‘the fufu that I have not yet eaten’

Although a morphological analysis of *tí pii* cannot be certain, it is worth noting the function words *tí(i)* ‘and (then), up to’ and *pii* ‘first’; with the negator *bɔ* this might mean something like ‘not up to first (=now?)’. Optionally, the function word *ntét* (also meaning ‘first’) may be inserted: *mi tí pii dzá ntét bɔ* ‘I haven’t yet eaten’. Another historical source might be *o-tít* ‘to avoid’. Interestingly, no other TAM marker is required with *tí pii*. The negative marker *bɔ* is required in all ‘not yet’ constructions.

### 7.3.2. Anterior (Perfect) Forms

The complex anterior (perfect) forms, expressing that a situation took place prior to the reference time, are semantically and formally related to the ‘already’ forms, as well as to past and future progressive (see §7.3.3). This makes sense: ‘I had eaten’ means, in effect, ‘I was [in a state of] already having eaten’.

#### 7.3.2.1. Past Anterior

The past anterior (past perfect) is formed with what appears to be the past tense of the auxiliary verb *o-kaa* (‘to be’, apparently shortened when used as a function word), followed by the ‘already’ form (see §7.3.1). The past of ‘to be’, ordinarily *ó kù*, simplifies to *ó ki* before the perfect marker of the auxiliary form.

[7.40]	<i>Infinitive</i>		<i>Past Anterior:</i>
			PAST <i>ó</i> +aux ki + ‘already’ stem
			(‘I had X-ed’)
	<i>L</i>	<i>o-lyaa</i> ‘to cry’	<i>mi ó ki á ʎó-lyaa</i>
	<i>HL</i>	<i>o-láà</i> ‘to cook’	<i>mi ó ki á o-láà</i>

The negative of the past anterior is formed by negating the past auxiliary *o-kaa* (> *ko ka*). The negative particle *bɔ* must be included, but may be placed either after *ka* or after the main verb, with no apparent scope effects. (See §8.5 for a discussion of *bɔ* placement in negative sentences.)

[7.41]	<i>Infinitive</i>		<i>Negative Past Anterior:</i>	
			PAST <i>neg ko</i> + <i>aux ka</i> + ‘ <i>already</i> ’ <i>stem</i> + <i>bo</i>	
			(‘ <i>I hadn’t X-ed</i> ’)	
	<i>L</i>	<i>o-lyaa</i> ‘to cry’	<i>mĩ ko ka bo á o-lyaa</i>	= <i>mĩ ko ka á o-lyaa bo</i>
	<i>HL</i>	<i>o-láà</i> ‘to cook’	<i>mĩ ko ka bo á o-láà</i>	= <i>mĩ ko ka á o-láà bo</i>

### 7.3.2.2. Future Anterior

Perhaps because of the inherent uncertainty of the future, the future anterior (future perfect) additionally requires the present tense of the modal verb *o-fêt* (‘should’: modal of weak obligation; see §7.4.1). Numerous tone absorption and contour simplification rules apply:

[7.42]	<i>Infinitive</i>		<i>Future Anterior:</i>	
			A-PRES <i>a</i> + <i>fêt</i> + INF <i>aux ka</i> + INF <i>stem</i>	
			(‘ <i>I will have X-ed</i> ’)	
	<i>L</i>	<i>o-lyaa</i> ‘to cry’	<i>mi a fêt ↓ó ká ↓ó-lyaa</i>	
	<i>HL</i>	<i>o-láà</i> ‘to cook’	<i>mi a fêt ↓ó ká o-láà</i>	

Here, the past tense of *o-kaa* does not make the optional stem change to *kii*; the stem-change form is also possible, however: *mi a fêt ↓ó kí ↓ó-lyaa* ‘I will have cried’.

The negation of the future anterior does not require *o-fêt*; it is formed with the negative future form of the auxiliary *o-kaa* (*sá ka*) followed by the ‘already’ form (§7.3.1). As expected, *bo* may be placed after the auxiliary or after the main verb.

[7.43]	<i>Infinitive</i>		<i>Negative Future Anterior:</i>	
			<i>neg. FUT</i> <i>sá</i> + <i>aux ka</i> + ‘ <i>already</i> ’ <i>stem</i> + <i>bo</i>	
			(‘ <i>I won’t have X-ed</i> ’)	
	<i>L</i>	<i>o-lyaa</i> ‘to cry’	<i>mi sá ká bo á ↓ó-lyaa</i>	= <i>mi sá ká á ↓ó-lyaa bo</i>
	<i>HL</i>	<i>o-láà</i> ‘to cook’	<i>mi sá ká bo á o-láà</i>	= <i>mi sá ká á o-láà bo</i>

### 7.3.2.3. The “Experiential” Perfect

The anterior/‘already’ forms are not employed in Nzadi to express the perfect of experience (i.e. ‘have you ever...?’). Instead, *o-mâŋ* ‘to have, be’ is used:

[7.44]	<i>bo a máŋ ↓á dzá fufú kó luziŋ ↓é bŋ</i>	‘have they ever eaten fufu in their lives?’
	<i>ndzéé ↓nápe á máŋ a káá mpfyô</i>	‘has that river ever been cold?’

7.3.2.4. *The Perfect of Persistent Situation*

This form is expressed in Nzadi not with an anterior, but with the present tense and an adverbial expression of the length of time for which the situation has held:

[7.45] ndzée é ye mpfyó baan ngwen ómótúk  
 river e-PRES be cold begin month one  
 ‘the river has been cold for a month’

7.3.3. *Progressive and Habitual Forms*

Progressive and habitual forms are formed with the auxiliary verb *o-kaa* ‘to be’ (shortened to *ka* before the vocalic auxiliary) and the *a*-PRESENT.

7.3.3.1. *Past Progressive/Habitual*

As is at least somewhat the case with the present tense, the past progressive and past habitual share the same form, consisting of the past tense of the auxiliary *o-kaa* (shortened to *ó kâ*) followed by the *a*-PRESENT form of the main verb. Contour simplification accounts for the downstepped H tone on the *a*-PRESENT; this downstep appears to be variable and the forms may also be realized with a non-downstepped *á*. Monosyllabic H-toned verbs take their alternative *a*-PRESENT form (see §7.2.3.1).

[7.46]	<i>Infinitive</i>		<i>Past Prog. / Habitual:</i>
			PAST <i>ó</i> + <i>aux kâ</i> + A-PRES <i>stem</i>
			(‘I was X-ing / I used to X’)
	<i>L</i> o-lyaa	‘to cry’	mi ó ká á lyáà
	<i>H</i> o-dzá	‘to eat’	mi ó ká á dza
	<i>HL</i> o-láà	‘to cook’	mi ó ká á láà
	<i>L-L</i> o-balul	‘to turn’	mi ó ká á bálul
	<i>H-L</i> o-báńtsa	‘to think’	mi ó ká á báńtsa

The negative past progressive/habitual is formed with the negative past of *o-kaa* (*ko kâ*) with the *a*-PRESENT.

[7.47]	<i>Infinitive</i>		<i>Negative Past Progressive / Habitual:</i> <i>Negative PAST ko + aux kâ + A-PRES stem + bɔ</i> (‘I wasn’t X-ing / I didn’t use to X’)
	<i>L</i>	o-lyaa ‘to cry’	mĩ ko ká bɔ á lyáà / mĩ ko ká ʰá lyáà bɔ
	<i>H</i>	o-dzá ‘to eat’	mĩ ko ká ʰá dzá bɔ
	<i>HL</i>	o-láà ‘to cook’	mĩ ko ká ʰá láá bɔ
	<i>L-L</i>	o-balul ‘to turn’	mĩ ko ká ʰá bálul bɔ
	<i>H-L</i>	o-báńtsa ‘to think’	mĩ ko ká ʰá bńtsa bɔ

As in the other forms, negative particle *bɔ* can occur after either the auxiliary or after the main verb. The tone pattern is exemplified for L-tone verbs but can be extrapolated to any of the stem tone patterns.

### 7.3.3.2. Immediate Past Progressive

The immediate past progressive/habitual may also be formed with the vowel-modified past tense *ó kii* of the auxiliary *o-kaa* ‘to be’, which before vowels shortens to *ó ki*, followed by the *a*-PRESENT.

[7.48]	<i>Infinitive</i>		<i>Past Progressive:</i> <i>PAST ó + aux ki + A-PRES stem</i> (‘I was (just) X-ing’)
	<i>L</i>	o-lyaa ‘to cry’	mi ó ki á lyáà
	<i>HL</i>	o-láà ‘to cook’	mi ó ki á láà

The difference between *ó ki* and *ó kâ* (past progressive/habitual) is not clear, although there may be a greater sense of “immediacy” or “nearness” with the *ó ki* form. The negation of the *ó ki* immediate past progressive is identical to that of the *ó kâ* general past progressive/habitual.

### 7.3.3.3. Future Progressive/Habitual (?)

The future progressive/habitual has a somewhat unexpected form. It could be analyzed as the prefixing of the preposition *kó* to the infinitive of *o-kaa* ‘to be’, giving a literal meaning like ‘I am at to be crying’.



[7.49]	<i>Infinitive</i>		<i>Future Prog/Hab:</i> a kó-ká + A-PRES stem (‘I will be X-ing / I will (habitually) X’)
	<i>L</i>	o-lyaa ‘to cry’	mi a kó-ká á lyáà
	<i>H</i>	o-dzá ‘to eat’	mi a kó-ká á dza
	<i>HL</i>	o-láà ‘to cook’	mi a kó-ká á láà
	<i>L-L</i>	o-balul ‘to turn’	mi a kó-ká á bálul
	<i>H-L</i>	o-báńtsa ‘to think’	mi a kó-ká á báńtsa

The negative future progressive is formed with the negative future of the auxiliary *o-kaa* and the *a*-PRESENT. Again, the *bɔ*-placement alternatives are shown only for the first example:

[7.50]	<i>Infinitive</i>		<i>Negative Future Progressive / Habitual:</i> negative FUT sá + aux ka + A-PRES stem (‘I won’t be X-ing / I won’t (habitually) X’)
	<i>L</i>	o-lyaa ‘to cry’	mi sá ká bɔ á lyáà / mi sá ká <sup>↓</sup> á lyáà bɔ
	<i>HL</i>	o-láà ‘to cook’	mi sá ká <sup>↓</sup> á láà bɔ

In fact, the contours can simplify in a number of ways, with the auxiliary *ka* sometimes surfacing as *L*, as in [7.51]:

[7.51] mi sá ka bɔ á láà = mi sá ka á láà bɔ ‘I won’t be cooking’

This variability applies to a number of the complex TAM expressions; however, it is not crucial to understanding their basic composition.

#### 7.3.3.4. Progressive Contractions with Participial *ŋga-*

Progressives can also be constructed with *o-kaa* ‘to be’ and the participial prefix *ŋga-*, as illustrated in [7.52] (see §5.7 for details on *ŋga-*):

[7.52]	o-kaa ŋga-bva	‘to be falling’
	o-kaa ŋga-díir	‘to be awake’ (from <i>o-diir</i> ‘watch’)

#### 7.3.3.5. Other Notes

All of the progressive forms may also combine with the *e*-PRESENT:

- [7.53]      mi ó ká é líí            ‘I was crying’ (past progressive)  
               mi ó ki é líí            ‘I was (just) crying’ (immediate past progressive)  
               mĩ ko ká é líí bɔ        ‘I wasn’t crying’ (negative past progressive)  
               mi a kó ká <sup>↓</sup>é líí        ‘I will be crying’ (future progressive)  
               mi sá ká <sup>↓</sup>é líí bɔ        ‘I won’t be crying’ (negative future progressive)

Again, contour simplification and downstep are somewhat variable.

A progressive form of the future anterior was also found, meaning ‘I will have been X-ing’. It is formed by adding the present tense of *o-fêt* to the past habitual form (see §7.3.3.1).

- [7.54]      mi a fêt <sup>↓</sup>ó ká <sup>↓</sup>á lyáà      ‘I will have been crying’

The negation of the future anterior progressive, meaning roughly ‘I won’t have been X-ing’, also uses *o-fêt*:

- [7.55]      mi sá ka fêt <sup>↓</sup>ó-lyáá (bɔ)      ‘I won’t have been crying’

#### 7.3.4. Prospective Forms (‘About To’)

Prospective aspect is used to describe situations that are in the future with respect to the reference time. In Nzadi, prospective forms indicate that the situation is in the *near* future of the reference time, i.e. that it is/was/will be “about to” occur. They are formed with *o-lîŋ* ‘to want’ as an auxiliary.

##### 7.3.4.1. Past Prospective

The past prospective consists of the past form of *o-lîŋ* ‘to want’ and the infinitive stem.

- |        |                     |            |   |
|--------|---------------------|------------|---|
| [7.56] | <i>Infinitive</i>   |            | <i>Past prospective:</i>                  |
|        |                     |            | <i>past ó + aux lîŋ + infinitive</i>      |
|        |                     |            | <i>(‘I was about to X’)</i>               |
|        | <i>L</i> o-lyaa     | ‘to cry’   | mi ó lîŋ <sup>↓</sup> ó-lyáà / ó-lyaa     |
|        | <i>H</i> o-dzá      | ‘to eat’   | mi ó lîŋ <sup>↓</sup> ó-dza / o-dzá       |
|        | <i>HL</i> o-láà     | ‘to cook’  | mi ó lîŋ <sup>↓</sup> ó-báàn / o-báàn     |
|        | <i>L-L</i> o-balul  | ‘to turn’  | mi ó lîŋ <sup>↓</sup> ó-bálul / ó-balul   |
|        | <i>H-L</i> o-báńtsa | ‘to think’ | mi ó lîŋ <sup>↓</sup> ó-báńtsa / o-báńtsa |

The negation of this form is as expected:

- [7.57]      mĩ ko lîŋ <sup>↓</sup>ó-lyáá bɔ    =    mĩ ko lîŋ bɔ o-lyáà      ‘I wasn’t about to cry’

## 7.3.4.2. Present Prospective

The present prospective is formed with the *a*-PRESENT of *o-lîŋ* and the infinitive stem.

[7.58]	<i>Infinitive</i>	<i>Present prospective:</i>
		A-PRES + aux <i>lîŋ</i> + <i>infinitive stem</i>
		(‘I am about to X’)
	<i>L</i> o-lyaa ‘to cry’	mi a lîŋ ↓ó-lyáà / ó-lyaa
	<i>HL</i> o-láà ‘to cook’	mi a lîŋ ↓ó-láà / o-láà

The present prospective can also be formed using *o-baan* ‘to begin’ as an auxiliary:

[7.59]	mi a kó-báán ↓ó-lyáà	‘I will be about to cry’ lit. ‘I am at to begin to cry’
--------	----------------------	---

As in the past, the present prospective negation is as expected:

[7.60]	mĩ ka lîŋ ↓ó-lyáà bə /	‘I am not about to cry’
	mĩ ka lîŋ bə o-lyáà	

## 7.3.4.3. Future Prospective

The future prospective is formed with the future auxiliary (*kí-kǎ*) followed by *A*-PRESENT of *o-lîŋ* and the infinitive stem:

[7.61]	<i>Infinitive</i>	<i>Future prospective:</i>
		FUT + aux <i>ka</i> + A-PRES. + aux <i>lîŋ</i> + <i>infinitive stem</i>
		(‘I will be about to X’)
	<i>L</i> o-lyaa ‘to cry’	mi a kí ka a lîŋ ↓ó-lyáà
	<i>HL</i> o-láà ‘to cook’	mi a kí ka a lîŋ ↓ó-láà / o-láà

Its negation also negates *o-kaa*:

[7.62]	mi sá ka a lîŋ ↓ó lyáà bə	‘I won’t be about to cry’
--------	---------------------------	---------------------------

## 7.3.5. Immediate Past (‘Just’)

The immediate past is formed with the auxiliary *oŋkáŋ*:

[7.63]	<i>Infinitive</i>	<i>Immediate past:</i>
		oŋkâŋ + <i>infinitive stem</i>
		(‘I am about to X’)
	<i>L</i> o-lyaa ‘to cry’	mi oŋkâŋ ↓ó-lyââ / o-lyaa
	<i>HL</i> o-lââ ‘to cook’	mi oŋkâŋ ↓ó-lââ

### 7.3.6. *Persistent Forms* (‘Still’)

Persistent (‘still’) forms involve the auxiliary *o-fûl*. The present is formed using the *e-PRESENT* form of *o-fûl* (‘still’):

[7.64]	<i>Infinitive</i>	<i>Persistent:</i>
		E-PRES + <i>fûl</i> + <i>infinitive stem</i>
		(‘I am still X-ing’)
	<i>L</i> o-lyaa ‘to cry’	mi ê fûl ó lyaa
	<i>HL</i> o-lââ ‘to cook’	mi ê fûl o lââ

Past and future forms also inflect *o-fûl* for tense:

[7.65]	mi ó fûl ó-lyaa	‘I was still crying’	(past)
	mi a fîfûl o-lââ	‘I will still be cooking’	(future)

The direct negation of the ‘still’ forms negates *o-fûl*:

[7.66]	mǐ ke fûl ó-lyaa bə	‘I am not still crying’
--------	---------------------	-------------------------

### 7.3.7. *‘Not Anymore’ Forms*

The semantic negation of ‘still’ is ‘not anymore’. These are formed with the negation of the *e-PRESENT* form of the main verb, followed by *dyák*, ‘again’ (cf. *ndé ó kër nǝ dyák* ‘he did it again’):

[7.67]	mǐ ↓ké lii dyák bə	‘I’m not crying anymore’	(o-lyaa ‘to cry’)
	mǐ ↓ké léé dyák bə	‘I’m not cooking anymore’	(o-lââ ‘to cook’)

Other tenses of ‘not anymore’ are formed similarly:

[7.68]	mǐ ko lyââ dyák bə	‘I didn’t cry anymore’	(past)
	mǐsâ lyââ dyák bə	‘I won’t cry anymore’	(future)

## 7.4. Modals and Modal-like Auxiliaries

### 7.4.1. *o-fêt* (Weak Obligation)

The modal verb *o-fêt* expresses weak obligation (‘should’) in both the epistemic sense and the deontic sense. Deontic uses are illustrated in [7.69], using *o-fêt* and the infinitive (the infinitive prefix *o-* changes to *e-* to agree with the 3pl. human direct object pronoun *bǒ* ‘them’ in the second and third sentences – see §8.37 for more on object pronoun agreement):

- |        |                                       |  |
|--------|---------------------------------------|--|
| [7.69] | mi a fêt ↓ó-díir ndé oswâ             | ‘I should visit him tomorrow           |
|        | (mē mǐ ka bán̄tsa bō mi a dídíir ndé) | (but I don’t think I will visit him).’ |
|        | mi a fêt ↓é-díir bǒ n̄tsú mǎŋkǔm      | ‘I should visit them every day’        |
|        | mǐ ka fêt ↓é-díir bǒ bō               | ‘I shouldn’t visit them’               |

As seen in the first example, *o-fêt* indicates something weaker than ‘must’, although the ‘should’ sense can carry fairly strong deontic force. The deontic and epistemic senses of ‘must/have to’ (strong necessity) are conveyed without the use of a modal auxiliary.

Epistemic uses are similar. Note that *o-fêt* can also combine with complex TAM expressions such as the progressive (see §7.3.3).

- |        |                        |                                  |
|--------|------------------------|----------------------------------|
| [7.70] | bō a fêt ↓ó-ká a sónka | ‘they should (might) be writing’ |
|        | <i>cf.</i> bō a sónka  | ‘they must be writing’           |

Recall that *o-fêt* is also used in the future anterior (§7.3.2.2), which may also be lacking in certainty.

A final use of *o-fêt* is in “sufficiency modal constructions”, which give a sufficient (but not necessary) way of fulfilling a goal:

- |        |                               |                                   |
|--------|-------------------------------|-----------------------------------|
| [7.71] | ker ya má laŋ esaa ndâbén,    | ‘If you want good food,           |
|        | ya a fêt ↓ó ké ↓ná ko Ipakála | you only have to go to Ipakála’s’ |

### 7.4.2. *o-fên* (Possibility)

In contrast, *o-fên* is a modal of possibility, ability, and permission:

- |        |                     |   |
|--------|---------------------|---|
| [7.72] | mpfyé á fên ó-pasul | ‘the pot is possible to break (is breakable)’ |
|--------|---------------------|---|

Certain expressions of present permission/ability/possibility are generally expressed in the past tense, although present tense is at least possible in some cases, as seen in the first example above. Recall that infinitive and past tense *ó* change to *é* to agree with 3pl object *bǒ*.

- [7.73] mi ó fĕn o-dzá fufú 'I may/can eat the fufu'  
 mi é fĕn <sup>↓</sup>é-sarsa bǔ bɔ ('mè mi sá sarsa bǔ bɔ) 'I can help them (but I won't help them)'

Negation of *o-fĕn* takes the tense matching the reference time. Interestingly, *o-fĕn* cannot be negated in the future.

- [7.74] mǐ ka fĕn <sup>↓</sup>é-sarsa bǔ bɔ 'I can't help them' (e.g. because I'm too busy)  
 mǐ ko fĕn <sup>↓</sup>é-sarsa bǔ bɔ 'I couldn't help them'  
 \*mi sá fĕn <sup>↓</sup>é-sarsa bǔ bɔ intended: 'I won't be able to help them'  
 mi sé sarsa bǔ bɔ 'I won't (be able to) help them'

The modal *o-fĕn* also appears in some counterfactual constructions, a few of which are exemplified here. (Counterfactuals are discussed in greater detail in §9.7.) Note that the third example below is repeated from [7.74] where it was observed that it can also mean simply 'I couldn't help them'.

- [7.75] ker mi â dzá fufu mi a títúl otâl 'If I eat fufu I will become tall'  
 mǐ ko fĕn <sup>↓</sup>é sarsa bǔ bɔ 'I couldn't have helped them'  
 ker mi ô dzé fufu mi ó fĕn o-túl otâl 'If I had eaten fufu I would have become tall'

#### 7.4.3. má (Conditionals)

The protases of conditional clauses may prefix *má* to other tense and aspect auxiliaries. Prefixing *má* is at least sometimes optional. See §9.7 for further details on conditional clauses. Tone patterns with auxiliaries following *má* exhibit some variability, as does the length of the following auxiliary. [7.76] shows *má* in the protasis of a conditional clause with progressive aspect. [7.77] shows it occurring optionally with perfect *â*.

- [7.76] ker ndé má ká à dza fufú... 'if he is eating fufu...'  
 if he COND be PRES eat fufu
- [7.77] ker bàán <sup>↓</sup>má à dzá fufú... 'if the children have eaten the fufu...'  
 ker bàán <sup>↓</sup>â dzá fufú... 'if the children have eaten the fufu...'

#### 7.4.4. Other Expressions of Modal Meaning

Some other meanings typically associated with modals are expressed with adverbials and other periphrastic expressions. The adverbial phrase *mbal ómǔ* 'at a certain time' (lit. 'time certain') is used to give an idea of possible intentionality ('perhaps'):

[7.78] mbal ómš mi a kíkě ‘Perhaps I will leave’

The similar modal concept of ‘might’ has been translated using the periphrastic expression *ka lán o-zyá bə* (‘don’t want to know’):

[7.79] mĩ ka lán o-zyá bə ker mi a kíkě ‘I might go’ (lit. ‘I don’t want to know if I will go’)

### 7.5. Copula Forms (‘Be’ / ‘Have’)

Nzadi has two copula verbs, *o-kaa* ‘to be’ and *o-mâŋ* ‘to have, be’. The first, *o-kaa* is used in identity, attributive (adjectival), and locative copula constructions. It can also be used in possessive copula constructions with the addition of *ye* ‘with’. The second copula, *o-mâŋ* is generally used with or without *ye* to express possession, but it can also be used in certain identity copula, sometimes with idiomatic meaning. In addition, many attributive (adjectival) copula are formed with *o-mâŋ ye* or *o-kaa ye*. The *o-mâŋ* form is also used in at least some attributive copula that don’t allow *ye*.

In the present tense (*e*-PRESENT), a suppletive form *ye* occurs and is in complementary distribution with *o-kaa*. [7.80] shows present, past, and future identity copula:

[7.80]	Tukúmu é ye lŋ	‘Tukumu is a teacher’	(present)
	Tukúmu ó kii lŋ	‘Tukumu was a teacher’	(past)
	Tukúmu á kíkaa lŋ	‘Tukumu will be a teacher’	(future)

In the *e*-PRESENT, *ye* is apparently simplified from *yě* (see § 7.2.3) but usually occurs with L tone (cf. [7.88] below). The source of the rising tone in the past tense in [7.80] is uncertain, but it may be influenced by the floating L prefix of *lŋ* ‘teacher’. The future *á* likely surfaces as H here due to being pronounced in slow, carefully-segmented speech.

The basic negative forms are given in [7.81].

[7.81]	Tukúmu ké ye lŋ bə	‘Tukumu isn’t a teacher’ (negative present)
	Tukúmu kó kii lŋ bə	‘Tukumu wasn’t a teacher’ (negative past)
	Tukúmu sá kaa lŋ bə	‘Tukumu won’t be a teacher’ (negative future)

As mentioned above, *é ye* (*o-kaa*) forms are used in identity, attributive, and locative constructions:





[7.87]	kǎà l̥ŋ	‘be a teacher!’
	pá kaa l̥ŋ	‘don’t be a teacher!’
	kǎà dzó	‘be quiet!’
	kàá ye bǎàn	‘have children!’
	kǎà kó ndzó	‘be in the house!’

Copulas are also used with demonstratives, with infinitive subjects, in (inverted) pseudo-cleft constructions, and, with *ker* ‘like’, in similes:

[7.88]	nápe é ye máán	‘this is a container of wine’
	o-dzá fufú é ye ɔdzɔ	‘to eat fufu is good’
	ŋkwó é ye oŋgér Tukúmu o sùm ndé	‘a chicken is what Tukumu bought’ (lit. ‘chicken is thing Tukumu bought he’)
	mbvwá <sup>↓</sup> e yě ker ilĩŋ éntên	‘the road is like the (winding) trace of a snake’

In some cases the copula may be deleted, e.g. after a demonstrative (cf. §10.4.1 for other contexts):

[7.89]	mápe avúp	‘this is dew’	(=mápe é ye avúp)
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## CHAPTER 8: BASIC SENTENCE STRUCTURE

- 8.1. Introduction
- 8.2. Transitive and intransitive main clauses
- 8.3. Ditransitive main clauses
- 8.4. Adjuncts within the main clause
- 8.5. Negative *bo* placement
- 8.6. Comparatives

### 8.1. Introduction

This chapter deals with basic structure of Nzadi main clauses. Details about subordinate, coordinate, and complement clauses may be found in Chapter 9, while relative and other clause types associated with information structure are treated in Chapter 10.

### 8.2. Transitive and Intransitive Main Clauses (S-Aux-V-(DO))

Nzadi main clauses have the form S-Aux-V-(X), where X can be a direct object (DO) or other complement or adjunct. The subject is obligatorily overt, either as a full lexical noun phrase (NP) or as a pronoun. The main verb is preceded by an obligatory auxiliary marker that can provide information about tense, aspect, and/or mood, including negation (see Chapter 7). Negated sentences include negative marking on the auxiliary and a post-verbal negative marker *bo* (see §8.4 below for details).

Intransitive clauses with a lexical subject and a subject pronoun are illustrated [8.1] and [8.2], respectively:

- [8.1] mwàán      ↓ó      bvê  
 bàán        ↓ó      bvê  
 child(ren) PAST fall  
 S            AUX V  
 ‘the child fell / the children fell’

- [8.2] mi            â        dzá  
 I                PERF eat  
 S(*pronoun*) AUX V  
 ‘I have eaten’

There is no subject-verb agreement in Nzadi. Thus, a subject noun may not co-occur with a subject pronoun unless there is a comma intonation between them, e.g. *bàán, bɔ ó bvê* ‘the children, they fell.’ The full paradigm of subject pronouns is seen in [8.3]:

- |       |           |                      |            |                            |
|-------|-----------|----------------------|------------|----------------------------|
| [8.3] | mi â dzá  | ‘I have eaten’       | bi â dzá   | ‘we have eaten’            |
|       | ya â dzá  | ‘you sg. have eaten’ | byen â dzá | ‘you pl. have eaten’       |
|       | ndé â dzá | ‘he/she has eaten’   | bɔ â dzá   | ‘they [+human] have eaten’ |
|       | nɔ â dzá  | ‘it has eaten’       | mɔ â dzá   | ‘they [-human] have eaten’ |

Direct objects, indirect objects, and other constituents follow the verb:

- [8.4] bàán      ↓â      dzá fufú  
 children PERF eat fufu  
 S            AUX V DO  
 ‘the children have eaten fufu’

- [8.5] bàán      ↓ó      món ndé  
 children PAST eat him  
 S            AUX V DO  
 ‘the children saw him/her’

Direct object pronouns may trigger agreement on the auxiliary, as discussed below in §8.3.7. Other kinds of constituents that may follow the verb, such as indirect objects and prepositional phrases, are discussed and illustrated in the sections below. Both subject and post-verbal noun phrases have the same internal structure (see Chapter 5 for details).

Since the same pronominal forms are used as subject and object, there is no case marking distinguishing the major arguments of the clause. There also is no passive construction in Nzadi.

### 8.3. Ditransitive Main Clauses (S-V-IO-DO and S-V-DO-Obl)

Ditransitives may be expressed in two constructions: double object (S-V-IO-DO) and direct object + oblique (S-V-DO-Obl). Obliques are introduced with the locative marker *kó*, a preposition meaning ‘at’ or ‘to’.

#### 8.3.1. Both Arguments are Nouns

The two kinds of ditransitive constructions are illustrated in [8.6] and [8.7], respectively. (For details about the optional /a/ marker in [8.7], see §3.3.2.)

[8.6]    bi    ó        pé    bǎán    fufú  
           we   PAST   give   children   fufu  
           S    AUX   V     IO        DO  
           ‘we gave the children fufu’

[8.7]    bi    ó        pé    fufú   kó    (a)    bǎán  
           we   PAST   give   fufu   LOC        children  
           S    AUX   V     DO    Obl-IO  
           ‘we gave fufu to the children’

In the double object construction the order of the two object nouns cannot be reversed to S-V-DO-IO. Thus, the sentence in [8.8] is ungrammatical unless having the odd IO-DO interpretation ‘I sent the child to the letter’:

[8.8]    \*mi   ô        túm   ɔŋkáán   mwǎán  
           I    PAST   send   letter    child  
           S    AUX   V     DO        IO  
           *intended*: ‘I sent the child the letter’

However, an oblique indirect object may optionally precede the direct object:

[8.9]    mi   ô        túm   ↓kó    (a)    múúr    bǎán  
           I    PAST   send   LOC        person   children  
           S    AUX   V     Obl-IO            DO  
           ‘I sent the man to the children’

## 8.3.2. One Argument is a Pronoun

When object pronouns are used, the ordering possibilities for ditransitive constructions are similar (but not always identical) to those found with noun objects. The sentences in [8.10-11] show an IO pronoun preceding a DO noun:

[8.10] bi ó pé ʰbó fùfú  
 we PAST give them children  
 S AUX V IO DO  
 ‘we gave them fufu’

[8.11] mi ô túm ndé bãán  
 I PAST send him children  
 S AUX V IO DO  
 ‘I sent him the children’

It is also possible for an IO noun to be followed by a DO pronoun:

[8.12] bi ó pé bãán nǒ  
 we PAST give children it  
 S AUX V IO DO  
 ‘we gave the children it’

[8.13] mi ô túm mwáán mǒ  
 I PAST send child them[-HUM]  
 S AUX V IO DO  
 ‘I sent the children them (e.g. letters)’

Much as a lexical direct object cannot be followed by an indirect object [8.8], it also cannot be followed by an indirect object pronoun.

[8.14] \*mi ô túm bãán ndé  
 I PAST send children him  
 S AUX V DO IO  
*intended:* ‘I sent the children to him’

The above sentence would be grammatical if the two arguments were interpreted as IO-DO, i.e. with the meaning ‘I sent him to the children’.

Differing from the ungrammaticality of reversing object nouns in [8.8], a [-human] direct object pronoun may appear before a full-NP indirect object:

- [8.15] bi ô pé †nó bãàn  
 we PAST give it children  
 S AUX V DO IO  
 ‘we gave it [to] the children’
- [8.16] mi ô túm †mó mwáàn  
 I PAST give them[-HUM] child  
 S AUX V DO IO  
 ‘we sent them (e.g. letters) [to] the child’

On the other hand, [+human] pronouns following the verb are interpreted as indirect objects. Thus the sentence in [8.11] cannot mean ‘I send the children (to) him’. What this means is that the expected IO-DO order can be violated only if the DO is both a pronoun and [-human]. This fact can be attributed to its two properties: (i) As a pronoun, it is short and highly topical (typically old information), and should therefore come earlier. (ii) Its [-human] specification makes it unlikely to be interpreted as an indirect object (recipient, benefactive), hence there is little chance of semantic indeterminacy or ambiguity. In contrast, nouns are less inherently topical than pronouns, and human nouns and pronouns are more semantically suited to be indirect objects. Hence, if two human objects are involved, the order must be IO-DO.

When the locative preposition *kó* is used, the same ordering possibilities are observed as when both arguments are nouns. Because *kó* makes clear that what follows is the IO, there are no humanness effects. The sentences in [8.17-18] pronominalize the DO:

- [8.17] bi ó pé †nó kó (a) bãàn  
 we PAST give it LOC children  
 S AUX V DO Obl-IO  
 ‘we gave it to the children’
- [8.18] mi ô túm mǎ †kó mwáàn  
 I PAST send them[-HUM] LOC child  
 S AUX V DO Obl-IO  
 ‘I sent them (e.g. letters) to the child’
- [8.19] mi ô túm ndé †kó ŋkûm  
 I PAST send him LOC chief  
 S AUX V DO Obl-IO  
 ‘I sent him to the chief’

The sentences in [8.20-21] pronominalize the oblique object:

[8.20] bi ó pé fufú ↓kó ndé  
 we PAST send child LOC her  
 S AUX V DO Obl-IO  
 ‘we gave fufu to her’

[8.21] mi ô túm mwáán ↓kó yâ  
 I PAST send child LOC you  
 S AUX V DO Obl-IO  
 ‘I sent the child to you’

Whichever argument is pronominalized, the *kó* phrase can again occur directly after the verb:

[8.22] bi ó pé kó (a) báán nǎ  
 we PAST give LOC children it  
 S AUX V Obl-IO DO  
 ‘we gave it to the children’  
 (lit. ‘we gave to the children it’)

[8.23] mi ô túm ↓kó (a) múúr byǎn  
 I PAST send LOC person you pl.  
 S AUX V Obl-IO DO  
 ‘I sent you (pl.) to the person’  
 (lit. ‘I sent to the person you (pl.)’)

[8.24] mi ô túm ↓kó yá mwáán  
 I PAST send LOC you child  
 S AUX V Obl-IO DO  
 ‘I sent the child to you’  
 (lit. ‘I sent to you the child’)

### 8.3.3. Both Arguments are Pronouns

When both the direct object and the indirect object are pronouns, the normal order is IO-DO:

[8.25] bi ó pé ndé nǎ  
 we PAST give her it  
 S AUX V IO DO  
 ‘we gave her it’

- [8.26] mi ô túm yă ndé  
 I PAST send you her  
 S AUX V IO DO  
 ‘I sent you her’

However, it is possible for the direct object to precede the indirect object if the direct object is [-human]:

- [8.27] mi ô pé ↓nó ndé  
 I PAST give it him  
 S AUX V DO IO  
 ‘I sent it [to] him’

Otherwise the direct object pronoun must follow the indirect object pronoun:

- [8.28] \*mi ô túm ndé yă  
 I PAST send him you  
 S AUX V DO IO  
*intended:* ‘I sent him [to] you’

With *kó*, the interpretation of two pronominal objects is straightforward:

- [8.29] mi ô túm yă ↓kó ndé  
 I PAST send you LOC him  
 S AUX V DO(pronoun) Obl-IO  
 ‘I sent you to him’

- [8.30] mi ô túm ndé ↓kó yâ  
 I PAST send him LOC you  
 S AUX V DO(pronoun) Obl-IO  
 ‘I sent him to you’

- [8.31] bi ó pé ↓nó kó yâ  
 we PAST give it LOC you  
 S AUX V DO Obl-IO  
 ‘we gave it to you’



- [8.32] bi ó pé <sup>1</sup>kó yá nǎ  
 we PAST send LOC you book  
 S AUX V Obl-IO DO  
 ‘we gave it to you’  
 (lit. ‘we gave to you it’)

#### 8.3.4. No Heavy-NP Shift

The word order constraints seen in the preceding subsections can be summarized as follows:

- (i) When the two objects occur in succession (i.e. without *kó*), the order can always be S-AUX-V-IO-DO. The order S-AUX-V-DO-IO is only possible (optionally) if the DO is a [-human] pronoun, followed either by a lexical IO [8.15-16] or another pronoun [8.27].
- (ii) When the IO is expressed as an oblique with *kó*, it is always possible to get the order S-AUX-V-DO-Obl. As a stylistic variant, the *kó* phrase can occur before the DO, i.e. S-AUX-V-Obl-DO, independent of the pronominal/nominal status or [±human] specification of the objects.

As a result of these orders, a bare IO pronoun can appear alone after a full DO or *kó*-IO phrase. In both the V-IO-DO and V-DO-Obl constructions, Nzadi shows no strong effects of heavy NP shift, i.e. the tendency to reverse the order so that a shorter or less complex phrase precedes a longer one. In the following sentences, all of which are acceptable, the literal meaning of ‘green’ is ‘water of cassava leaf’:

- [8.33] mi ô pé [ilɔŋ oní<sup>1</sup>nán-oní<sup>1</sup>nán na adzá iniir é fufú] kó yá  
 I PAST give bowl big-REDUP DET water cassava.leaf GEN fufu LOC you  
 S AUX V ..... DO ..... Obl  
 ‘I gave the very big green bowl of fufu to you’

- [8.34] mi ô pé <sup>1</sup>yá [ilɔŋ oní<sup>1</sup>nán-oní<sup>1</sup>nán na adzá iniir é fufú]  
 I PAST give you bowl big-REDUP DET water cassava.leaf GEN fufu  
 S AUX V IO ..... DO .....  
 ‘I gave you the very big green bowl of fufu’

- [8.35] mi ô pé fufú [kó múúr pyoo na otál nanga wáár ŋkup kó ótsɔ]  
 I PAST give bowl LOC person dark DET tall who.PRES wear hat LOC head  
 S AUX V DO ..... Obl .....  
 ‘I gave fufu to the tall dark person wearing a hat’

- [8.36] mi ô pé [muur pyoo na otál nanga wáár ŋkup kó ótsɔ] fufú  
 I PAST give person dark DET tall who.PRES wear hat LOC head fufu  
 S AUX V ..... IO ..... DO  
 ‘I gave the tall dark person wearing a hat fufu’

As seen in [8.35] and [8.37] it is quite acceptable to have a very long and syntactically complex noun phrase followed by a short noun phrase, even a bare pronoun (cf. [8.22-23]).

