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A Grammar of Nzadi

A Bantu Language of Democratic Republic of Congo

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A GRAMMAR OF NZADI [B.865]

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ABBREVIATIONS

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

Tone marks:

(´) :	H(igh)
(`) :	L(ow)
(ˆ) :	HL falling
(ˇ) :	LH rising
(ˇ`):	LHL rising-falling
(↓´):	Downstepped H

CHAPTER 1: INTRODUCTION

1.1. Goals of this Study

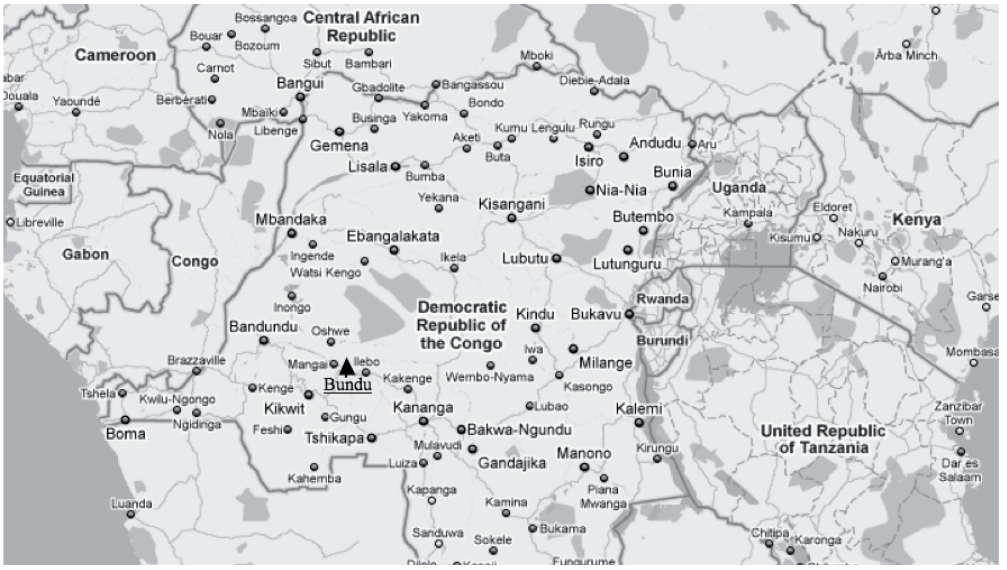
This study presents a grammar, texts, and lexicon of Nzadi, a virtually unknown Bantu language spoken along the Kasai River in the Democratic Republic of the Congo. During the academic year 2008-2009 we were fortunate to be able to work together when the third author, a native speaker of Nzadi, was a 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 Burssens, 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

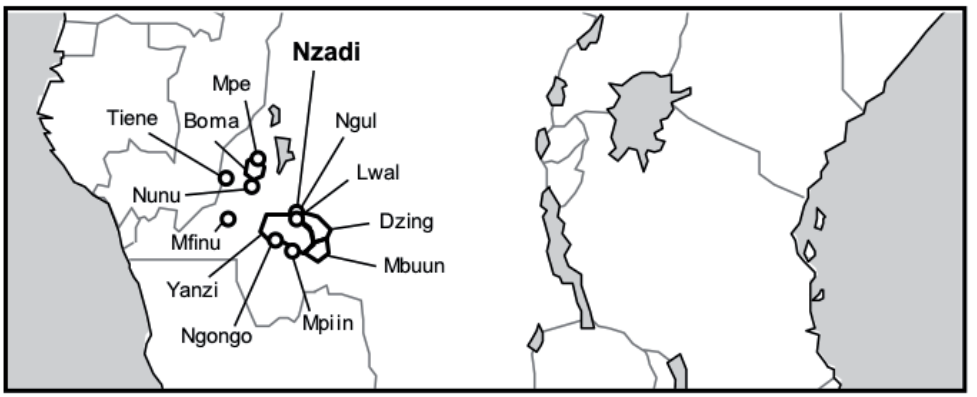
As mentioned, Nzadi is a small Bantu language spoken by fishing communities from Kwamuntu to Ilebo along the North side of the Kasai River in Bandundu Province (Democratic Republic of the Congo). Their villages are interspersed with others consisting of speakers of different languages, particularly Dzing, 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 additonal 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)* 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 **-dɪm-* 'to cultivate' vs. Nzadi *o-ker kisál*, lit 'to do farming', PB **-bʊ́mb-* 'to mould' vs. Nzadi *o-ker mfyĕ adzíŋ* (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-tûn* '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 *sâm* '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 addition 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 **mò-jánà* (> *mò-ánà*) becomes *mwǎàn* '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 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 Language, 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.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