### 8.3.6. Benefactives

The preceding examples involved the verbs *o-pá* ‘to give’ and *o-túm* ‘to send’ which subcategorize for both a DO and a recipient IO ‘to someone’ which can also be marked by the preposition *kó*. Two derived verbs which also subcategorize for a recipient are *o-mwê* ‘to show’ (cf. *o-mân* ‘to see’) and *o-sɔnkil* ‘to write to’ (cf. *o-sɔnka* ‘to write’). These verbs may therefore be identified as inherently ditransitive, thereby allowing an unmarked IO-DO sequence.

As seen in the following examples, simple transitive verbs may also appear in the S-AUX-V-IO-DO construction:

- [8.33] bi ó súm mwàán oŋkáán  
 we PAST buy child book  
 S AUX V IO DO  
 ‘we bought the child a book’

- [8.34] mi â láá báán fufú  
 I PAST cook children book  
 S AUX V IO DO  
 ‘I have cooked the children fufu’

- [8.35] bɔ ó túŋ baar ndzó  
 they PAST build people house  
 S AUX V IO DO  
 ‘they built the people a house’

In this case the corresponding oblique sentences are not constructed with the preposition *kó* ‘to, at’, but rather with the noun *sám* ‘reason’, which takes the genitive linker (GL) /é/ ‘of’ (§5.3.1):

[8.36] bi ó súm oŋkàán sám ↓é mwààn  
 we PAST buy book reason of child  
 S AUX V DO Obl-IO  
 ‘we bought a book for the child’

[8.37] mi â láá fufú sám ↓é bààn  
 I PAST cook book reason of children  
 S AUX V DO Obl-IO  
 ‘I have cooked fufu for the children’

[8.38] bɔ ó túŋ ndzɔ sám ↓é báàr  
 they PAST build house reason of people  
 S AUX V DO Obl-IO  
 ‘they built a house for the people’

Although *sám* also means ‘because of’ and has other functions (see §8.4.4), we classify the benefactive usage as ditransitive since it alternates with S-AUX-V-IO-DO. The following sentences complete the paradigm of [8.35] and [8.38] with pronominalizations:

[8.38] bɔ â túŋ baar ndzɔ ‘they have built the people a house’  
 bɔ â túŋ bɔ̃ ndzɔ ‘they have built them a house’  
 bɔ â túŋ baar nɔ̃ ‘they have built the people it’  
 bɔ â túŋ bɔ̃ nɔ̃ ‘they have built them it’

[8.39] bɔ â túŋ ndzɔ sám ↓é báàr ‘they have built a house for the people’  
 bɔ â túŋ ndzɔ sám ↓é bɔ̃ ‘they have built a house for them’  
 bɔ â túŋ ↓nɔ̃ sám ↓é báàr ‘they have built it for the people’  
 bɔ â túŋ ↓nɔ̃ sám ↓é bɔ̃ ‘they have built it for them’

The forms in [8.39] have the word order DO *sám* ↓é IO. The reverse order of direct and indirect objects – *sám* ↓é IO DO – is also possible, as in *bɔ â túŋ sám ↓é báàr ndzɔ* ‘they have built for the people a house’ etc.

### 8.3.6. External Possession

The last source of a S-AUX-V-IO-DO construction to be considered is what is known as external possession. As an alternative to expressing a possessor with its object, as in [8.40], the possessor may itself be realized as an indirect object, as in [8.41]:

[8.40] ndé ó bwí ékul e mí  
 he PAST break leg of me  
 S AUX V DO  
 ‘he broke my leg’

[8.41] ndé ó (ní)bwí mi ékul  
 he PAST me.break me leg  
 S AUX V IO DO  
 ‘he broke my leg’  
 (lit. ‘he broke me the leg’)

While the construction in [8.41] most typically applies when a body part is involved, this is because the possessor is usually affected by the action, e.g. the person is seriously hurt because of the breaking of his leg. The sentences in [8.42] and [8.43] are also possible, where both possession and the affectedness of the possessor are implied:

[8.42] ndé ó (ní)bwí mi mípfyě  
 he PAST me.break me pot  
 S AUX V IO DO  
 ‘he broke my pot’, *or*  
 ‘he broke the pot on me’  
 (lit. ‘he broke me the pot’)

[8.43] bɔ́ ó (ní)pásul mǐ simísi  
 they PAST me.tear me leg  
 S AUX V IO DO  
 ‘they tore my shirt’, *or*  
 ‘they tore the shirt off me’  
 (lit. ‘they tore me the shirt’)

The second gloss ‘he broke the pot on me’ of [8.42] is intended to express a “malefactive”: ‘he broke the pot; that’s what he did to me.’ In the second gloss in [8.43] the affectedness on the possessor (‘me’) can imply that he was wearing the shirt (or that he was otherwise affected).

### 8.3.7. Object Pronoun Agreement

In all tenses and aspects, and with infinitives, Nzadi exhibits optional object pronoun agreement, as seen with the perfect aspect in the following examples:

	<i>no agreement</i>	<i>with agreement</i>	
[8.44]	bɔ â zwé		‘they will bathe (tr.)’
	bɔ â zwé mwǎàn		‘they will bathe a child’
[8.45]	bɔ â zwé mǐ̀	bɔ â nzwé mǐ̀	‘they will bathe me’
	bɔ â zwé yǎ̀	bɔ ê zwé yǎ̀	‘they will bathe you sg.’
	bɔ â zwé ñdé	bɔ ô zwé ñdé	‘they will bathe him/her’
	bɔ â zwé bǐ	bɔ ê zwé bǐ	‘they will bathe us’
	bɔ â zwé byě̀n	bɔ ê zwé byě̀n	‘they will bathe you pl.’
	bɔ â zwé bǒ	bɔ ê zwé bǒ	‘they will bathe them [+human]’
[8.46]	bɔ â zwé nǒ		‘they will bathe it’
	bɔ â zwé mǒ		‘they will bathe them [-human]’

As seen in the two examples in [8.44], the perfect is marked by /â/ when there is no object or when the object is a noun. (/â/ will thus automatically also occur when the verb is intransitive: *bɔ á bva* ‘they have fallen’.) When there is a (human) object pronoun, as in [8.45], there are instead two interchangeable options: The /â/ of the perfect may be realized as such, or there may be an agreement with the pronoun, as follows:

- (i) If the pronoun is the 1sg. object (‘me’), the agreement takes the form of a homorganic nasal between the tense/aspect marker and the root. Compare: *bɔ â mbúl mǐ̀* ‘they have beaten me’, *bɔ â ntáŋ mǐ̀* ‘they have counted me’. We write this nasal as a prefix on the verb since it is copied when the verb is reduplicated in the future: *bɔ â ndzwíndzwé mǐ̀* ‘they will bathe me’ (cf. *bɔ â dzwídzwé mwǎàn* ‘they will bathe the child’). This nasal is identical to the PB 1sg. object prefix \*N- attested throughout Bantu.
- (ii) Tense and aspect markers change to *o* when the object is the 3sg. human pronoun *ndé* ‘him/her’. Compare: *bɔ ô búl ndé* ‘they have beaten him’, *bɔ ô táŋ ndé* ‘they have counted him’. This *o* derives from the PB 3sg. class 1 (human) object prefix \*mɔ- (cf. the realization of the identical class 1 and 3 \*mɔ- prefixes as *o-* in §4.1).
- (iii) Tense and aspect markers change to *e* with the second person singular *yǎ̀* and all plural object pronouns. Compare: *bɔ ê búl yǎ̀* ‘they have beaten you’, *bɔ ê búl bǐ* ‘they have beaten us’, *bɔ ê táŋ byě̀n* ‘they have counted you pl.’, *bɔ ê táŋ bǒ* ‘they have counted them’. The Proto-Bantu source of this *e* is unclear, although it necessarily represents a merger of the other historical object prefixes.

When the object agreement is present, tones do not change on the tense/aspect marker or verb roots. However, the potential effect on tense/aspect marking is considerable, since these

markers can not only be /a/, but also /e/ or /o/. These also change according to (i)-(iii) above. Thus compare the following:

[8.47]	<i>no agreement</i>	<i>with agreement</i>	
	bɔ ê búl (mwǎàn)		‘they are beating (the child)’
	bɔ ê búl mǐ̀	bɔ ê mbúl mǐ̀	‘they are beating me’
	bɔ ê búl yǎ̀	(no change)	‘they are beating you sg.’
	bɔ ê búl ndé	bɔ ô búl ndé	‘they are beating him’

As seen in the progressive forms in [8.47] and the past tense forms in [8.48], in some cases the only distinguishing feature of tenses with object agreement may be the tone pattern.

[8.48]	<i>no agreement</i>	<i>with agreement</i>	
	bɔ ó búl (mwǎàn)		‘they beat the child’ (PAST)
	bɔ ó búl mǐ̀	bɔ ó mbúl mǐ̀	‘they beat me’
	bɔ ó búl yǎ̀	bɔ é búl yǎ̀	‘they beat you sg.’
	bɔ ó búl ndé	(no change)	‘they beat him’

Object agreement patterns are exemplified in [8.49], with tones given for a monosyllabic L-toned verb (e.g. *o-diir* ‘to watch, visit’). (RED refers to reduplication in the future; §7.2.4)

[8.49]	<i>basic, with L-toned root</i>	<i>1sg</i>	<i>2sg</i>	<i>3sg</i>	<i>1,2,3pl</i>
PRES	<i>a</i> + L	aŋ + L	e + L	o + L	e + L
PERF	<i>â</i> + L	âŋ + L	ê + L	ô + L	ê + L
PROG	<i>é</i> + LH	éŋ + LH	é + LH	ó + LH	é + LH
PAST	<i>ó</i> + HL	óŋ + HL	é + HL	ó + HL	é + HL
FUT	<i>a</i> + RÊD + H	aŋ + RÊD + H	e + RÊD + H	o + RÊD + H	e + RÊD + H
INF	<i>o</i> -L	oŋ + L	e + L	o + L	e + L

Ditransitive constructions also optionally exhibit object agreement with the indirect object:

[8.50]	ndé ó (m) pá mǐ̀ fufú	‘He gave me fufu’
	ndé é pá yǎ̀ fufú	‘He gave you sg. fufu’
	bɔ ó (m) bwí̀ mí lwǒ̀	‘they broke my arm’ (lit. ‘they broke me arm’)

[8.51] shows the full paradigm of the infinitive *o-dzi* ‘to feed’ agreeing with an IO pronoun, as appearing for example after *bɔ à líŋ* ‘they want’ (cf. *bɔ a líŋ o-dzi mwǎàn fufú* ‘they want to feed the child fufu’):



[8.56]	bɔ̃ â mbúl mwǎän	‘they have beaten my son’
	bɔ̃ â ndzá fufú	‘they have eaten my fufu’/the fufu on me’
	bɔ̃ ô dzá (ndé) fufú	‘they have eaten his fufu/the fufu on him’
	mi ê bwá (bó) lwǒ`	‘I have broken their arms’

In the first two sentences the nasal prefix unambiguously establishes that there is a 1sg. referent present, here a possessor expressed as an indirect object (‘they have beaten to me son’). The pronouns in parentheses in the last two sentences leave potential ambiguities behind, but can be deleted in context.

Finally, note that in the imperative, where there is no tense/aspect marker, the agreements occur on their own:

[8.57]	pá mwǎän ikwo	‘give the children a banana!’
	ó mpe mǐ ikwo	‘give me a banana!’
	ó pe ndé ikwo	‘give him a banana!’
	é pe bǐ akwo	‘give us bananas!’
	é pe bǒ akwo	‘give them bananas!’

Two interesting observations can be made on the basis of the forms in [8.57]. First, the verb /pá/ ‘give’ changes to *pé* when the recipient object is a pronoun. This conforms to the general change of the final vowel *-a* to *-e* of the verb in many Bantu languages (although the 1sg. object often takes *-a* instead). As expected, this *-e* does not appear without the agreement: *pá mǐ ikwo* ‘give me a banana!’ The second observation is that there is an extra vowel /ó/ which accompanies the 1sg. *N-* prefix. We suspect that this is all that is left of an earlier 2sg. subject prefix \**o-*.

## 8.4. Adjuncts Within the Main Clause

Most kinds of adverbial adjuncts have relatively free ordering possibilities within Nzadi main clauses. Several types of adverbials are discussed and exemplified in the sections below.

### 8.4.1. Locative Adverbials

Nzadi locative expressions are often transparent extensions of body-part expressions and other real-world objects. [8.58] gives a sample of Nzadi locatives and some of their sources:



[8.58]	duu	‘sky’; also: ‘north, upriver, up, on (top of)’
	ngyě	‘under, south, downriver, below, down’
	ngbee	‘heel’; also ‘beside, side’
	osó	‘face’; also ‘ahead, in front of’
	nduŋ-ŋgbé	‘back’; also: ‘behind’
	ibvuu	‘inside’ (cf. PB *bumo ‘abdomen’)
	ngbee e lwó ibaa	‘east’ (lit. ‘side of the arm of man’)
	ngbee e lwó okaar	‘west’ (lit. side of the arm of woman’)

Locative adverbial phrases are generally headed by the locative marker *kó* (‘to, at’).

[8.59]	kó duu é mês	‘on the table’
	kó ŋgye é mês	‘under the table’
	kó ngbee é mês	‘next to the table’
	kó óso e mês	‘in front of the table’

Prepositional phrases headed by *kó* can serve as complements to stative copula *ye* [8.60], and with other verbs in stative, goal, and source constructions [8.61-63].

[8.60]	mi	é	ye	kó	ńdzo	
	I	E-PRES	be	LOC	house	
	‘I am in the house’					
[8.61]	tukúmu	o	dzé	fufú	kó	ńdzo
	Tukumu	PAST	eat	fufu	LOC	house
	‘Tukumu ate fufu in the house’					
[8.62]	akáár	o	kót	↓kó	ndzo	
	women	PAST	enter	LOC	house	
	‘the woman entered the house’					
[8.63]	muur	o	wám	entín	↓kó	ńtsa búún
	person	PAST	run	speed	LOC	outside Buun
	‘the person ran out of Buun’					

Some verbs taking locative complements do not require *kó*:

[8.64] muur é ke búún  
 person PRES go Buun  
 ‘the person is going to Buun’

muur ê fê búún  
 person PRES come.from Buun  
 ‘the person is coming from Buun’

muur ê lúm búún  
 person PRES come from Buun  
 ‘the person is leaving Buun’

As seen in the above examples, specific verbs may lexically target either a goal (‘to a place’) or source (‘from a place’). In some cases *kó* reorients the verb from source to a goal:

[8.65] ndé ó tín osûr  
 he PAST escape forest  
 ‘he escaped from the forest’

ndé ó tín ↓kó ósûr  
 he PAST escape LOC forest  
 ‘he escaped to the forest’

In other cases a denominal locative adverbial from [8.5.7] is required:

[8.66] mpfũ ↓ó bvé kó óte  
 bird PAST fall LOC tree  
 ‘the bird fell onto the tree’

mpfũ ↓ó bvé kó dú ↓ótê  
 bird PAST fall LOC sky of.tree  
 ‘the bird fell from the tree’

It should be noted that Nzadi does not use serial verbs (e.g. ‘run’ + ‘enter’). Rather, an adverbial marker or coordination of a second clause must be used to indicate the path of a movement (cf. also [8.63]):

[8.67] ndé ó wám entín ko kát iyó tíi ko ndzèè  
 he PAST run speed loc inside market up to LOC river  
 ‘he ran through the market up to the river’

ndé ó wám entín yε (ndé) o kót iyó  
 he PAST run speed and he PAST enter market  
 ‘he ran into the market’ (lit. ‘he ran and (he) entered the market’)

#### 8.4.2. Temporal Adverbials

Temporal adverbials such as *okali* ‘yesterday’ are quite free in their placement in the Nzadi clause. [8.68] shows possible placements. (See also §8.4.4.)

[8.68] (okali) mi (okali) o dzé (okali) fùfú (okali)  
                   I                  PAST eat                  fufu  
 ‘I ate fufu yesterday’

Examples of Nzadi temporal adverbials are given in [8.69]. Some are expressed in single lexical items; others are phrasal.

[8.69] okali                  ‘yesterday’  
 nõwe                  ‘today’  
 oswâ                  ‘tomorrow’  
 sésěp ↓nápe          ‘soon’ (lit. ‘this moment’)  
 ntánj ↓nápe          ‘now’ (lit. ‘this time’)  
 okali napyá          ‘day before yesterday’ (lit. that (far) yesterday’)  
 okampwân          ‘day after tomorrow’

Phrasal temporal adverbials are often introduced with the locative marker *kó*, as in [8.70-71].

[8.70] bàán é yě ↓kó ntánj ↓nápe  
 children PROG come LOC time this  
 ‘the children are coming now’

- [8.71] mi ó dzé fufú ↓kó ntáŋ ↓ómotúk  
 I PAST eat fufu LOC time/hour one  
 ‘I ate fufu for an hour’  
 mi ó kër nǎ ko mbvél isâr  
 I PAST do 3SG[-HUM] LOC year three  
 ‘I did it in three years’

In other cases locative *kó* is not required:

- [8.72] mi ó kër nǎ kó ndzɔ ɔŋkáàn mbvél isâr  
 I PAST do 3SG[-HUM] LOC school year three  
 ‘I did it at school for three years’
- [8.73] bàán a yí-yǎ ↓kó ndzɔ ɔŋkáàn sésěp ↓nápe  
 children FUT RED-come LOC school moment this  
 ‘the children will come to school soon’
- [8.74] mi ó dzé fufú ebim  
 I PAST eat fufu long.time  
 ‘I ate fufu for a long time’

#### 8.4.3. Manner Adverbials

The sentences in [8.75] exemplify several manner adverbials in Nzadi. Note that, as discussed in §5.4, Nzadi does not make strong distinctions between adjectives, adverbs, and nouns.

- [8.75] mi ô dzé fufú ikyê  
 I PAST eat fufu slow(ness)  
 ‘I ate fufu slowly’
- mi ô dzé fufú entîn  
 I PAST eat fufu speed  
 ‘I ate fufu quickly’
- mi ó kër nǎ obé  
 I PAST do it bad  
 ‘I did it badly’
- mi a tóó bviir  
 I PRES sing strong/strength  
 ‘I sing loudly’

Some verbs appear regularly with a manner word, for example ‘run’:

- [8.76] mi ô wám entín  
 I PAST run speed  
 ‘I ran’

#### 8.4.4. Circumstantial/Purposive (*sâm*)

The noun *sâm* ‘reason’ is used to express a number of adjunct and argument-like constituents. Its benefactive function was seen above in §8.3.6. Additional examples are seen in [8.77-78]:

- [8.77] ndé ó wéé mbum sám ↓é máá ndé  
 she PAST collect fruit reason of mother her  
 ‘she picked fruit for her mother’
- [8.78] mi o pê ndzii kó báán ↓sám ↓é yâ  
 I PAST give money LOC children reason of you  
 ‘I gave money to the children for you’

The literal translations of the above sentences are ‘she picked fruit reason of his mother’ and ‘I gave money to the children reason of you’.

The circumstantial or purposive meaning of *sâm* is exemplified in [8.79-81]:

- [8.79] ndé ó kánsa entútu sám ↓é ndzii  
 he PAST collect flowers for of money  
 ‘he collected flowers for money’
- [8.80] mi ô pé ndzii kó múùr sám ↓ónkáán  
 I PAST give money LOC person reason of book  
 ‘I gave the person money for the book’
- [8.81] mwǎàn á lyáà sám ↓é mî  
 child PRES cry reason of I  
 ‘the child is crying because of me’

*sâm* may also be followed by an infinitive verb:

- [8.82] ndé ó káŋsa fufú sám o-dzá  
 she PAST collect cassava reason INF-eat  
 ‘she collected cassava for eating’
- [8.83] mi ô dzél <sup>1</sup>kó nítsa ndzó sám o-tyén ye yâ  
 I PAST wait LOC outside house reason INF-talk with you  
 ‘I waited outside the house to talk to you’
- [8.84] indzée ka bviir bɔ sám otyên  
 Nzadi NEG.be hard NEG reason INF-eat  
 ‘Nzadi is not hard to speak’

For examples showing the use of *sám* with the meanings of ‘why’ and ‘because’, see §9.3.2 and §10.3.4, respectively.

#### 8.4.5. Instrumentals, Manner, and Comitatives (*tí, ye*)

Instrumentals are introduced by the preposition *tí* ‘with’ (see also [8.92-93]):

- [8.85] ndé ó ké ó-paa e ba-mpfùú tí ondúk  
 he PAST go INF-hunt of birds with gun  
 ‘he hunted birds with a gun’
- [8.86] ndé ó wée míbum tí ntáp oté  
 he PAST pick fruit with branch tree  
 ‘he picked fruit with a stick’

The same preposition is used to express comitatives:

- [8.87] ndé ó ké tí mwǎàn  
 she PAST go with child  
 ‘she left with the child’

The preposition *tí* is often interchangeable with the preposition/conjunction *ye* ‘with, and’:

- [8.88] ibaa tí okáár o tûl  
 ibaa ye okáár o tûl  
 man with woman PAST arrive  
 ‘a man and a woman arrived’

Manner can also be expressed by *yε* ‘with’:

- [8.89]    bi   ó     kê     búún   yε     ekul  
           we PAST go     Bundu with     foot  
           ‘we went to Bundu on foot’  
           bi   ó     yé     yε     bwóm  
           we PAST come with     fear  
           ‘we came in fear’

Here again the prepositions *tí* and *yε* are interchangeable:

- [8.90]    bi   ó     kê   búún   tí kamyó / tí velô / tí wäär  
           bi   ó     kê   búún   yε kamyó / yε velô / yε wäär  
           we PAST go Bundu with car with bicycle with boat  
           ‘we went to Bundu by car / by bicycle / by boat’

#### 8.4.6. ‘Instead of’ (*okal* + *GEN*)

The noun *okal* ‘place’ is used to express the meaning ‘instead of’. Since it is preceded by the preposition *kó*, it has the literal meaning ‘at the place of’:

- [8.91]    mi   ô     léé            fufú   kó   ókál   ↓é   yâ  
           I PAST cook.PAST fufu LOC place of you  
           ‘I cooked instead of you’ (lit. ‘in your place’)

#### 8.4.7. Resultatives

In resultative constructions, the resulting state can be expressed in an adjective immediately following the main verb and preceding an instrumental adverbial.

- [8.92]    mi   ô     páŋsa   tsétsé   mês   tí   epúú  
           I PAST wipe clean table with cloth  
           ‘I wiped the table clean with a cloth’  
           [8.93]    mi   ô     káŋ   ebin   é     ńdzɔ   bviir   tí   ósim  
           I PAST tie door GEN house strong with rope  
           ‘I tied the door shut with a rope’

## 8.4.8. Adverbial Placement

As noted above, adverbial placement within the clause is fairly free. The only apparent restriction is that it may not appear between the tense/aspect particle and the verb, as shown with the possible placements of *okali* ‘yesterday’ in [8.94]:

[8.94]	(okali)	mi	(okali)	ó	(*okali)	dzê	(okali)	fufú	(okali)
		I		PAST		eat		fufu	
		‘I ate fufu yesterday’							

Adverbs may also appear between indirect and direct objects:

[8.95]	mi	â	pá	báán	nǒwɛ	fufú
	I	PERF	give	children	today	fufu
	‘I’ve given the children fufu today’					

Longer adverbials appear to have similar freedom of movement. Placement at the beginning or end of the clause may be preferred.

8.5. Negative *bɔ*

As detailed in chapter 7, Nzadi marks negation in two places in the sentence. One marker occurs in the auxiliary which depends on the tense, aspect or mood. A second marker, *bɔ*, occurs postverbally towards the end of the clause. The sections that follow discuss the relatively free placement of *bɔ* within main clauses (§8.5.1) and relative clauses (§8.5.2) and the apparent lack of scopal effects (§8.5.3).

8.5.1. Placement of *bɔ* in Main Clauses

In the simplest sentences with intransitive verbs or transitive verbs with an unexpressed object, *bɔ* occurs after the verb, and is ungrammatical in any other location.

[8.96]	yǎ ka lúŋguk	bɔ	‘you sg. are not thinking’	(PRESENT)
	mǐ ko lyaa	bɔ	‘I didn’t cry’	(PAST)
	bɔ sá taŋsa	bɔ	‘they will not teach’	(FUTURE)

In sentences with a post-verbal object, there is a strong preference for *bɔ* to appear after the object:

[8.97]	bɔ kɛ dzé fufú	bɔ	‘they are not eating fufu’
	mǐ ko taŋsa mwáán	bɔ	‘I didn’t teach the child’



Although strongly dispreferred, *bɔ* is sometimes observed between the verb and the object:

- [8.98]      *bɔ kɛ dzɛ bɔ fufu*                    ‘they are not eating fufu’  
               *mǐ ko taŋsa bɔ mwáàn*                ‘I didn’t teach the child’

In ditransitive constructions, *bɔ*’s distribution is somewhat more limited. Double object sentences (S-V-IO-DO) may have *bɔ* after the direct object or between the indirect object and the direct object, but not before both:

- [8.99]      *mǐ ke pá ya fufu bɔ*  
               I    NEG.PAST give you fufu NEG  
               *mǐ ke pá ya bɔ fufu*  
               I    NEG.PAST give you NEG fufu  
               *\*?mǐ ke pá bɔ ya fufu*  
               I    NEG.PAST give NEG you fufu  
               ‘I didn’t give you fufu’

In indirect object constructions (S-V-DO-Obl), the most preferred ordering has *bɔ* after both objects, as in [8.100]. It is at least marginally acceptable to order *bɔ* before the oblique object, but, as in the double object constructions, *bɔ* is ungrammatical before both objects. Object pronouns and full lexical objects appear to behave similarly in this respect.

- [8.100]      *mǐ ke pá fufu kó yá bɔ*  
               I    NEG.PAST give fufu to you NEG  
               ? *mǐ ke pá fufu bɔ kó yá*  
               I    NEG.PAST give you NEG to you  
               *\*? mǐ ke pá bɔ fufu kó yá*  
               I    NEG.PAST give NEG you to you  
               ‘I didn’t give fufu to you’

*bɔ* may occur either before or after benefactives; the preferred ordering may place *bɔ* before the benefactive, but there appears to be no strong preference either way:

- [8.101]      *okáár ko láá fufu bɔ sám ɛ́ mwáàn*  
               woman NEG.PAST cook fufu NEG reason of child  
               *okáár ko láá fufu sám ɛ́ mwáàn bɔ*  
               woman NEG.PAST cook fufu reason of child NEG  
               ‘the woman didn’t cook fufu for the child’

There also appears to be no strong ordering preference for sentences where the complement is other than an object. In such cases *bɔ* is freely insertable after the verb and after the complement, as in the complex verbal expressions in [8.102] (cf. §6.5), and with goals, as in [8.103]:

- [8.102] ndé ka pɔ tɔ́ bɔ ‘he isn’t sleeping’  
 ndé ka pɔ bɔ tɔ́ (o-pɔ + tɔ́ = ‘to sleep’)  
 bɔ sá sɔk mwáán bɔ ‘they won’t perspire’  
 bɔ sá sɔk bɔ mwáán (o-sɔk + mwáán ‘heat’ = ‘to perspire’)
- [8.103] muur ké <sup>1</sup>ké búún bɔ ‘the person isn’t going to Buun’  
 muur ké <sup>1</sup>ké bɔ búún

Placement of *bɔ* with respect to adverbials is similarly free:

- [8.104] tukúmu ko bva nɔ́we bɔ  
 Tukumu NEG.PAST fall today NEG  
 tukúmu ko bva bɔ nɔ́we  
 Tukumu NEG.PAST fall NEG today  
 ‘Tukumu didn’t fall today’
- [8.105] tukúmu ko pá mwáán fufú kó kát ndzó bɔ  
 Tukumu NEG.PAST give child fufu LOC inside house NEG  
 tukúmu ko pá mwáán fufú bɔ kó kát ndzó  
 Tukumu NEG.PAST give child fufu NEG LOC inside house  
 ‘Tukumu didn’t give the child fufu inside the house’

The table in [8.106] schematizes negative *bɔ* placement possibilities in various main clause structures. *X* can be a non-object complement, or any adjunct, and may co-occur with direct and indirect objects, with *bɔ* placement restricted with regard to objects as in other cases.

[8.106]	<i>Affirmative</i>	<i>Negative</i>		
	S-V	S-V- <i>bɔ</i>	*S- <i>bɔ</i> -V	* <i>bɔ</i> -S-V
	S-V-O	S-V-O- <i>bɔ</i>	?S-V- <i>bɔ</i> -O	
	S-V-IO-DO	S-V-IO-DO- <i>bɔ</i>	S-V-IO- <i>bɔ</i> -DO	*?S-V- <i>bɔ</i> -IO-DO
	S-V-DO-Obl	S-V-DO-Obl- <i>bɔ</i>	?S-V-DO- <i>bɔ</i> -Obl	*?S-V- <i>bɔ</i> -DO-Obl
	S-V-X	S-V-X- <i>bɔ</i>	S-V- <i>bɔ</i> -X	

8.5.2. *bɔ* Placement and Relative Clauses

The placement of *bɔ* with respect to relative clauses is also fairly free. (Relative clauses are treated in detail in §10.2.) *bɔ* can occur before or after the head of the relative clause:

- [8.107]    mǎ ko            mɔn mwàán bɔ        na ó        bvê  
 I    NEG.PAST    see    child    NEG    DET    PAST    fall.PAST  
 mǎ ko            mɔn bɔ        mwàán na ó        bvê  
 I    NEG.PAST    see    NEG    child    DET    PAST    fall.PAST  
 ‘I didn’t see the child who fell’

[8.108] shows that when an adverbial takes scope over the whole sentence (rather than just the relative clause), *bɔ* can also follow the adverbial. (Compare with [8.109], in which *okali* ‘yesterday’ modifies the verb in the relative clause.)

- [8.108]    mǎ ko            pá yǎ bɔ fufú na o        léé        mî        okalí  
 I    NEG.PAST    give you NEG fufu DET PAST        cook.PAST I        yesterday  
 mǎ ko            pá yǎ fufú bɔ na o        léé        mî        okalí  
 I    NEG.PAST    give you fufu NEG DET PAST        cook.PAST I        yesterday  
 mǎ ko            pá yǎ fufú na o        léé        mí        okalí        bɔ  
 I    NEG.PAST    give you fufu DET PAST cook.PAST I        yesterday NEG  
 ‘I didn’t give you the fufu that I cooked yesterday’

- [8.109]    mi sâ            pá bɔ fufú na o        léé mí        okalí        kó yâ  
 I    NEG.FUT    give NEG fufu DET PAST cook I        yesterday LOC you  
 mi sâ            pá fufú bɔ na o        léé mí        okalí        kó yâ  
 I    NEG.FUT    give fufu NEG DET PAST cook I        yesterday LOC you  
 mi sâ            pá fufú na o        léé mí okalí        kó yá bɔ  
 I    NEG.FUT    give fufu DET PAST cook I        yesterday LOC        you NEG  
 ‘I will not give the fufu I made yesterday to you’

However, the polarity of the relative clause is sensitive to *bɔ* placement. If both the main and the relative clauses are negated, *bɔ* can appear after the relative clause only (taking scope over both clauses), or both before and after the relative clause, as in [8.110].

- [8.110]    mĩ ka            lánj mbum bɔ na é ye oyá bɔ  
 I    NEG.PRES like fruit NEG DET PRES be ripe NEG  
 mĩ ka            lánj mbum na é ye oyá bɔ mĩ  
 I    NEG.PRES like fruit DET PRES be ripe NEG I  
 ‘I don’t like fruit that isn’t ripe’

If, however, only the main clause is negated, *bɔ* cannot appear after the relative clause, although it may appear after its head:

- [8.111]    mĩ ka            lánj mbum bɔ na é ye oyá  
 I    NEG.PRES like fruit NEG DET PRES be ripe  
 \* mĩ ka            lánj mbum na é ye oyá bɔ  
 I    NEG.PRES like fruit DET PRES be ripe NEG  
 ‘I don’t like fruit that is ripe’

### 8.5.3. Scope of Negation

Although some of the examples in §8.5.2 show that the placement of *bɔ* and adverbials with respect to relative clauses has an effect on which constituents are negated, in simple clauses *bɔ* can take scope over any of the elements. This is illustrated in [8.112], in which various constituents of the sentence *túkumu ko dzá fufú bɔ* ‘Tukumu didn’t eat the fufu’ are focused; all of the statements that follow are syntactically and pragmatically acceptable.

- |         |                               |                                 |
|---------|-------------------------------|---------------------------------|
| [8.112] | túkumu ko dzá fufú nǒwe bɔ... | Tukumu didn’t eat fufu today... |
|         | ...ndé ó dzé lóso             | ...he ate rice                  |
|         | ...ndé o yéé nǒ               | ...he sold it                   |
|         | ...mi ô dzé nǒ                | ...I ate it                     |
|         | ...ndé ó dzé nǒ okalí         | ...he ate it yesterday          |

## 8.6. Comparatives

As in many Bantu languages, comparative constructions are relatively rare. They are expressed with the verb *o-lek* ‘to surpass’.

- [8.113]    otál            ↓é    ndé    a            lék            otál            ↓é    ndé  
 height    of    him    PRES    surpass    height    of    her  
 ‘he is taller than she is’ (lit. ‘his height surpasses her height’)

Comparative noun phrases are constructed with participial *ngá-lek* ‘surpassing’:

- [8.114]    muur okúúr ηgá-lek                    `the older person`  
              muur okúúr ηgá-lek ηgá-lek        `the oldest person`

As seen in the second example above, a superlative meaning can be expressed by repeating *ηgá-lek*. Two other alternatives involve use of Ci- adjective reduplication, which has an intensifying effect:

- [8.115]    muur okíkúúr ηgá-lek            `the oldest person`  
              muur okíkúúr okíkúúr            `the oldest person`

These forms must be interpreted contextually, since they can also mean simply ‘very X’. Comparative semantics can also be achieved by use of *ye* ‘with’, as in [8.116].

- [8.116]    oηkáán ↓nápe é        ye    okúúr    ye    oηkáán    napyáá  
              book    this    PROG   be   old        with   book    that  
              ‘this book is older than that book’

[8.117] shows an equative clause using *mpîl ómótúk* ‘one manner’ (=‘the same way’).

- [8.117]    oηkáán ↓nápe é        ye    okúúr    mpîl    ómótúk    ye    oηkáán    napyáá  
              book    this    PROG   be   old        manner   one        with   book    that  
              ‘this book is as old as that book’

## CHAPTER 9: COORDINATION AND SUBORDINATION

- 9.1. Introduction
- 9.2 NP coordination
- 9.3 Sentential coordination
- 9.4 Purposive subordination
- 9.5 Complement clauses
- 9.6 Temporal clauses
- 9.7 Conditional and counterfactual clauses

### 9.1. Introduction

Nzadi's main coordinator is *ye* 'and, with', which is used to conjoin full clauses as well as NPs and other phrases. Other coordinators, including temporal clause adverbials, are listed in [9.1] and discussed in sections §9.3 (sentential coordination) and §9.6 (temporal clauses).

[9.1]	<i>tí</i>	'and, with'	
	<i>me</i>	'but' (from French <i>mais</i> )	
	<i>mbal íjkě̀n</i>	'or, maybe, lit. another time'	
	<i>atá</i>	'although, even'	
	<i>kókàl</i>	'instead, in place of'	(cf. <i>okal</i> 'place')
	<i>sâm</i>	'because (of), for'	(cf. <i>sâm</i> 'reason')
	<i>kó nítáj ʰómótúk</i>	'while, at the same time'	(cf. <i>ntáj</i> 'time')
	<i>osó</i>	'before, forward, first'	(cf. <i>osó</i> 'face')
	<i>nduŋ-ŋgbé</i>	'after'	(cf. <i>nduŋ-ŋgbé</i> 'back')

In subordinate clauses, when the subject of the clause is the same as the main clause subject, the infinitive form is used (§9.4.1). With different subjects, the subjunctive is used (§9.4.2). The same is true for temporal clauses (§9.6.2). ‘When’ and ‘after’ clauses also occur as post-verbal subject constructions (also discussed in §9.6.2).

Complement clauses may be introduced with *niggé* ‘that’, although this is generally not obligatory. Conditional and counterfactual clauses are introduced with *ker* ‘if, like’ (§9.7).

## 9.2. NP Coordination

NPs may be coordinated with *ye* ‘and, with’, and with *tí*, also meaning ‘and, with’. These are used interchangeably. There are apparently no ordering restrictions with pronouns and full NPs. For further details and examples, see §5.8.3.

## 9.3. Sentential coordination

### 9.3.1. Coordination with *ye* ‘and, with, to’

Like NPs, clauses can be coordinated with *ye* ‘and, with’. When the subject is the same in both clauses, the subject pronoun is optionally, but not obligatorily, repeated. The auxiliary must occur in both clauses.

- [9.2]    mi        ó        léé    ye        (mi)    ó        dzé        fufú  
           I        PAST    cook    and        I        PAST    eat        fufu  
           ‘I cooked and ate fufu’  
       bɔ        ó        súm    ntswé    (bɔ)    ó        lùm  
           they    PAST    buy    fish    they    PAST    leave  
           ‘they bought fish and left’  
       okáár    o        yé     ye        (ndé)    ó        mpé        mĩ        fufú  
           woman PAST    come    and        she    PAST    me.give    me        fufu  
           ‘the woman came and gave me fufu’

In the following examples the coordinated clause is used to express the path of a motion:

- [9.3]    mi        ó        wám    entín    ye        ó        súún        iyó  
           I        PAST    run     speed    and        PAST    jump        market  
           ‘I ran past the market’  
       ndé    â        wíwám    entin    ye        â        títúl        ndzée  
           he    FUT    run.RED    speed    AND    FUT    reach.red    river  
           ‘he will run up to the river’

A coordinate structure is also required to express a resultative:

- [9.4] mi â pûs ebin é ńdzɔ yɛ nɔ á kɔŋgul  
 I PERF push door of house and it PERF open  
 ‘I have pushed the house door open’  
 (lit. I have pushed the house door and it has opened)

The conjunction *yɛ* may also optionally be deleted:

- [9.5] mi ó yé (yɛ) mi ó kê  
 I PAST come and I PAST go  
 ‘I came and I went’

The tenses of the coordinated clauses need not be identical, as seen in [9.6]:

- [9.6] ndé ó yé yɛ ndé a lyáà  
 he PAST come and he PRES cry  
 ‘he came crying’ (lit. ‘he came and he is crying’)

mwàán ko ya bɔ yɛ ndé a syâŋ  
 child NEG.PAST come NEG and she PRES smile  
 ‘the child did not come smiling’

When both clauses are negated, the auxiliary must also be negated in each clause. However, the negative marker *bɔ* may be omitted after the first clause.

- [9.7] bǐ ko tɔ̀ dzĩm (bɔ) yɛ bǐ ko mén bɔ  
 we NEG.PAST sing song NEG and we NEG.PAST dance NEG  
 ‘we did not sing and we did not dance’

As expected, when only one clause is negated, only that clause takes negative marking:

- [9.8] bi ó tɔ̀ dzĩm yɛ bǐ ko mén bɔ  
 we PAST sing song and we NEG.PAST dance NEG  
 ‘we sang and we did not dance’

Negation works as described above with clauses that have different tenses, as well. In [9.9], negating the first clause negates the entire event. [9.10] negates two separate events.



[9.9] ndé ko yǎ bɔ yɛ ndé a lyáà  
 she NEG.PAST come NEG and she PRES cry  
 ‘he didn’t come crying’

[9.10] ndé ko yǎ (bɔ) yɛ ndé ko kaa lyáá bɔ  
 he NEG.PAST come NEG and he NEG.PAST be cry NEG  
 ‘he didn’t come and he wasn’t crying’

It is also possible to conjoin clauses which require a post-verbal subject, e.g. sequenced relative clauses (§10.2):

[9.11] fufú na o léé bǒ yɛ (na) o dzé bǐ  
 fufu DET PAST cook they and DET PAST eat we  
 ‘the fufu that they cooked and we ate’

If the relative clause is followed by a coordinated main clause, a preverbal subject will occur in the latter:

[9.12] nápe mwáán na o mɔ́n mí yɛ mi ó lúm  
 this child DET PAST see I and I PAST leave  
 ‘this is the child that I saw and then left’

### 9.3.2. Other Sentential Coordinators

This section considers sentential coordinators other than the conjunction *yɛ* seen in the previous examples. The first of these, *mɛ* ‘but’, is a transparent borrowing from French *mais*, and is commonly used in the same contexts as *yɛ*:

[9.13] ndé a tɔ̀d̥ dzǐm, mɛ mi a mên  
 he HAB sing song but I HAB dance  
 ‘he sings but I dance’

[9.14] ndé ó mên mɛ mǐ ko mên bɔ  
 he PAST dance but I NEG.PAST dance NEG  
 ‘he danced but I did not dance’

Sentences can also be coordinated with *mbal íjǵkǵn* ‘maybe, another time’, from *mbal* ‘time’ and *íjǵkǵn* ‘other, another, a certain, some’. The resulting meaning is similar to English ‘or’ and ‘or maybe’:

- [9.15] mi a títóó dzĩm mbal íjčkĕn mi a mĩmĕn  
 I FUT sing.RED song time another I FUT dance.RED  
 ‘I will sing or (maybe) I will dance’

*atá* ‘even, although’ may be used as a sentential coordinator or before an NP. It has the properties of a negative polarity item, hence being used in negative, interrogative, and conditional clauses (see §10.4.1). When coordinating clauses, it means ‘even though’ or ‘although’:

- [9.16] mi a títóó dzĩm atá mi a líj o-mĕn  
 I FUT sing.RED song even I PRES want to dance  
 ‘I will sing although I want to dance’

Another coordinator is formed from the locative preposition *kó* + the noun *okal* ‘place’. Most frequently realized *kókál*, the resulting meaning is ‘in place of’ or ‘instead of’:

- [9.17] kókál o-mĕn mi a tí-tóó dzĩm`  
 LOC.place to dance I FUT sing.RED song  
 ‘instead of dancing, I will sing’
- kókál o-dzá mi sâ dzá bõ  
 LOC.place to eat I NEG.FUT eat NEG  
 ‘instead of eating, I will not eat’

The last coordinator to consider is *sám* ‘because’, derived from the noun *sám* ‘reason’, which has a number of functions. One of these is to coordinate clauses:

- [9.18] ndé ó tóó dzĩm sám mi ó mĕn  
 she PAST sing song reason I PAST dance  
 ‘she sang because I danced’
- ndé ó lĩm sám ya ó búl ndé  
 he PAST leave reason you PAST hit him  
 ‘he left because you hit him’
- mi a lĩm sám mi a zwá aduur  
 I PAST arrive reason 3SG PAST leave  
 ‘I am leaving because I am feeling tired’

There is no Nzadi word for ‘without’. Nzadi speakers often use the French preposition *sans*:

- [9.19] mi ó dzé fufú sans okpá  
 I PAST eat fufu without salt  
 ‘I ate fufu without salt’

To express the same idea in native Nzadi, it is necessary to use a relative clause (lit. fufu which doesn’t have salt):

- [9.20] mi ó dzé fufú na ké ye tí okpá bɔ  
 I PAST eat fufu DET NEG.PRES be with salt NEG  
 ‘I ate fufu without salt’

To express the notion of doing one thing without doing another, two clauses are required:

- [9.21] mwáán o bvé yɛ ndé ko lyaa bɔ  
 I PAST fall and he NEG.PAST cry NEG  
 ‘the child fell without crying’

kěr nɔ̃ yɛ pâ sá ontsêl  
 do it and NEG put noise  
 ‘do it without making noise!’

The literal meanings of the above sentences are ‘the child fell and he didn’t cry’ and ‘do it and don’t make noise!’.

## 9.4. Purposive Subordination

There are two types of purposive subordination: those which are expressed by an infinitive and those which require a subjunctive clause.

### 9.4.1. Infinitive Clauses

Nzadi subordinate clauses occur as infinitives when they have the same subject as the main clause. Such constructions can occur with a variety of predicates in the main clause, as illustrated in [9.22-23]:

[9.22] mi a líŋ o-mên  
 I PRES want to dance  
 ‘I want to dance’

mi a líŋ o-dzá  
 I PRES want to eat  
 ‘I want to eat’

mi a tún o-kε  
 I PRES refuse to go  
 ‘I refuse to go’

[9.23] bɔ ó yé (sám) o-mpá mǐ fufú  
 they PAST come reason to me.give me fufu  
 ‘the came (in order) to give me fufu’

As seen, the noun *sám* ‘reason’ can be used to explicitly indicate that the first action is designed in order to bring about the second. Other examples:

[9.24] bɔ a díír baar sám o-líŋ ésa  
 they HAB visit people reason to get food  
 ‘they visit people in order to get food’

In some cases the *sám* + infinitive construction can have an indefinite subject:

[9.25] indzéé ka bviir bɔ sám o-tyêŋ  
 Nzadi NEG.be hard NEG reason to speak  
 ‘Nzadi is not hard to speak’

There is no negative form of the infinitive in Nzadi. Instead the verbs *o-tún* ‘to refuse’ and *o-saŋ* ‘to refrain’ are used as auxiliaries. Thus, besides the fully affirmative and fully negative sentences in [9.26] are the separately negated infinitive phrases in [9.27].

[9.26] Tukúmu ó mék ó-lil  
 Tukumu PAST try to swim  
 ‘Tukumu tried to swim’

Tukúmu kó mek ó-lil bɔ  
 Tukumu NEG.PAST try to swim NEG  
 ‘Tukumu didn’t try to swim’

- [9.27] Tukúmu ó mék o-tún ó-bva  
 Tukumu PAST try to refuse to fall  
 ‘Tukumu tried not to fall’
- = Tukúmu ó mék ↓ó-saŋ o-bva  
 Tukumu PAST try to refrain to fall  
 ‘Tukumu tried not to fall’

#### 9.4.2. Subjunctive Clauses

In contrast to the clauses in §9.4.1, subordinate clauses with a different subject occur as subjunctives. When the subject is different, it must be lexically specified before the auxiliary:

- [9.28] mi a líŋ (niŋgé) okáár ke mên  
 I PRES want that woman SBJV dance  
 ‘I want the woman to dance’

Further subordinate subjunctives are illustrated below. See Chapter 7 for more information on subjunctive forms, which can occur with the auxiliary *e* or *ke*.

The following sentences illustrate that the subjunctive auxiliary may be *e* or *ke* with apparently no difference in meaning.

- [9.29] mi a líŋ bɔ e kôt  
 I PRES want them SBJV enter  
 = mi a líŋ bɔ ké kôt  
 I PRES want them SBJV enter  
 ‘I want them to enter’

Other desiderative-type verbs also trigger the subjunctive, as illustrated with ‘tell’, ‘allow’, and ‘refuse’ in [9.30].

[9.30] mi a tyén ya ke lúm  
 I PRES say you SBJV leave  
 ‘I tell/order you to leave’

mi a lán ya ke mên  
 I PRES like you SBJV leave  
 ‘I allow/ask you to dance’

mi â tún ya ke kê  
 I PERF refuse you SBJV go  
 ‘I have refused your going’  
 (lit. ‘I have refused that you go’)

Purposive subordinate clauses function the same way within imperative and hortative contexts, as shown with the 3rd person plural hortative in [9.31].

[9.31] é sǎŋ bǒ bɔ e kôt  
 SBJV allow they they SBJV enter  
 = é sǎŋ bǒ bɔ ké kôt  
 SBJV allow they they SBJV enter  
 ‘(you pl.) let them enter’  
 (lit. ‘let them that they enter’)

Subjunctive clauses are negated with the negative form of the hortative (§7.2.6), using *o-saŋ* ‘to refrain from’:

[9.32] bɔ a líŋ mǐ ke kîi lôŋ  
 they PRES want I SBJV be teacher  
 ‘they want me to be a teacher’

bɔ a líŋ mǐ e sǎŋ ʎó-kaa lôŋ  
 they PRES want I SBJV refrain to be teacher  
 ‘they want me not to be a teacher’

## 9.5. Complement Clauses

Complement clauses are optionally, but not obligatorily, introduced with *niŋgé* ‘that’, just as the relative clause markers *na* and *ng-* are optional (§10.2). They include clauses after verbs of perception (§9.5.1), clauses after NPs (§9.5.2), and indirect speech clauses (§9.5.3).

## 9.5.1. Complement Clauses after Verbs of Perception

Verbs of perception such as ‘see’ and ‘hear’ pattern in the same way as internal perception-type verbs such as ‘know’ and ‘think’. In sentences with verbs of perception, the verbs in the complement clauses – which may or may not be conjoined with *niŋgé* ‘that’ – are fully inflected.

- [9.33] mi ó môn (niŋgé) ya ó mên  
 I PAST see that you PAST dance  
 ‘I saw that you danced’  
 mi ó zwá (niŋgé) bɔ́ ó kpê  
 I PAST hear that they PAST die  
 ‘I heard that they died’

Verbs in complement clauses do not have to match the first clause in tense or polarity, as illustrated below. As also seen in the first sentence, the subject of the second clause may appear doubled as the object of the first:

- [9.34] mi é môn yă ya é yě  
 I PAST.you see you you PROG come  
 ‘I saw you coming’  
 mĩ ko môn bɔ́ bàán †é yě  
 I NEG.PAST see NEG children PROG come  
 ‘I didn’t see the children coming’
- [9.35] mĩ ka zyá bɔ́ ya a mímén  
 I NEG.PRES know NEG you FUT dance.RED  
 ‘I doubt that you will dance’  
 (lit. ‘I doubt that you will dance’)

The use of *niŋgé* with ‘to see’ or ‘to hear’ can indicate that the subject saw or heard the information about the event, rather than seeing or hearing the event itself.

- [9.36] mi ó zwá ya ó tódò dzĩm̀  
 I PAST hear you PAST sing song  
 ‘I heard you sing’
- mi ó zwá niŋgé ya ó bvê  
 I PAST hear that 2G PAST fall  
 ‘I heard that you fell’

When complement clauses begin with words other than the subject, the rest of the sentence takes the non-subject relative clause form with post-verbal subject marking:

- [9.37] mĩ ka lánj o-zyá bɔ ɔŋgér Tukúmu ó món ndé  
 I NEG.PRES manage to know NEG thing Tukumu PAST see he  
 ‘I don’t know what Tukumu saw’  
 mĩ ka lánj o-zyá bɔ kan Tukúmu ó túl ndé  
 I NEG.PRES manage INF-know NEG if Tukumu PAST arrive 3SG  
 ‘I don’t know whether Tukumu arrived’

### 9.5.2. Complement Clauses After NPs

Complement clauses can also occur after NPs in contexts such as ‘the lie that X told’. These clauses are also introduced with *niŋgé*.

- [9.38] mi ó zwá baar ó tyên elá niŋgé ndé ó bvê  
 I PAST hear people PAST say lie that he PAST fall  
 ‘I heard people tell the lie that he fell’  
 [9.39] mi ó zwá ɔŋgwá niŋgé ndé ó kpê  
 I PAST hear fact that he PAST die  
 ‘I heard the fact that he died’

### 9.5.3. Direct and Indirect Speech

In both direct and indirect speech, tense and aspect auxiliaries and tones take main-clause form. In direct speech, the words spoken are given as a direct quote, as in [9.40] and [9.41]. [9.40] shows a quoted command.

- [9.40] bɔ ó tyên “yá pe!”  
 they PAST say come here  
 ‘they said, “come here!”’  
 [9.41] bɔ ó tyên “bi e lánj yǎ`”  
 they PAST say we PRES like you  
 ‘they said, “we like you”’

With indirect speech, *niŋgé* is optionally used, as in other sentences above. Nzadi does not have logophoric pronouns or other ways to indicate (non-)coreferentiality among third persons. Thus, as is illustrated in [9.42], when the subject is the same in the indirectly quoted speech, reference is ambiguous:



- [9.42] bɔ<sub>i</sub> ó tyén (niŋgé) bɔ<sub>i,j</sub> e lán yǎ`  
 they PAST say that they PRES like you  
 ‘they<sub>i</sub> said they<sub>i,j</sub> like you’

Quoted commands become subjunctive in indirect speech:

- [9.43] bɔ ó tyén (niŋgé) ya ké yé pɛ  
 they PAST say that you SBJV come here  
 ‘they said for you to come here’

## 9.6. Temporal Clauses

Temporal clauses may take either the form of main clauses with temporal adverbials, or, in the case of certain ‘when’ or ‘after’ clauses, utilize the post-verbal subject construction typical of non-subject relative clauses (§10.2.2-5).

### 9.6.1. Simultaneous Events

Simultaneous events are expressed in two separate main clauses conjoined by *yɛ*:

- [9.44] ndé ó yé yɛ ndé a lyáá  
 he PAST come and he PRES cry  
 ‘he came crying’  
 (lit. ‘he came and he is crying’)

There may also be an explicit indication of simultaneity marked by *kó níŋáŋ ʃmɔ́túk*:

- [9.45] mi ó tɔ̀ dzĩm yɛ mi ó mên kó níŋáŋ ʃmɔ̀túk  
 I PAST sing song and I PAST dance LOC time one  
 ‘I sang and I danced at the same time’

When the clause with *kó níŋáŋ ʃmɔ̀túk* is preposed, *yɛ* is not needed. The temporal clause in [9.46] can be translated with ‘while’.

- [9.46] kó níŋáŋ ʃmɔ̀túk mi ó tɔ̀ dzĩm mi ó mên  
 LOC time one I PAST SING song I PAST dance  
 ‘While I sang I danced’

## 9.6.2. Clauses with ‘before’, ‘after’, and ‘when’

‘Before’ is expressed lexically with *osó* (literally ‘face’, used also to mean ‘forward’, ‘first, ahead’), and ‘after’ with *nduṅ-ṅgbé* (‘back’). These are used along with the *ye* conjunction, and occur at the beginning or end of the clause they modify, as illustrated for *osó* in [9.47].

[9.47] *osó mi ó tṣḍ dzĩm ye mi ó mèn*  
 before I PAST sing song and I PAST dance  
 ‘before I sang, I danced’

*mi ó tṣḍ dzĩm osó ye mi ó mèn*  
 I PAST sing song before and I PAST dance  
 ‘I sang before I danced’

When the subject of the two clauses is not the same, *ye* is omitted and the second clause is in the subjunctive, as with purposive subordination (§9.4). The subjunctive occurs regardless of the “actual” tense of the temporal clause. Examples are given in [9.48] for *osó* ‘before’ and in [9.49] for *nguṅ-ṅgbé* ‘after’.

[9.48] *ndé ó lùm osó mi ke tũl*  
 she PAST leave before I SBJV arrive  
 ‘she left before I arrived’

[9.49] *mi ó tũl nduṅ-ṅgbé ndé ke lùm*  
 I PAST arrive back she SBJV leave  
 ‘I arrived after she left’

‘When’ clauses occur with the post-verbal subject construction (see §10.2). Such clauses occur frequently in narratives describing processes, and can mean ‘when X’ or ‘after X’. These clauses often have perfect aspect, although aspectual variation is possible depending on the aspectual relationship between the two clauses. The extract in [9.50] from the market narrative (Text 2) describes a sequence of events leading up to holding a market. The second sentence repeats the main clause of the first as a temporal clause and uses perfect marking.

[9.50] *sám o-súm iyó baar a fět ↓ó-kê ntét ndzée.*  
 reason to buy market people PRES should to go first river  
 ‘To hold the market, people must first go to the river.’

- [9.51] á ke bɔ ndzée, bɔ á ker kisál kó ndzée.  
 PERF go they river they they do work LOC river  
 ‘When they’ve gone to the river, they’ve worked at the river.’

Later in the same narrative, the people have arrived at the market, as indicated in the temporal clause in [9.52].

- [9.52] á ya bǎ, bɔ a kútan ye baar obyê.  
 PERF come they they PRES meet with people many  
 ‘When they’ve come, they meet with many people.’

Example [9.53] shows the same kind of clause sequencing in the *okúŋ* narrative (Text 3). The second temporal clause (in the third line) appears in habitual form.

- [9.53] sám ↓ó-láá okúŋ ya a fêt ↓ópii fup nǎ kó tsya.  
 reason to cook okuŋ you PRES should first grill it LOC fire  
 ‘In order to cook the okúŋ you should first grill it on the fire.’

á fup nɔ yǎ kó tsya, yǎ a lúm mpwe é nǎ  
 PERF grill it you LOC fire you PRES remove skin of it  
 ‘After you’ve grilled it on the fire, you remove its skin.’

a lúm ↓yâ mpwe é nǎ, ya a kér ibvyê.  
 PRES remove you skin of it you PRES make wrapping  
 ‘When you remove its skin, you make a wrapping.’

Example [9.54], from the *Nzadi history* narrative (Text 1), illustrates a temporal clause in the past tense (‘when they went upriver’):

- [9.54] nápe mpíl akúúr ↓é bǐ a tyén bɔ o fé ŋgyě.  
 this way elders of ours PRES say they PAST come.from south  
 ‘This way our elders say they came from the south.’

bɔ â báán. ó báán bǎ, bɔ â báán e  
 they PERF come.up PAST come.up they they PERF come.up of  
 ‘They went upriver. When they went upriver, they came up to’

ndzée kasài. tíí bɔ á kɛ ko-sí baar  
 river Kasai. and they PERF go LOC. to leave people  
 ‘the Kasai river. And they went to drop off people.’

In the second sentence in [9.55] below, the span of the elders’ ‘living there’ encompasses the topic time (the time relevant for this utterance) of the presence of many mosquitoes. The habitual is expressed as a complex verb in two ‘when’ clauses, both with post-verbal subjects.

[9.55] bĩ ka lánj o-zyá ntét bɔ. me kó mpíl àkúúr a tyén bǔ,  
 we NEG.PRES manage to know first NEG but LOC manner elders PRES say they  
 ‘We don’t yet know. But according to the way the elders say,

bɔ ó kíí a zínj kókát bentsaŋga. ó kíí bǔ a zínj  
 they PAST be PRES live inside islands PAST be they PRES live  
 they lived on islands. When they lived

kukwâ bǔ, ba-mbyé ↓ó káá obyê  
 there they mosquitos PAST be many  
 there, there were many mosquitoes.’

## 9.7. Conditional Clauses

Nzadi allows both realis and irrealis conditional clauses. The morphology is the same for both kinds in both protases and apodoses, and they must be understood in context. Conditional clauses are introduced with *ker* ‘if, like’. Conditional clauses optionally prefix *má-* to verbal *a* (present, perfect) auxiliaries.

### 9.7.1 Realis

Both present and future conditional clauses appear in present tense. Conditional protases in present tense may be followed by apodoses in a variety of tenses, including present [9.56], past [9.57], and future, shown in [9.58] for future affirmative; [9.59] for future negative.

[9.56] ker ndé má káá a dzá fufú ndé á fét o-káá á nɔ máán mípi  
 if she COND be PRES eat fufu she PRES should to be PRES drink wine also  
 ‘if she is eating fufu, then she is (lit. should be) drinking wine also’

[9.57] ker ndé má káá a dzá fufú okáár muur ó léé nǔ  
 if she COND be PRES eat fufu woman person PAST cook it  
 ‘if she is eating fufu, then the woman is the person who cooked it’

[9.58] ker mi â dzá fufú mi a tí-túl otál  
 if I COND eat fufu I FUT become.RED tall  
 ‘if I eat fufu, I will become tall’

[9.59] ker ndé má káá a dzá fufú ndé sâ zwá dyák ndzaa bō  
 if she COND be PRES eat fufu she NEG.FUT feel again hunger NEG  
 ‘if he is eating fufu, then he won’t be hungry anymore’

Past conditionals work the same way as present and other conditionals:

[9.60] ker bàán ʎâ dzá fufú bi ó fén ó-ke  
 if children PERF eat fufu we PAST can to go  
 ‘if the children have eaten the fufu, we can go’

### 9.7.2. Copular Conditionals

Main clause copular constructions were described in §7.5. Like other conditionals, copular conditionals are introduced with *ker* ‘if, like’ and either use the copular construction *é ye* [9.61] or conditional *ma* and *o-kaa* ‘to be’ [9.62].

[9.61] ker Tukúmu é ye lōŋ ...  
 if Tukumu PRES be teacher  
 ‘if Tukumu is a teacher...’

[9.62] ker Tukúmu má kaa lōŋ ...  
 if Tukumu COND be teacher  
 ‘if Tukumu is a teacher...’

[9.63] and [9.64] show their respective negations.

[9.63] ker Tukúmu ké ye lōŋ bō ...  
 if Tukumu NEG.PRES.COP be teacher NEG  
 ‘if Tukumu is not a teacher...’

[9.64] ker Tukúmu má saŋ o-kaa lōŋ ...  
 if Tukumu COND refrain INF-BE teacher  
 ‘if Tukumu is not a teacher...’

9.7.3. *Irrealis*

As noted above, irrealis conditionals/counterfactuals take the same morphology as realis conditionals. The following sentences are in fact ambiguous between realis and irrealis interpretations:

- [9.65]      ker mwàán ↓ó      dzé fufú ndé sa      kaa (ye) ndzáá      bɔ  
 if child PAST eat fufu he NEG.FUT be with hunger NEG  
 ‘if the child ate fufu, he will not be hungry’  
 ‘if the child had eaten fufu, he wouldn’t be hungry’

- [9.66]      ker ndé ó      dzé fufú ndé ô      fén o-tul      bviir  
 if he PAST eat fufu he PAST can to become strong  
 ‘if I ate fufu, I was able to become strong’  
 ‘if I had eaten fufu, I would have been able to become strong’



## CHAPTER 10: INFORMATION STRUCTURE

- 10.1. Introduction
- 10.2. Relative clauses
- 10.3. Interrogatives
- 10.4. Focus and Topic
- 10.5. Other Utterance Types

### 10.1. Introduction

This chapter deals with several different constructions which are used to express questions, assert or contrast elements in a sentence, or set up a constituent as a topic. Where relevant the use of intonation will also be pointed out. We begin with relative clauses, since non-subject relatives have a special structure which also appears in WH questions, clefts, and certain temporal clauses.

### 10.2. Relative Clauses

Relative clauses are remarkable in Nzadi for several reasons:

- (i) They can be marked in several ways, e.g. by the determiner *na*, the WH-element *ŋg* (which fuses with the following tense-aspect marker), both, or neither. Thus corresponding to the main clause sentence *bàán ó kót <sup>1</sup>kó ndzɔ* ‘the children entered the house’ are the following four subject relative possibilities:



- [10.1]      bǎán    na    ŋgo      kót    ↓kó    ńdzɔ  
 children DET WH.PAST enter LOC house  
 = bǎán na o kót ↓kó ńdzɔ  
 = bǎán ŋgo kót ↓kó ńdzɔ  
 = bǎán o kót ↓kó ńdzɔ  
 ‘the children who entered into the house’

- (ii) Negative tenses cannot appear in relative clauses. Instead the verbs *o-tún* ‘to refuse’ and *o-sáŋ* ‘to refrain from’ are used as auxiliaries. The following relative clauses can thus be literally translated as ‘the child who refused to eat his fufu’ and ‘the child who refrained from eating his fufu’:

- [10.2]      mwǎán    na    o      tún      o-dzá    fufú    é      ńdé  
 child    DET    PST    refuse    INF-eat    fufu    GL    his  
 = mwǎán    na    ó      sáŋ      o-dzá    fufú    é      ńdé  
 child    DET    PST    refrain    INF-eat    fufu    GL    his  
 ‘the child who didn’t eat his fufu’

- (iii) Object- and other non-subject relative clauses require that the subject be expressed after the verb, either as the sole expression of the subject or as a pronominal copy. Failure to express the subject after the verb results in an ungrammatical structure, as seen in the last example below:

- [10.3]      fufú    na    o      dzé    múùr  
 fufu    DET    PST    eat    person  
 = fufú    na    muur    o    dzé    ńdé  
 fufu    DET    person    PST    eat    he  
 \*fufú    na    muur    o    dzé  
 fufu    DET    person    PST    eat  
 ‘the fufu that the person ate’

- (iv) Relative clauses condition different tones either on the tense markers, as in [10.4] or on the verb stem itself, as in [10.5]:

- [10.4]      bǎán      ó      kót      ↓kó      ńdzɔ  
 children PAST enter LOC house  
 ‘the children entered into the house’

bàán      o      kót      ↓kó      ńdzo  
 children    PAST    enter    LOC    house  
 ‘the children who entered into the house’

[10.5]    baar      o      wêê      máán  
 people    PAST    choose    wine  
 ‘the people who chose the wine’

máán      ↓ó      wêé      baar  
 children    PAST    choose    people  
 ‘the wine the people chose’

All of these facts are described in the following sections.

### 10.2.1. Subject Relative Clauses

As seen above in [10.1], subject relative clauses are formed by using either the determiner *na*, the WH-element or relativizer *ŋg-*, both, or neither. As in main clauses there is no subject-verb agreement. The same relative markers are used whether the subject of the relative clause is singular, plural, human or non-human:

[10.6]    muur    na    ŋgo    bvê    ‘the person who fell’  
           baar    na    ŋgo    bvê    ‘the people who fell’  
           oŋkáán    na    ŋgo    bvê    ‘the book that fell’  
           eŋkáán    na    ŋgo    bvê    ‘the books that fell’  
                   DET    WH.PAST    fall

Given the double marking, the above structure can be interpreted literally as ‘the X that which fell’. The first is the determiner *na* which is used in other context, e.g. when there is no overt noun head: *na e mí* ‘mine’, *na onân* ‘the big one’ (§5.4). The second marker *ŋg-* is found in WH question words, e.g. *ŋge* ‘which’, *ŋgó* ‘where’. Because *ŋg-* is always followed by one of the vocalic tense-aspect markers /o/, /e/, /a/, with which it fuses, it is not possible to assign an underlying vowel to it:

[10.7]    mwáán    na    ŋga    dzá    fufú  
 child    DET    WH.HAB    eat    house  
 ‘the child who eats fufu’  
 mwáán    na    ŋgâ    dzá    fufú  
 child    DET    WH.PERF    eat    house  
 ‘the child who has eaten fufu’

mwàán na ɲgê dzé fufú  
 child DET WH.PRES eat house  
 ‘the child who is eating fufu’

mwàán na ɲgo dzé fufú  
 child DET WH.PAST eat house  
 ‘the child who ate fufu’

mwàán na ɲga dzîdzá fufú  
 child DET WH.FUT eat.RED house  
 ‘the child who will eat fufu’

Independent of the tense-aspect either the determiner or the WH relativizer can be used:

[10.8] mwàán na a dzá fufú  
 child DET HAB eat house  
 ‘the child who eats fufu’

mwàán ɲgê dzé fufú  
 child WH.PRES eat house  
 ‘the child who is eating fufu’

As was seen in the last examples of [10.1] and [10.4], a subject relative is possible with no overt relativizer in certain tenses. As seen in [10.9], the H of the past tense marker /ó/ usually becomes L, hence keeping main and relative clauses distinct:

[10.9] baar ó dzí mwàán  
 people PAST fed child  
 ‘the people fed the child’

baar o dzí mwàán é ye ba-mbé mĩ  
 people PAST fed child PRES be friends my  
 ‘the people who fed the child are my friends’

When *na* is present there is some variation, with past tense /ó/ sometimes being realized H:

- [10.10] mĩ ko món mwàán bɔ na ó bvê  
 I NEG.PAST see child NEG DET PAST fall  
 ‘I didn’t see the child who fell’

It is likely that the L tone of /o/ comes from the deletion of *na* (or conceivably of *ŋg-*, which could have carried an historical L tone). In other cases *na* and *ŋg-* may be omitted only if clear from the context, as the main and subject relative clauses merge:

- [10.11] bàán na a kòkót ˩kó ńdzɔ  
 children DET FUT enter.RED LOC house  
 ‘the children who will enter into the house’

bàán ˩á kòkót ˩kó ńdzɔ  
 children FUT enter.RED LOC house  
 ‘the children (who) will enter into the house’

Subject relative clauses with *ŋga* ‘WH-HAB’ are used in lieu of nominalizations to express agentive nominals such as in [10.12].

- [10.12] muur na ŋga láà  
 person DET WH.HAB cook  
 ‘a cook’ (lit. ‘a person who cooks’)

muur na ŋga sũm  
 person DET WH.HAB buy  
 ‘buyer’ (lit. ‘a person who buys’)

muur na ŋga yeɛ  
 person DET WH.HAB sell  
 ‘seller’ (lit. ‘a person who sells’)

As was pointed out in §5.7, these are sometimes hard to distinguish from participals: ‘person cooking’, ‘person buying’, ‘person selling’. The same is true of the following expressions of common professions:

[10.13]	muur	na	ɲga	ke	ndzée	‘fisherman’
	person	DET	WH.HAB	go	river	
	muur	na	ɲga	ke	opáá	‘hunter’
	person	DET	WH.HAB	go	hunting	
	muur	na	ɲga	ke	izwɔɲ	‘farmer’
	person	DET	WH.HAB	go	field	
	muur	na	ɲga	pasul	ntsúr	‘butcher’
	person	DET	WH.HAB	cut	meat	
	muur	na	ɲga	ker	mbul	‘blacksmith’
	person	DET	WH.HAB	do	metals	

A fisherman is someone going/who goes to the river, a blacksmith someone doing/who does metals etc.

As seen in [10.12-13] the noun *muur* ‘person’ (pl. *baar*) heads a generic subject relative clause which refers to a person. It is also possible to have a headless subject relative, in which case *na* is required:

[10.14]	na	ɲga	ke	ndzée	
	DET	WH.HAB	go	river	
	‘(the) one who goes to the river’				
	na	ɲga	kòkót	kó	ńdzɔ
	DET	WH.HAB	go	hunting	
	‘(the) one who will enter into the house’				

Negative markers may not appear in relative clauses. Instead, the auxiliary verbs *o-tún* ‘to refuse’ and *o-saɲ* ‘to refrain’ are used to express negation:

[10.15]	okáár	na	ɲga	tún	↓ó-sɔnkil	bǎ
	child	DET	WH.HAB	refuse	to write to	them
	‘the woman who doesn’t write to them’					
	mwaán	na	ɲgo	sáɲ	o-dzá	fufú
	child	DET	WH.PAST	refrain	hunting	fufu
	‘the child who didn’t eat fufu’					

A deaf person is referred to as *muur na nga tún ozwá* ‘a person who doesn’t hear’ (lit. a person who refuses to hear).

## 10.2.2. Object Relative Clauses

While subject relative clauses differ only minimally from main clauses, non-subject relative clauses differ in significant syntactic ways. As the following variants show, object relative clauses use the same (optional) *na* and *ŋg-* as subject relatives:

- [10.16] fufú na ŋgo dzé bǎàn  
 fufu DET WH.PAST eat children  
 = fùfú na o dzé bǎàn  
 = fùfú ŋgo dzé bǎàn  
 = fùfú o dzé bǎàn  
 ‘the fufu that the children ate’

As immediately observed, the subject of the relative clause appears after the verb. If it had only appeared before the verb, the result would have been an ungrammatical structure:

- [10.17] \*fufú (na) bǎàn (ŋg)o dzé  
 fufu DET children WH.PAST eat  
 ‘the fufu that the children ate’

What is possible is for a lexical subject noun to appear before the verb if there is an agreeing subject pronoun occurring afterwards:

- [10.18] fufú na bǎàn ŋgo dzé bǒ  
 fufu DET children WH.PAST eat they  
 = fùfú na bǎàn o dzé bǒ  
 = fùfú bǎàn ŋgo dzé bǒ  
 = fùfú bǎàn o dzé bǒ  
 ‘the fufu that the children ate’

As seen, when preposed to the verb, the subject of the relative clause appears between *na* and *ŋg-*, both of which are again optional. There are thus two possible ways to construct an object relative clause: (i) the subject of the relative clause appears after the verb; (ii) the subject of the relative clause appears before the verb with a pronominal copy appearing afterwards. The generalization is that the subject of the relative clause must be expressed (as a noun or pronoun) after the verb in an object relative clause. As we will see shortly, there are specific restrictions on the two constructions, which also are available in other non-subject relative clauses (§10.2.3). The pronoun copy is, however, not available in subject relatives. [10.19] is thus ungrammatical:

- [10.19] \*bàán na ŋgo bvé bǝ  
 children DET WH.PAST fall they  
 ‘the children who fell’

The sentences in [10.20] show that the recapitulative pronoun agrees in number and [±human] with the preposed subject of the object relative clause:

- [10.20] ibaa na mwàán ŋgo món ndé  
 ibaa na bàán ŋgo món bǝ  
 man DET child(ren) WH.PAST see he/they  
 ‘the man that the child saw’ /  
 ‘the man that the children saw’

- ibaa na mbvá ŋgo té nǝ  
 ibaa na ba-mbvá ŋgo té mǝ  
 man DET dog(s) WH.PAST bite it/they  
 ‘the man that the dog bit’ /  
 ‘the man that the dogs bit’

The same options are possible if the subject of the relative is complex, e.g. consisting of a conjoined nouns or pronouns. First, these may occur after the verb:

- [10.21] ibaa na ŋgo món okáár ye mwàán  
 man DET WH.PAST see woman and child  
 ‘the man that the woman and child saw’

- ibaa na ŋgo món okáár ye yǎ`  
 man DET WH.PAST see woman and you (sg.)  
 ‘the man that the woman and you saw’

- ibaa na ŋgo món yǎ ye mĩ`  
 man DET WH.PAST see you (sg.) and I  
 ‘the man that you and I saw’

When these conjoined noun phrases occur before the verb, the appropriate agreeing pronoun appears after:

- [10.22]    *ibaa na okáár ye mwàán ηgo món bǔ*  
 man DET woman and child WH.PAST see they  
 ‘the man the woman and child saw’
- ibaa na okáár ye yǎ ηgo món byěn*  
 man DET woman and you (sg.) WH.PAST see you (pl.)  
 ‘the man the woman and you saw’
- ibaa na yǎ ye mǐ ηgo món bǐ*  
 man DET you (sg.) and I WH.PAST see we  
 ‘the man that you and I saw’

Again, both *na* and *ηg-* are optional: *ibaa na okáár ye mwàán o món bǔ*, etc.