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. Kemmonye ("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 *sâm* 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 ↓é ŋgé* 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:

bɔ	ó	mpé	mǐ̀	ɔŋkàán
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. pîpé 'fut.RED' (where the reduplicant *pî* 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. *lɔ̂ŋ* 'teacher', *nǒ* 'it'. If the contour occurs over a long vowel, both an acute and a grave accent are used: *swíì* 'red', *màá* 'mother'. The rising-falling contour LHL is written three ways, depending on syllable structure: *mwǎàn* 'child' (long vowel), *dzǔm̀* 'ten' (short vowel + nasal consonant), *lwǒ*ˋ 'hand, arm' (short vowel in open syllable).

CHAPTER 2: THE SOUND SYSTEM

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]	*nouns:*	nwí	'bee'	méməɛ	'deaf and dumb person'
		bwɔ	'mushroom'	tsébo	'sneezing'
		mɛ̀ɛ́	'oil, fat'	fufú	'fufu (cassava meal)'
		duu	'sky'	tufîn	'pus'
		wén	'sun'	sɛmêk	'sibling-in-law'
		bvuur	'load'	kakál	'aunt (sister of father)'

verbs:	bvâ	‘fall!’	báńtsa	‘think!’
	dzâ	‘eat!’	sărsa	‘help!’
	láà	‘cook!’	sɔ̃nka	‘write!’
	wɛ̌ɛ̀	‘take!’	bálul	‘turn around!’
	syâŋ	‘laugh!’	táfun	‘chew!’
	măt`	‘stand!’	sákan	‘play!’
other:	dzo	‘quiet’	nɔ̃wɛ	‘today’
	pɛ	‘here’	sɛ́sɛ̂p	‘now’
	bɔ̃	‘they, them’	bulɛ̂	‘blue’
	pyoo	‘black’	tsɛ́tsɛ́	‘very quiet’
	dzûm	‘ten’	pɛtpɛ́t	‘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’, *màáŋgŭl* ‘mango’, *pɔtpɔ̂t* ‘mud’, *pɛpɛ̂* ‘papaya’, *bukbuk* ‘fish (sp.)’, *kamyɔ̂* ‘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]

nouns:	okal	‘place’	osisá	‘vein, muscle’
	ekal	‘places’	epéké	‘liver’
	ikɔ́ɔ́r	‘frog’	iméme	‘sheep’
	ikwɔ	‘banana’	izibà	‘lake’
	adzá	‘water’	asíké	‘horns’
	mbvá	‘dog’	mpɔndɔ́	‘millet’
	ndzɔɔ	‘elephant’	ndikîl	‘poison’
verbs:	o-bva	‘to fall’	o-báńtsa	‘to think’
	o-dzá	‘to eat’	o-sarsa	‘to help’
	o-láà	‘to cook’	o-sɔnka	‘to write’
	o-wɛɛ	‘to take’	o-balul	‘to turn around’
	o-syâŋ	‘to laugh’	o-tafun	‘to chew’
	o-mat	‘to stand’	o-sakan	‘to play’

other:	obé	'bad'	o-kpú$^{\downarrow}$kpê	'short'
	ebim	'already'	ikíkěr	'small, thin'
	ípe	'two'	ísyémɛ	'six'
	atá	'even'	íŋ́kěn	'other, another'
	mpa	'new'	mpɛ́mbɛ́	'white'
	ŋge	'what, which'	ntámá	'a long time ago'

Again, some of the words with bisyllabic stems are reduplications or borrowings (cf. *avokâ* '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: *ɔ́mɔtúk* 'one', *ɔ́mɔ* 'certain', *mípi* 'also, and', *ŋ́gizyâ* '-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: *mbwɛtétɛ* 'star', *osákátá* 'a Sakata person', *simísi* '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. *ndzô nwí* 'beehive' (*ndzó* 'house' + *nwí* 'bee'), *mwằ lwɔ̌*` 'finger' (*mwằàn* 'child', *lwɔ̌*` '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 ŋ́kò* 'pestle' (*òté* 'stick, tree', *ŋkó* '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', *ɛɛ* '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. *mwằàn* 'child' (pl. *bằàn*), *wằár* 'canoe', (pl. *mằár*), *dzɪ̌*` 'eye' (pl. *mɪ̃̌*). While these words consist of a frozen prefix + root, it is less obvious how to analyze Kikongo borrowings such as the following: *musumbwâ* 'fish (sp.)' (pl. *misumbwâ*), *likémba* 'plantain' (pl. *makémba*), *kisâl* 'work' (plural, *bisâl*). 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. *likɛmbɛ* 'handpiano' (pl. *ba-likɛmbe*), *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 mɪ̌* ~ *o-mpá mɪ̌* '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', *oŋgba-tyɛm* or *oŋgbatyɛm* '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', *ɛkɛ́* 'leaf', *okáàr* 'woman', *ɔtɔk* 'pipe', *adzá* 'water', *mbum* 'fruit', *ndɔ̂b* 'fishhook'. VNC sequences also occur: *iŋkɔ̆m* 'fist', *eŋkûr* 'owl', *ontsûŋ* 'devil', *ɔmpɔŋ* 'fish (sp.)'. When not preceded by a vowel, a nasal prefix is syllabic, e.g. when occurring initially: *m.bum* 'fruit', *n.dɔ̂b* 'fishhook'. VNCV sequences are syllabified between the vowel and the nasal: *o.mbvul* 'umbrella', *i.ŋkɔ̆m '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]					
	CV:	nwí	'bee'	bwɔ	'mushroom'
		osó	'face'	ŋkă	'snail'
		o-dzá	'to eat'	o-kɛ	'to go'
	CVV:	duu	'sky, up'	mɛ̀é	'oil, fat'
		itáá	'sun'	ndzɔɔ	'elephant'
		o-láà	'to cook'	o-yɛɛ	'to sell'
	CVC:	nûr	'body'	sɔ̂k	'axe'
		abal	'belly'	ntɛn	'snake'
		o-tûm	'to send'	o-ker	'to do'
	CVVC:	muur	'person'	máán	'wine'
		otáám	'trap'	ŋkáàm	'goat'
		o-byéɛ̀r	'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]					
	CV.CV:	tsébo	'sneezing'	pɛpê	'papaya'
		isíké	'horn'	iziba	'lake'
		nɔ̆wɛ	'today'	okalí	'yesterday'
	CVC.CV:	pambú	'worm'	mámpa	'bread'
		mpɔndɔ́	'millet'	oyánsi	'a Yansi person'
		o-sɔnka	'to write'	o-sarsa	'to help'
	CV.CVC:	sabât	'shoe'	sɛmêk	'sibling-in-law'
		ifakâm	'stool'	ŋgyovûl	'question'
		o-balul	'to turn'	o-kasul	'to divide'
	CVC.CVC:	dɔ̆ŋdɔ̆ŋ	'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	61	232	38	24	10	11	8	3	465
	(16.8)	*(13.1)*	*(49.9)*	*(8.2)*	*(5.2)*	*(2.2)*	*(2.4)*	*(1.7)*	*(.6)*	
verbs:	48	15	130	14	Ø	15	24	11	Ø	257
	(18.7)	*(5.8)*	*(50.6)*	*(5.4)*	*(0)*	*(5.8)*	*(9.3)*	*(4.3)*	*(0)*	
totals:	126	76	362	52	24	25	35	19	3	722
	(17.5)	*(10.6)*	*(50.1)*	*(7.2)*	*(3.3)*	*(3.5)*	*(4.8)*	*(2.6)*	*(.4)*	
	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: *ntsíìri* 'canerat', *ipááfŭl* 'butterfly', *màáŋgŭl* 'mango'. The only entry which has a long vowel in its second syllable is *tukíìr* '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: *matɔ́nd* '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]