As mentioned, there are specific restrictions on these constructions. The paradigm in [10.23] shows that all pronouns can appear as subject after the verb:

- [10.23]    *mwàán (na) (ηg)o món mǐ*            ‘the child that I saw’  
           *mwàán (na) (ηg)o món yǎ`*            ‘the child that you (sg.) saw’  
           *mwàán (na) (ηg)o món ndé*            ‘the child that s/he saw’  
           *mwàán (na) (ηg)o món nǔ*            ‘the child that it saw’  
           *mwàán (na) (ηg)o món bǐ*            ‘the child that we saw’  
           *mwàán (na) (ηg)o món byěn*            ‘the child that you (pl.) saw’  
           *mwàán (na) (ηg)o món bǔ*            ‘the child that they [+human] saw’  
           *mwàán (na) (ηg)o món mǔ*            ‘the child that they [-human] saw’

On the other hand, a simple subject pronoun cannot occur before the verb, whether it is repeated after the verb or not. All of the following are ungrammatical:

- [10.24]    \**mwàán (na) mǐ (ηg)o món (mǐ`)*            ‘the child that I saw’  
           \**mwàán (na) ya (ηg)o món (yǎ`)*            ‘the child that you (sg.) saw’  
           \**mwàán (na) ndé (ηg)o món (ndé)*            ‘the child that s/he saw’  
           \**mwàán (na) nǔ (ηg)o món (nǔ)*            ‘the child that it saw’  
           \**mwàán (na) bǐ (ηg)o món (bǐ)*            ‘the child that we saw’  
           \**mwàán (na) byen (ηg)o món (byěn)*            ‘the child that you (pl.) saw’  
           \**mwàán (na) bǔ (ηg)o món (bǔ)*            ‘the child that they [+human] saw’  
           \**mwàán (na) mǔ (ηg)o món (mǔ)*            ‘the child that they [-human] saw’

As can be seen from [10.22], it is not that subject pronouns cannot occur preverbally, but rather that they cannot appear on their own: what precedes the verb must provide more information than a simple pronoun would. In other words, the preverbal subject cannot simply



be recapitulative. However it is possible for the pronoun to occur with pause and the H% final intonation (§3.4):

- [10.25]    muur    na    bǎ,    á    sɔnkil    bǎ  
               person    DET    they    HAB    write to    they  
               ‘the person that they, they write to’

What this suggests is that the “real” subject is the one after the verb, with the preverbal noun phrase functioning more like a topic. In support of this, note in the following sentences that the postverbal subject cannot consist solely of a floated modifier:

- [10.26]    fufú    na    o        dzé    baar    obyê  
               man    DET    PAST    eat    people    many  
   = fufú    na    baar    obyé    o        dzé    bǎ  
               man    DET    people    many    PAST    eat    they  
   = fufú    na    baar    o        dzé    bǎ    obyê  
               man    DET    people    PAST    eat    they    many  
               \*fufú    na    baar    o        dzé    obyé  
               man    DET    people    PAST    eat    many  
               ‘the fufu that many people ate’

The third example above may be acceptable because of the ambiguity of *obyé*, which may modify the amount of fufu. The following sentences show that modifiers generally cannot float, even if co-occurring with a postverbal pronoun:

- [10.27]    fufú    na    o        dzé    baar    bɔ-áŋkũm  
               man    DET    PAST    eat    people    they all  
   = fufú    na    baar    bɔ-áŋkũm    o        dzé    bǎ  
               man    DET    people    they all        PAST    eat    they  
               \*fufú    na    baar    o        dzé    (bǎ)    bɔ-áŋkũm  
               man    DET    people    PAST    eat    they    they all  
               ‘the fufu that all the people ate’

- fufú    na    o        dzé    baar    bápe  
               fufu    DET    PAST    eat    people    these  
   = fufú    na    baar    bápe    o        dzé    bǎ  
               fufu    DET    people    these    PAST    eat    they  
               \*fufú    na    baar    o        dzé    (bǎ)    bápe  
               fufu    DET    people    PAST    eat    they    these  
               ‘the fufu that these people ate’

Finally, note that in modifying pronouns there is a preference for a noun to accompany them in preverbal position:

- [10.28] fufú na o dzé byen ípe  
 fufu DET PAST eat you pl. two  
 = ?fufú na byen ípe o dzé byën  
 fufu DET you pl. two PAST eat you pl.  
 ‘the fufu that you two ate’
- fufú na byen báár ípe o dzé byën  
 fufu DET you pl. people two PAST eat you pl.  
 ‘the fufu that you two people ate’

Since the same pre- vs. post-verbal subject marking is found in other non-subject relative clauses, we shall postpone until §10.2.4 a general discussion of the two constructions.

### 10.2.3. Ditransitive Object Relative Clauses

The same possible subject variations are possible when relativizing on either object of a ditransitive construction:

- [10.29] fufú na o pé okáár bǎàn  
 fufu DET PAST give woman children  
 = fufú na okáár o pé ndé bǎàn  
 fufu DET woman PAST give she children  
 \*fufú na okáár o pé bǎàn  
 fufu DET woman PAST give children  
 ‘the fufu that the woman gave the children’

- [10.30] bǎàn na o pé okáár fufú  
 children DET PAST give woman fufu  
 = bǎàn na okáár o pé ndé fufú  
 children DET woman PAST give she fufu  
 \*bǎàn na okáár o pé fufú  
 children DET woman PAST give fufu  
 ‘the children that the woman gave fufu’

As before, the last sentence of [10.29] and [10.30] is ungrammatical, as the subject is not expressed after the verb. Again, when the subject is a pronoun, it cannot occur before the verb:

- [10.31] fufú na o pé ndé bǎàn  
 fufu DET PAST give she children  
 \*fufú na ndé o pé (ndé) bǎàn  
 fufu DET she PAST give she children  
 ‘the fufu that she gave the children’

- [10.32] bǎàn na o pé ndé fufú  
 children DET PAST give she fufu  
 \*bǎàn na ndé o pé (ndé) fufú  
 children DET she PAST give she fufu  
 ‘the children that she gave fufu’

The sentences in [10.33] shows that both the subject and the (indirect) object can be pronominalized:

- [10.33] fufú na o pé ndé bǎ  
 fufu DET PAST give she them  
 ‘the fufu that she gave them’

bǎàn na o pé ndé nǎ  
 children DET PAST give she it  
 ‘the children that she gave it’

However, a rather mysterious, but robust restriction is that a post-verbal lexical subject may not be followed by an object pronoun:

- [10.34] \*fufú na o pé okáár bǎ  
 fufu DET PAST give woman them  
 ‘the fufu that the woman gave them’

\*bǎàn na o pé okáár nǎ  
 children DET PAST give woman it  
 ‘the children that the woman gave it’

This is true whether there is object pronoun agreement or not (cf. \*fufú na e pé okáár bǎ). Instead, one must either use the alternative oblique construction with /kó/ ‘to’ (§10.2.4), or place the lexical subject before the verb:

[10.35] fufú na okáár o pé ndé bǎ  
 fufu DET woman PAST give she them  
 ‘the fufu that the woman gave them’

bàán na okáár o pé ndé nǎ  
 children DET woman PAST give she it  
 ‘the children that the woman gave it’

The same restriction arises in oblique relatives in the next section. However, before turning to these, consider the sentences in [10.36] which again show that *o-tún* ‘to refuse’ or *o-saŋ* ‘to refrain’ are used to express negation within a relative clause:

[10.36] dzím na ŋga tún yǎ ʔó-laŋ  
 song DET WH-HAB refuse you to like  
 ‘the song that you do not like’

baar lón a tún ndé ó-sonkil  
 people teacher HAB refuse she to write to  
 ‘the people that the teacher doesn’t write to’

[10.37] mi ó pé ndól bàán na o tún o-dzá fufú é bǎ  
 I PAST give punishment children DET PST refuse INF-eat fufu GL their  
 = mi ó pé ndól bàán na ó sáŋ o-dzá fufú é bǎ  
 I PAST give punishment children DET PST refrain INF-eat fufu GL their  
 ‘I punished the children who did not eat their fufu’

These sentences also show that the post-verbal subject normally goes after the first verb or auxiliary (but cf. §10.2.5)

#### 10.2.4. Oblique Relative Clauses

In this section we consider the structures which relativize from within an oblique, which we will use as the cover term for a non-subject, non-object phrase. Examples will include preposition phrases, temporals, and genitives. There is no preposition stranding in Nzadi. Instead, the preposition precedes the relativized noun:

- [10.38] ko múúr okáár o pé ndé fufú  
 to person woman PAST give she fufu  
 ‘the person that the woman gave fufu’
- tí mbyě (na) (ŋg)ó piŋ mî ntsúr  
 with knife DET WH.PAST cut me meat  
 ‘the knife that I cut meat with’

Given the inseparability of the noun from the preceding preposition, the above can also be glosses ‘to the person that the child gave fufu’ and ‘with the knife that I cut the meat with’. On the other hand, the preposition is often not overtly expressed:

- [10.39] mbyě na ó piŋ ndé ntsúr  
 knife DET PAST CUT she meat  
 ‘the knife that she cut meat (with)’
- ntãŋ na ó pɔ mí tðð  
 bed DET PAST sleep I sleep  
 ‘the bed that I slept (in)’

It is particularly with temporals that a preposition is not required:

- [10.40] esúú na o dzé mwàán fufú  
 day DET PAST eat child fufu  
 = esúú na mwàán ò dzé ndé fufú  
 day DET child PAST eat he fufu  
 ‘the day that the child ate fufu’

Once again, pronouns are possible after the verb in all combinations except for lexical noun subject + pronominal object. The last clause below is thus ungrammatical:

[10.41] esúú na o dzé ndé fufú  
 day DET PAST eat he fufu  
 ‘the day that he ate fufu’

esúú na o dzé ndé nǒ  
 day DET PAST eat he it  
 ‘the day that he ate it’

\*esúú na o dzé mwàán nǒ  
 day DET PAST eat child it  
 ‘the day that the child ate it’

With a ditransitive verb the subject and both objects may appear in sequence after the verb:

[10.42] esúú na o pé okáár mwàán fùfú  
 day DET PAST give woman child fufu  
 = esúú na okáár o pé ndé mwàán fùfú  
 day DET woman PAST give she child fufu  
 ‘the day the woman gave the child fufu’

Consider the following possibilities where the recipient is *mǐ* ‘me’:

[10.43] esúú na o mpé okáár mǐ fùfú  
 day DET PAST me.give child fufu  
 ‘the day the woman gave me fufu’

esúú na o mpé ndé mǐ fùfú  
 day DET PAST me.give she me fufu  
 ‘the day that she gave me fufu’

esúú na o mpé ndé mǐ nǒ  
 day DET PAST me.give she me fufu  
 ‘the day that she gave me it’

\*esúú na o mpé okáár mǐ nǒ  
 day DET PAST me.give woman me fufu  
 ‘the day the woman gave me it’

Once again the last example shows that a pronominal object cannot follow a post-verbal lexical noun subject. The above examples also show that object pronoun agreement, e.g. first

singular *N-*, is not blocked by the presence of an intervening post-verbal subject, in this case first person singular *N-*.

When a genitive is relativized the result is a resumptive possessive pronoun within the relative clause:

[10.44]    bàán    na    muur    bʋĩm    o    yíb    ńdé    fufú    ↓é    bǒ  
 children    DET    person    theft    past    steal    he    fufu    of    them  
 ‘the children whose fufu the thief stole’

ibaa    na    o    món    mí    izí    ndé    okáár  
 man    DET    PAST    see    I    sibling    his    female  
 ‘the man whose (older) sister I saw’

The structure of the above sentences can be alternatively glossed as ‘the children that the thief stole their fufu’ and ‘the man that I saw his older sister’.

#### *10.2.5. Summary and further properties of non-subject relative clauses*

To summarize the preceding, we have seen that non-subject relative clauses require the overt expression of the subject after the verb, either as a full noun phrase or as a pronoun, which sometimes recapitulates the preverbal subject. As seen in the following sentences, an object may not intervene between the verb and the subject:

[10.45]    esúú    na    o    súm    akáár    akwɔ  
 day    DET    PAST    buy    women    bananas  
 \*esúú    na    o    súm    akwɔ    akáár  
 day    DET    PAST    buy    bananas    women  
 ‘the day that the women bought bananas’

However, certain adverbials such as *nǔwɛ* ‘today’ can intervene if the subject is a noun, but not if it is a pronoun:

- [10.46] fufú na o dzé Tukúmu nǒwe  
 day DET PAST eat Tukumu today  
 = fufú na o dzé nǒwe Tukúmu  
 day DET PAST eat today Tukumu  
 ‘the fufu that Tukumu ate today’
- fufú na o dzé ńdé nǒwe  
 day DET PAST eat Tukumu today  
 \*fufú na o dzé nǒwe ndé  
 day DET PAST eat today Tukumu  
 ‘the fufu that he ate today’

Another property of the post-verbal subject is that it normally appears after the first verb or auxiliary of the non-subject relative clause. We have already seen this in the case of the negative auxiliary verbs *o-tún* and *o-saŋ*. Further examples are the following:

- [10.47] fufú na a líŋ ↓mí o-dzá  
 fufu DET PRES want I to eat  
 ‘the fufu that I am about to eat’
- fufú na oŋkáj ↓mí o-dzá  
 day DET IMM.PAST I to eat  
 ‘the fufu that I have just eaten’
- fufú na á kal mi ó-láp o-súm  
 fufu DET PERF return I to continue to buy  
 ‘the fufu that I bought again’

However, the subject may optionally occur after certain lexical verb + infinitive sequences:



- [10.48] akwɔ na ó yé bǝ o-mpá mĩ̀  
 bananas DET PAST come they to me.give me  
 = akwɔ na ó yé o-mpá bǝ mĩ̀  
 bananas DET PAST come to me.give they me  
 ‘the bananas that they came to give me’
- mbyě na ó wεε ndé o-piŋ ntsúr  
 knife DET PAST take he to cut meat  
 = \*mbyě na ó wεε o-piŋ ndé ntsúr  
 knife DET PAST take to cut he meat  
 ‘the knife that he took to cut the meat’

The same post-verbal subject requirement is in force whether the relative clause is restrictive, non-restrictive or appositional, for example with a proper noun or pronoun head:

- [10.49] bí baar Tukumu ó wεε ndé bi a kíkēr kisál tí ndé  
 we people Tukumu past choose he we FUT do.RED work with him  
 ‘we, (the ones) who Tukumu chose, will work with him’
- Tukumu (na) (ŋg)o món bǝ a máŋ kó ńdzo  
 Tukumu DET WH.PAST see they PRES be LOC house  
 ‘Tukumu, whom we saw, is in the house’

In addition, the subject must appear after each relative clause in sequence:

- [10.50] fufú na o láá mí na o dzé yâ  
 fufu DET past cook I DET PAST eat you  
 ‘the fufu that I cooked that you ate’

If a complement clause is embedded within a relative clause, the post-verbal subject is required only after the first verb:

- [10.51] ŋkóp na o tyén yá (niŋge) o pé Tukúmu  
 cup DET PAST say you that PAST give Tukumu  
 ‘the cup that you said that you gave Tukumu’

However, in the following structure which exploits two relative clauses in sequence, a post-verbal subject occurs in both:

- [10.52] ηκόπ na o tyén yá na o pé yá Tukúmu  
 cup DET PAST say you DET PAST give you Tukumu  
 ‘the cup that you said that you gave Tukumu’

Despite the second clause seeming to be relativized on *ηκόπ*, [10.51] and [10.52] appear to be synonymous.

This brings us to the question of whether there is any semantic or pragmatic difference between the two types of non-subject relative clauses exemplified in [10.53]:

- [10.53] fufú na o súm akáár  
 fufu DET PAST buy women  
 = fufú na akáár o súm bǝ  
 fufu DET women PAST buy they  
 ‘the fufu that the women bought’

The most likely place to look would be for a difference in information structure: Perhaps ‘the women’ are presupposed or given in one structure, but asserted or new in the other. However, this does not appear to be the case. First, note that one can substitute *akáár* <sup>4</sup>*kún* ‘the women in question, the aforementioned women’ in either example of [10.53] without any problem. In addition, the following sentences show that all four combinations of both structures can combine when ‘the women’ is contrasted:

- [10.54] wèé fufú na o súm akáár, sáj owε fufú na o súm ábaa  
 = wèé fufú na akáár o súm bǝ, sáj owε fufú na abaa òsúm bǝ  
 = wèé fufú na o súm akáár, sáj owε fufú na abaa òsúm bǝ  
 = wèé fufú na akáár o súm bǝ, sáj owε fufú na ò súm ábaa  
 ‘take the fufu that the WOMEN bought, not the fufu that the MEN bought!’

Finally, although the postposed subject is sometimes “felt” to be like a passive, as glossed below, there is no known difference between the following structures:

- [10.55] fufú na muur o dzé ídé  
 fufu DET person PAST eat he  
 ‘the fufu that the person ate’  
  
 fufú na o dzé múùr  
 fufu DET PAST eat person  
 ‘the fufu that the person ate’  
 ‘the fufu that was eaten by the person’

It thus appears that the difference is more grammatical than semantic or pragmatic.

The last issue concerns an important tonal difference which distinguishes non-subject relative clauses from both main clauses and subject relative clauses. It will have been seen in some of the examples that a potential ambiguity may arise:

- [10.56]    *ibaa na ŋgo món okáàr*  
           man DET WH.PAST SEE woman  
           ‘the man who saw the woman’ *or*  
           ‘the man that the woman saw’

As seen, [10.56] could either be a subject relative, with *okáàr* being the object of *o-môn* ‘to see’, or it could be an object relative with *okáàr* being the postposed subject of *o-môn*. However, with the right post-verbal noun or pronoun, the two can be disambiguated:

- [10.57]    *ibaa na ŋgo món mĩ*  
           man DET WH.PAST see me  
           ‘the man who saw me’
- ibaa na ŋgo món mî*  
           man DET WH.PAST see me  
           ‘the man whom I saw’
- [10.58]    *ibaa na ŋgo món muur*  
           man DET WH.PAST see person  
           ‘the man who saw the person’ *or*  
           ‘the man who the person saw’
- ibaa na ŋgo món múùr*  
           man DET WH.PAST see person  
           ‘the man who the person saw’

In [10.57] the first person singular pronoun *mĩ* keeps its underlying LHL tones as object, but undergoes a change to HL as subject. In [10.58], when *muur* ‘person’ is pronounced with its underlying L, the result is ambiguity. When it is pronounced HL, it is unambiguously subject of the relative clause. Similar differences are seen in [10.59] and [10.60] with the L tone verb /o-wɛɛ/ ‘to choose’:

[10.59]   ibaa na   ŋgo      wéé   mĩ̀  
 man  DET  WH.PAST  choose  me  
 ‘the man who chose me’

ibaa na   ŋgo      wée   mî  
 man  DET  WH.PAST  choose  me  
 ‘the man whom I chose’

[10.60]   ibaa na   ŋgo      wéé   muur  
 man  DET  WH.PAST  choose  person  
 ‘the man who chose the person’

ibaa na   ŋgó      wèé   muur  
 man  DET  WH.PAST  choose  person  
 ‘the man who the person chose’

ibaa na   ŋgó      wée   múùr  
 man  DET  WH.PAST  choose  person  
 ‘the man who the person chose’

In [10.59] there is a corresponding tonal difference to [10.57], again marking the difference between a subject vs. object relative clause. A slightly different situation obtains in [10.60], where *muur* keeps its underlying L in the first two examples, but changes to HL in the third. Before offering the analysis, consider also the forms in [10.61].

[10.61]	<i>/món/</i> ‘see’	<i>/wée/</i> ‘choose’	
	baar ó môn máán	baar ó wéè máán	‘the people saw/chose the wine’
	baar o môn máán	baar o wéè máán	‘the people who saw/chose the wine’
	máán o món bààr	máán ↓ó wéé bààr	‘the wine that the people saw/chose’
	máán o món báàr	máán ↓ó wée báàr	
	<i>/món + ‘ + bààr/</i>	<i>/wée + ‘ + bààr/</i>	

As seen, in the past tense both the H and L verbs have HL tone in main clauses and subject relative clauses. However, in the non-subject (here: object) relative clause, they have H and LH tone, respectively:

[10.62]	<i>underlying verb tone</i>	<i>main clause</i>	<i>non-subject relative</i>
	/H/ <i>/món/</i> ‘see’	HL   [môn]	H   [món]
	/L/ <i>/wée/</i> ‘choose’	HL   [wéè]	LH [wéé]

The analysis is presented in the last line in [10.61] where we see that in non-subject relative clauses there is a floating H tone between the H or L verb and what follows. The realization of this H is similar to the tonology of the genitive linker /é/ (§5.3.1), except that it only obligatorily affects pronouns, which have only three tone patterns: (i) /LHL/ pronouns become HL; (ii) the /L-H/ pronoun *ndé* becomes H-H; (iii) the remaining /LH/ pronouns do not change:

[10.63]	/LHL/	:	baar na o mǒn mî	‘the people that I saw’
			baar na o mǒn yâ	‘the people that you (sg.) saw’
	/L-H/	:	baar na o mǒn ídé	‘the people that he/she saw’
	/LH/	:	baar na o mǒn nǒ	‘the people that it saw’
			baar na o mǒn bí	‘the people that we saw’
			baar na o mǒn byǎn	‘the people that you (pl.) saw’
			baar na o mǒn bǒ	‘the people that they [+human] saw’
			baar na o mǒn mǒ	‘the people that they [-human] saw’

Similar changes are observed in other tenses:

[10.64]	fufú na â sǔm mî	‘the fufu that I have bought’	(perfect)
	fufú na ê sǔm mî	‘the fufu that I am buying’	(progressive)
	fufú na o sǔm mî	‘the fufu that I bought’	(past)
	fufú na a sísúm mî	‘the fufu that I will buy’	(future)

As opposed to pronouns, the floating H only optionally goes onto monosyllabic L tone nouns such as *muur*. This accounts for the difference between the second and third examples in [10.60]. While a L-L or L-LH noun will change to H-L and H-LH, longer L-initial nouns generally resist the H:

[10.65]	ndzǒ	na	ó	diir	íbaa
	house	DET	PAST	watch	person
	‘the house that the person watched’				
	(o- <i>diir</i> ‘to watch’, <i>ibaa</i> ‘person’)				
	ndzǒ	na	ó	diir	ídzàám
	house	DET	PAST	watch	God
	‘the house that God watched’				
	(ndzàám ‘God’)				

ndzó na ó ðiír sukamûnt  
 house DET PAST watch gorilla  
 ‘the house that the gorilla watched’  
 (*sukamûnt* ‘gorilla’)

The potential tonal difference between main/subject relative clauses and non-subject relative clauses can be kept in mind as related constructions are discussed in the following sections.

### 10.3. Interrogatives

Yes-no questions have no particular morphology, e.g. no final interrogative particles, nor is there any syntactic difference between statements and yes-no questions. In forming a yes-no question the pitch of the whole utterance is raised (cf. §3.4). Relative H, L and downstep <sup>↓</sup>H tones are thus preserved. This raising of pitch is indicated by (↑):

[10.66] ↑ya ó ké iyó  
 you PAST go market  
 ‘did you go to the market?’

εε, mi ó ké iyó  
 yes I PAST go market  
 ‘yes, I went to the market’

[10.67] ↑mwáán ↓ê dzé fufú  
 child PROG eat fufu  
 ‘is the child eating fufu?’

bɔ, ndé ê dzé ↓lɔsɔ  
 no he PROG eat rice  
 ‘no, he is eating rice’

While the above raising of the pitch of the utterance is the native process for asking yes-no questions, the latter may also start with the loanword *eske* (from French *est-ce que* ‘is it that?’):

[10.68] *eske* muur ó ké iyó  
 man PAST go market  
 ‘did the man go to the market?’

*εε*, ndé ó ké iyó  
 yes he PAST go market  
 ‘yes, he went to the market’

The answers to such questions need not include all of the information in the question. Thus, the last question could also have been answered, *εε* ‘yes’ or *εε, ndé ó ké* ‘yes, he went’.

One thing that has been noted is a perhaps greater tendency to separate the subject from the predicate and assign a H% boundary tone to it in a yes-no question:

[10.69] <sup>↑</sup>*Tukúmú* ó súm mantete  
 Tukumu PAST buy squash  
 ‘did Tukumu buy squash?’

*eske* Tukúmu ó súm mantete  
 Tukumu PAST buy squash  
 ‘did Tukumu buy squash?’

As seen above, the H% is less likely present when *eske* is used to form the question.

While yes-no questions are quite straightforward, as just outlined, WH questions may vary in a number of ways, especially in whether the WH question word remains in situ or whether it is fronted to the beginning of the utterance. The following subsections treat subject-, object- and oblique WH-questions in turn.

### 10.3.1. Subject WH Questions

Subject WH questions are relative straightforward formed with a WH word or expression occupying the subject position:

[10.70] ne ó bwá mpfyě  
 who PAST break pot  
 ‘who broke the pot?’

ngé ó té mwǎàn  
 what PAST bite child  
 ‘what bit the child?’

Although the human WH word *ně* ‘who(m)’ and its plural *ba-ně* may appear alone, *ně* often co-occurs with the noun *muur* ‘person’, pl. *baar* ‘persons, people’:

- [10.71]      *nε*            *ó*            *bvê*  
                   who            PAST        fall  
 = *ně*            *muur*        *ó*            *bvê*  
                   who            person      PAST        fall  
                   ‘who fell?’
- ba-nε*        *ó*            *bvê*  
                   who (pl.)    PAST        fall  
 = *ně*            *baar*        *ó*            *bvê*  
                   who            persons     PAST        fall  
                   ‘who (pl.) fell?’

Similarly, the corresponding non-human WH word *ηge* ‘what, which’, plural *ba-ηge*, is usually reinforced by *oηgér* ‘thing’, plural *eηgér*:

- [10.72]      *ηgé*            *ó*            *bvê*  
                   what            PAST        fall  
 = *oηgér*        <sup>↓</sup>*ηgé*        *ó*            *bvê*  
                   thing          what        PAST        fall  
                   ‘what fell?’
- ba-ηgé*        *ó*            *bvê*  
                   what (pl.)    PAST        fall  
 = *eηgér*        <sup>↓</sup>*ηgé*        *ó*            *bvê*  
                   things        what        PAST        fall  
                   ‘what (pl.) fell?’

The longer forms literally mean ‘which thing(s)’, as can be seen in the following comparisons:

- [10.73]      *oté*    *ηgé*        *ó*            *bvê*  
                   tree    which      PAST        fall  
                   ‘which tree fell?’
- eté*    *ηgé*        *ó*            *bvê*  
                   trees    which      PAST        fall  
                   ‘which trees fell?’



The WH word *ŋge*, which can be used to mean ‘what’ or ‘which’, carries L tone before pause, but H tone if followed by another word. As discussed in §5.5.3, Nzadi has a number of forms for ‘which’. There it was seen that *ne* may also be used with human nouns: *muur ne* ‘which person?’, *muur ne ó bvê* ‘which person fell?’. The reverse order seen in [10.71] is likely an historically reduced cleft: *ně muur ó bvê* ‘who (is the person that) fell?’. This would also explain the change from L to LH tone on *ně* (from *ne é ye muur* ‘who is the person?’).

Finally, the HL realization of *bvê* ‘fall’ in [10.71-73] shows that subject WH clauses take the same tone pattern as main and subject relative clauses (cf. *muur ó bvê* ‘the person fell’, *muur na ó bvê* ‘the person who fell’).

### 10.3.2. Object WH Questions

Non-subject WH questions offer many more possibilities and complexities than subject WH questions. Although utilizing the same WH words as subject WH questions, object WH questions allow the three structures in [10.74]:

[10.74]	ya	ó	món	ne	(WH in situ)
	you	PAST	see	who	
=	ně	ya	ó	môn	(fronted WH)
	who	you	PAST	see	
=	ně	o	món	yâ	(fronted WH and post-verbal subject)
	who	PAST	see	you	
	‘who did you (sg.) see?’				
cf.	ne	ó	món	yă`	(=subject WH question)
	who	PAST	see	you	
	‘who saw you (sg.)?’				

The first sentence shows the WH word *ne* ‘who’ in situ, i.e. in object position. In the second sentence, *ně* is fronted before the subject. The third sentence shows *ně* also being fronted, but with the subject occurring post-verbally. These sentences clearly show that there is some optionality in forming object (as well as other non-subject) WH questions: Even if the WH word is fronted, the subject does not obligatorily appear after the verb as it does in non-subject relative clauses. The tones of these sentences reveal that it is not just the presence vs. absence of a post-verbal subject which is varying, but in fact, these are different constructions: The second sentence is based on the main clause pattern with a H past tense tone marker /ó/. The third sentence has a L tone /o/, suggesting the deletion of a relativizer (‘who is it that you saw?’). If we compare the third sentence with the last, we see that although the word orders are the same, there are two tonal differences between the object- vs. subject WH questions: the /o/ vs. /ó/ tense markers and the tone on the subject pronoun. The latter difference shows that the underlying tone of the object WH question verb is /món + ‘/,

as in a non-subject relative, while the underlying tone of the subject WH question verb is /món + ʼ/ (or /môn/), as in main and subject relative clauses.

A fourth object WH question alternant is seen in [10.75], where the subject is a noun:

[10.75]	okáár	↓ó	món	ne	
	woman	PAST	see	who	
=	ně	okáár	↓ó	môn	
	who	woman	PAST	see	
=	ně	o	món	okáár	
	who	PAST	see	woman	
=	ne	okáár	o	món	ńdé
	who	woman	PAST	see	she
	‘who did the woman see?’				

The first three sentences correspond to those in [10.74], with *okáár* ‘woman’ replacing the second person pronoun. The last sentence in [10.75] shows the noun subject preceding the verb, and the subject pronoun [ń-dé] ‘she’ following. Again the tones show that the second and fourth sentences utilize different structures.

The same structures are possible when the WH element is non-human. The following sentences show the preference for *oŋgér ŋge* (lit. ‘what thing’) when fronted:

[10.76]	mwàán	↓ó	súm	ŋge		
	child	PAST	buy	what		
=	oŋgér	↓ŋgé	mwàán	↓ó	súm	
	thing	what	child	PAST	buy	
=	oŋgér	↓ŋgé	o	súm	mwàán	
	thing	what	PAST	buy	child	
=	oŋgér	↓ŋgé	mwàán	o	súm	ńdé
	thing	what	child	PAST	buy	he
	‘what did the child buy?’					

It should be added, however, that with *oŋgér ŋge* the obligatory post-verbal subject construction is greatly preferred.

The question-answer exchange below shows that an object WH structure is used to question the action of the entire verb phrase:

[10.77] muur é kër ŋge  
 person PAST do what  
 ‘what is the person doing?’

ndé a dzyá ŋgêr  
 he PRES bury thing  
 ‘he is burying something’

### 10.3.3. Ditransitive Object WH Questions

Either object of a ditransitive verb can be questioned in the same ways as single objects. The following questions the second object of *o-pé* ‘to give’ with fronted *oŋgér ŋge* ‘what’:

[10.78] oŋgér ŋge okáár o pé ndé bãän  
 thing what woman PAST give she children  
 = oŋgér ŋge o pé okáár bãän  
 thing what PAST give woman children  
 ‘what did the woman give the children?’

oŋgér ŋge okáár o pé ndé bõ  
 thing what woman PAST give she them  
 \*oŋgér ŋge o pé okáár bõ  
 thing what PAST give woman them  
 ‘what did the woman give them?’

While there are two possible when both the subject and recipient object are nouns, there is only one when the recipient object is a pronoun. As was discussed in §10.2.3, a post-verbal noun subject cannot be followed by a pronoun object.

The same facts are observed when the recipient object is questioned:

- [10.79]    ně    muur    okáár    o    pé    ndé    ndzii  
           who   person   woman   PAST   give   she   money  
 =   ně    muur    o            pé    okáár    ndzii  
       who   person   PAST        give   woman   money  
       ‘who did the woman give the money?’
- ně    muur    okáár    o    pé    ndé    nǒ  
       who   person   woman   PAST   give   she   it  
       \*ně    muur    o            pé    okáár    nǒ  
       who   person   PAST        give   woman   it  
       ‘who did the woman give it?’

However, it is much preferred to use the oblique alternative *kó nɛ* ‘to whom’ when questioning the recipient (see next section).

#### 10.3.4. Oblique WH Questions

As in the case of relative clauses (§10.2.4), Nzadi does not allow preposition stranding in oblique WH questions. Instead the WH word occurs after the preposition:

- [10.80]    lój            o            pé            oŋkáán    kó            nɛ  
           teacher   PAST   give            book        LOC        who  
           ‘the teacher gave the book to whom?’
- =   kó            nɛ            o            pé            lój            oŋkáán  
       LOC        who        PAST        give        teacher    book
- =   kó            nɛ            lój            o            pé            (ndé )    oŋkáán  
       LOC        who        teacher    PAST        give        he            book  
       ‘to whom did the teacher give the book?’

Again, the parenthetical (*ndé*) in the last sentence indicates that the post-verb subjection construction is not obligatory. Other oblique WH questions are shown in [10.81].

[10.81] sám      ↓é      né      okáár      o      léé      ndé      fufú  
 reason    of      who    woman    PAST    cook    she    fufu  
 ‘for whom did the woman cook fufu?’

mwàán    ó      dzé      fufú      tí      ñgé  
 child    PAST    eat      fufu      with    what  
 ‘the child ate fufu with what?’

= tí      ñgé    o      dzé      mwàán    fufú  
 with    what    PAST    eat      child    fufu  
 ‘with what did the child eat fufu?’

Locative WH questions are expressed by *(ko)ñgó* ‘where’. As seen in the following sentences, similar alternates are found as with object WH questions:

[10.82] baar      â      mén      koñgó  
 people    PERF    dance    where  
 = koñgó    baar      â      mên      (bǒ)  
 where    people    PERF    dance    they  
 = koñgó    â      mén      baar  
 LOC      PERF    dance    people  
 ‘where have the people danced?’

[10.83] mǐ      é      ye      koñgo  
 people    PERF    dance    where  
 = koñgó    é      ye      mǐ  
 LOC      where    people    PERF  
 ‘where am I?’

A common alternative to *ñgó* is *okal ñge* or *okal nañgó* ‘which place, where’:

[10.84] okal    ñge      o      zí      ñdé      ndzii  
 place    which    PAST    hide    he      money  
 ‘where did he hide the money?’

okal    nañgó    báán      ↓ó      món    (bɔ)    mbvá  
 LOC    which    children    PAST    see    they  
 ‘where did the children see the dog?’

While *koñgó* is used to query static locations, either *koñgó* or *ñgó* by itself expresses locative goals and sources:

- [10.85] (ko)ŋgó ó ké bǎ  
 where PAST go they  
 ‘where did they go?’
- mwáán ↓ó ké ŋgó  
 LOC which children PAST  
 ‘where did the child go?’
- adzá mápe a fá ńgo  
 water this PRES come from where  
 ‘where is this water from?’

The fact that the [ko] of *kongó* is L tone suggests that it is not the preposition *kó*, but rather an historical agreement prefix of PB locative class 17 \**kɔ*-. Since *nangó* (pl. *bangó*, *mangó*) means ‘which’, *kongó* likely meant ‘which (locative)’, going with a locative expressive.

Turning to temporal WH expressions, there is no identifiable question word ‘when?’. Instead one has to use a locative noun + *ŋge* ‘which’:

- [10.86] kó ntáŋ ŋge bàán ↓ó dzê  
 LOC time which children PAST eat  
 ‘what time did the children eat?’
- ya ó túl esuu ńge  
 you PAST arrive day which  
 ‘what day did you arrive?’
- ndé ó kpé mbvél ↓ŋge  
 he PAST die year which  
 ‘what year did he die?’

Note the following tonal differences which again mirror the difference between main/subject relative vs. non-subject relative clauses:

- [10.87] esúú ↓ŋge ya ó túl  
 day which you PAST arrive  
 = esúú ↓ŋge o túl yâ  
 day which PAST arrive you  
 ‘what day did you arrive?’

A manner WH question may be expressed with *ngambó* ‘how’, which is L-H if followed by another word, otherwise L-L before pause. It too shows multiple word order possibilities:

- [10.88]      bǎ            ó            bónsa    nǎ            ngambo  
                   they        PAST    fix        it            how  
 = ngambó    bǎ            ó            bónsa    nǎ  
                   how        they     PAST    fix        it  
 = ngambó    ó            bónsa    bǎ            nǎ  
                   how        PAST    fix        they        it  
                   ‘how did they fix it?’

- [10.89]      ya            ó            dzwí    ntsúr    ngambo  
                   you        PAST    kill        animal    how  
 = ngambó    ó            dzwí    yá            ntsúr  
                   how        PAST    kill        you        animal  
                   ‘how did you kill the animal?’

‘How much’ is expressed with *nga mbyé*, either by itself or after a noun:

- [10.90]      nga mbyé    mwàán    ó            dzê  
                   how much    child     PAST    eat  
 = nga mbyé    mwàán    o            dzé        ndé  
                   how        child     PAST    eat        he  
                   ‘how much did the child eat?’

- [10.91]      lóso    nga mbyé    o            kii    pípyâ  
                   rice    how much    PAST    be  
                   ‘how much rice was there?’

‘Why’ is expressed as *sám é ngé* (lit. reason of what):

- [10.92]      sám        ↓é        ngé    mwàán    ↓á        lyáá  
                   reason    of        what    child     PRES    cry  
 = sám        ↓é        ngé    mwàán    ↓á        lyáá    ndé  
                   reason    of        what    child     PRES    cry  
 = mwàán    á        lyáá    sám        ↓é        ngé  
                   child     PRES    cry    reason    of        what  
                   ‘why does the child cry?’

‘Whose’ is expressed by placing *ne* ‘who’ in a genitive construction after the noun in question, e.g. *mbvá ne* ‘whose dog’, *ba-mbvá é nê* ‘whose dogs’. Compare the following sentence, where the copula is optional (cf. [10.122]):

[10.93] nápe (é ye) mwàán ne  
 this PRES be child who  
 ‘whose child is this?’

Nzadi does not seem to allow multiple WH questions: \*who saw what, etc.

### 10.3.5. Indirect Questions

In this section we consider indirect and embedded questions. When embedding a yes-no question, either *kan* or *ker* can be used, both meaning ‘if, whether’:

[10.94] mí ka zyá bɔ kan Tukúmu o túl ndé  
 mí ka zyá bɔ ker Tukúmu o túl ndé  
 I NEG.PRES know NEG if Tukumu PAST arrive he  
 ‘I don’t know if Tukumu arrived’

As seen, embedded questions require a post-verbal subject. This stands in contrast to a non-embedded if-clause (cf. §9.7):

[10.95] ker bàán ↓ó dzé akwɔ, bɔ sí kaa ye ndzaa bɔ  
 if children PAST eat bananas they NEG.FUT be with hunger NEG  
 ‘if the children ate the bananas they would not be hungry’  
 mi a zyá ker bàán o dzé ndé ákwɔ  
 I PRES know if children PAST eat he bananas  
 ‘I know if the children ate the bananas’

Embedded WH questions have the properties of relative clauses built on the generic head nouns *muur* ‘person’, *ongêr* ‘thing’, *okal* ‘place’, *ntâŋ* ‘time’, *mpîl* ‘manner’, and *sâm* ‘reason’:



- [10.96] mi a zyá muur ó mên  
I PRES know person PAST dance  
'I know who danced'
- mi a zyá muur Tukúmu o món ídé  
I PRES know person Tukumu PAST see he  
'I know who Tukumu saw'
- [10.97] mi a zyá oŋgér Tukúmu o món ídé  
I PRES know person PAST dance  
'I know what Tukumu saw'
- [10.98] mi a zyá okal (ŋgé) muur ó ke ndé  
I PRES know place which person PAST go he  
'I know where the person went'
- [10.99] mi a zyá ntáŋ (ŋgé) bàán o lúm bǒ  
I PRES know time which children PAST leave they  
'I know when the children left'
- [10.100] mí ka zyá bɔ mpíl ó dzwí bǒ ntsúr  
I NEG.PRES know NEG manner PAST kill they animal  
'I don't know how they killed the animal'
- [10.101] mí ka zyá bɔ sám (ŋgé) o lúm bɔ  
I NEG.PAST know NEG reason which PAST leave NEG  
'I don't know why they left'

Note with respect to the last example that embedded *sám* clauses meaning 'why' require a post-verbal subject, where *sám* clauses meaning 'because' do not:

- [10.102] bɔ ó dzé fufú sám bɔ ó káá yɛ ndzaa  
they PAST ate fufu reason they PAST be with hunger  
'they ate fufu because they were hungry'

The above structures are the same that would be used after verbs of telling and asking:

[10.103] ya ó tyén yɛ mǐ muur ó búl ndé  
 you PAST say with me person PAST hit him  
 ‘did you tell me who hit him?’

ya ó tyén yɛ mǐ muur o búl ndé  
 you PAST say with me person PAST hit he  
 ‘did you tell me who he hit?’