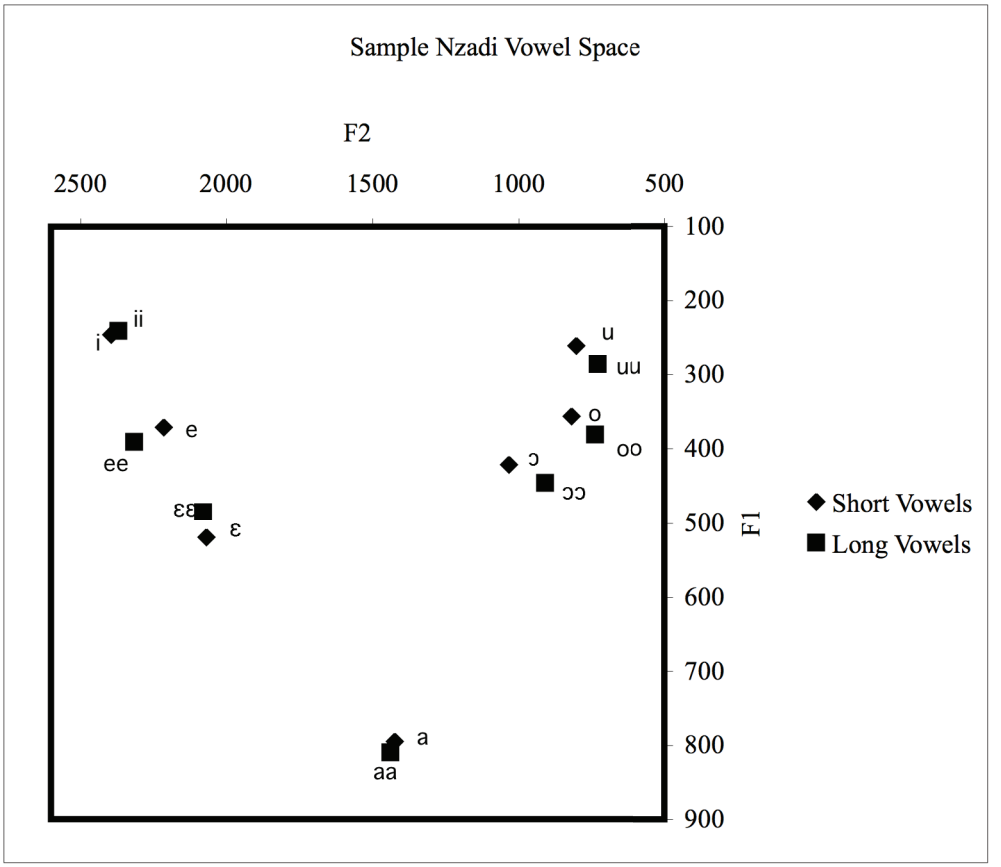
	front	*central*	*back*	*front*	*central*	*back*
high	i		u	ii		uu
high-mid	e		o	ee		oo
low-mid	ɛ		ɔ	ɛɛ		ɔɔ
low		a			aa	

/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/	dzĭ̀	‘eye’	ndzii	‘cowry, money’
		o-sî	‘leave behind’	o-sii	‘frighten’
		o-tsî	‘to accept’	o-tsíì	‘to float’
	/e, ee/	obé	‘bad’	mbéè	‘friend’
		ŋge	‘which’	ŋgèé	‘pity’
		ntswé	‘fish’	ntswèé	‘facial hairs’
	/ɛ, ɛɛ/	ndyɛ́	‘injury’	ondyɛ́ɛ́	‘white man’
		o-kɛ	‘to go’	ɛkɛ́ɛ́	‘leaf’
		pɛ	‘here’	o-pɛɛ	‘to look for’
	/u, uu/	otû	‘night’	tuu	‘termite’
		kifu	‘error’	ifuu	‘hole’
	/o, oo/	mpfyô	‘cold’	pyoo	‘black’
		ibvyŏ̀	‘breast’	ogyòó	‘hiccup’
	/ɔ, ɔɔ/	ɔdzɔ	‘good’	ndzɔɔ	‘elephant’
		ekɔ́	‘cloud’	ekɔɔ	‘bee’
		ɔtɔ́	‘bow & arrow’	o-tɔ́ɔ̀	‘to gather, pick’
	/a, aa/	ibá	‘palmtree’	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

		F1	F2			F1	F2
SHORT VOWELS	a	795	1425	LONG VOWELS	**aa**	810	1440
	ɛ	520	2070		**ɛɛ**	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	*e*	*ɛ*	*u*	*o*	*ɔ*	*a*	*totals:*
CV:	21	15	25	3	16	15	58	153
CVV:	15	8	11	18	2	8	23	85
totals:	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 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]

-m :	ntə̂m	'taste'	ntsɔ́ɔ̀m	'fork'
	ŋkám	'hundred'	ŋkáàm	'goat'
	itâm	'cheek'	otáàm	'trap'
-n :	ŋkɛ́n	'seed'	mikɛ́ɛ́n	'leprosy'
	ekûn	'firewood'	ekúún	'hip'
	imăn	'stone'	máán	'wine'
-r :	ikɔ́ɔ́r	'frog'	iyɔ́r	'place'
	eŋkûr	'owl'	okúùr	'old'
	ekâr	'incompetent'	okáàr	'woman'

The one exception that has been noted is *ondăàl* '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*
CVC:	65	54	23	100	42	142
CVVC:	9	21	21	37	14	51
CiiC:	0	0	3	2	1	4
CɛɛC:	0	1	2	2	1	3
CuuC:	0	4	6	6	3	10
CɔɔC:	1	3	2	6	0	6
CaaC:	8	14	9	22	9	31
totals:	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]

/CiC/	min	‘mouth’	mbin	‘calabash’
	o-lil	‘to swim’	o-yîb	‘to steal’
	okin	‘entire’	ebim	‘already, previously’
/CeC/	idzên	‘tooth’	oŋgêr	‘thing’
	o-ker	‘to do’	o-mên	‘to dance’
	o-lek	‘surpass’	íŋkěn	‘other, another’
/CɛC/	ntɛn	‘snake’	kyês	‘happiness, joy’
	o-dêf	‘to borrow’	o-bêl	‘to suffer’
	o-fêt	‘should, must’	ntêt	‘first’
/CuC/	ibúl	‘valley’	ekwut	‘ear’
	o-fur	‘to pay’	o-sûm	‘to buy’
	dzûm	‘ten’	ofûl	‘still’
/CoC/	*(no examples)*			
/CɔC/	lôŋ	‘teacher’	ngɔm	‘drum’
	iyór	‘place’	mpɔs	‘Saturday, week’
	o-tɔ	‘to boil’	o-pwɔp	‘to sift’
/CaC/	imăn	‘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 [ɨ]: *ebep* [ebɨp] 'lip', *ŋkêm* [ŋkɨ̂m] 'monkey', *oŋgêr* [ɔŋgɨ̂r] '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/	íŋkěn	'(an)other'	ŋkɛ̂n	'seed'
	o-yêr	'to drive away'	idzɛ́r	'fish (sp.)'
	elem	'glue'	malɛ̂m	'slowness'
	esen	'louse'	ntɛn	'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]

	labial	*alveolar*	*palatal*	*velar*	*labiovelar*
stops	p b	t d		k (g)	kp (gb)
affricates	(pf) bv	ts dz			
fricatives	f v	s z			
nasals	m	n			
liquid		l (r)			
glides			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/:	ɔtɔk	‘pipe’	/d/:	ndɔk	‘sorcery’
		tuu	‘termite’		duu	‘sky, up’
		etúŋ	‘fly’		ndúŋ	‘pepper’
	/k/:	iŋkɔ̆m	‘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’, *ɔŋgbatyɛm* ‘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, *ɔŋkpĕn* ‘flea, jigger’, and all except the reduplicated first syllable of *okpú꜖kpê* ‘short’ are followed by /i/, /e/ or /a/.