The following sentences show that a complement clause can be embedded with optional *niŋgé* ‘that’ within a WH question:

[10.104] muur né o tyén yá (niŋgé) bɔ ó môn  
 person who PAST say you that they PAST see  
 ‘who did you say (that) they saw?’

oŋgér ŋge o tyén bǒ (niŋgé) mi ó sùm  
 thing which PAST say they that I PAST buy  
 ‘what did they say (that) I bought?’

As seen, the subject of *o-tyén* ‘to say’ must appear after the verb, but the subject of *o-môn* ‘to see’ appears before the verb. An alternative structure is shown in [10.105].

[10.105] muur né o tyén yá na o môn bǒ  
 person who PAST say you DET PAST see they  
 ‘who did you say that they saw?’

oŋgér ŋge o tyén bǒ na o sùm mí  
 thing which PAST say they DET PAST buy I  
 ‘what did they say that I bought?’

While synonymous with the sentences in [10.104], these last sentences appear literally to relativize both verbs on ‘person’ and ‘thing’. This is all the more clear in [10.106], where the relative clause appears after the WH phrase:

- [10.106]    muur   né    na   o    món   bǎ   o    tyén   yâ  
 person who    DET PAST see    they PAST say    you  
 ‘who did you say that they saw?’
- oŋgér   ŋge    na   o    súm   mí   o    tyén   bǎ  
 thing    which DET PAST buy    I    PAST say    they  
 ‘what did they say that I bought?’

These sentences can be literally translated as ‘who that they saw did you say?’ and ‘what that I bought did they say?’.

## 10.4. Focus and topic

This section briefly treats some of the structures involved in expressing constituents which come under focus or which are topicalized.

### 10.4.1. Focus

Most focusing in Nzadi appears to take place without special marking, for example when contrasting the subject or object of a sentence (cf. [10.54]):

- [10.107]    ya    â    mbúl   mǐ   ndé   ka            mbúl   mǐ`  
 he    PERF me.hit me he    NEG.PERF    me.hit me  
 ‘YOU hit me, HE didn’t hit me’
- ndé   â    mbúl   mǐ, ndé   ke            búl   yǎ`  
 he    PERF me.hit me he    NEG.PERF.you hit    you  
 ‘he hit ME, he didn’t hit YOU’

The focusing particle *ná* ‘just, only’ can occur before the verb with effects such as the following:

- [10.108]    mi    á    ↓ná   dza  
 I        PERF just eat  
 ‘I have just eaten’
- oŋgér   á    ↓ná   twá   ítsun  
 thing    PERF just exit odor  
 ‘something (just) smells’

When referring either to an object or to the verbal action itself, *ná* is placed after the verb:

[10.109]    mi    a    dzá    ↓ná    fufú  
               LOC   HAB   eat    just   fufu  
               ‘I only eat FUFU’ (I don’t eat rice)

              mi    a    láá    ↓ná    fufú  
               LOC   HAB   cook   just   fufu  
               ‘I only COOK fufu’ (I don’t eat it)

If focusing the subject, a cleft construction is preferred (cf. below):

[10.110]    ná    mǐ    muur    a    dzá    fufú  
               only   I    person   HAB   eat    fufu  
               ‘only I eat fufu’

Another focusing particle is *ata* ‘even’:

[10.111]    atá    muur    ómótúk    ko    ya    bɔ  
               even   person   one    NEG-PAST   come   NEG  
               ‘no one came’ (lit. even one person didn’t come)

              mí    ko    món    àtá    muur    ómótúk  
               I    NEG-PAST   see    even    person   one  
               ‘I didn’t see anyone’ (lit. I didn’t see even one person)

As seen in the following ungrammatical sentence (and its ungrammatical gloss in English), *atá* is a negative polarity item which cannot be used in an affirmative statement:

[10.112]    \*mi    ó    món    àtá    muur    ómótúk  
               I    PAST   see    even   person   one  
               \*‘I saw anyone’ (lit. I saw even one person)

It can however be used in a question and in an if-clause:

[10.113]    ↑atá    muur    ómótúk    ó    yê  
               even   person   one    PAST   come  
               ‘did anyone come?’ (lit. did even one person come?)

- [10.114]    <sup>↑</sup>atá ker ya o    món (atá) muur ómotúk, pá tyén ye ndé  
 even if you PAST see even person one    NEG speak with him  
 ‘even if you see someone (anyone), don’t speak with him’

The negative particle *ka* ‘not’ can be used instead or in addition to *atá*, in either order. The following four sentences are synonymous, all meaning ‘no child cried, not even a child cried’:

- [10.115]    atá    mwàán    ↓ómotúk    ko    lyaa    bɔ  
 even    CHILD    one    NEG.PAST    cry    NEG  
 ka    mwàán    ↓ómotúk    ko    lyaa    bɔ  
 not    CHILD    one    NEG.PAST    cry    NEG  
 atá    ka    mwàán    ↓ómotúk    ko    lyaa    bɔ  
 even    not    CHILD    one    NEG.PAST    cry    NEG  
 ka    atá    mwàán    ↓ómotúk    ko    lyaa    bɔ  
 not    even    CHILD    one    NEG.PAST    cry    NEG  
 ‘no child cried, not even a child cried’

While the above sentences with *ka* involve double negation, it is possible for *ka* to appear with an affirmative verb. In this case placement of *bɔ* is both optional and variable:

- [10.116]    ka ndzó ómotúk (bɔ) a    máŋ ye ŋkúb ↓é swîi (bɔ)  
 not house one    NEG PRES be with color of red NEG  
 ‘No house is (painted) red’

As seen, focus can be marked with normal word order and with one or more particles. Another option is to use a cleft construction. The full construction involves *nɔ* ‘it’ plus the verb ‘to be’ in its various forms (§7.5), e.g. in the following sentences in which the subject has been clefted:

- [10.117]    nɔ ↓é yé oŋkàán (na) o    bvê  
 it PRES be book DET PAST fall  
 ‘it’s a book that fell’
- = nɔ ó kii akáár o    sùm ntswé  
 it PAST be women PAST buy fish  
 ‘it was the women who bought the fish’

When a non-subject is clefted, the post-verbal subject construction is frequently employed:

- [10.118]    nǔ   ↓é   yé   fufú   mwàán   ↓ó   dzê  
               it   PRES   be   fufu   child   PAST   eat  
 =    nǔ   ↓é   yé   fufú   o   dzé   mwàán  
               it   PRES   be   fufu   PAST   eat   child  
               ‘it’s the fufu that the child ate’

- [10.119]    nǔ   ó   kii   ntswé   na   o   súm   akáár  
               it   PAST   be   fish   DET   PAST   buy   women  
 =    nǔ   ó   kii   ntswé   na   okáár   o   súm   bǔ  
               it   PAST   be   fish   PAST   women   PAST   buy   they  
               ‘it was the fish that the women bought’

The clause from which the noun phrase is clefted is thus very much like a relative clause. This is seen from the presence of the determiner *na* in the following sentences, which also illustrate the frequent absence of initial *nǔ* ‘it’:

- [10.120]    é   ye   fufú   na   okáár   o   pé   ndé   mwàán  
               PRES   be   fufu   DET   woman   PAST   give   she   child  
               ‘it’s the fufu that the woman gave the child’  
  
               é   ye   mwàán   na   okáár   o   pé   ndé   fufú  
               PRES   be   child   DET   woman   PAST   give   she   fufu  
               ‘it’s the child that the woman gave the fufu’

When the clefted noun phrase is human, the generic word *muur* ‘person’ (pl. *baar*) is optional but frequent:

- [10.121]    é   ye   mǐ   (muur)   mwàán   o   món   ndé  
               PRES   be   me   person   child   PAST   see   he  
               ‘it’s the fufu that the woman gave the child’  
  
               nǔ   ó   kii   bàán   (baar)   o   kót   ↓kó   ndzɔ  
               it   PAST   child   children   people   PAST   enter   LOC   house  
               ‘it’s the children who entered into the house’

In this case the clefted noun can also occur before the verb ‘be’, which in turn can be deleted:

[10.122] mĩ (é ye) muur na o súm ntswé  
 I PRES be person DET PAST buy fish  
 ‘I am the person who bought the fish’

báán (↓é ye) baar okáár o sársá ndé  
 it PRES be people woman PAST help she  
 ‘the children are the people that the woman helped’

Once again the relation between a non-subject cleft and relative clause is evident from the post-verbal subject. The first sentence below is ambiguous as to who is the subject vs. recipient:

[10.123] mwáán ↓é ye muur na o pé okáár fufú  
 child PRES be person DET PAST give woman fufu  
 ‘I am the person who gave the woman fufu’  
 ‘I am the person that the woman gave fufu’

mwáán ↓é ye muur na o pé okáár nǒ  
 child PRES be person DET PAST give woman it  
 ‘I am the person who gave the woman it’  
 \*‘I am the person who the woman gave it’

The second sentence is however unambiguous: *okáár* ‘woman’ cannot be the subject or it would be followed by an ungrammatical pronoun (cf. §10.2.4).

Human and non-human pseudo-clefts are illustrated in [10.124]:

[10.124] muur (na) o mǒn mí é ↓yé Tukúmu  
 person DET PAST see I PRES be Tukumu  
 ‘who/the person I saw is Tukumu’

onǵér (na) o dzé bǒ é ↓yé fufú  
 thing DET PAST eat they PRES be fufu  
 ‘what/the thing they ate is fufu’

The constituents in a pseudo-cleft can come in either order:

[10.125] engér o súm mî é ye ba-ntswé ísár ↓mápe  
 things PAST buy I PRES be fish (pl.) three these  
 ‘what I bought are these three fish’

ba-ntswé ísár ↓mápe é ye engér o súm mî  
 fish (pl.) three these person DET things PAST buy I  
 ‘these three fish are what I bought’

Since *é ye* and other forms of the verb ‘be’ can be deleted in clefts, pseudoclefts and elsewhere, what is left behind often does not look like a full sentence:

[10.126] mwàán muur na ó bvê  
 child person DET PAST fall  
 ‘the child is who fell’  
 (= ‘the child of the person who fell’)

nápe mwàán ne  
 this CHILD who  
 ‘whose child is this?’

ndzii ó dzĩ muur  
 money PAST bury person  
 ‘it’s the money the person buried’  
 (= ‘the money that the person buried’)

#### 10.4.2. Topic

In this section we treat topicalization, marked by left-dislocation, and then consider different types of stylistic inversion and word order variation.

As in most other languages, a noun phrase can be left-dislocated to indicate that it is the topic of the sentence and perhaps of the discourse. The following examples show that the left-dislocation can be a noun, pronoun, or a full noun phrase:





- [10.131] yă yε mĩ ndé ó zĩ bĩ okalí,  
 you and I he PAST know us yesterday  
 mwáán ndé-ńgizyá na okáár ndé ko zĩ ńdé bo  
 child his own DET female he NEG.PAST know her NEG  
 ‘YOU AND ME he knew yesterday, but his own daughter he didn’t recognize’

Other elements may also appear before the main proposition at the beginning of the sentence. As was seen in §8.4.2 a temporal adverb such as *okalí* ‘yesterday’ has flexibility in where it occurs within the sentence, including initially. The following also show this variation:

- [10.132] akáár ɿipe o kót ɿkó ńdzɔ nɔwe  
 women two PAST enter LOC house today  
 ‘two women entered the house today’

nɔwe akáár ɿipe o kót ɿkó ńdzɔ  
 today women two PAST enter LOC house  
 ‘today two women entered the house’

- [10.133] bi a kũkũm awɔŋ mbvél ɿnápe  
 we PAST plant.RED maize year this  
 ‘we will plant maize this year’

mbvél ɿnápe bi a kũkũm awɔŋ  
 year this we PAST plant.RED maize  
 ‘this year we will plant maize’

When the verb is intransitive the temporal adverb can be inverted with the subject:

- [10.134] nɔwe ó kót akáár ɿipe ɿkó ńdzɔ  
 today PAST enter women two LOC house  
 ‘today entered two women into the house’

Similarly, the first sentence below shows locative inversion with the subject:

- [10.135] kó ńdzɔ o kót akáár ɿipe  
 LOC house PAST enter women two  
 ‘into the house entered two women’

\*kó ndzɔ o kót bǎ  
 LOC house PAST enter they  
 ‘into the house entered they’

\*kó ndzɔ o dzé mwàán fufú  
 LOC house PAST ate children fufu  
 ‘in the house ate children fufu’

The above ungrammatical sentences show that the inverted subject cannot be a pronoun, nor can inversion take place if the verb is transitive. This makes locative inversion quite different from the post-verbal subject construction found in relative clauses and WH questions.

The following shows a range of stylistic variants concerning the placement of a preposition phrase headed by *tí* ‘with’:

[10.136] akáár ↓ó kót ↓kó ndzɔ tí bǎán  
 women PAST enter LOC house with children  
 ‘the women entered the house with children’

akáár ↓ó kót ↓tí bǎán kó ndzɔ  
 women PAST enter with children LOC house  
 ‘the women entered with children the house’

akáár ↓tí bǎán ó kót ↓kó ndzɔ  
 women with children PAST enter LOC house  
 ‘the women with children entered the house’

tí bǎán akáár ↓ó kót ↓kó ndzɔ  
 with children women PAST enter LOC house  
 ‘with children the women entered the house’

\*tí bǎán ó kót akáár kó ndzɔ  
 with children PAST enter women LOC house  
 ‘with children entered the women the house’

As seen, only the last sentence is ungrammatical. Similar variations are observed when the *tí* phrase marks an instrumental. Here the last sentence is ungrammatical also because the verb is transitive:

- [10.137] akáár o píŋ ntsúr tí mbyě  
 women PAST cut meat with knife  
 ‘the women cut the meat with a knife’
- tí mbyě akáár o píŋ ntsúr  
 with knife women PAST cut meat  
 ‘with a knife the women cut the meat’
- \*tí mbyě o píŋ akáár ntsúr  
 with knife PAST cut women meat  
 ‘with a knife cut the women the meat’

While the above show possible inversions with a temporal or locative adjunct, when the meaning is clear, it is also sometimes possible to invert the subject and object:

- [10.138] mwáán ó tán oŋkàán  
 child PAST read book  
 ‘the child read the book’
- oŋkaan ó tán mwáán  
 book PAST read child  
 ‘the child read the book’  
 (lit. the book read the child)
- \*oŋkaan ó tán ndé  
 book PAST read child  
 ‘he read the book’  
 (lit. the book read him’)

As with temporal and locative inversions, the inverted subject cannot be a pronoun, rather must have new information content. As seen earlier, the last sentence in [10.126], repeated below, is ambiguous, as it could also be the result of subject-object inversion:

- [10.139] ndzii ó dží muur  
 money PAST bury person  
 ‘the person buried the money’  
 (lit. money buried the person)

There is a tendency for such inversions to be translated as a passive, e.g. ‘the money was buried by the person’. What is significant is the LH tone on the verb, which indicates that this is the post-verbal subject sentence structure. Perhaps this apparent main clause subject-object

inversion derives historically from the non-subject relative clause structure which requires the expression of the subject after the verb.

Another context which is more clearly parasitic on the non-subject relative clause structure involves backgrounded temporal clauses which lack a relativized head or other marker. As seen below, aside from tone, such headless temporal clauses contrast in word order with the corresponding main clauses:

[10.140]	<i>main clause</i>		<i>temporal clause</i>
	bò á yà ‘they come’		á ↓yá bǒ ‘when they come’
	they HAB come		HAB come they
	bààr á yà ‘people come’		á ↓yá bààr ‘when people come’
	people HAB come		HAB come people
			bààr á ↓yá bǒ
			people HAB come they

The above temporal clause structures are quite common, especially in narratives, as seen in the following excerpts, where the post-verbal subjects are underlined (cf. §9.6.2):

[10.141] á kɛ bɔ ndzɛ́é, bɔ á ker kisál ↓kó ndzɛ̀é...  
 PERF go they market they PERF do work LOC river  
 ‘When they’ve gone to the river, they’ve worked at the river...’

á ya bǒ bɔ a kútan yɛ baar obyê  
 PERF come they they PRES meet with people many  
 When they’ve come, they meet with many people’ (Text 2)

[10.142] á fup nɔ yǎ kó tsyǎ, ya a lúm mpwe é nǒ.  
 PERF grill it you LOC fire you PRES remove skin of it  
 ‘After you’ve grilled it on the fire, you remove its skin.’

a lúm ↓yá mpwe é nǒ, ya á ker ibvyê.  
 PRES remove you skin of it you PERF make wrapping  
 After you remove its skin, you make a wrapping.’ (Text 3)

As seen, such unmarked temporals seem sometimes best translated with ‘when’, other times with ‘after’. As seen in the following comparison, the time frame of the main clause is typically taken to be subsequent to the temporal clause, not simultaneous:

[10.143] á    lya    ndé, ndé a    syâŋ  
 HAB cry    he    he    HAB smile  
 ‘after he cries he smiles’

ndé má    lya, ndé a    syâŋ  
 he    COND cry    he    hab smile  
 ‘when he cries he smiles’

This contrasts with the conditional marker *má*, which is more restricted to present and future time, and which also occurs in condition clauses with the meanings ‘if’ or ‘when’ (cf. §9.7):

[10.144] ker bɔ    má    dzá    fufú    <sup>↓</sup>nápe, bɔ    a    títúl    bviir  
 if    they COND eat    fufu    this    they FUT    become.RED strong  
 ‘if/when they eat this fufu, they will become strong’  
 ker bɔ    má    ya,    mi    a    tyén ye    bǒ  
 if    they COND come I    HAB talk with them  
 ‘if/when they come, I speak with them’

Thus, while *má* does not occur in the past tense, the headless temporal clauses can appear with any tense:

[10.145] ó    li    ndé, ndé o    syâŋ  
 PAST cry    he    he    PAST smile  
 ‘when he cried, he smiled’  
 a    yíyǎ    bǒ, tyén ye    bǒ  
 FUT    come.RED they speak with them  
 ‘if/when they (fut.) come, speak with them’

A logical hypothesis is that such temporal clauses once had a head noun such as *ntâŋ* ‘time’ and that the observed structures derive historically from a non-subject relative clause whose head has been subsequently deleted.

### 10.5. Other Utterance Types

This section briefly lists a few common utterance types and constructions used in discourse. The existential ‘there is, there are’ is expressed with the verb *o-mâŋ* ‘to be’:

- [10.150] mwàán a máŋ (kó ńdzɔ)  
 child PRES be LOC house  
 ‘there is a child’ (e.g. in the house)  
 (lit. ‘a child is/exists’)

In the negative there are two constructions:

- [10.151] ka mwàán bɔ  
 NEG.PRES child NEG  
 = mwàán ka máŋ bɔ  
 child NEG.PRES be NEG  
 ‘there is no child’  
 (lit. ‘a child isn’t’)

The presentative ‘here’s/there’s, here/there are’ (French *voici, voilà*) is expressed with the verb *o-diir* ‘to watch, observe’ in the imperative:

- [10.152] diir, nápe é ye ŋkôp  
 observe this PRES be cup  
 ‘here’s a cup!’  
  
 diir, nyá é ye mbvá  
 observe there PRES be dog  
 ‘there’s a dog!’

The common interjections for answering questions are *ɛɛ* ‘yes’ and *bɔ* ‘no’. The most common greetings are shown below for both singular and plural addresses:

- [10.153] ńgambo yǎ` ‘how are you (sg.)?’  
 ńgambo byěŋ ‘how are you (pl.)?’  
 how you  
 mbót yǎ` ‘greetings to you (sg.)’  
 mbót byěŋ ‘greetings to you (pl.)’  
 greetings you

The above pronoun has a recipient connotation, as seen also in the expression *ntsón yǎ`* ‘shame on you!’ (lit. shame you). While the second person pronoun follows the greeting, it precedes an epithet:

[10.154] yǎ elá  
 you lie  
 ‘you liar!’

yǎ bvím  
 you theft  
 ‘you thief!’

yǎ endžín  
 you idiot  
 ‘you idiot!’

There is no vocative marker per se. A similar raised pitch intonation is used to call people by name as in questions (§3.4): <sup>↑</sup>*Tukúmu!* <sup>↑</sup>*Ipakála!*





# **APPENDIX A: AN OVERVIEW OF THE NZADI PEOPLE AND THEIR HISTORY**

Simon Nsielanga Tukumu

- A.1. Introduction
- A.2. Settlement
- A.3. Geographic Area
- A.4. Political Organization
- A.5. Social Organization
- A.6. Economic Organization
- A.7. Cultural Beliefs
- A.8. Education System
- A.9. Socio-Cultural Activities
- A.10. The Burial Ceremony
- A.11. Summary

## **A.1. Introduction**

The language whose grammar is described in this work is [indzéeé], referred to as Nzadi by others, spoken in the southwest part of the Democratic Republic of the Congo (DRC) in Bandundu Province. It is a Bantu language distinct from Ding (Dzing) and Lwer (Lori), to which it is most closely related. Although a certain number of borrowings are evident from Ding [idzínj], Lwer [ilwál], Ngwii [igwé], Sakata [isákátá], Leele [isilil] and Kikongo, the lingua franca of the area, Nzadi is distinct both in its lexicon and grammar. In Jouni Filip

Maho's update of Guthrie's referential classification of the Bantu languages, Nzadi is assigned to zone B, specifically B.865.<sup>1</sup>

The Nzadi language is spoken by the Nzadi people. Administratively, they are located in the Sedzo, Kapia and Mapangu territorial zones. Linguistically, the Nzadi people are subdivided in three groups: the *Ngiemba* or *Kinsingie*, the *Lensibun* or *Labien*, and the *Ndzé Ntaa* or *Kinsintaa*. The *Ngiemba* are those who live in the lower Kasai River. The *Lensibun* group lives in the central part of the Kasai River, and the *Ndzé Ntaa* live in the upper Kasai River area. Particularly in terms of the sound system, the *Ngiemba* dialect has been influenced by the Lori or Lwer language, the *Lensibun* by Ding, and the *Ndzé Ntaa* by Leele.

## A.2. Settlement

The origin of the Nzadi has not been well established and hence remains obscure. In terms of our current understanding, oral traditions support two hypotheses. The first holds that the Nzadi came from Central Africa Republic. According to this hypothesis, they are said to have left this part of Africa before the arrival of the Europeans by crossing the Ubangi River. They first settled around Lake Tumba in the DRC and lived with Sengele pygmies. After a big fight with the Sengele, they left the conflict area and came to settle on the Congo River islands. Fearing the Sengele's attacks, they left the Congo River islands. They called the Congo River *Ndzé-èwa-Nkum*, meaning the river that, because of its largeness, has finished killing sparrow hawks that flew over it. In order to hide from slavery at the hands of the Belgian colonizers, the Nzadi temporarily settled at the village of Kwamuntu, the name of which derives from *okwá-é-mûr* 'bones of (a dead) person'. Iyulu Etuar I, the head of the Nzadi group, died at Kwamuntu. Etuar II, his nephew, the son of his sister Esee, became his successor and the head of the Nzadi group. Esee's husband was Pana. Etuar II migrated with his people into the Kasai River and settled at Mushie village; then at Bukal, Ubangil and Salamite villages, where they met the Teke, Nunu and Sakata tribes. From Salamite, they moved by settling their own villages on the islands, along the Kasai River.

The second hypothesis, however, suggests that the Nzadi came from Gabon. In this account the Nzadi followed the Atlantic Ocean shores and reached Congo Brazzaville. From there they crossed the Congo River (*Ndzé-èwa-Nkum*), thereby establishing themselves within the DRC. They subsequently ascended the Congo River and settled at Kwamuntu, the village located at the mouth of the Kasai River. Then, they entered into the Kasai River and settled at Mushie, whose Nzadi name *musee* refers to a tree used to make boats. After living in Mushie, the Nzadi reached Kwilu and the mouth of the Kasai River. Here, the group was divided. One group followed the Kwilu River and founded the village of Salaminta (*sal-biantaa*), which means 'stay behind at a low point as we are progressing'.

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<sup>1</sup> Jouni F. Maho (2009), "The Online Version of the New Updated Guthrie List: A Referential Classification of the Bantu Languages," [article on-line] (accessed June 22, 2010), available from <http://goto.glocalnet.net/mahopapers/nuglonline.pdf>.

The other group followed the Kasai River. At the rapids, the boat of the main advisor of Etuar II sunk. This is why the rapids were named after him as a memorial. Near the rapids, the group founded Kise-kinda (*Isin-é-nda*) village in order to observe the burial of chief Kandolo. After a couple of months, Etuar II migrated with some people along the Kasai until reaching Elooh Nkenya, the last Nzadi village, near the city of Ilebo. In the course of their migration along the Kasai River, Etuar II established other Nzadi villages. When he returned from Elooh Nkenya, he settled at Iliem-Mbang and died here. Along their migration, they met the Nunu, Sakata, Yansi, Ding, Lori and Leele tribes. The Nzadi helped the Ngwii (Ngoli) people cross the Kasai River from the equatorial forest to their current sites. The first group crossed from Poto-Poto (Iyeme) to Olomo Mpese; the second group crossed from Iliem to Ipang; the third from Viar to Wele-Wele and the fourth from Ilwa to Bun Bangoli.

Although the above two historical scenarios are contradictory, three facts are particularly prominent in Nzadi narratives: (i) their fight with Sengele pygmies; (ii) their settlement at Kwamuntu village; (iii) their migration along the Kasai River. These three facts are widely acknowledged by the Nzadi ancestors. People like Nkum Mbie, Ngom, Mbay-Mpum, Epawa, Bozwa, Othar, Henri Mban-Bwa, Kandol, Ompi, Izwong, transmitted these historical facts to current Nzadi generations.<sup>2</sup>

### A.3. Geographic Area

Although the Nzadi population has not been precisely determined, it certainly numbers in the thousands. From the different settlements, the Nzadi geographical area appears not to be so large, extending currently from Kwamuntu to Ilooh Nkenya. The map in chapter 1 gives an idea of the Nzadi geographic area. All Nzadi acknowledge that the following villages are founded by their ancestors: Ngabe or Ngab-Baa, Okwa-e-Mur (or Kwamuntu), Musee (or Mushie), Mabenga, Mbambenga, Ngie-Ilung (Eolo or Yolo), Etul-Enzal, Makang, Osiang, Ngooh, Panu, Panu-Sumbu, Piopio, Musiane, Ngiabom, Ekpati (or Equatel), Nsele, Abab-Aba, Mangai-Muke, Djam, Indulu, Iliem-Mbang, Viar, Mbishwo, Nzio, Ikulung, Bifolo, Mburkin, Batangate (or Mungal-Nzal), Bun (or Bundu), Ngiswo (or Mutang), Ibe Nkun (or Dibaya-Nkuni), Mpang-Nkumileke, Mpang-Djio, Ngelelung, Eluom-Engie (or Lele), Sang-Sam, Nkumu-Nzadi, Mbum-Nkok, Mbumankang and Ilooh Nkenya (or Nkenya). These Nzadi's villages are located in the Sedzo, Kapia and Mapangu administrative territorial zones.

### A.4. Political Organization

The Nzadi people were originally organized into a chiefdom known as *Ebee* or *Munzuanenkoy*. The well-known Nzadi chief who organized the Nzadi settlement is Etuar II.

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<sup>2</sup> Albert Panda Atarango, *Etude Ethnolinguistique en Anthroponymie Nzadi de 1834 à Nos Jours: Cas de Secteur Sedzo*, Travail de fin d'étude de graduat en pédagogie appliquée (I.S.P. de Bandundu, Section de Mangai, 2007-2008), 2.

The colonizers acknowledged Etuar II as the Nzadi chief because he paid the annual taxes. A small book recording Etuar's taxes is kept by Etuar's grandsons in Bundu. Marc Masikini, one of Etuar's grandsons, addressed letters to the DRC Minister of Interior, Decentralization and Security, to the Governor of the Bandundu Province and to other state authorities to request the reestablishment of Etuar's chiefdom. The Bandundu Province Governor's answer to the Idiofa territory administrator says that the President of the Republic is the only person who can acknowledge and authorize the reestablishment of Etuar's chiefdom.<sup>3</sup> The Nzadi chiefdom is still pending, awaiting the finalization of the dossier in conformity with the state legal procedure.

There is some disagreement concerning the Nzadi chiefdom. Descendants of chief Kandolo and chief Pan and Mpia Nguyu are disputing control of the chiefdom. Those of chief Mpia in the Nzadi village, called Mpangu, say that they hold the chiefdom's power because the colonial administrator gave to their grandfather Mpia a clarion, a medallion, and the Congo flag as the signs of power. However, the Nzadi know that during the colonial period Etuar II, Kandolo, Pan, and Mpia Nguyu were already in dispute over who had power over the chiefdom. This is why the administrator of land and territorial affairs did not grant power to any of them. To resolve the dispute, he instead annexed the Nzadi to the Ding, Ngoli, Lwer, Sakata and Leele chiefdoms.

However, in each Nzadi village there is one chief. Generally, the descendants of the founder of the village hold the power. In Bundu, the power is held by the descendants of chief Izwong of the *Nsim* clan.

#### A.5. Social Organization

The Nzadi have a clan system of governance with a matriarchal system determining social organization. In this organization, an uncle hands over his power to his eldest nephew for succession. However, if the candidate is not appreciated by the population, the uncle cannot choose his nephew as a successor. In the Nzadi tribe, the chief is advised by his main advisor and the notables of the village who form the council of the village. The main task of the council is to advise the chief on certain important matters, such as the succession of the chief, the appointment of the *Kapita* (the first and main chief's advisor), the judges and the market's chief.

Nzadi villages are composed of clans. In each clan there is a chief. Bundu, for example, is composed of ten clans: *Eliliam*, *Enum*, *Esang*, *Nsampar*, *Nsim*, *Nsong*, *Okun*, *Ombio*, *Onsien*, and *Otun*. The clan *Osié* has disappeared, because all members of this clan died. The first clan to settle in Bundu is the *Okun* clan. It was subsequently supplanted by the *Ombio* (or *Mbel*) clan, then by *Nsim* clan, which still holds power with chief Izuong, the organizer of the

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<sup>3</sup> The reference of Mr. Gérard Gifuzza Ginday, the Bandundu Province Governor's letter is the following: no. 253/ 207/CAB/PROGOU/BDD/2006. The letter was written in Bandundu on June 20, 2006.

Bundu village. Each Nzadi clan has a totem. The following table gives an overview of the totems of the Bundu's clans:

CLANS	TOTEMS OR TABOOS
<i>Eliliam</i>	<i>IgnEte</i> (a fish); <i>Nikol</i> (small sparrow hawk)
<i>Enum</i>	<i>IpEr</i> (a fish); <i>Engúm</i> (a fish)
<i>Esang</i>	<i>IpEr</i> (a fish); <i>Engúm</i> (a fish); <i>Nkuk</i> (pigeon of the river)
<i>Nsampar</i>	<i>Njiem and Eluom</i> (birds), <i>Nkáa</i> (The impala of the forest)
<i>Nsim</i>	<i>Engúm</i> (a fish) and <i>NsiEm</i> (anguilla), <i>Nkpé-Nkpup</i> (leopard)
<i>Nsong</i>	<i>Ngúú</i> (hippopotamus)
<i>Okun</i>	<i>Nkúl</i> (tortoise) and <i>Ngwóm</i> (bushcow)
<i>Ombio</i>	<i>Isín</i> (squirrel)
<i>Onsien</i>	<i>Ibor-E-Nkam</i> (a fish), <i>Elab-E-nsa-nkwo</i> (a type of tilapia)
<i>Osie</i>	<i>Iluk</i> (a small river bird)
<i>Otun</i>	<i>NkÊm</i> (monkey)

According to Romain Ikun, the current chief of Bundu, these totems symbolize the traditional alliance between the clan and nature. Each uses these totems in order to make the protector the traditional fetish of the clan. Those who do not respect the taboo can suffer a bad disease and die.

## A.6. Economic Organization

Since time immemorial, fishing has been the main activity of the Nzadi. Agriculture was introduced in the Nzadi area only after the country's independence in 1960. Agriculture has been learned from the Ding people and their close neighbors. From their trading relationships, the market places were set up. The Piopio, Bundu, Ngizuo, Mpang and Ngelelung markets are well known in the Idiofa territorial zone. The Nzadi sell not only fish to the Ding, Pende, Bunda and Wongo peoples but also their salt. Particularly from the Ding, the Nzadi buy cassava bread, potatoes, vegetables, fruits, palm wine, meats, crops and various tools, such as machetes, hoes, spears, arrows, traditional pans for cooking, and many other artifacts. From the Pende they buy traditional medicines, comestible caterpillars, palm wines, palm nuts, and traditional clothes, bags and hats. From the Bunda traders the Nzadi buy various products, mainly second hand European clothes, rice, and groundnuts. At the market places, they discuss their social and political lives with their neighbors. The Nzadi markets have made an important impact in the life of people in Bandundu Province, serving as the feeding *loci* for so many people living near and beyond the Nzadi villages. The Nzadi are particularly proud of having such an impact on the economic life of the region and of the DRC.

### A.7. Cultural Beliefs

The Kasai River has had a tremendous, unifying impact on the cultural life of the Nzadi. The chief's investiture ceremony and that of the twins are done on the Kasai River. It is the place where the spirits of ancestor protectors live. From the ancestors, the chief receives wisdom, knowledge and strength to hold his power. When someone in the village suffers a grave illness, the spirits of the ancestors are evoked by his relatives. In order to find someone who has drowned and disappeared in the river, the spirits of the ancestors are also evoked so that people can find him or her in a short period of time.

However, the twins ceremony is the most well known. It is done on the river because twins are considered as chiefs. Customarily, their parents are called to spend nineteen days with them in a small house called *ndzo bangang*, invoking the protection of the ancestors by using nine cultural songs. At the nineteenth day, the twins and their parents are accompanied by other twins and their parents to perform the *osui* ceremony, which is done on a specific place at the river, called *ibiang* where there is a whirlpool.

In the Nzadi's beliefs, the protector ancestors live in such a place. These days people fear crossing the river at such a place because it is so deep. The Nzadi believe that twins come from such a place. This is why they are so respected in the Nzadi villages. They are sources of blessings for the family and the clan and occupy an important place in the hierarchy of the protectors. *Ndzaam Mpung* (God) is the first protector. He is followed by *Ba-nkâá* (the ancestors), then by *Ban e mîr* (the twins), and finally by *Akur* (the elders).

### A.8. Educational System

From ancestral times, the Nzadi educational system has involved the family and extended family, who help a child acquire knowledge and wisdom. The Nzadi educate their children first of all to acquire knowledge on fishing activities, which will be fundamental in their lives. Girls and boys are instructed by their parents and relatives at a young age on how to paddle, swim and fish. The Nzadi people were traditionally not much interested in the European type of school. What mattered for them was to be schooled in fishing. At age of fifteen, a boy knows how to make all sorts of *diang* (nets) such as *ndiang-opáa*, *ilang*, *kalkal*, *ndiang-nkerwi*, *epE*, and *ongete*. From their grand fathers, uncles and fathers, they know how to use the sharp iron fishing tools like *Nsaar*, *Ikop*, *Esui* for fishing. The following picture shows two main Nzadi fishing tools, *Nsaar* and *ikop*.



Here young Nzadi boy Hubert Munzunzu, with black T-shirt and grey pan, is holding *ndang ikop* (the stick of the *ikop*) with his two hands, meanwhile Toty Mumpi, with white shirt and blue jeans, is holding *nzaar* in his right hand and *ndang ikop* in his left hand. Photo by N. Tukumu.



From their grandmothers, aunts, and mothers, girls learn how to fish with *nsáa-nzal*, *Ilaa*, and *onding*.



Mrs. Patience Mukanimi, holding a paddle; with her, Gracia Nsurukum, the girl holding a stick; and her boy, Nsurukum, sitting in the boat. The three are going fishing with *onding*, located between the girl and the boy. Here is the Kasai River's affluent, called *mpáa ngilo* in Nzadi. Bundu village is behind the forest. Photo by N. Tukumu.

Boys and girls know how to fish with *iláa*. This tool is said to be the Nzadi's traditional net. The following picture shows how the Nzadi young people plait *iláa*.



Mr. Iluku Nkwakinga, in front and dressed in a T-shirt, with his two daughters, Mervedy and Albertine Nkwakinga behind, followed by Nzoze Nsielanga and other young Nzadi people behind Nzoze are plaiting *iláa* with cords. To the right of Nzoze (from his perspective), children are standing and watching how the adults make *iláa*. Photo by N. Tukumu.

After being used in water for some time, *iláa* appears like this:



*Iláa* is put at the shore of *mpa nkie*, the small affluent of the Kasai River. Children are watching. Picture taken in the Bundu village. Photo by N. Tukumu.

*Osol* is the period from October to November when the Nzadi find a lot of fish. This is the beginning of the rainy season, which lasts nine months, from September to April. Fish are also found during *Otsar*, the period from May to August when the Kasai water begins to dry. As it happens, the Nzadi are busy all year. After 1925, when the European school was introduced in the Nzadi area, boys and girls ran away from schools, particularly during *osol*, when schools were empty because boys and girls were busy fishing. But this situation has changed, because they now realize that European schools are important. They bring new knowledge to people.

#### A.9. Socio-Cultural Activities

Fishing is the principal activity of the Nzadi. They eat fish, shrimp, crabs, and the meat of aquatic animals and birds with vegetables (*endaal*, *anir-è-nguu*, *mpolo: ban e nkE mpin*), and *mpiem* (a type of white soil found at the river). They also eat fruits found on the Kasai's islands, such as *Etintup* and *nsal*. *Etintup* take the yellow color (*nuur adza ilar*) when they are



ripe, while *nsal* become red (*sui*). The Nzadi did not eat cassava bread and leaves until they met the Dinga, who helped them to plant cassava and other crops. However, they taught the Ding and other peoples how to fish and make salt (*okpá á ndzee*). The latter is a specific cultural Nzadi activity. There is a special technique to make this salt with herbs called *Nkuu* found at the river. The Nzadi use it for cooking and for curing illnesses, such as teeth's pain (*nkum*), wounds (*mpuur*), and abscesses (*ayen*). Even now, Nzadi salt is used by traditional doctors for curing many illnesses.

Before Europeans came with their clothes, the Nzadis ancestors used *NkE-mpin* (large leaves found in the islands of the Kasai) and barks of trees called *Nsang* for their clothing. They no longer use these. What is still being used is *mbal mbal* made with palm tree leaves. Currently, only chiefs use these at the investiture ceremony or at an important celebration.

For leisure and ceremony, they dance and sing various songs. *Iswung* are sung and danced at the palaver places. *Ndzím* is sung and danced at the funeral moments. *Angang dzim* are sung when there are twins. The Nzadi also sing and dance *Lawan* and *Ongnan* at joyful times. When haunting aquatic animals like *ngúú* (hippopotamus), *mbvel* (impala) and *nkwom osur* (big forest cow), they sing specific songs like *Iluka*. When working in the fields, they sing various songs, both from the traditional Nzadi repertory and traditional songs of the Ding.

#### A.10. The Burial Ceremony

Before using wooden coffins, the Nzadi used to bury with a coffin made with small raphia palm tree bamboos, called *nkaam*. The burial takes place in the cemetery, called *Ngum*. Before the arrival of the colonizers, the burial took place on the day of the market. A twin's burial, however, was held on *okel* (Sunday). But since Christianization, burials place any time, in a cemetery and with a wooden coffin. Before the burial, the body is washed and well dressed. At the cemetery, when the community goes to bury the body, the relatives of the dead evoke their ancestors to welcome the newcomer. In Nzadi, their words at this particular moment are called *nswane*. The burial time is a moment of reconciliation with the dead one. The community asks the dead one to forgive wrongs and to continue to advocate for the prosperity of those living. The burial time is closed with a big celebration, held after 40 days. This feast is called in Nzadi *fet olum mpir*.

#### A.11. Summary

The aim of this chapter was to give an overview of Nzadi history and culture. The Nzadi are Bantu people, located in the southwest of the DRC who live along the River Kasai and acknowledge coming from *Ndzée-éwa-Nkum*. The Nzadi language designated B.865 has three variants, the *Ngiemba*, the *Lensibun* and the *Ndzé Ntaa*. These variants are influenced by

closely related languages and by Kikongo, one of the four national languages of the DRC.<sup>4</sup> With the work of my co-authors, Professor Larry Hyman, and his assistant Thera Crane, the Nzadi language is now kept alive with this grammar.

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<sup>4</sup> Kikongo, Kiswahili, Lingala and Tshiluba are the Democratic Republic of the Congo's four national languages.

# **APPENDIX B: PROTO-BANTU - NZADI SOUND CORRESPONDENCES**

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- B.1. Consonants
- B.2. Vowels
- B.4. Reduction Patterns and Relative Chronology
- B.5. Tones

Nzadi has undergone radical reduction in its history, resulting in strikingly short stems. Many Proto-Bantu (PB) CVCV forms have become CVC, CVV, or even CV, depending on the identity of the segments. Nasals tend to survive more faithfully than obstruents, and the vowels that end up in adjacent positions through the loss of intervening consonants frequently coalesce, or turn into a glide + vowel sequence. Given the difficulty in determining exactly which forms are borrowings and which are native, along with the confounding factor of the influence of analogical change, this description will be short and draw on the most reliable correspondences in the data set.

## **B.1. Consonants**

Many of the most regular correspondences can be found by examining the stem-initial consonant ( $C_1$ ). In this position it is possible to see a more robust set of correspondences,

probably because there is a tendency to preserve  $C_1$  in general. Although the frequent loss of stem-internal consonants ( $C_2$ ) is largely conditioned by the original intervocalic environment, this is not a sufficient characterization of where consonant change and loss occurs:  $C_1$  also often occurred intervocalically in Proto-Bantu, being preceded by the vowel of a noun class or other prefix. We therefore must view the non-initial portion of the stem to constitute a weak prosodic position, subject to various reductions and loss. I will address the relative chronologies of these reductions later in §B.3. For now, it is enough to know that the stem-initial position is the source of most of the correspondences that appear to be robust.

The PB consonant system is most commonly reconstructed as follows:

[B.1]		<i>labials</i>	<i>alveolars</i>	<i>palatals</i>	<i>velars</i>
	<i>voiceless:</i>	p	t	c	k
	<i>voiced:</i>	b	d	j	g
	<i>nasals:</i>	m	n	ɲ	
	<i>voiceless prenasalized:</i>	mp	nt	nc	ŋk
	<i>voiced prenasalized:</i>	mb	nd	nj	ŋg

As seen, the proto system consisted solely of non-continuant consonants, although the palatal affricates  $*c$ ,  $*j$  often become [s] and [z] ~ [y], and the voiced series  $*b$ ,  $*d$ ,  $*g$  is often realized [β], [l] ~ [r], and [ɣ] in the daughter languages. In the following sections I will work forward from PB to the Nzadi forms, beginning with the affricates.

### B.1.1. Affricates ( $*c$ , $*j$ )

Original Proto-Bantu  $*c$  almost uniformly corresponds to Nzadi *s*, which becomes regularly affricated to *ts* when preceded by a nasal. The pairs in [B.2] below show the correspondences in  $C_1$  position: those in the first column give examples in which  $*c$  corresponds to *s* as the result of the sound change. Those in the second column illustrate the affrication after nasal prefixes which we see in the parallel synchronic phonological process.<sup>5</sup>

[B.2]	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>
	*cádá	e-sáá	‘feather’	*cónì	n-tsôn	‘shame’
	*cádá	o-sâl	‘work’	*còkí	n-tswèé	‘facial hair’
	*càngà	e-sàŋ	‘island’	*cúí	n-tswé	‘fish’
	*cìmb- ‘dig’	e-sim	‘root’	*còbó	n-tswòó	‘cassava’
	*céndé	o-syén	‘thorn’	*cìngá	n-tsiŋ	‘fish (sp.)’

<sup>5</sup> In all examples I use a hyphen to separate noun prefixes from their stem, although such words are written without a hyphen in the grammar.

This pattern also can be seen for C<sub>2</sub> affricates in the correspondences in [B.3].<sup>6</sup>

[B.3]	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>
	*cicà	o-sisá	‘vein, muscle’ (cl.3)
	*kòcùdà	o-kòsùl	‘to cough’
	*pácà	ma-pásà	‘twin’ (cl. 6?)

There are only four cases in the corpus of a word-medial *nts*: *o-bántsà* ‘to think’, *ma-bántsà* ‘a thought’, *o-mantsa* ‘to finish (tr.)’, and *o-yúntsà*. Of these, at least the first two are borrowed. They and the other two appear to contain the causative suffix \*-*ɪc*- (cf. PB \**mad*- ~ \**man*- ‘finish’), which is consistent with the stem-initial correspondences: although the initial vowel of the suffix was lost, the affricate was preserved and post-nasally appears as the expected *ts*.

By contrast, the behavior of the PB voiced counterpart \**j* is rather complex. It has three separate reflexes in C<sub>1</sub> position: *dz*, *y*, and occasionally *z*, the latter two shown in [B.4]

[B.4]	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>
	*jàmbà	i-yam	‘crocodile’	*jìngà ‘blood’	o-zìŋ	‘to be alive’
	*jánikà	o-yâŋ	‘spread to dry’	*jígù	o-zwâ	‘hear’
	*jìbà	o-yìb	‘steal’	*jógà	o-zwô	‘bathe (intr.)’
	*júmà	o-yûm	‘to dry’	*jàngà ‘refuse’	o-zâŋ	‘lack’

There does not seem to be any regularity to this distribution, nor do the reflexes seem to line up consistently with any nearby languages. Thus, if one set of the reflexes is the result of borrowing, it may have involved more than one neighboring source language.

Out of 35 examples each of C<sub>1</sub> *y* and *z*, none that can be reconstructed to PB \**j* show up after a nasal; only *dz* appears in that environment. However, Nzadi *dz* also shows up frequently without preceding nasals (see [B.5] for examples). Thus, although the *z/dz* distinction is still subject to the synchronic post-nasal affrication, the split in intervocalic PB \**j* cannot be accounted for in this way unless we assume an earlier nasal as part of the noun

<sup>6</sup> Note, however, that these are troublesome in other ways: most notably, their lack of reduction. Although there are correspondances in which PB root-medial intervocalic obstruents remain, it is extremely rare for word-final vowels to match with the proto-Bantu reconstructed forms. Further, there is one possible correspondence that would match Nzadi *o-lùtsà* ‘to overflow’ with PB \**dùc-à* ‘to throw’. If this reconstruction is valid and not the result of a borrowing, then the root-internal PB \**c* became Nzadi *ts* intervocalically, rather than the expected *s*. For this reason it is quite possible that the first and last forms in [B.3] are borrowings of some kind; the middle one, however, ‘cough’, does match most of the observed patterns, both in terms of the behavior of the affricate, and also the vowel loss and \**d* > *l* shift (see §B.1.2.1).



class prefix (all of the examples in [B.5] are nouns). While this might work for \*jókà ‘snake’ (which is often in class 9/10), and perhaps others, it doesn’t work for ‘tooth’ and ‘eye’, where the \*i- class 5 prefix may instead be responsible.

[B.5]	PB	Nzadi	Gloss	PB	Nzadi	Gloss
	*jàmbé	n-dzàá	‘God’	*jínò	i-dzên	‘tooth’
	*jògù	n-dzɔɔ	‘elephant’	*jádà	e-dzâa	‘fingernail’
	*jénjé	n-dzyɛn	‘cricket’	*jùgù	e-dzúu	‘groundnut’
	*jádé	n-dzée	‘river’	*jókà	o-dzwó	‘snake’
	*jó	n-dzó	‘house’	*jínà	dzĩn	‘name’
	*jàdà	n-dzaa	‘hunger’	*jícò	dzĩ̀	‘eye’
				*jimbò	dzĩ̀m	‘song’

### B.1.2. Stops (\*p, \*t, \*k, \*b, \*d, \*g)

As mentioned, PB is often reconstructed with only non-continuant consonants. While the voiceless series \*p, \*t, \*k is accepted by everyone, some Bantuists reconstruct the voiced series as \*β, \*l, \*ɣ, or with an alternation between [b, d, g] and [β, l, ɣ]. We shall refer to the voiced series here as stops, even though they frequently are realized continuant in Nzadi, as elsewhere.

#### B.1.2.1. Alveolars (\*t, \*d)

In C<sub>1</sub> position, Proto-Bantu \*d split quite neatly into two reflexes: before \*i and \*I it became dz, thus merging with one of the reflexes of \*j. Elsewhere it became l—both in C<sub>1</sub> and in C<sub>2</sub> positions. Examples of both these reflexes are given below in [B.6].

[B.6]	PB	Nzadi	Gloss	PB	Nzadi	Gloss
	*dí-à	o-dzá	‘to eat’	*dúm-a	o-lúm	‘to peel, pluck’
	*díci-	o-dzĩ	‘to feed’	*dúmè	e-lúm	‘husband’
	*dibà	n-dzya	‘deep’	*dàngò	e-laŋ	‘doorway’
	*dük-a	o-dzya	‘to bury’	*kòdòdà	o-kulul	‘to scrape off bark’
	*díma	n-dzyëm	‘bat’ <sup>7</sup>	*kudu	ŋ-kùl	‘tortoise’
	*dingà	o-dziŋ	‘smoke’	*gùdú	e-kul	‘leg’

While the forms on the right illustrate the \*d > l correspondence in all positions, it should be noted that there is also a large set of cases where original C<sub>2</sub> \*d does not become l, but rather was lost entirely, resulting in coalescence of the vowels appearing before and after it:

<sup>7</sup> The tones on this pair seem to have become reversed, so we should perhaps not trust on this particular correspondence as a reliable indicator of the sound changes that occurred.

[B.7]	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>
	*kádà	i-kâa	‘charcoal’	*bédà	e-bul	‘iron, metal’
	*kádá	ŋ-káá	‘crab’	*búda	m-bvêl	‘rain’
	*kódá	ŋ-kǒ	‘snail’	*tádí	o-tál	‘length’
	*kídà	o-kyá	‘tail’	*gòdà	ŋ-gɔl	‘fish (sp.)’
	*dídà	o-lyaa	‘to cry’	*kádì ‘trouble’	o-kâl	‘illness’
	*bídà	o-vyâ	‘to call’	*gidá	i-kěl	‘blood’
	*pùdú	m-pfùú	‘bird’	*gùdù	e-kul	‘leg’

There do not seem to be any shared characteristics unique to the group in [B.7]. No significant difference between the correspondences on the left vs. those on the right exactly accounts for the fact that \*CVdV comes out sometimes as CV(V), sometimes as CVI. As will be shown below, this pattern is not unique to reflexes of \**d*: a similar split holds between root-internal \**b* and \**g* alternately devoicing or disappearing. I will propose three possible explanations for this in §B.3.

Finally, it should be noted that there are a few cases where PB \**d* also seems to correspond with modern coda *r*. It is not entirely clear what is responsible for these particular sets of correspondences. In general the \**d* > *l* change is quite robust, so it is more plausible to attribute these intervocalic (or word-final) \**d* > *r* changes as a irregular, to be explained through analogy or borrowing or inaccurate reconstruction, rather than through regular sound change.<sup>8</sup> Most of the instances of this are given in [B.8] below.

[B.8]	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>
	*kádià	o-kâar	‘woman’
	*kudu	o-kûur	‘old’
	*gèdà ‘iron thing’	oŋ-gêr	‘thing’
	*tádè	i-târ	‘stone’

The fate of original \**t* is somewhat more clear-cut. As *C*<sub>1</sub>, it usually corresponds to modern *t*. As *C*<sub>2</sub>, it corresponds fairly regularly with modern *r*. Examples of the root-initial and root-internal conditions are given in the first and second columns of [B.9], respectively:

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<sup>8</sup> If, however, a change from PB \**d* to modern *r* (separate from the change from \**d* to *l*) can be motivated, then it would be consistent with the observation from §2.5.2 that the distribution of onset *d* and coda *r* is complementary, allowing one an historical reason at least to consider coda *r* a possible manifestation of underlying coda *d*.

[B.9]	PB	Nzadi	Gloss	PB	Nzadi	Gloss
	*tààtá	tàá	‘father, uncle’	*pùtá	o-für	‘to pay’
	*tádí	o-tál	‘long, far’	*dùtá	o-dür	‘to pull’
	*tí	o-té	‘tree’	*pútá	m-púr	‘wound’
	*túmà	o-tùm	‘send’	*kítá	o-kèr	‘to make, do’
	*tàngí	n-tǎŋ	‘bed’	*titu	e-tíir	‘grass’
	*té	a-tÉ	‘saliva’			

### B.1.2.2. Labials (\*p, \*b)

In C<sub>1</sub> position, the labial stops \*p and \*b tend to show up as Nzadi p and b, except for some cases when they were followed by high round vowels: \*u, and \*u. In these instances they have lenited reflexes: \*b usually shows up as an affricated bv, while \*p appears as f after vowels, and as affricated pf after nasals. (This last reflex is due to the same synchronic post-nasal affrication that we saw with the s/ts alternation of the reflexes of original \*c). In [B.10] below are some examples of original \*b showing up as b and as bv, and in [B.11] are the corresponding voiceless pairs.

[B.10]	PB	Nzadi	Gloss	PB	Nzadi	Gloss
	*búà	m-bvá	‘dog’	*bákà	o-bâa	‘to get’
	*búdà	m-bvêl	‘rain, year’	*bòndò	i-bɔɔn	‘raphia palm’
	*bógà	m-bvwâ	‘path’	*bíndá	m-bín	‘calabash’
	*bùjâ	e-bvw`á	‘fish (sp.)’	*bèbù,	e-bèp	‘lip’
	*búkù	e-bvùu	‘fish (sp.)’	*bòngó	m-bǒŋ	‘brain; marrow’

[B.11]	PB	Nzadi	Gloss	PB	Nzadi	Gloss
	*pùdú	m-pfùú	‘bird’	*pÚtá	m-púr	‘wound’
	*pùngà	m-pf`úN	‘monkey sp.’	*pègà	i-pek	‘shoulder’
	*puku	i-fùu	‘hole’	*pogo	m-pó	‘throat’
	*pùmbuk-	o-fùm	‘to fly’	*papa	i-päp	‘wing’
				*piipí	m-pìp	‘dark’

The trend of (af)frication of labial stops before PB \*u, and \*u is quite robust and the counterexamples are few—although not nonexistent, as \*pótá > m-púr, ‘wound,’ shows. Equally true is that the Nzadi affricates pf and bv almost always derive from a PB labial stop followed by a high round vowel.

In C<sub>2</sub> position, \*p corresponds reasonably well with Nzadi p, while \*b either devoices or disappears—a similar pattern to that observed with \*d. The table in [B.12] below gives some pairs showing the split in root-internal \*b.

[B.12]	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>
	*kábá	oŋ-kâp	‘belt’	*dibà	n-dzyà	‘deep’
	*bàbá	i-pǎp	‘wing’	*gùbú	ŋ-gwùú	‘hippo’
	*bèbù	e-bèp	‘lip’			

An exception is \*jìbà > o-yìb ‘to steal’ (a borrowing?), where the final labial stop is voiced.

### B.1.2.3. Velars

Almost uniformly original \**k* will yield modern Nzadi *k* in all positions. The same cannot be said for \**g*, however. PB \**g* merged with \**k* in C<sub>1</sub> position except after a nasals prefix, such that Nzadi now maintains the PB velar voicing distinction only after nasals. The first column in [B.13] below shows the clear-cut \**k* > *k* correspondence, while the second column shows the behavior of \**g* when it appears with and without a preceding nasal.

[B.13]	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>
	*kádà	i-kâa	‘charcoal’	*gùngà	ŋ-gùŋ	‘bell’
	*kádá	ŋ-kâa	‘crab’	*gèdé	ŋ-gyě	‘under, south’
	*kímà	ŋ-kêm	‘monkey’	*gòdà	ŋ-gol	‘fish (sp.)’
	*kíngó	ŋ-kíŋ	‘neck’	*gèni	oŋ-gyÈn	‘stranger’
	*kódú	o-kûur	‘old’	*gòngá	i-kǒŋ	‘spear’
	*kámá	ŋ-kám	‘hundred’	*gàngà	o-kaŋ	‘tie’
	*kúmà	o-kûm	‘to become’	*gidá	i-kèl	‘blood’

As with the other stops, \**k* remained *k* in C<sub>2</sub> position, while \**g* alternately devoiced (very rarely) or disappeared (much more common):

[B.14]	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>
	bègà	i-pèk	‘shoulder’	dúgà	o-dwâ	‘paddle’
				jùgó	e-dzúu	‘groundnut’
				jígù	o-zwâ	‘to hear’

It is worth addressing briefly the issue of the labiovelars /*kp*/ and /*gb*/, which occur in Nzadi. As with the affricated labials, they tend to correspond to original velars that were followed by round vowels. There is too little data to determine the origin of the voicing distinction: *kp* is far more common than *gb*, which seems to be restricted to post-nasal position, but *kp* can occur post-nasally as well: *i-kpí* ‘tick’, *ŋ-kpi* ‘lion’, *ŋ-gbee* ‘side’. Most of the reconstructions for words with *kp* seem to come from original \**k*, but as can be seen in [B.15] below, ‘salt’ can be traced back to PB \**g*.

[B.15]	PB	Nzadi	Gloss
	*kú-a	o-kpá	‘to die’
	*gúá	o-kpá	‘salt’
	*kúpí	o-kpé	‘short’
	*kóci or *kopi	ŋ-kpì	‘lion’

Leaving aside the problem of voicing, the rise of labiovelars from sequences of labials followed by round vowels is perfectly logical in terms of sound change. However, it is not a clean change: as the first column of [B.13] above shows, there certainly are examples of original velars followed by round vowels that did not become labialized. Be that as it may, the labiovelars must have come from somewhere. Note that some of the PB forms have labial stops in them somewhere. It is tempting to wonder whether the source of the labiovelar stops was simply the loss of the vowel between them. However, the nature of the reduction patterns, as I shall discuss in §B.3, never resulted in the loss of interconsonantal vowels; only final vowels were lost, and only adjacent vowels glided. Perhaps sequences of velars followed by round vowels followed by labials somehow increased the rounding of the vowel sufficiently to result in labiovelar reflex,<sup>9</sup> but at the moment there is too little data to be sure.

### B.1.3 Sonorants (Nasal and Prenasalized Consonants)

Although Proto-Bantu had only nasal sonorant consonants, Nzadi has a fair set of glides and liquids. The source of Nzadi *l* and *r* has already been discussed in the previous section (they seem to hail from \**d* and \**t*, not necessarily respectively.). One of the sources of *y* was also mentioned there (original \**j*); other sources of *y* and *w* will be mentioned in the next section on vowels. That leaves only the nasals, whose development was quite systematic.

First it should be noted that nasals and pre-nasalized consonants merged almost categorically: PB \**m* and \**mb* both became Nzadi *m* ([B.16]); \**nd*, \**n*, and perhaps \**ny* became *n* ([B.17]), and \**ng* became *N* ([B.18]).

[B.16]	PB	Nzadi	Gloss	PB	Nzadi	Gloss
	mèn-à ‘swallow’	mèn	‘mouth’	cìmbà ‘to dig’	e-sim	‘root’
	gòmà	ŋ-gòm	‘drum’	kómbà ‘scrape’	e-kwôm	‘broom’
	kúmà	o-kùm	‘to become’	dímbà	o-dzîm	‘to deceive’

<sup>9</sup> Although that does not account for the pair \**kúmà* > *o-kùm*, ‘become’, which also contains a sequence of velar, rounded vowel, and following labial, and yet did not result in a labiovelar.

[B.17]	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>
	nénè	o-nân	‘big’	gòndè	ŋ-gwen	‘moon’
	jínò	i-dzên	‘tooth’	kùndà	o-kùn	‘to bury’
	mènà ‘swallow’	mèn	‘mouth’	bìndò	m-bìn	‘dirt’
	cóni	n-tsôn	‘shame’	kúndè	ŋ-kwôn	‘bean (sp.)’
	(mányà)	(i-mǎn)	(stone)	cíndí	i-sín	‘squirrel’

[B.18]	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>
	dóngú	n-dúnj	‘red pepper’
	gòngà	ŋ-gùj	‘bell’
	gòngá	i-kǒŋ	‘spear’
	dàngò	e-làj	‘door’
	dòngà	i-lɔj	‘plate’

Although there is little data regarding the fate of PB *\*ɲ*, the fact that it seems to have merged with reflexes of *\*n* and *\*nd* might explain why the only post-nasal reflexes of *\*j* that appear are *dz*. If a *\*j* had become *\*y* after a nasal the way it sometimes did after vowels, then it would have undergone the same fate as original *\*ɲ*, which is to become *n*. Any trace of original post-nasal *\*j* would thus have been erased. If this theory is to be adopted (it is by no means irrefutable, given the scanty evidence), then it would require that the change of *\*j* to *y* must have occurred before the simplification of the nasals. Only in this way could an original *\*ɲj* sequence have merged with original *\*ny* early enough for both to become modern *n*.

## B.2. Vowels

It is generally agreed that PB had seven contrasting vowels which could occur either long or short. Two interpretations of the original system are presented in [B.19].

[B.19]	<i>[±ATR] High Vs</i>		<i>[±ATR] Mid Vs</i>	
	*i	*u	*i	*u
	*ɪ	*ʊ	*e	*o
	*ɛ	*ɔ	*ɛ	*ɔ
	*a		*a	

As indicated, the first system assumes that a contrast in Advanced Tongue Root (ATR) among the high vowels, while the second assumes an ATR contrast among the mid vowels. Most scholars today seem to assume that PB had the first system, although many Northwest Bantu languages have the synchronic system to the right. Phonetically, the Nzadi follows the Northwest Bantu pattern, as it contrasts the seven long and short vowels /i, e, ɛ, u, o, ɔ, a, ii, ee, ɛɛ, uu, oo, ɔɔ, aa/ (see §2.3). (In the PB reconstructions I use *\*e* and *\*o* for orthographic

convenience, although I also assume these were pronounced [ɛ] and [ɔ] in the proto language.)

### B.2.1. Single Vowels

Like PB, Nzadi has a seven-vowel system that contrasts length, but it does not correspond directly to the PB reconstructions. The PB high vowels often merge in Nzadi: *\*i* with *\*ɪ* and *\*u* with *\*ʊ*. The modern reflexes are the undifferentiated high vowels *i* and *u*. [B.20] below gives some examples for the high front vowels, while [B.21] gives correspondences for the high back vowels.

[B.20]	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>
	*piipí	m-pìp	‘dark’	*cínđí	i-sín	‘squirrel’
	*đingà	o-dziŋ	‘smoke’	*cimba ‘to dig’	e-sim	‘root’ (cl. 7)
	*jibà	o-yìb	‘to steal’	*bíndá	m-bín	‘calabash’
	*jíngà ‘blood’	o-zìŋ	‘to be alive’	*cíngá	n-tsiŋ	‘fish (sp.)’
	*kíngó	ŋ-kíŋ	‘neck’			

[B.21]	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>
	*pùdú	m-pfùú	‘bird’	*dúma ‘bite’	o-lúm	‘to peel, pluck’
	*pùngà	m-pfùŋ	‘monkey (sp.)’	*gùngà	ŋ-gùŋ	‘bell’
	*kúdù	ŋ-kùl	‘tortoise’	*jùgù	e-dzuu	‘groundnut’
	*pùtà	o-fùr	‘to pay’	*gùdò	e-kùl	‘leg’

This merger is not entirely straightforward, however. In some cases PB *\*ʊ* in fact shows up in Nzadi as *wɔ*, thus belying the apparent merger shown in [B.21]. The clearest reconstructions are given below in [B.22].

[B.22]	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>
	*pupa ‘to fall drop by drop’	m-pwóp	‘dripping pus’
	*kúndè	ŋ-kwôn	‘bean’

However, these cases are problematic in some ways: they are certainly not numerous, they do not appear to have any counterpart with the front vowels, and in some of them the tones do not match up—almost unheard of in Nzadi (see §B.4 for a discussion of tonal correspondences). Given that the PB *u* / *ʊ* merger seems much more reliable, it is more plausible to write off these cases as irregularities due to other factors: borrowing, analogy, incomplete reconstruction, etc.

The reflex of PB *\*a* remains reliably *a*, as shown in [B.23] below.

[B.23]	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>
	*tàngí	n-tǎŋ	‘bed’
	*cádá	o-sâl	work’
	*càngà	e-sàŋ	island’
	*gàngà	o-kàŋ	‘to tie’
	*jàngà ‘to refuse’	o-zâŋ	‘to lack’
	*kámá	ŋ-kám	‘hundred’
	*dàngò	e-làŋ	‘door’

### B.2.2 Combined Vowels

Sources of modern mid vowels include PB *\*e* and *\*o*, as well as cases of vowel coalescence. Where PB *\*e* and *\*o* yield modern mid vowels, usually the preceding obstruent glided accordingly. In these cases, the current reflex is most frequently the lower mid vowel *ɛ* or *ɔ*, rather than the higher mid vowel *e* or *o*. (This pattern is also a distributional tendency in the modern language: there are only two cases of *Cye* in the corpus compared to 26 of *Cyɛ*, and only three cases of *Cwo*, compared to 30 of *Cwɔ*.) Examples are given below in [B.24].

[B.24]	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>
	*còbó	o-swòó	‘intestine’	*bémbédé	m-byém	‘mosquito’
	*dóm̄ba	o-lwôm̄	‘to ask for’	*ndédé	on-dyéé	‘white man’
	*bòmbó	m-bwǒm̄	‘nose’	*gèdè	n-gyě	‘downstream’
	*kómbà	o-kwôm̄	‘sweep’	*céndé	o-syéŋ	‘thorn’

This pattern is surprising if thought of as palatalization or labialization, not least because one would expect the high vowels to be more likely than mid vowels to trigger palatalization or rounding—yet we see in [B.20] and [B.21] that they did not. However, the reconstructions in [B.24] are robust, and seem more reliable than the few cases in [B.22] that could be coerced to show gliding from high vowels. There is insufficient data to determine whether the identity of the second vowel is important; certainly the examples in [B.24] show that non-high vowels are the most frequent  $V_2$  in these correspondence sets, so it is implausible to attribute the glide to the influence of a following high vowel. Perhaps it makes the most sense to think of these pairs as not showing palatalization or labialization, but rather “breaking”: the mid vowels *\*e* and *\*o* became *iɛ* and *uɔ*, and, as is common in Nzadi, the preceding high vowels were simply reduced to glides.

Other sources of modern mid vowels can be traced to cases of coalescence. Generally speaking, voiced  $C_2$  tended either to devoice (as with *\*g > k*) or become sonorant (as with *\*d > l* and *\*t > r*). Some, however, simply were lost, which will be discussed more fully in the next section. Whatever the story behind this inconsistent voiced-stop loss, it nevertheless created a situation in which two vowels that were not otherwise adjacent were brought



together. When those vowels were the same, the result was simply a long vowel, as shown below in [B.25].

[B.25]	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>
	*kádà	i-kâa	‘charcoal’
	*kádá	ŋ-kâa	‘crab’
	*còbó	n-tswòó	‘cassava’
	*jùgù	e-dzúu	‘groundnut’
	*pùdú	m-pfúú	‘bird’
	*ndédé	on-dyéé	‘white man’
	*gèdé	n-gyě	‘downstream’
	*bákà	o-bâa	‘get’

However, when the vowels were not the same, vowel coalescence occurred. If the first vowel was a high vowel, the result was the corresponding glide, followed by the second vowel—usually *a*:

[B.26]	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>
	*kídà	o-kyá	‘tail’	*dú,g-à	o-dwâ	‘to paddle’
	*dìdà	o-lyâa	‘to cry’	*gùbù	ŋ-gwùú	‘hippo’
	*bídà	o-vyâ	‘to call’	*bùjá	e-bvwă	‘fish (sp.)’
	*dìbà	n-dzyâ	‘deep’	*kúpà	o-kwâ	‘bone’

When the first of the two vowels involved was not high, the outcome is less clearly systematic. One of the more prevalent patterns, however, is that a  $V_1V_2$  sequence usually resulted in  $V_1$  ‘winning,’ especially if  $V_1$  was \**o*. This is the reverse of the modern system where it is  $V_2$  that remains when such a sequence is contracted under rapid speech (see section 2.5.1.1).<sup>10</sup> Some examples are given below in [B.27].

[B.27]	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>
	*jógà	o-zwô	‘to bathe (intr.)’
	*jògù	n-dzoo	‘elephant’
	*jókà	o-dzwó	‘snake’
	*kódà	ŋ-kǒ	‘snail’

In other cases, the combined vowels emerge as something other than the two originals. There is insufficient data to reconstruct every combination, but [B.28] below shows some.

<sup>10</sup> This is not without exception. In \**jádé* > *n-dzée*, ‘river,’ for example,  $V_2$  clearly wins out over  $V_1$ . The same might also be true of \**tákò* > *i-tô*, ‘buttock,’ unless it is analyzed as a case of a low vowel \**a* and a mid vowel \**o* coalescing into a lowered mid-vowel  $\text{ɔ}$ .

Mostly the coalescences seem to yield Nzadi *e*: \**u*, or \**ʊ* followed by \**i*, oddly enough, often emerges as a combination of a glide (or other labial quality) and *e*, while \**i* and \**a* do not produce the glide.

[B.28]	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>
	*cùki	e-swě	‘hair’
	*cúí	n-tswé	‘fish’
	*kúpí	o-kpé	‘short’
	*gidá	i-kě̀l	‘blood’

### B.3. Reduction Patterns and Relative Chronology

One of the major trends in Nzadi is shortening. As was mentioned in §2.1, 85% of words have a monosyllabic stem, and the development of modern Nzadi roots from the common Proto-Bantu CVCV root shape followed one of two paths. Either C<sub>2</sub> disappeared—usually when it was a voiced stop—or the final vowel (V<sub>2</sub>) was dropped.

I have already brought up the mysterious split between root-internal voiced stops: sometimes they devoiced and remained as Nzadi codas, while other times they disappeared entirely. There are two possible accounts of this. The first explanation appeals to the reconstructed PB phoneme inventory. Some Bantuists have reconstructed another set of stops which are separate from the voiced stops due to a fortis/lenis distinction. This has not been widely accepted, but if it turns out that those reconstructed fortis/lenis series are distributed in such a way that one—say, the fortis series—is found in the words that retained the reflexes of the PB voiced stops, while the words that lost them contain only the other series—ideally lenis—then we will see a very tidy explanation for why Proto-Bantu voiced stops behaved in two separate ways: in fact, they were two separate series of phonemes.

The second account appeals to language contact: theoretically, the words that lost their voiced stops can be understood as ancient borrowings that occurred some time after the change from PB \**d* to *l* and the devoicing of \**g* and \**b* to \**k* and \**p* was complete. Thus, there were no native stem-internal voiced stops except for those that were borrowed. A second, separate change that was responsible for the loss of voiced stops in those positions resulted in the loss of \**g*, \**b*, \**d* in the borrowings, but spared the native reflexes which were now \**k*, \**p*, and \**l*.

If the second theory is to be accepted, then we must conclude that the loss of voiced stops in C<sub>2</sub> position happened later in the development of Nzadi than the other changes involving voiced stops. PB \**d* must have become *l* and \**g* and \**b* must have devoiced before the new borrowings containing \**d*, \**g*, and \**b* entered the language. If not, all the borrowed voiced stops would have behaved like native ones, and we would not see the observed split in the modern Nzadi reflexes.

By a similar reasoning, the change in [B.6], which turned word-initial \**d* into *dz* before high front vowels, probably occurred before the more general change in (3b), wherein word-

initial \**d* went more generally to *l*. (A number of languages in the area have [d] before /i/ (and after a nasal), otherwise [l], e.g. Yaka [di, le, lu, lo, la].) Otherwise, \**d* everywhere would have become *l*, and while the affrication of an alveolar obstruent before a high front vowel is perfectly natural, it is slightly less likely for such a change to affect sonorants like *l*.

The overarching question is which of the two shortening procedures applied first to \*CVCV words. The first possibility is that the shortening eliminated word-final vowel (V<sub>2</sub>) first, changing a \*CVCV into \*CVC. Next, final voiced stops disappeared, resulting in CV words in the modern language. The second is that voiced stops disappeared intervocalically first while sonorants and voiceless ones remained, giving \*CVCV (where C<sub>2</sub> is not a voiced stop) and \*CVV words. This was then followed by the disappearance of final vowels in all \*CVCV words.

The second option seems the most plausible. The cases involving the loss of voiced stops almost uniformly show the remains of two vowels: if the initial vowel was high, it often became a glide, as in [B.26], the second vowel becoming the nucleus of the remaining syllable. If the vowels are identical, the result is usually a long vowel, as in [B.25]. If the final vowels had been lost first, followed by the obstruents word-finally, then we would expect no evidence of the final vowels to remain in the words, or else we would expect evidence of them to remain everywhere through processes like compensatory lengthening and umlaut. Instead, there is a contrast: we do not tend to find long vowels in words descended from Proto-Bantu \*CVNV forms, while we do see long vowels and diphthongs in words descended from Proto-Bantu \*CVDV forms. The more natural conclusion, then, is that the word-final vowels remained until after the obstruents were lost, and only then did the remaining CVNV words undergo apocope.

#### B.4. Tones

This section will be necessarily short, not for lack of evidence, but for lack of complexity. Nzadi generally retains the exact reconstructed tones found in the PB roots. Because of the near-universal shortening from two-syllable stems to one-syllable stems, identical tone sequences were simplified, while non-identical sequences are preserved as contour tones. This means that a PB word of the shape  $\acute{\acute{\sigma}}$  would appear in Nzadi as  $\acute{\sigma}$ , PB  $\grave{\acute{\sigma}}$  would show up as Nzadi  $\grave{\sigma}$ , PB  $\acute{\acute{\sigma}}$  became Nzadi  $\acute{\acute{\sigma}}$ , and PB  $\grave{\acute{\sigma}}$  became Nzadi  $\acute{\acute{\acute{\sigma}}}$ . I will give examples of these correspondences first in nouns, and then discuss verbs. Examples of identical tone sequences simplifying are shown in [B.29], while examples of non-identical sequences becoming contours are shown in [B.30].

[B.29]	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>
	*tádí	o-tál	‘length’	*dàngò	e-laŋ	‘door’
	*kúpí	o-kpé	‘short’	*gùngà	ŋ-guŋ	‘bell’
	*bíndá	m-bín	‘calabash’	*gòdà	ŋ-gɔl	‘fish (sp.)’
	*kámá	ŋ-kám	‘hundred’	*jògù	n-dzɔɔ	‘elephant’
	*kíngó	ŋ-kíj	‘neck’	*pègà	i-pek	‘shoulder’

[B.30]	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>
	*bòmbó	m-bwɔ̃m	‘nose’	*jáda	e-dzáà	‘claw’
	*gòngá	i-kɔ̃ŋ	‘spear’	*kúndè	ŋ-kwɔ̃n	‘bean (sp.)’
	*gidá	i-kèl	‘blood’	*dúmè	o-lùm	‘husband’
	*pùdú	m-pfùú	‘bird’	*kúdù	ŋ-kùl	‘tortoise’
	*còbó	o-swɔ̃ɔ	‘intestine’	*jínò	i-dzèn	‘tooth’

The tones on verb stems depend crucially on the inflectional features, as seen in Chapters 7 and 8. In this study we have cited infinitive tones. These derive from the PB forms consisting of the verb stem + a low-tone suffix *\*-à*, whose vowel has mostly fallen out, but whose L tone faithfully survives into modern Nzadi. For this reason, the possible tones in verbs are either HL, if the PB stem had a high tone, or simply L (simplified from LL), if the PB stem had a low tone. Examples of both patterns are given below in [B.31].