Affricates and fricatives also contrast in voicing:

[2.18]	[pf]:	mpfùú	‘bird’	/bv/:	ebvúù	‘fish (sp.)’
		mpfûk	‘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/:	oswɔ̌ŋ	‘fish (sp.)’	/z/:	izwɔŋ	‘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. *ompfĩ* ‘morning’, *mpfer* ‘flour’.

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

[2.19]	/m/:	ɔ́mɔ̌	‘(a) certain’	/n/:	ɔ-nɔ́	‘to drink’
		imăn	‘stone’		onân	‘big’
		mɛ	‘but’		nɛ	‘who’
	/l/:	o-lɔ̂ŋ	‘to teach’	/d/:	dɔ̌ŋdɔ̌ŋ	‘okra’
		o-láà	‘to cook’		ndáá	‘story, voice’
		elíŋ	‘shade’		diŋdíŋ	‘middle of night’
	/y/:	o-yɛɛ	‘to sell’	/w/:	o-wɛɛ	‘to choose, pick’
		oyá	‘ripe’		o-wá	‘to finish (intr.)’
		iyáàr	‘funnel’		o-wáàr	‘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/:	obyɛ̂	‘many’	/bw/:	o-bwâl	‘to harvest’
	/pfy/:	mpfyô	‘cold’	/pfw/:		
	/bvy/:	ibvyǒ`	‘breast’	/bvw/:	mbwâ	‘path’
	/fy/:			/fw/:	o-fwanan	‘to resemble’
	/vy/:	o-vyâ	‘to call’	/vw/:		
	/my/:	myáá	‘there’	/mw/:	mwǎàn	‘child’
	/ty/:	o-tyɛ̂n	‘to say, tell’	/tw/:	etwâ	‘bag’
	/dy/:	ndyɛ́	‘injury’	/dw/:	ndwɛ	‘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/:	nyɛ̂	‘calm’	/nw/:	o-nwaan	‘to fight’
	/ly/:	o-lyaa	‘to cry’	/lw/:	o-lwâ	‘to vomit’
	/ky/:	o-kyá	‘tail’	/kw/:	ŋkwɔ̂n	‘bean’
	/gy/:	o-ŋgyɛn	‘stranger’	/gw/:	ŋgwɔ́m	‘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. *ndyɛ́* ‘injury’. If analyzed as vowel sequences, this would produce the

representations *o-liaa* and *ondíéé* 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.dɔ̂b* '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.	mpɔs	'Saturday, week'
	/mb/:	ambuun	'Mbuun people'		mbŭn	'forehead'
	[mpf]:	ompfĩ	'morning'		mpfer	'flour'
	/mbv/:	ombvul	'umbrella'		mbvût	'response'
	/nt/:	intuntu	'flower'		ntûl	'chest'
	/nd/:	ondûk	'gun'		ndúŋ	'pepper'
	/nts/:	entsaŋga	'island'		ntsun	'odor'
	/ndz/:	ondzĭn	'idiot'		ndzɔɔ	'elephant'
	/ŋk/:	eŋkûr	'owl'		ŋkŭl	'cane'
	/ŋg/:	oŋgul	'tobacco'		ŋguŋ	'bell'
	/ŋkp/:	oŋkpĕn	'flea, jigger'		ŋkpi	'lion'
	/ŋgb/:	oŋgbatyɛm	'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 *indzéé*), two exceptional borrowings have been noted: *kimvûk* 'group', *oyánsi* '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 *onya-ntsyɛ* '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]

	labial	*alveolar*	*velar*
stops	p	t	k
nasals	m	n	ŋ
liquids		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-lwɔ̂m	‘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- zwɔ̂ŋ	‘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]