[B.31]	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>	
	*jíb-à	o-yīb	‘steal’	*díd-à	o-lyàa	‘to cry’	
	*jóm-à	o-yùm	‘to dry’	*kùnd-à	o-kùn	‘to bury’	
	*bák-à	o-báa	‘to get’	*gàng-à	o-kàŋ	‘tie’	
	*kúm-à	o-kùm	‘to become’	*dìik-a	o-dzyà	‘to bury’	
	*dúm-a	‘bite’	o-lùm	‘to peel, pluck’	*pùt-à	o-fùr	‘to pay’

The only exceptions to this generalization are the twelve verbs in Nzadi which do not bear any trace of the L of PB *\*-à* infinitive suffix. These are all alike in having the form CV́. As discussed in §3.3.3, these verbs mostly correspond to PB stems that themselves had the shape CV́, as shown below in [B.32].

[B.32]	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>
	*ǀí-à	o-dzá	‘to eat’
	*kú-à	o-kpá	‘to die’
	*nyó-à	o-nǀ	‘to drink’
	*pá-à	o-pá	‘to give’
	*tó-à	o-tá	‘to bite’
	*tó-à	o-tsǀ	‘to pound’

Note that all of these verbs end in [a] or [ǀ], clearly indicating that the final \*-à has fused with the \*CV root (realized [ǀ] after \*o). It is likely that the above tonal pattern is regular, having to do with the lack of a \*C<sub>2</sub> in PB. This would explain the similar pattern found in the following forms on the left in [B.33], where the final L tone in the PB root is not preserved in the Nzadi CV word:

[B.33]	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>	<i>PB</i>	<i>Nzadi</i>	<i>Gloss</i>
	*búá	m-bvá	‘dog’	*bádè	i-bá	‘palm tree’	*búgà	m-bvwâ	‘path’
	*túè	ǀ-tsǀ	‘head’	*kídà	o-kyá	‘tail’	*kúpà	o-kwâ	‘bone’
	*kúá	i-kpá	‘death’	*júki	nwí	‘bee’	*kádà	i-káá	‘charcoal’
				*jóká	o-dzwó	‘snake’	*pókù	m-púù	‘rat’
									‘mouse’

It is thus likely that earlier HL contours, i.e. those which existed before the loss of intervocalic C<sub>2</sub>, were simplified to H. Perhaps some of the irregular PB \*ǀò > Nzadi H correspondences such as those given in the middle column of [B.33] can be accounted for by an early loss of the C<sub>2</sub>, which then fed into the simplification of HL as H. Since other nouns show regular \*H-L > HL with loss the intervocalic C<sub>2</sub>, as in the right column above, there would have had to be different waves of consonant loss both pre- and post-dating the \*HL > H tonal simplification. Whatever the cause of the above double reflexes, there is no overlooking the fact that most of the tonal correspondences are completely regular.

## TEXTS

Text 1: Nzadi History

Text 2: The Nzadi Market

Text 3: *Okúŋ*: An Nzadi Fish

The following three narratives were recorded with Simon Nsielanga Tukumu on 27 January 2010, and were later transcribed by the authors, with Simon Tukumu ensuring proper transcription, offering corrections for false starts and hesitations on the transcriptions, and providing Nzadi vocabulary to replace occasional code-switching occurrences. The transcriptions presented here reflect those (minor) changes.

Also evident in the narratives is some of the variation discussed in this grammar, especially variations in vowel shortening before other vowels and in tense/aspect tone patterns and tone contour simplification.

In general, intonation (see §3.4) is indicated with punctuation (‘,’ and ‘.’) rather than by tone marking.

## Text 1: Nzadi History

- [1] nápe é ye mpíl akúúr ↓é bǐ ó ↓yé bǝ o-kaa kókál ↓é waa  
 this PROG be way ancestors of us PAST come they INF-be LOC.place of village  
*This is the way our ancestors came to be at the place of our village, where*
- [2] é bǐ nǝ ↓nówe akúúr ↓é bǐ bǐ ka lánj o-zyá ngbèè o  
 of us it today ancestors of us we NEG.PRES manage INF-know side PAST  
*it is today. Our ancestors, we don't know which direction they*
- [3] fé ↓bó bɔ, mi a máj á yúntsà o-tyén ye ndám akúúr  
 come.from they NEG I PRES have PERF try INF-talk with a.few elders  
*came from. I have tried to talk with a few elders*
- [4] kókát waa é bǐ íjki ngbee o fé bǐ, me tíí esú ↓é ↓nówe  
 inside village of us which side PAST come.from we but up.to day of today  
*in our village [about] which direction we came from, but up to now*
- [5] bɔ a tyén ningé bi o fé ngyě, me ngye kókál nge  
 they PRES say that we PAST come.from south but south LOC.place which  
*they say we came from the south, but which place in the south*
- [6] bǐ ka lánj o-zyá bɔ. bɔ â fá ngyě. nápe mpíl akúúr  
 we PRES.NEG manage INF-know NEG they PERF come.from south this way elders  
*we don't know. They came from the south. This is the way our elders*
- [7] ↓é bǐ a tyén bɔ o fé ngyě. bɔ â báán. o báán  
 of us PRES say they PAST come.from south they PERF go.upriver PAST go.upriver  
*say they came from the south. They went upriver. When they went upriver,*
- [8] bǝ, bɔ â báán e ndzée kasáí. tíí bɔ á ke ko-sí baar  
 they they PERF go.upriver river Kasai and they PERF go LOC.INF-leave people  
*they went up the Kasai river. And they went to leave people*
- [9] tíí ↓kó wàá ómótúk bɔ a bvyá nǝ njénya kó mbíí ílebô, me  
 up.to LOC village one they PRES call it Nkenya LOC near Ilebo but  
*up to a village they call Nkenya, near Ilebo. But*
- [10] íjki mpíl ↓ó ↓yé bǝ o-túl wàá é bǐ tíí ↓késu é ↓nówe  
 which way PAST go they INF-arrive village of us up.to LOC.day of today  
*which way they went to arrive at our village, up to today*

- [11] bĩ ka lán o-zyá ntét bɔ. mɛ kó mpíl akúúr a tyén bǔ,  
we NEG.PRES manage INF-know first NEG but LOC manner elders PRES say they  
*we don't yet know. But the way the elders say,*
- [12] bɔ ó ki a zín ʔkókát bintsanga ó kíi bɔ a zín kukwá bɔ  
they PAST be PRES live inside islands PAST be they PRES live there they  
*they lived on islands. When they lived there,*
- [13] ba-mbyé ʔó ká obyɛ. baar ó ki á kpá obyɛ. nǔ ninyáá ʔó  
PL-mosquito PAST be many people PAST be PRES die many it this PAST  
*there were many mosquitos. Many people were dying. This [is why]*
- [14] yé bǔ o-túl kókál ʔé wáá é yé nǔ ʔnǔwɛ. nápe mpíl  
come they INF-arrive LOC.place of village PROG be it today this manner  
*they came to arrive at the place our village is today. This is the way*
- [15] akúúr a tyén bǔ sám ʔé itswár ʔé bí ʔé wáá, mɛ mi a  
elders PRES talk they reason of *histoire* of us of village but I PRES  
*the elders talk about our village history, but I*
- [16] mánj yɛ mpfún o-kɛ ko-ker ba-rechérche sám mi e sónka istwár  
be with desire INF-go LOC.INF-do PL-research reason I SBJV write history  
*have the desire to go to do research so that I may write that history*
- [17] ninyáá sám bi e zí íjki ŋgbee o fé bǔ, íjki  
that reason we SBJV know which side PAST come.from they which  
*so that we may know which direction they came from, which*
- [18] mpíl ʔó yé bǔ, íjki mpíl o zín bǔ kó bintsanga mimyá,  
manner PAST come they which manner PAST live they LOC islands those  
*way they came, how they lived on those islands,*
- [19] íjki mpíl ʔó yé bǔ o-tul tíi okal é wáá é ʔyé nǔ.  
which manner PAST come they INF-arrive up.to place of village PROG be it  
*how they came to arrive at the place the village is.*



## Text 2: The Nzadi Market

- [1] mi a líŋ o-tyén sám baar ké zî íŋki mpíl a sùm  
 I PRES want INF-tell reason people SBJV know which manner PRES buy  
*I want to tell so that people may know how they do (lit. buy) the market*
- [2] bə iyó kó waa e mî. sám o-súm iyó baar a fět ↓ó-kê  
 they market LOC village of me reason INF-buy market people PRES must INF-go  
*in my village. To hold the market, people must first go*
- [3] ntét ndzée á ke bə ndzée, bə á ker kisál ↓kó ndzèè. bə á  
 first river PERF go they market they PERF do work LOC river they PERF  
*to the river. When they've gone to the river, they've worked at the river. They've caught*
- [4] báa ntswé. ↓késúú iyó bə á dwá ŋkíí tíí ↓kííyo ye bə á  
 get fish LOC.day market they PERF paddle oar up.to LOC.market and they PERF  
*fish. On market day they've paddled up to the market and they've*
- [5] baan iyó. iyó ↓é ye okal ómótúk baar a yá obyê. baar a  
 begin market market PROG be place one people PRES come many people PRES  
*started the market. The market is a place many people come. People come from*
- [6] fá ŋgbee obyê. ye kííyo é wáá, iyó e búùn, baar a  
 come.from side many and LOC.market of village market of Buun people PRES  
*many directions. And at the village market, the market of Buun, many people come*
- [7] yá obyê sám o-súm ntswé, sám o-súm ntsúr, sám o-súm ↓mámpa, sám  
 come many reason INF-buy fish reason INF-buy meat reason INF-buy bread reason  
*to buy fish, to buy meat, to buy bread,*
- [8] o-súm ntswòó. adziŋ a fá bǒ man é bǒ, bə a tswá  
 INF-buy cassava Dzing.people PRES come.from they villages of them they PRES bring  
*to buy cassava. The Dzing people come from their villages; they bring*
- [9] ba-ntswòó. bə a tswá ba-entúŋ, bə a tswá eŋgér obyê. ba-pecheur  
 PL-cassava they PRES bring pl-vegetables they PRES bring things many PL-fisherman  
*cassava, they bring vegetables, they bring many things. The fishermen,*

- [10] a fá bǒ ndzée, bɔ a tswá ntswé. bɔ a tswá ntsúr.  
 PRES come.from they river they PRES bring fish they PRES bring meat  
*when they come from the river, they bring fish. They bring meat.*
- [11] ye késú iyó, baar á ya bǒ, bɔ á baan o-súm, bɔ á baan  
 and LOC.day market people PERF come they they PERF begin INF-buy they PERF begin  
*And on market day, when people have come, they've begun to buy, they've begun*
- [12] o-yéè. iyó mpíi é ye okal ómótúk baar á ya bǒ sám bɔ  
 INF-sell market also PROG be place one people PERF come they reason they  
*to sell. The market is also a place where people have come so that they*
- [13] e kútan sám o bɔ e zábakan. nɔ é ye okal ómótúk baar  
 SBJV meet reason ? they SBJV know.each.other it PROG be place one people  
*may meet, so that they may know each other. It is a place people*
- [14] á †yá bǒ sám bO e zí mpíi ndáá mpíl †é lí nǒ kó  
 PERF come they reason they SBJV know also news manner PROG pass it LOC  
*come so that they may know also the news of what is happening in*
- [15] ntôt, mpil é lí nǒ kó mǎn íjkin, mpil †é lí nǒ ko  
 world manner PROG pass it LOC villages other manner PROG PASS it LOC  
*in the world, what is happening in other villages, what is happening in*
- [16] mǎn é bí. ye kíyɔ, á ya bǒ bɔ a kútan ye baar obyê  
 villages of us with LOC-market PERF come they they PRES meet with people many  
*our villages. And at the market, when they've come, they meet with many people.*
- [17] sám o-súm iyó bí a máŋ ye mpíl bí a súm †bí iyó.  
 reason INF-buy market we PRES have with manner we PRES buy we market  
*In order to hold the market, we have a way we do the market.*
- [18] adziŋ a fá bɔ man é bǒ, á †yá bǒ kíyo  
 Dzing.people PRES come.from they villages of them PERF come they LOC.market  
*When the Dzing people come from their villages, when they come to the market,*
- [19] bí a máŋ yE okal ómótúk nanŋa súm †bó iyó. mpíi kó ntsú ná  
 we PRES be with place one where buy they market also LOC day of  
*we have a place where they do the market. Also, on market days,*

- [20] iyó sám o-kót iyó nɔ a maŋ ye osim. ŋkúm iyó á fét  
 market reason INF-enter market it PRES be with rope chief market PERF must  
*in order to enter the market, there is a rope. The market chief must*
- [21] o-pá ntswa sám akáár adziŋ ↓á ya bǒ bɔ ké kót iyó  
 INF-give order reason women Dzing PRES come they they SBJV enter market  
*give the order for the Dzing women who have come to enter the market*
- [22] ye bɔ ké báán kisál é bǒ sám o-súm ntswé, sám o-súm esáá  
 and they SBJV begin work of them reason INF-buy fish reason INF-buy food  
*and to begin their work to buy fish, to buy food,*
- [23] mpi sám ba-pecheur ke báán o-ték ba-ntswé é bǒ o-ték ba-ntsúr ↓é  
 also reason PL-fisherman SBJV begin INF-sell PL-fish of them INF-sell PL-meat of  
*also for the fishermen to begin to sell their fish, to sell their meats*
- [24] bǒ o-ték engér mɔ-ánkũm naŋga fã ndzéé. akúúr ↓é bí na ntá  
 them INF-sell things all which come.from river elder of us DET first  
*to sell everything that comes from the river. Our very first elders*
- [25] osó bǒ káá ye ba-ntsúù sám ↓ó-súm iyó me kó ntán ↓nape bi a  
 first they be with PL-days reason INF-buy market but LOC time this we PRES  
*had days to do the market,<sup>11</sup> but now [when] we*
- [26] súm iyó kó ba-ntsúú bi a lí esúú ómótúk kó esúú ↓ípé bi á  
 buy market on PL-days we PRES pass day one LOC day two we PERF  
*hold the market on days, we skip one day and on the second day we've*
- [27] baan o-súm iyó. tíí ko ntsúú ↓é nǒwe mi a bántsa baar á ker  
 begin INF-buy market and LOC days of today I PRES think people PERF do  
*begun to do the market. And nowadays I think people have done*
- [28] ná mpil ómótúk. bɔ a lí esú ómótúk kó esú íjkěn iyó a  
 only manner one they PRES pass day one LOC day other market PRES  
*just one way. They skip one day, on the other day the market*
- [29] mǎŋ bɔ a lí esú ómótúk ye èsú íjkěn iyó a mǎŋ mípi bɔ  
 be they PRES pass day one and day other market PRES be also they  
*takes place, they skip one day and on the other the market takes place again, they*

<sup>11</sup> It seems that the elders held the market every day, but now it is only held every other day.

- [30] â súm iyó. kó ba-ntsú é ↓nǒwe iyó dyák baar ka kál  
 PRES buy market LOC PL-days of today market again people NEG.PRES return  
*do the market. Nowadays, the market, many people don't keep*
- [31] ↓ó-yǎ dyák obyé bɔ sám e nge sám ba-pecheur ka (mán) dyák  
 INF-come again(NPI) many NEG reason of which reason PL-fisherman NEG be again  
*coming because there are no longer many fishermen*
- [32] bǒ obyé bɔ ye mpi kó ndzée ntswé â kúm màâ mpâs sám  
 they many NEG and also LOC river fish PERF become small difficulty reason  
*and also at the river fish have become difficult*
- [33] o-báà. adziŋ ka kál o-yǎ dyák obyé bɔ sám bǒ ka  
 INF-get Dzing.people NEG.PRES return INF-come again much NEG reason they NEG.PRES  
*to get. Not many Dzing people keep coming very much because they don't*
- [34] mán ye ndzii dyák obyé bɔ sám ↓ó-súm iyó.  
 have with money again much NEG reason INF-buy market  
*have much money anymore to do the market.*
- [35] nǒ ninyáá iyó a mán a tsá. baar ka kál  
 it that market PRES be PRES descend people NEG.PRES return  
*Due to that, the market is diminishing. Not many people keep*
- [36] ó-ya dyák obyé bɔ. mípi ntswé ka kál ↓ó-mɔnka dyák obyé  
 INF-come again many NEG also fish NEG.PRES return INF-be.visible again many  
*coming. Also not many fish are to be seen anymore.*
- [37] bO. nǒ ninyáá baar a tsá kókát iyó. nápe mpíl iyó á ke  
 many it that people PRES descend inside market this manner market PERF go  
*Due to that, people are becoming fewer in the market. This is how our market*
- [38] nǒ kó waa é bí iyó á ké nǒ kó (ba-)man é bí na andzée  
 it LOC village of us market PERF go it LOC PL-villages of us DEM Nzadi.people  
*has been going on, the market has been going on in the villages of us, the Nzadi  
 people.*

## Text 3: okúŋ: An Nzadi Fish

- [1] kó wáá é bǐ, bǐ a máŋ ye ntswé ómótúk naŋga tún bǐ o-yeé  
 LOC village of us we PRES be with fish one which refuse we INF-SELL  
*In our village, we have a fish which we refuse to sell.*
- [2] ntswé kún ↓dzín e nǎ okúŋ. okúŋ e yě ntswé ómótúk ntôm. ntôm  
 fish that name of it okúŋ okúŋ PROG be fish one taste taste  
*The name of that particular fish is “okúŋ”. okúŋ is a tasty fish. Its taste*
- [3] ↓é nǎ é ↓yé ker ntsúr, me nǎ ↓é ye ntswé. sám ↓ó-láá okúŋ  
 of it PROG be like meat but it PROG is fish reason INF-cook okúŋ  
*is like meat, but it is fish. In order to cook okúŋ,*
- [4] ya a fět ↓ópíi fup nǎ kó tsyǎ. á fup nǎ yǎ kó tsyǎ,  
 you PRES should first grill it LOC fire PERF grill it you LOC fire  
*you should first grill it on the fire. After you’ve grilled it on the fire,*
- [5] ya a lúm mpwe é nǎ. a lúm ↓yá mpwe é nǎ, ya á ker  
 you PRES remove skin of it PRES remove you skin of it you PERF make  
*you remove its skin. After you remove its skin, you make*
- [6] ibvyê. yǎ a sá nǎ kibvyê. a sá ↓yá nǎ kibvyê, nǎ  
 wrapping you PRES put it LOC.wrapping PRES put you it LOC.wrapping it  
*a wrapping. You put it on the wrapping. When you put it in the wrapping,*
- [7] máá yá ya á ke kokúl iláár. a kúl ↓yá iláár, ya â sá  
 COND.pres be.ready you PERF go LOC.pick lemon PRES pick you lemon you PERF put  
*when it is ready, you go pick a lemon. When you pick a lemon, you put*
- [8] nǎ iláár, nǎ á ya ntôm. sam ↓é ngé okúŋ akúúr ↓é bǐ ko  
 it lemon it PERF become taste reason of which okúŋ ancestors of us NEG.PAST  
*lemon on it and it becomes tasty. The reason why, okúŋ, our ancestors*
- [9] tún ↓ó-yéé nǎ bǎ sám bǎ o zǐ niŋgé ntswé ninyá é ye  
 refuse INF-sell it NEG reason they PAST know that fish that PRES be  
*refused to sell it, because they knew that that fish is*

- [10] ntôm. ye kó luzín ↓é bī andzée bī ka yéè ntswé ninyá bɔ. atá  
 taste and LOC life of us Nzadi.people we NEG.PRES sell fish that NEG even  
*tasty. In the tradition of us Nzadi, we don't sell that fish. Even*
- [11] nɔ má ka ikíkěr bī ka yéé ↓nó bɔ. nɔ á ya ker luzín  
 it COND be small we PRES.NEG sell it NEG it PERF become like life  
*if it is small, we don't sell it. It has become a part of our existence,*
- [12] ↓é bī ker tradition ↓bī, sám é ↓ntswé ninyá. nǎ ↓é yě ntswé andzée  
 of us like tradition our because of fish that it PRES be fish Nzadi  
*our tradition, because of that fish. It is the Nzadi fish.*



## ENGLISH-NZADI LEXICON

In the course of studying Nzadi a lexicon of slightly over 1,000 Nzadi words and word combinations was compiled. These are presented below in the form of an English-Nzadi lexicon, arranged alphabetically by the English gloss. The following abbreviations identify the part of speech:

<i>a.</i>	adjective	<i>interj.</i>	interjection	<i>prep.</i>	preposition
<i>adv.</i>	adverb	<i>i.</i>	interrogative	<i>pron.</i>	pronoun
<i>aux.</i>	auxiliary	<i>n.</i>	noun	<i>q.</i>	quantifier
<i>c.</i>	conjunction	<i>nc.</i>	noun compound	<i>v.</i>	verb
<i>d.</i>	determiner	<i>num.</i>	numeral	<i>vc.</i>	verb complex

In some cases the part of speech is only approximate. For example, adjectives are identified as such although they are morphologically nouns (§5.4). A major problem is whether certain particles should be considered auxiliaries, adverbs, or (in some cases) even verbs. The identification of parts of speech is thus a practical one designed to be helpful in identifying the function of the entries in question, e.g. adjectives modify nouns.

Addition information is provided as follows:

- (i) For nouns, if the plural has a different prefix from the singular, the plural prefix is indicated in parentheses, e.g. *etwâ (a-)* ‘bag’. If the noun is expected to take a different prefix in the plural (§4.2) but doesn’t, the same prefix is indicated in parenthesis: *ekó (e-)* ‘cloud’. In the few cases where the whole form changes, the full form of the plural occurs in parentheses: *muur (baar)* ‘person’. If a plural is not indicated, this means that there is no change, although most nouns



can take the plural proclitic *ba-*, if needed. Noun compounds are identified as *nc*.

- (ii) Verbs are entered in their infinitive form, hence preceded by the prefix *o-*. For monosyllabic verbs ending in a vowel, two forms are indicated after them in parentheses, e.g. *obáà (baa; bee)* ‘to get, receive’. The first refers to the form the verb takes in the past tense; the second refers to the form it takes in the subjunctive (see §6.3). Since some verbs offer a choice of realization in the past tense, these are indicated with a  $\sim$ , e.g. *ovyâ (vya~vi; vi)* ‘to call’. Verb complexes (e.g. verb + noun) are identified as *vc*.

*able, be* : ofɛ̃n v. (=be possible, may can)  
*accept* : otsî v.  
*accompany* : osî v.  
*accompany* : oke ye muur vc. (=go with someone)  
*accompany* : osap v.  
*accuse* : oba ndáá vc.  
*adapt* : oswom v. (=change)  
*add* : oyík v.  
*afternoon* : embvakǒl n.  
*again* : dyâk adv.  
*again (do sth. again)* : okal v. (also òǹkal)  
*age* : otûl okúur vc. (=become old)  
*ago; a long time ago* : ntámá adv.  
*algae (sp. in water)* : mbol n.  
*all* : no-áŋkũm (bo-áŋkũm, mo-áŋkũm) q.  
*allow* : osañ v.  
*also* : mǐpi adv., c.  
*among* : gangán prep.  
*ancestor* : ŋkáá n.  
*and* : tí c., prep.  
*anger* : makâs n.  
*animal* : ntsúr n. (=meat)  
*ankle* : ikóón (a-) n. (also ikóón ékûl 'ankle of foot')  
*answer* : okal v. (also òǹkal)  
*ant* : ŋkễn n. (generic for ants which bite)  
*ant (big)* : ntsáŋ kûr nc.  
*ant (small)* : ntûr n.  
*argue* : oswáàn v.  
*arm* : lwǒ` n. (=hand)  
*armpit* : ntsáá mpwǒp nc.  
*arrest* : okaŋ v. (=stop)  
*arrive* : otûl v.  
*ask* : olwǒm v.  
*ask (for sth.)* : olíŋ v. (=beg, request, want)  
*ask (s.o.)* : oyuvul v. (=interrogate)  
*ask, ask for sth.* : oyûp v.  
*aunt (mother's sister)* : màá n. (= 'mother')  
*aunt (mother's older sister)* : màá okúur nc.

*aunt (mother's younger sister)* : màá flyǎn. nc.  
*aunt (sister of father)* : kakál n.  
*avocado* : avokâ n.  
*avoid* : otít v. (=leave sth.)  
*awake, be* : okaa ŋgàdiir vc. (lit. to be watching)  
*axe* : sǒk n.  
*back* : nduŋ-ŋgbé nc.  
*bad* : obé a., n.  
*bad spirit* : mpễv obé nc. (=ghost)  
*bag* : etwâ (a-) n.  
*bag* : ŋkwǒm n.  
*bag* : osuk (e-) n. (big one women carry on back)  
*bake in ashes* : otum v. (=roast (meat))  
*bamboo* : ebaan (m-) n.  
*banana* : ikwǒ (a-) n.  
*banana cluster ("régime de banane")* : etwâ (e-) n.  
*bark* : osá ontsêl vc.  
*bark, peeling* : mpwe n. (=skins)  
*basket* : ntsaa n.  
*basket* : ntsa ndzál nc. (type used for basket-fishing)  
*bat* : ndzyěm n.  
*bathe (intr.)* : ozwô (zwo~zwi; zwi) v.  
*bathe (tr.)* : ozwê (zwe; zwe) v.  
*be* : ye v. (used with é-)  
*be* : okaa (kaa~kii; kii) v.  
*be alive* : ozíŋ v. (=live)  
*be silent* : okaa dzó vc.  
*be slippery* : osâl v.  
*be standing* : okaa ngá-mât vc.  
*beak (of bird)* : men n. (=mouth; also mîn)  
*bean* : ŋkwôn n.  
*bear fruit* : otwî mbum vc.  
*beard, facial hairs* : ntswéé n.  
*beat* : obûl v. (=hit)  
*beat* : onuk v.  
*beautiful* : osya (e-) a.

*because (of)* : sâm *n.* (=‘reason of’)  
*become* : otûl (=arrive)  
*become* : okûm *v.*  
*bed, mat* : ntân *n.*  
*bee* : ekoo (a-) *n.*  
*bee* : nwí *n.*  
*beehive* : ndzô nwí *nc.* (‘house of bee’)  
*beg (for)* : olîŋ *v.* (=request, ask for sth., want)  
*begin* : obaan *v.*  
*belch* : oker ogyô *vc.*  
*believe* : okwikil *v.*  
*bell* : ŋguŋ *n.*  
*belly* : abal *n.*  
*belly* : okεεr (ε-) *n.*  
*belt* : oŋkâp (e-) *n.*  
*bend* : obwôn *v.* (=bend over)  
*bicycle* : velô *n.*  
*bicycle* : kéŋglô *n.*  
*big, fat, wide* : onân (e-) *a.* (=fat, wide)  
*bird* : mpfûú *n.*  
*bird nest* : iyaam e mpfuu *nc.*  
*birth* : obûr (e-) *n.*  
*bite* : otá (te; te) *v.*  
*bitter, be* : bul *v.*  
*black* : pyoo *a.*  
*blind (be blind)* : otûn omôn *vc.* (=to not see; lit. to refuse to see)  
*blood* : ikêl (a-) *n.*  
*blow (through mouth)* : ofêl yε men *vc.*  
*blow nose* : ofêl yε mbwôm *vc.*  
*blow up* : ofêl *v.*  
*blue* : bulê *a.*  
*boa* : mbôm *n.*  
*boasting* : lulên *n.*  
*body* : nûr *n.*  
*boil* : otak *v.*  
*bone* : okwâ *n.*  
*book* : oŋkâán (e-) *n.* (=letter, grammar)  
*borrow* : odêf *v.*  
*bottle* : olwan (e-) *n.*

*bottom* : ntsé *n.* (=down(river))  
*bow* : otó (e-) *n.* (also =bow and arrow)  
*bowl* : iloŋ (a-) *n.*  
*boy* : mwă íbaa *nc.*  
*brain* : mbôn *n.*  
*branch* : mwá oté *nc.*  
*branch* : ntâp *n.*  
*bread* : mámpa *n.*  
*break (pot, stick etc.)* : obwâ bwa~bwi; bwi) *v.*  
*break, cut, hatch (eggs breaking open), tear* : opasul *v.* (=cut, tear)  
*breast* : ibvyô` (a-) *n.*  
*breath* : oful mun *nc.*  
*breath, soul* : møy *n.*  
*breathe* : ozûm *v.*  
*bridge* : etaar (a-) *n.*  
*bridge over water* : etaar ádza *nc.*  
*bridge, road bridge* : etaar mbvwâ *nc.*  
*bright* : ntsêm *a.*  
*bring* : otswâ (tswa~tswi; tswi) *v.*  
*bring out* : otûl *v.* (=arrive)  
*bring up* : obokol *v.*  
*broom* : ekwôm (e-) *n.*  
*brother in-law* : semêk <sup>1</sup>íbaà *nc.*  
*brother, older (of brother or sister)* : izí íbaa (a-) *nc.*  
*brother, younger (of brother or sister)* : okwâ <sup>1</sup>íbaa (a-) *nc.*  
*buffalo* : ŋgwóm osûr *nc.*  
*build up* : otûŋ *v.*  
*bundle* : isuk (a-) *n.*  
*Bundu (town)* : búún *n.*  
*burn (fire)* : owam *v.*  
*burn (intr.)* : opya *v.* (=cook intr.)  
*burn (intr.), get burnt* : odzó tsyă *vc.* (=get stung + fire)  
*burn (tr.)* : odzwî tsyă *vc.* (=sting + fire)  
*bush* : ntsyê *n.*  
*but* : me *c.* (from French mais)  
*butterfly* : ipááfûl (a-) *n.*

- buttock* : itô (a-) *n.*  
*buy (tr.)* : osûm *v.*  
*calabash* : mbín *n.*  
*call* : ovyâ (vya~vi; vi) *v.*  
*calm* : nyê *a*  
*calm (tr.)* : olaŋ *v.*  
*calm, be* : okaa nyê *vc.*  
*cane* : ŋkûl *n.*  
*canerat* : ntsiiri *n.*  
*canoe* : ŋgab *n.*  
*canoe* : wââr (mââr) *n.*  
*car* : kamyô *n.*  
*carry* : okââr *v.*  
*carve* : okul *v.*  
*cassava, cocoyam* : ntswôó *n.*  
*cassave leaf* : iniir (a-) *n.* (cf. âdzá iniir 'water of cassave leaf' ='green')  
*cat* : ŋgal-mbíí *nc.*  
*caterpillar (sp.)* : esye (ntsye) *n.*  
*caterpillar (sp.)* : ntsôlô *n.* (edible type, found in raphia palm, very sweet)  
*caterpillar (sp.)* : ibakul (a-) *n.* (edible, found in tall palm tree)  
*cave* : mpep *n.*  
*ceiling* : du é ndzô *nc.* ('sky of house')  
*certain* : ómô *d*  
*certain, a certain* : íŋkên *d.* (=other)  
*chair* : kít *n.*  
*change* : oswçm *v.* (=adapt)  
*charcoal* : ikáà (a-) *n.*  
*chase* : olap *v.* (=follow)  
*cheek* : itâm (a-) *n.*  
*chest* : ntûl *n.*  
*chew* : otafun *v.*  
*chicken* : ŋkwô *n.*  
*chief* : ŋkúm *n.*  
*child* : mwâân (bâân) *n.*  
*childhood, youth* : ilyâŋ (a-) *n.*  
*chimpanzee* : sukamûnt *n.* (=gorilla)  
*chin* : elep (a-) *n.*  
*choose, pick* : owεε (wεε; wεε) *v.*  
*claw* : edzáà (n-) *n.*  
*clay* : ibûm (a-) *n.* (for making bricks, not too solid; used in compound màân ibûm)  
*clean* : pwôô *a.*  
*clean, neat* : tsé *a.* (=well-fitting)  
*clean, rinse* : osukul *v.* (=clear)  
*clear brush, weed* : osakul *v.* (=clean)  
*climb* : obáân *v.*  
*close (tr.), stop, arrest* : okaŋ *v.*  
*cloth(ing)* : epúú (e-) *n.*  
*cloud* : ekó (e-) *n.*  
*cockroach* : oseε (ε-) *n.*  
*coconut* : kôkô *n.*  
*coffee* : kafê *n.*  
*cold* : mpfyô *n.*  
*collect, put together* : okaŋsa *v.* (=fold, tie)  
*color* : nûr oŋgêr *nc.* (=body of thing)  
*color* : okûb (e-) *n.*  
*color* : mpyém (=pl. of epyém)  
*come (intr.)* : oya (ye; ye) *v.*  
*come from* : ofa (fe~fo; fe) *v.*  
*compound* : epaŋ (a-) *n.*  
*consult a local doctor* : ofí (ti; ti) *v.*  
*continue to do sth.* : olap *v.* (=follow, chase)  
*cook* : oláà (laa~lee; lee) *v.*  
*cook (intr.)* : opya *v.* (=burn)  
*cooking pot* : mpfyě *n.*  
*copulate* : opwôŋ *v.*  
*corpse* : mbvûm *n.*  
*correct* : oswôŋ *v.*  
*cough* : okôsul *v.*  
*count, read* : otâŋ *v.* (=read)  
*country, world* : ntôt *n.* (=world)  
*cover* : okaŋ *v.* (=close, tie, stop)  
*cow* : ŋgwóm *n.*  
*cowry, money* : ndzii *n.*  
*crab* : ŋkáá *n.*  
*crab (sp.)* : osum (e-) *n.*  
*crawl* : ofur *v.*  
*cricket* : ndzyén *n.*  
*crocodile* : iyam (a-) *n.*

- crocodile* : ηkwǎn *n.*  
*cross* : obât *v.*  
*cry (intr)* : olyaa (lyaa~lii; lii) *v.*  
*cultivate* : oker kisál *vc.* ('to do farming')  
*cup* : ηkôp *n.*  
*cut* : opasul *v.* (=break, tear)  
*cut (off), cut loose* : opiη *v.*  
*damage* : obî *v.*  
*dance (intr)* : omên *v.*  
*dare* : olîη oker *vc.* ('to want to do')  
*dark* : mpip *a.*  
*daughter* : mwǎ okáâr *nc.* (=‘girl’)  
*dawn* : otwâ mwáán (twi~twa; twi) *vc.*  
*day* : esuu (ntsùù) *n.*  
*day after tomorrow* : okampwân *nc.*  
*day before yesterday* : okali na pyáá *nc.*  
*daytime* : ompê mwáán *nc.*  
*deaf and dumb person* : méme *n.*  
*death* : ikpá (a-) *n.*  
*debark* : okul *v.* (=scrape, carve)  
*debt* : mpfûk *n.*  
*decay* : opwôn *v.*  
*deceive* : odzîm *v.*  
*decide* : okáâr lukân *vc.* ('to carry a decision')  
*decide* : owεε lukân *vc.* ('to take a decision')  
*decision* : lukân *n.*  
*deep* : ndzya *a.*  
*defend* : okii *v.*  
*deformation* : kifû (bí-) *n.* (=error, limping)  
*descend* : otsá (tse; tse) *v.*  
*devil* : ontsûη (e-) *n.*  
*dew* : avúp *n.*  
*dew ('water of path')* : adzá é mbvwâ *nc.*  
*die* : ovîl *v.* (=disappear)  
*die (intr)* : okpá (kpe; kpe) *v.*  
*dig* : otûm *v.*  
*digit* : epen (m-) *n.* (finger, toe)  
*diminish, become less* : otsá (tse; tse) *v.*  
*dirt(y)* : mbin *n.*  
*disappear, be lost* : ovîl *v.*  
*dish* : ilôη (a-) *n.*  
*dish out food from pot onto plate, serve* : osuk *v.*  
*distance* : otál (e-) *n.*  
*divide* : okasul *v.*  
*do* : oker *v.* (=make)  
*doctor* : ongaη (e-) *n.*  
*dog* : mbvá *n.*  
*door* : ebin (m-) *n.*  
*door* : elañ (a-) *n.*  
*down* : ηgyě *prep.* (=under)  
*down(river)* : ntsé *n.*  
*dream* : ndwe *n.*  
*dream* : olé ndwe *vc.*  
*dress, get* : owáâr *v.* (=put on clothing)  
*drink, suckle* : onó (nô~nwe; nwe) *v.*  
*drip* : otaη *v.*  
*drive away* : oyêr *v.*  
*drum* : obyêr *v.*  
*drum* : ηgôm *n.*  
*drunk, be* : oyûr *v.*  
*dry* : oyâη *v.*  
*dry season* : eso (e-) *n.*  
*dry under the sun* : oyûm *v.*  
*dumb (non-speaking) person* : bába *n.*  
*dust* : efur (e-) *n.*  
*Dzing person* : odzîη (a-) *n.*  
*each* : kónso *d.*  
*ear* : ekwut (a-) *n.*  
*ear* : itîi (a-) *n.*  
*earring* : mpété itîi *nc.* ('ornament of ear')  
*easily; easiness?* : ndáábên *adv.?*  
*eat* : odzá (dze; dze) *v.*  
*echo* : iyám (a-) *n.*  
*egg* : ikyě (a-) *n.*  
*eight* : ináána *num.*  
*eighty* : akûm ináána *num.*  
*elephant* : ndzôo *n.*  
*embrace* : oyaam *v.*  
*empty sth.* : olûm *v.*  
*end* : ntsûk *n.*

- enter* : okôt *v.*  
*entire* : okin *q.*  
*error* : kifu (bí-) *n.* (=deformation)  
*escape* : otín *v.*  
*even* : atá *adv.*  
*every* : ntso *n.* (used in kó ntsò)  
*excite, push* : opús *v.*  
*excrement* : tií *n.*  
*excrete* : onya (nya~ni; ni) *v.*  
*exit, come out* : otwâ (twi~twa; twi) *v.*  
*expand* : oḡḡsa *v.*  
*expensive* : ntâl *a.*  
*explode* : opasuk *v.*  
*extinguish* : ozîm *v.* (also + tsyã ‘fire’)  
*extirpate* : odzik *v.* (=‘uproot’)  
*eye* : dzĩ (mĩ) *n.*  
*eyebrow, eyelash* : ntswě e dzĩ *nc.*  
*face* : osó (e-) *n.*  
*fact* : oḡgwá (or oḡgwâ?)  
*faeces* : tií *n.*  
*fainting* : ḡkâḡ *n.*  
*fall* : obva (bve; bve) *v.*  
*family* : iyûr (a-) *n.* (includes spouse and children)  
*far* : otál (e-) *a.*  
*fart* : okpi (e-) *n.*  
*fart (euphemism)* : ozûm *v.* (=‘breathe’)  
*fart, pass gas* : onya okpi *v.*  
*fast, quickly* : mḡnmḡn *adv.*  
*fat* : onân (e-) *a.* (=big, wide)  
*father* : tãá *n.*  
*father-in-law* : okěl ibãá *nc.*  
*fatigue* : aduur *n.*  
*fear* : bwóm *n.*  
*fear* : otín bwóm *v.*  
*feather* : esáá (ntsáá) *n.*  
*feed* : odzî (dzi; dzi) *v.*  
*fell (tree)* : obvii *v.*  
*female sex organ (euphemism)* : itô ↓ókâar *nc.*  
*field, farm* : izwḡḡ (a-) *n.*
- fifty* : akûm ↓itãân *num*  
*fight* : onwaan *v.*  
*finger* : mwã lwö` *nc.*  
*finger* : osap è lwö *nc.* (cf. epen)  
*finish* : osûk *v.*  
*finish (intr)* : owá (we~wa; ---) *v.*  
*finish (tr.)* : omantsa *v.*  
*fire* : tsyã *n.*  
*fireplace* : iyór ↓é tsya *nc.*  
*firewood* : ekûn *n.*  
*first* : osó (e-) *n.* (=‘face, forward’)  
*first* : opii *aux t*  
*first* : ntêt *adv.?*  
*fish* : ntswé *n.*  
*fish (sp.)* : mbûl *n.* (amphililis maesii)  
*fish (sp.)* : ibḡḡr (a-) *n.*  
*fish (sp.)* : mbatên *n.*  
*fish (sp.)* : mbvwã *n.* (auchenoglanis occidentalis)  
*fish (sp.)* : ontêḡ (e-) *n.* (belonophago)  
*fish (sp.)* : ḡḡḡl *n.* (big, catfish-like, clarias?)  
*fish (sp.)* : musumbwã (mi-) *n.* (chrysihrthys cranchii)  
*fish (sp.)* : ebvúù (m-) *n.* (citharinus)  
*fish (sp.)* : eka (ḡ-) *n.* (ctenopoma)  
*fish (sp.)* : ḡkwéé *n.* (distichodus, used also for carp; from Japanese?)  
*fish (sp.)* : bukbuk *n.* (electric malapterus)  
*fish (sp.)* : ḡmpḡḡ (e-) *n.* (labeo)  
*fish (sp.)* : ntsélá *n.* (labeo longipinnis)  
*fish (sp.)* : okaḡ (e-) *n.* (mastacembalus; small narrow fish)  
*fish (sp.)* : epim (m-) *n.* (mormyridae)  
*fish (sp.)* : ntsíḡ *n.* (parachanna)  
*fish (sp.)* : okúḡ (e-) *n.* (polypterus, delicious eaten, not sold)  
*fish (sp.)* : idzér (a-) *n.* (schiberidae)  
*fish (sp.)* : dzwãân *n.* (species of mormyrops, weak electric, gets quite large)  
*fish (sp.)* : ikúù (a-) *n.* (synodontis angelicas, small beautiful fish, black and white)

- fish (sp.)* : tukiir *n.* (tetraddon, poisonous, not eaten)  
*fish (sp.)* : olyel (ε-) *n.* (tigerfish, hydrocynus)  
*fish (sp.)* : ebál (m-) *n.* (tilapia)  
*fish (sp.)* : oswǒn (e-) *n.* (varicorhinus)  
*fish (sp.)* : elim (e-) *n.* (xenomystus nigri)  
*fish (sp.), eel* : ntsyem *n.*  
*fish (with hook)* : olyâ (lya~li) *v.*  
*fish spear* : ntsâr *n.*  
*fish with net* : olyâ siŋ *vc.*  
*fishhook* : ndôb *n.*  
*fishing method (with a long mat not a net)* : olaam *n.*  
*fist* : iŋkǒm (a-) *n.*  
*fit* : okwa (kwa~kwi; kwi) *v.*  
*fitting, well-fitting* : tsé *a.* (=clean, neat)  
*five* : itáàn *num.*  
*flamingo* : ɔsɔɔ (ɔ-) *n.*  
*flatter* : olâŋ *v.*  
*flea, jigger* : oŋkpěh (e-) *n.*  
*fling up earth* : opí mãän *vc.*  
*float* : otsiì *v.*  
*flour* : mpfer *n.*  
*flower* : intúntu (e-) *n.*  
*fly* : ofum *v.*  
*fly* : etúŋ (n-) *n.*  
*fly* : owam *v.* (=run)  
*fold* : okaŋsa *v.* (=collect, tie)  
*follow* : olap *v.* (=chase)  
*food* : esaa (e-) *n.*  
*foot* : ekul (e-) *n.* (=leg)  
*for* : sâm *n.* (=‘reason of’)  
*forehead* : mbũn *n.*  
*forest* : osûr (e-) *n.* (=land)  
*forge (make strong)* : oker bviir *vc.*  
*forget* : oziŋ *v.*  
*forgive* : olulul *v.*  
*fork* : ntsóðm *n.*  
*forty* : akûm <sup>1</sup>iná *num.*  
*forward, ahead* : osó (e-) *n.* (=‘face’)
- four* : íná *num.*  
*fresh* : obvo *a.*  
*Friday* : kitáán *n.*  
*friend* : mbèè *n.*  
*frighten, scare* : osii *v.*  
*frog* : ikóór (a-) *n.*  
*fruit* : mbum *n.*  
*fruit (sp.)* : ntsúù *n.* (purple color)  
*fry* : okaliŋ *v.*  
*fufu* : fufú *n.* (made of cassava)  
*full, be* : ozúúr *v.*  
*funnel* : iyââr (a-) *n.*  
*fur* : eká (ŋ-) *n.*  
*garbage place* : iya (a-) *n.*  
*garden* : itóm (a-) *n.*  
*gather* : osá ókâl ómótúk *vc.* (=‘put in one place’)  
*gather together, collect* : otóð (tɔɔ; tɔɔ) *v.*  
*get, receive, become* : obáâ (baa; bee) *v.*  
*get up (in morning), rise* : ozwi (zwi; zwi) *v.*  
*ghost* : mpêv obé *nc.* (=bad spirit)  
*girl, daughter* : mwă okáâr *nc.*  
*give* : opá (pe; pe) *v.*  
*glue* : olem (e-) *n.*  
*go* : oke (ke; ke) *v.*  
*go around (sth.)* : ozûŋ *v.*  
*goat* : ŋkáàm *n.*  
*God* : ndzâám *n.*  
*good spirit* : mpêv <sup>1</sup>ódzɔ *nc.*  
*good, beautiful* : ɔdzɔ *a.*  
*gorilla* : onya ntsyé *nc.*  
*gorilla* : sukamûnt *n.* (=chimpanzee)  
*grandfather* : ŋka íbaa *nc.*  
*grandmother* : ŋká okáâr *nc.*  
*grandparent* : ŋkáá *n.*  
*grasp* : ofin *v.*  
*grass* : etiír (e-) *n.*  
*grasshopper* : epεε (a-) *n.*  
*greeting* : mbôt *n.*  
*grill (meat, fish)* : ofup *v.*  
*grill used for smoking fish, meat* : ŋkyáŋ *n.*

- grind* : oniksa v.  
*ground, soil, sand* : mǎàn n.  
*groundnut* : edzuu (n-) n.  
*group* : kimvúk n.  
*grow* : ozyê (zyε; zyε) v.  
*gun* : ondûk (e-) n.  
*hair* : eswě (ntswě) n.  
*hammer* : ebul na ŋga-búl bɔ nc. (lit. iron that the hit (with))  
*hand* : lwǒ` n. (=arm)  
*handpiano* : likembe n.  
*handpiano* : isaŋ (a-) n.  
*happiness, joy* : kyês n.  
*happy, be* : oyaŋ v.  
*hard* : bviir a.  
*harvest* : obwâl v.  
*hat* : ŋkup n.  
*hatch* : opasul v. (=break; hence eggs breaking open)  
*hate* : otûn ólaŋ vc. (to not like)  
*have, be* : omâŋ v.  
*hawk* : ŋkwúm n.  
*head* : ɔtsó (e-) n.  
*headpad* : ŋkal n.  
*heal* : obelul v.  
*hear* : ozwâ (zwa~zwi; zwi) v.  
*heart, stomach* : otûm (e-) n.  
*heat* : osá tsyǎ vc. (to put fire)  
*heat, hot* : mwáán n.  
*heavy* : obvuur v.  
*hedge fence* : ntsúk épaŋ nc. (limit of compound)  
*help* : osarsa v.  
*hen* : ŋkwó okáàr nc.  
*here (near speaker)* : pè d  
*hiccup* : ogyòó (e-) n.  
*hide (tr & intr)* : ozǐ v.  
*hill* : ŋgúm n.  
*him, her, he, she* : ndé pron.  
*hip* : ekúún (e-) n.  
*hippo* : ŋgwúú n.
- hit* : obûl v.  
*hit, bump into* : otá sakûb vc.  
*hoe* : ntsên n.  
*hold, carry on head* : obêt v.  
*hold, catch* : okât v.  
*hole* : ifuu (a-) n.  
*honey* : mèè nwí nc. ('oil of bee')  
*hook, hang* : oyân v.  
*horn* : isiké (a-) n.  
*house* : ndzó n.  
*how* : ŋgambó q.  
*how much* : ŋga mbyé q.  
*hundred* : ŋkám num.  
*hunger* : ndzaa n.  
*hunt* : oké opáá vc. ('to go hunting')  
*hunt(ing)* : opáá (e-) n.  
*hurry* : oker entín vc.  
*hurt, get* : obâ mpúr vc.  
*husband* : olúm (a-) n.  
*hyena* : okyâŋ (e-) n.  
*idea* : ŋgîn n.  
*idiot, stupid person* : ondzín (e-) n.  
*if* : ker c.  
*ill (be ill)* : okaa okâl vc.  
*illness, sickness* : okâl (e-) n.  
*imitate* : oker mpil ómótúk vc. ('do the same way')  
*immerse* : odzya (dzya~dzi; dzi) v.  
*impala* : mbvel n.  
*incompetent* : ekâr a.  
*incompetent, be* : okaa ekâr vc.  
*injury* : ndyé n. (e.g. a , scratch, e.g. from lemon-grass)  
*insect* : ntûr n. (=small ant (sp.))  
*insert* : osá <sup>1</sup>kíbvúú vc. ('put inside')  
*inside* : íbvuu (a-) n.  
*inside* : kókât prep  
*insult* : otwâ (twi; twa; twi) v.  
*insult, teasing* : epwǒn (m-) n.  
*interrogate* : oyuvul v.  
*intestines* : oswǒó (e-) n.



- iron* : ebul (m-) *n.* (=metal)  
*island* : esaŋ (a-) *n.*  
*island* : entsaŋga (e-) *n.*  
*it* : nǒ *pron*  
*itch* : bviŋ *n.*  
*itch* : oker viŋ *vc.*  
*itch* : viŋ *n.*  
*jaw* : ekee (a-) *n.*  
*journey* : ndze tǎl *nc.*  
*jump, jump over* : osuun *v.*  
*keep (not give away), retain* : obâk *v.* (=protect)  
*key* : ntsáp *n.*  
*kidney* : obam (e-) *n.*  
*kill* : odzwâ (dzwa~dzwi; dzwi) *v.*  
*knee* : imón (a-) *n.*  
*kneel* : okaa kímôn *vc.*  
*knife* : mwǎ-mbyě *nc.*  
*knife (large bushknife)* : mbyě *n.* (cf. mwá mbyě 'knife')  
*knock* : okum *v.*  
*know (person, thing), recognize* : ozyâ (zi; zi) *v.*  
*know each other* : ozabakan *v.*  
*know, recognize* : (olaŋ) ozyâ *vc.*  
*kola* : ikásu (a-) *n.*  
*lack* : ozâŋ *v.*  
*ladder* : etaa edû (a-) *nc.*  
*ladle* : lût onínân *nc.* ('large spoon')  
*lake* : iziba (a-) *n.*  
*lamp* : mwîn *n.*  
*land* : osûr (e-) *n.* (=forest)  
*language, speech* : ndáá *n.*  
*last* : ntsúk *n.* (=end, limit)  
*laugh (intr), smile* : osyâŋ *v.*  
*lay (+ ikyě 'egg')* : obêl *v.*  
*lay (eggs)* : osá ákyě *vc.* ('to put eggs')  
*lay egg* : obûr *v.* (= 'give birth')  
*lead* : odyatsa *v.*  
*leaf* : ekéé (ŋ-) *n.*  
*learn* : oluŋguk *v.*
- leave* : otít *v.* (=avoid)  
*leave behind (tr)* : osí (sí; sí) *v.*  
*leave, leave behind* : olûm *v.*  
*left (side)* : okáâr (a-) *n.* (= 'woman')  
*leg* : ekul (e-) *n.* (=foot)  
*lemon* : iláâr (a-) *n.*  
*lemon juice* : adzá <sup>1</sup>iláâr *nc.*  
*lend* : odefsa *v.*  
*length* : otál (e-) *n.*  
*lengthen, stretch* : osím *v.*  
*leopard* : ŋkpi ŋkɔp *nc.* (lion + ?)  
*leprosy* : okâ <sup>1</sup>é lépre *nc.*  
*leprosy* : mikéén. *n.*  
*let, let go* : osaŋ *v.*  
*letter* : oŋkáán (e-) (=book, grammar)  
*lick* : olyâŋ *v.*  
*lie* : elá (e-) *n.*  
*lie* : odzím *v.*  
*lie down* : okaa ŋgá sîm *vc.*  
*life* : mwε *n.*  
*life, existence* : luzîŋ *n.*  
*lift up* : ozaŋgul *v.*  
*light, daylight* : mwáán *n.*  
*like* : ker *prep.*  
*like, love, admire* : olaŋ *v.*  
*limit* : ntsúk *n.* (=end)  
*limit* : olul (e-) *n.*  
*limp* : oke kífú *vc.*  
*limping* : kífú (bí-) *n.* (=error, deformation)  
*lion* : oyáám (e-) *n.*  
*lion* : ŋkpi *n.*  
*lip* : ebep (a-) *n.*  
*live* : ozîŋ *v.* (=be alive)  
*liver* : epéké (m-) *n.*  
*lizard* : oŋgbatyem (e-) *n.*  
*load* : bvuur *n.*  
*log* : sakûb *n.*  
*long* : otí<sup>1</sup>tál (e-) *a.*  
*long* : otál (e-) *a.*  
*look for (tr)* : opeε (peε; peε) *v.*  
*look, observe* : odiir *v.*

- lose (tr.)* : oziŋ v.  
*lose weight* : olûm bvuur vc. ('to remove load')  
*lose, be lost* : oke ntó vc.  
*lost* : ntó n.?  
*lost, be* : ovîl v. (=disappear)  
*loud* : bviir a.  
*louse* : esen (ntsen) n.  
*louse* : epuu (m-) n.  
*Lwal person* : olwâl (a-) n.  
*machete* : ipaŋ (a-) n.  
*mad, become* : obââ ibûm vc.  
*madness* : okâl <sup>↓</sup>ôtsô nc.  
*madness* : ibûm (a-) n.  
*maggot* : mbûm n.  
*maize* : iwôn (a-) n.  
*make* : oker v. (=do)  
*make free* : olúŋ <sup>↓</sup>kó ki mpik vc.  
*male sex organ (euphemism)* : itô <sup>↓</sup>ibâ (a-) nc.  
*man* : ibaa (a-) n.  
*manage (to do sth.)* : olaŋ v.  
*mango* : màâŋgũl n.  
*manner* : mpîl n.  
*many* : obyê q.  
*market* : iyó n.  
*marrow* : mbôn n. (=brain)  
*marry* : otúk v.  
*mat* : ntân mbaan nc. ('mat of bamboo')  
*maybe* : mbal ínkën nc. ('another time')  
*Mbuun person* : ombuun (a-) n.  
*me, I* : mĩ pron.  
*measure* : omek v.  
*meat* : ntsúr n. (=animal)  
*medicine* : ŋkís n.  
*meet* : okutan v.  
*message, news* : ndáá n.  
*metal* : ebul (m-) n. (=iron)  
*middle of night* : diŋdíŋ n.  
*milk* : adzá í bvyô nc. ('water of breast')  
*milk (a cow)* : ofin v. (=grasp, squeeze)
- millet* : mpôndó n.  
*mirror* : taltál n.  
*missing* : ntó n.?  
*mix* : ovuksa v.  
*Monday* : kintét n.  
*monkey* : ŋkêm n.  
*monkey (sp.)* : ibvuk (a-) n.  
*monkey (sp.)* : mpfũŋ n.  
*month* : ŋgwen n. (=moon)  
*moon* : ŋgwen n.  
*moon (full)* : ŋgwen òninân nc.  
*morning* : ompfi (e-) n.  
*mortar* : ŋkó n.  
*mosquito* : ebyém (m-) n.  
*mother* : màá n.  
*mother-in-law* : okèl okàâr (a-) nc.  
*motorcycle* : tuktuk n.  
*mouse* : mpúù ndzó n. ('house rat')  
*mouth, beak (of bird)* : men n. (also mîn)  
*much, often* : mbyé adv., q. (cf. ŋga mbyé 'how much')  
*mud* : pòtpôt n.  
*mud (a house)* : olaŋ v.  
*muscle* : osisá n. (=vein)  
*mushroom* : bwô n.  
*mushroom (sp.)* : ntsî n. (white, small)  
*nail (of finger, toe)* : εβεε (m-) n. (=shell)  
*name* : dzîñ n.  
*navel* : okwúm (e-) n.  
*neck* : ŋkíŋ n.  
*necklace* : okyân mpó (e-) nc. ('ring of throat')  
*negative copula* : ka adv.  
*negative imperative marker* : pâ adv.  
*nest* : iyâám (a-) n.  
*net* : siŋ n.  
*new* : mpa a  
*night* : otú (e-) n.  
*nine* : iwa num.  
*ninety* : akúm iwà num.  
*no, negative marker* : bô interj.

- noise* : ontsêl (e-) *n.*  
*north* : duu *n.* (=sky)  
*nose* : mbwǝm *n.*  
*not* : sâŋ *adv.* (from osan 'to refrain')  
*now* : sésép<sup>↓</sup> nápe *adv.*  
*now, right now* : ko ntáŋ<sup>↓</sup> nápe *nc.* ('at this time')  
*Nzadi language* : indzée *n.*  
*Nzadi person* : ondzée (a-) *n.*  
*oar* : ŋkíí *n.*  
*obey* : ozitsa *v.*  
*odor* : ntsun *n.*  
*often* : mbyé *adv.*  
*oil, fat* : mǝé *n.*  
*okra* : dǝŋdǝn. *n.*  
*old* : okúur (e-) *a.*  
*old* : ntám *a.*  
*old, become* : otúl okúur *vc.* (=to age)  
*one* : ómǝtúk *num*  
*only, just* : ná *adv.*  
*open (tr.)* : okaŋgul *v.*  
*open (tr.)* : ofuŋgul *v.*  
*order* : ntswa *n.*  
*ornament* : mpété *n.* (decoration that one wears)  
*other* : iŋkǝn *d.* (=another, some)  
*outside* : ntsá *n.*  
*overflow* : olutsa *v.*  
*overflow* : otsyak *v.*  
*owl* : eŋkúr *n.*  
*owner* : oŋgaa (a-) *n.*  
*paddle* : ŋkáb *n.*  
*paddle* : odwá (dwa~dwi; dwi) *v.*  
*pain* : oseé (e-) *n.*  
*pain, difficulty, anger* : mpás *n.*  
*palm kernel, pit of fruit* : oŋgyě (e-) *n.*  
*palm leaf* : lǎn. *n.*  
*palm oil* : mǝe mba *nc.*  
*palm tree* : ibá (a-) *n.*  
*palm wine* : máán iba *nc.*  
*palmnut* : mbá *n.*  
*papaya* : pepê *n.*  
*parent-in-law* : okǝl (a-) *n.*  
*pass* : osuun *v.* (=jump over)  
*pass, happen* : olya (lya~li; li) *v.*  
*paste* : ebáá (e-) *n.* (from groundnut, squash etc. for spreading)  
*path* : mbvwá *n.*  
*pay* : ofur *v.*  
*peel, debark* : obvul *v.*  
*peeling* : mpwe *n.* (=bark)  
*penis* : ikáár (a-) *n.*  
*pepper (red)* : ndúŋ *n.*  
*person* : muur (baar) *n.*  
*perspiration, sweat* : mwáán *n.*  
*perspire* : ǝsok *vc.* (used with mwáán)  
*perspire* : otwá mwáán *vc.* ('to exit heat')  
*pestle* : oté ŋko *nc.* ('stick of mortar')  
*photograph* : fotó *n.*  
*pick (fruit)* : ǝtǝǝ *vc.* (+ mbum 'fruit')  
*pick (fruit)* : okúl *v.*  
*pick up* : ǝtǝǝ (tǝǝ; tǝǝ) *v.*  
*pierce* : otobul *v.*  
*pig* : ŋgúl *n.*  
*pineapple* : kíl *n.*  
*pipe* : ǝtǝk (e-) *n.*  
*pity* : ŋgèè *n.*  
*place* : okal (e-) *n.*  
*place* : iyór (a-) *n.*  
*plait* : okaŋ ntswèè *vc.* ('tie' + 'hair')  
*plait (hair)* : otúŋ *v.*  
*plant* : okun *v.* (=sow seeds)  
*plantain* : ikwǝ é màkémba (a-) *nc.*  
*plantain* : likémba (ma-) *n.*  
*plaster, mud (a house)* : olaŋ *v.*  
*plate* : ilǝŋ (a-) *n.*  
*play* : osakan *v.*  
*please* : obǝndǝl *v.*  
*pluck* : olúm *v.* (=remove)  
*poison* : ndikíl *n.*  
*porcupine* : ntsúr tii *nc.*

- possible, be able, may, can* : ofɛn v. (=be able, may, can)  
*pottery* : mpfyɛ adziŋ nc. (lit. pot of the Dzing)  
*pound (e.g. yams)* : ɔtsó (tso~tswe; tswe) v.  
*pour, throw (e.g. water)* : otsyak v.  
*poverty, poor* : ntsu káám nc.  
*praise* : okumsa v.  
*pray* : osáám v.  
*praying mantis* : ibwá ŋkǎ (a-) nc.  
*preach* : otendul v.  
*precede* : oke osó vc.  
*pregnancy* : iyûm (a-) n.  
*press* : ozîn v.  
*priest* : ŋgaŋ ndzàám n. ('doctor' + 'God')  
*protect* : obâk v. (=keep)  
*pull* : obêñ v.  
*pull* : odur v.  
*punishment* : ndôl n.  
*pus* : tufîn n.  
*pus, running external* : mpwóp n.  
*push* : otâk v.  
*put (on, to), assemble* : osá (se; se) v.  
*put on (clothing)* : owáár v. (=get dressed)  
*put s.o./sth. somewhere* : osap v.  
*put together* : ovuksa v. (=mix)  
*question* : ŋgyovûl n.  
*quiet* : dzó a  
*rabbit* : mpúù endyɛ́ nc. ('white man's rat')  
*rain* : onwô v.  
*rain* : mbvêl n.  
*rainy season* : ntâŋ mbvêl nc.  
*raise a child* : obûŋ v.  
*raphia palm* : ibɔɔn (a-) n.  
*rash* : ebye (m-) n.  
*rat* : mpúù n.  
*rat (of the bush)* : mpúù ntsyê n.  
*rat (of the forest)* : mpúù osûr n.  
*reach* : otûl v. (=arrive)  
*read* : otâŋ v. (=count)  
*reason, why, for* : sâm n.  
*receive, become* : obáà (baa; bee) v.  
*red* : swîi a.  
*refrain from doing sth.* : osañ v. (used in negative relative clauses and subjunctive)  
*refuse* : otûn v.  
*relative* : otûŋ (a-) n.  
*release* : osañ v.  
*remove, take away* : olûm v.  
*repair, fix* : obɔŋsa v.  
*resemble* : ofwanan v.  
*response* : mbvût n.  
*rest* : ozûm v.  
*rest (stretch + fatigue)* : osîm áduur vc.  
*rest, stretch (pull + fatigue)* : obÊñ aduur vc.  
*return (tr, intr), bring back* : okal v. (also òŋkal)  
*rib* : mpandzi n.  
*rice* : lóso n.  
*right (as opposed to wrong)* : mambôt n.  
*right (side)* : ibaa (a-) n. (from 'man')  
*right, be* : opá ma mbôt vc.  
*ring* : okyâŋ (e-) n.  
*ripe, ready, be cooked (intr.)* : oyá v.  
*ripen* : osul v.  
*rise* : obáán v.  
*rise, ascend* : oke duu vc.  
*river* : ndzée n.  
*road* : mbvwâ n.  
*roast (meat)* : otum v. (=bake in ashes)  
*roof* : ɔtwôm (e-) n.  
*rooster* : ŋkwɔ ibaa nc.  
*root* : esim (a-) n.  
*root* : ntsumbûl n.  
*rope* : osim (e-) n.  
*rot* : olyañ v.  
*rub, brush* : opaŋsa v.  
*rule* : otswâ (tswa~tswi; tswi) v.  
*run, fly; burn (fire)* : owam v. (also owum)  
*sacrifice* : otambika v.  
*Sakata person* : osákátá (a-) n.  
*saliva* : atÉ n.

- salt* : okpá (e-) *n.*  
*Saturday, week* : mpɔs *n.*  
*say, tell* : otyÊn *v.*  
*school* : ndzɔ ŋkààn *nc.* ('house of book')  
*scoop* : ozUŋ *v.* (with hand or instrument)  
*scrape* : okul *v.* (=carve)  
*scrape off* : onik *v.*  
*scratch* : okwaŋ *v.*  
*see* : ɔmôn *v.*  
*seed* : ŋkên *n.*  
*self, oneself, one's own* : ŋgizyâ *n.* ? (e.g. mí-ŋgizyâ 'myself')  
*sell* : oyee *v.*  
*send (person, thing)* : otúm *v.*  
*servant* : bôy *n.*  
*servant, domestic* : muur kisâl *nc.*  
*serve* : osap *v.*  
*serve food from pot onto plate* : osuk *v.*  
*seven* : ntsaamôn. *num.*  
*seventy* : akûm ntsaamôn. *num.*  
*sew, weave; plait hair, build up* : otúŋ *v.*  
*shade, shadow* : elíŋ (a-) *n.*  
*shallow* : ŋkyee *a.*  
*shame* : ntsôn. *n.*  
*share* : okabul *v.*  
*sharpen* : osá mpúr *vc.*  
*sharpness* : mpúr *n.*  
*shave* : obvul ntwèé *vc.* ('peel facial hair')  
*shave* : olúm ntwèé *vc.* ('remove facial hair')  
*sheep* : iméme (a-) *n.*  
*shell* : ébɛɛ (m-) *n.* (=nail)  
*shine* : omɔnka *v.*  
*shirt* : epúú (e-) *n.* (=clothing)  
*shirt* : simísi *n.*  
*shoe* : sabât *n.*  
*shoot, lance (into air)* : onuk *v.*  
*short* : okpú<sup>1</sup>kpê *a.*  
*short* : okpé (e-) *a.*  
*shorten* : opɛɛ *v.*  
*should, must, will* : ofêt *v. aux.*
- shoulder* : ipek (a-) *n.*  
*shout* : ebyá (m-) *n.*  
*show* : omwê (mwɛ; mwɛ) *v.*  
*shrimp* : ɔŋkɔ (e-) *n.*  
*sibling in-law* : semêk *n.*  
*sibling, older* : izi (a-) *n.*  
*sibling, younger* : okwâ (a-) *n.*  
*sick, be* : ozwâ okâl *vc.*  
*sick, become* : otúl okâl *vc.*  
*side, heel* : ŋgbee *n.* (or ŋgbèè èkùl 'of foot')  
*sift* : oyuŋgul *v.*  
*sift* : opwɔp *v.*  
*sing* : ɔtɔ́ɔ́ dzím̄ *vc.*  
*sing* : ɔtɔ́ɔ́ (tɔɔ; tɔɔ) + dzím̄ *vc.*  
*sink (tr.)* : odzya (dzya~dzi; dzi) *v.*  
*sister in-law* : semêk okáàr *nc.*  
*sister, older (of brother or sister)* : izi okáàr (a-) *nc.*  
*sister, younger (of sister or brother)* : okwâ okáàr (a-) *nc.*  
*sit down* : okaa kó ntse *vc.*  
*six* : ísyéme *num.*  
*sixty* : akûm<sup>1</sup> ísyéme *num.*  
*size* : obek (e-) *n.*  
*skin* : epwe (m-) *n.*  
*skin (an animal)* : olúm épwe *vc.* ('remove skin')  
*skull* : ébɛ ótsɔ (m-) *nc.* ('shell of head')  
*sky* : duu *n.*  
*slander* : obaŋ *v.*  
*slave* : mpík *n.*  
*sleep* : tɔ́ɔ́ *n.*  
*sleep* : ɔpɔ tɔ́ɔ́ (pɔ~; pɔ~pwe) *vc.*  
*slow(ly)* : icyê *a.*  
*slowness, slowly* : malêm *n.*  
*small* : okyê (e-) *a.*  
*small, thin, narrow* : ikikêr *a.*  
*smell* : ozwâ ntsun *vc.* ('perceive odor')  
*smoke* : odziŋ (e-) *n.*  
*smoke (fish)* : oyâŋ *v.*  
*smooth* : osâl *a.*

- snail* : ŋkǎ *n.*  
*snake* : ntɛn *n.*  
*snake (sp.)* : odzwó (e-) *n.*  
*snake (sp.) (poisonous)* : mpêl *n.*  
*snake (sp.) (poisonous)* : ŋkáj *n.*  
*sneeze* : oker tsébo *vc.*  
*sneezing, sneeze* : tsébo *n.*  
*snore* : osá ŋkɔɔn *vc.*  
*snore, snoring* : ŋkɔɔn *n.*  
*snot* : twôñ *n.*  
*soft(ly) (of speaking)* : ikyê *a.* (of speaking)  
*soft, softness* : pɛtpét *a*  
*son* : mwǎ fbaa *nc.* (=boy)  
*song* : dzim *n.*  
*sorcerer* : muur ndók *nc.*  
*sorcery* : ndók *n.*  
*south* : ntsé *n.* (=downriver)  
*south* : ŋgyě *prep.* (=under)  
*speak evil* : otyÊñ obé *vc.*  
*spear* : ikǎñ (a-) *n.*  
*spear* : onuk ikǎñ *vc.* ('to lance' + 'spear')  
*speed, haste* : entín *n.*  
*spider* : ndzám  
*spirit* : mpêv *n.*  
*spit* : otúl até *vc.*  
*split* : obaar *v.*  
*split* : okabul *v.*  
*spoil (tr. & intr.)* : obí *v.*  
*sponge* : inũk (a-) *n.*  
*spoon* : lút *n.*  
*spoon (small)* : lút ikíkèr *nc.*  
*squash* : mantete *n.*  
*squeeze* : ofin *v.* (=grasp)  
*squeeze, twist* : onwÔñ *v.*  
*squirrel* : isín (a-) *n.*  
*stab* : osá mbyě *vc.* ('put' + 'knife')  
*stand* : omat *v.*  
*star* : mbwetéte *n.*  
*steal* : oyĩb *v.*  
*step on* : okaa kó dû *vc.*  
*still (do sth.)* : ofûl *v. aux.*  
*sting* : odzwí *v.*  
*stir* : obalul *v.*  
*stone* : imǎñ (a-) *n.*  
*stone* : itâr (a-) *n.*  
*stool* : ifakâm (a-) *n.*  
*stop* : okañ *v.* (=arrest)  
*story, history* : ndáá *n.*  
*stranger, guest* : ongyen (e-) *n.*  
*stream* : ntÓ *n.*  
*strength* : osím *v.*  
*strip the bark* : okulul *v.*  
*strip the bark* : olúm mpwe *vc.* ('remove bark')  
*strong* : bviir *a.*  
*strong, become; become hard* : otúl bviir *vc.*  
*stump* : isén *n.* (of tree)  
*stump* : ivúp (a-) *n.* (of a plant whose leaves shoot out, like lemongrass)  
*stung, get* : odzô *v.*  
*stuttering, stammering* : eñkum *n.*  
*suck* : odur *v.* (=pull)  
*suckle* : onó (no~nwe; nwe) *v.* (=drink)  
*suffer* : obêl *v.*  
*suffer* : ozwâ okâl *vc.* ('feel illness')  
*sufficient (be)* : okwa (kwa~kwi; kwi) *v.*  
*sugarcane* : osuñ (e-) *n.*  
*sun* : itâá (a-) *n.*  
*sun* : wén *n.*  
*Sunday* : obin (e-) *n.* (also èsú ↓óbîñ)  
*supervise* : olañdil *v.*  
*surpass* : olek *v.*  
*surround* : ozwôñ *v.*  
*swallow* : omen *v.*  
*swear* : otá ndzám *vc.*  
*sweep* : okwôm *v.*  
*sweet yam* : okpá é mañgwôm *nc.*  
*sweetness* : mawéte *n.*  
*swell* : otúl onân *vc.* ('to become big, fat')  
*swim* : olil *v.*  
*table* : mes *n.*  
*tail* : okyá (e-) *n.*



- tree* : oté (e-) *n.*  
*tremble* : odzek *v.*  
*trouble, get* : obáà ntsaj *vc.*  
*trouble, palaver* : ntsaj *n.*  
*trousers, pants* : mpaantru *n.*  
*trunk* : ikũn (a-) *n.*  
*try* : oyúńtsa *v.*  
*try* : omek *v.*  
*Tuesday* : kiz̄ɔl *n.*  
*turn (around) (intr.)* : obaluluka *v.*  
*turn (around) (tr., intr.)* : obalul *v.*  
*twenty* : akũm <sup>1</sup>ápe *num.*  
*twin* : mampása *nc.*  
*two* : ípe *num.*  
*umbrella* : ombvul (e-) *n.*  
*uncle (brother of mother)* : mpê *n.*  
*uncle (father's brother)* : tàá *n.* (=‘father’)  
*uncle (father's older brother)* : tàá okúùr *nc.*  
*uncle (father's younger brother)* : ta ílyǎn. *nc.*  
*uncovered* : epúl *a.* (e.g. a container)  
*under, below* : ɲgyě *prep.*  
*undress* : olũm epúú *vc.* (remove clothing)  
*up to* : tíí *prep.*  
*up, upriver* : duu *n.* (=sky)  
*upriver, go* : obáàn *v.*  
*uproot* : odzik *v.* (=‘extirpate’)  
*urinate* : onya asap *vc.*  
*urine* : asap *n.*  
*vagina* : ndú *n.*  
*valley* : ibúl (a-) *n.*  
*vapor, steam* : oswii (e-) *n.*  
*vegetable* : ontũɲ (e-) *n.*  
*vegetable (sp.)* : ondàál (e-) *n.*  
*vegetable (sp.)* : okyii (e-) *n.*  
*vegetable, bitter (sp.)* : olũl (e-) *n.*  
*vein* : osisá (e-) *n.*  
*very clean* : tsétsé *a*  
*village* : wáá (mǎn) *n.*  
*visible, be* : omɔnka *v.* (=shine)  
*visit* : odiir *v.*  
*visitor* : ndzé ndza *nc.*  
*voice* : ndáá *n.*  
*vomit* : olwâ (lwa~lwi; lwi) *v.*  
*voyage* : nzetól *n.*  
*wait* : odzel *v.*  
*wake up, wake (s.o.) up* : ozwi (zwi; zwi) *v.*  
*walk* : olya dzyen *vc.*  
*walking* : dzyen *n.*  
*want* : olaɲ *v.*  
*war* : etum (e-) *n.*  
*warn, ask* : okap *v.*  
*wash (things)* : osuɲ *v.*  
*watch* : odiir *v.*  
*water* : adzá *n.*  
*wave (river)* : ntín *n.*  
*we, us* : bí *pron*  
*weave* : otũɲ *v.* (=sew)  
*Wednesday* : kitát *n.*  
*weed* : osakul *v.* (=clear brush)  
*what, which* : ɲge *i.*  
*where* : koɲgó *i.*  
*whether* : kan *c.*  
*which (precedes noun)* : ɲki *i.*  
*which, who* : ɲgó *i.*  
*white* : zyé *a*  
*white* : mpémbé *a*  
*white color of solid (e.g. of chalk)* : epyém (sg. only) *n.*  
*white man* : ondyéé *n.*  
*white, become* : otũl zyé *vc.*  
*white, become* : otũl mpémbé *vc.*  
*who* : nɛ *i.*  
*whole (sg.)* : nɔ-ɲɲkũm *q.* (=‘all’)  
*why* : sám <sup>1</sup>é ɲgé *nc.* (‘reason of what?’)  
*wide* : onân (e-) *a.* (=big, fat)  
*wife* : okáàr (a-) *n.* (okáà =form used with poss pronouns in the singular, e.g. òkáá mǎ ‘my wife’)  
*wife, first* : okáàr osó (a-) *nc.*  
*wife, other (non-first wife)* : mbaan *n.*  
*wind* : mwél *n.*



- wine* : máán *n.*  
*wing* : ipǎp (a-) *n.*  
*wish, desire, need* : mpfûn *n.*  
*with, and* : tí *prep.*  
*with, to, and* : yε *prep., c.*  
*woman, wife* : okáâr (a-) *n.*  
*work (tr.)* : osâl *v.*  
*work, farming* : kisâl (bi-) *n.*  
*world* : ntôt *n.* (=country)  
*worm* : pambú *n.*  
*wound* : mpúr *n.*  
*wrapping of sth (e.g. food, package)* : ibvye (a-) *n.*  
*write* : osónka *v.*  
*write (to someone)* : osónkil *v.*  
*yam, potato* : okpá (e-) *n.*  
*Yansi person* : oyánsi (a-) *n.*  
*yawn* : mwii *n.*  
*yawn* : oker mwii *vc.*  
*year* : mbvêl *n.* (=rain)  
*yes* : εε *interj.*  
*yesterday* : okalí (e-) *n.*  
*you (pl.)* : byěñ *pron*  
*you (sg.)* : yǎ` *pron*  
*young man (15-25 years old)* : ontsun (e-) *n.*  
*younger, junior (people)* : ilyǎn *a.*

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