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

nasals						*liquids*				*stops*				
-ŋ	>	-m	>	-n	>	-l	>	-r	>	-k	>	-p	>	-t

back vowels						*front vowels*				
u	>	a	>	ɔ	>	i	>	e	>	ɛ
aa	>	uu	>	ɔɔ	>	ii	>	ɛɛ		

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-yîb	'to steal'
		ndɔ̂b	'fishhook'		
/s/	(7)	kyɛs	'happiness'	makâs	'anger' (ma =a borrowed prefix)
		mɛs	'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'	bɔ̂y	'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)	pɔtpɔ̂t	‘mud’	sabât	‘shoe’
	/k/:	(6)	ɔ́mɔtúk	‘one’	o-pasuk	‘explode’
	/m/:	(2)	ifakâm	‘stool’	oŋgbatyɛm	‘lizard’
	/n/:	(8)	mbatên	‘fish (sp.)’	o-tafun	‘to chew’
	/ŋ/:	(3)	dɔ̌ŋdɔ̌ŋ	‘okra’	o-kaliŋ	‘to fry’
	/l/:	(35)	ndikîl	‘poison’	o-belul	‘to heal’
	/r/:	(2)	ikíkěr	‘small’	tukíir	‘fish (sp.)’
	total:	60				

Of the above, only final /l/ can be said 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]	*labial*	*alveolar*	*velar*
stops	b	t	k
fricatives	f	s	
sonorants	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)	nzɛtôl	‘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)	imɛ́mɛ	‘sheep’	ísyɛ́mɛ	‘six’
	/l/	(11)	okali	‘yesterday’	o-kaliŋ	‘to fry’

This leaves the following eight entries which have other intervocalic consonants: *pɛpɛ̂* ‘papaya’, *okpú^{l}kpê* ‘short’, *ŋgyovûl* ‘question’, *o-yuvul* ‘to ask (someone)’, *inɔ́ána* ‘eight’, *o-fwanan* ‘to resemble’, *ntsíìrí* ‘canerat’, *nɔ̌wɛ* ‘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-pɛ́mbɛ́	'white'
		/nd/	(4)	mpɔndɔ́	'millet'		o-bɔndɔl	'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-dɛfsa	'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: *ɔngbatyɛm* 'lizard', *ŋ́gyizyâ* 'self', *o-laŋdil* 'to supervise'. The remaining are borrowings: keŋglǒ 'bicycle', *o-pukmun* 'to tempt', *mámpa* 'bread', *kamyɔ̂* '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)	pɔtpɔ̂t	'mud'	pɛtpɛ́t	'softness'
	/kt/	(1)	tuktuk	'motorcycle'		
	/kb/	(1)	bukbuk	'fish (sp.)'		
	/nt/	(1)	intúntu	'flower'		
	/ŋd/	(2)	dǒŋdǒŋ	'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 [ʊ] 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]		*Coalescence Process*		*Occurs When*	*Examples*
	(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 *bɔ̌* ‘them’:

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

As seen, a+o → o, a+e → e, o+e → e, and e+o → 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 + oŋgyɛn	→	osim oŋgyên	‘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 + ikɔ́ɔr	→	kó íkɔ́ɔr	~	kíkɔ́ɔr	‘to the frog’
	kó + etúŋ	→	kó étûŋ	~	kétûŋ	‘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 *mɛ* ‘but’, which is borrowed from French:

[2.39]	mɛ ikɔ́ɔr ↓á bva	~	miikɔ́ɔr ↓á bva	‘but a frog has fallen’
	mɛ etúŋ á bva	~	meetúŋ á bva	‘but a fly has fallen’
	mɛ okáár ↓á bva	~	mookáár ↓á bva	‘but a woman has fallen’
	mɛ akáár ↓á bva	~	maakáár ↓á bva	‘but women have fallen’
cf.	mɛ muur á bva			‘but a person has fallen’

Similarly, the vowel of the pronouns *yă*̀ ‘you sg.’, *ndé* ‘s/he, him/her’, *nɔ̌* ‘it’, *bɔ̌* ‘they, them (human)’, and *mɔ̌* ‘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	nɔ á bva	bɔ á bva	mɔ á bva	‘you sg. etc.
		yàá bva	ndáá bva	nàá bva	bàá bva	màá bva	have fallen’
	past:	ya ó bvê	ndé ó bvê	nɔ ó bvê	bɔ ó bvê	mɔ ó bvê	‘you sg. etc.
		yòó bvě	ndóó bvê	nòó bvê	bòó bvê	mòó bvê	fell’
	progressive:	ya é bvě	ndé é bvě	nɔ é bvě	bɔ é bvě	mɔ é bvě	‘you sg. etc.
		yèé bvě	ndéé bvě	nèé bvě	bèé bvě	mèé bvě	are falling’

The pronouns *mĭ*̀ ‘1st person singular’ and *bĭ* ‘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 + ikɔ́ɔ́r	→	tí ikɔ́ɔ́r	‘with a frog’
	tí + etúŋ	→	tí etúŋ	‘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 occuring, 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]	atɛ́ + é + mùùr	→	atéé múùr	‘the person’s saliva’
	osɛɛ + 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 + bɔ̌	→	ntswé bɔ̌	‘their fish (sg.)’
	ntswé + é + bɔ̌	→	ntswéé bɔ̌	‘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]	[dzɨ]	:	oŋgér o dz̲é bɔ̌	'what did they eat?'
	[pɨ]	:	ó p̲e ndé íkwɔ	'give him a banana!'
	[pʊ]	:	kó nɛ baar o p̲é óŋ̀kàán	'to whom did the people give the book?'
	[fʊ]	:	mi o f̲é ndzéé	'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 /ɛ/ or /ɔ/ vowel:

[2.48]

		harmony		*no harmony*	
/e-/	:	ɛkéé	‘leaf’	ekɔɔ	‘bee’
		ɛsyɛn	‘thorns’	ekwɔ̂m	‘broom’
		ɛbyém	‘mosquito’	etɔk	‘pipes’
/o-/	:	ɔsɔɔ	‘flamingo’	osyén	‘thorn’
		ɔtsɔ́	‘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 *oswɔ̀ɔ́* ~ *ɔswɔ̀ɔ́* ‘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-nɔ́* ~ *ɔ-nɔ́* ‘to drink’, also *ómɔtúk* ~ *ɔ́mɔtúk* ‘one’, *ómɔ* ~ *ɔ́mɔ* ‘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/	:	mwă	[mwã̆]	‘small’	cf.	mwăàn	‘child’
		o-mwé	[o-mwẽ́]	‘to show’		o-mɔ́n	‘to see’
/n-/	:	nwí	[nwĩ́]	‘bee’			
		o-nɔ́	[o-nɔ̃́]	‘to drink’			
		o-nwô	[o-nwõ̂]	‘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]

ɛsaa	‘feather’	ntsaa	‘feathers’
ɛsáŋ	‘tear’	ntsáŋ	‘tears’
esen	‘louse’	ntsen	‘lice’

As seen, the /s/ of the singular form occuring 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, *efur* ‘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 fûr	'he paid'	ndé ó mpfúr mǐ̀	'he paid me'
	s → ts	ndé ó sársa	'he helped'	ndé ó ntsársa mǐ̀	'he helped me'
	v → bv	ndé ó vyâ	'he called'	ndé ó mbvyá mǐ̀	'he called me'
	z → dz	ndé ó zî	'he hid'	ndé ó ndzí mǐ̀	'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 *mǐ̀* appears without preverbal agreement:

[2.48]					
	m → m	ndé ó mɔ̂n	'he saw'	ndé ó mɔ́n mǐ̀	'he saw me'
	n → n	ndé ó nûk	'he shot'	ndé ó núk mǐ̀	'he shot me'
	l → l	ndé ó lɔ̂ŋ	'he taught'	ndé ó lɔ́ŋ mǐ̀	'he taught me'
	y → y	ndé ó yúvul	'he asked'	ndé ó yúvul mǐ̀	'he asked me'
	w → w	ndé ó wɛ́ɛ̀	'he chose'	ndé ó wɛ́ɛ́ mǐ̀	'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 *CVŋgVC* stems:

[2.49]				
	o-kaŋ	'to close'	o-kaŋgul	'to open'
	o-lɔ̂ŋ	'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, *matɔ́nd* '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', *ntsîirí* 'canerat', *mpaantrû* 'pants', *oká ↓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 *matɔ́nd* '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

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 ↓H and ↓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', *ntsɔ́ɔ̀m* 'fork', or with a circumflex (ˆ) if there is only one vowel, e.g. *lɔ̂ŋ* 'teacher'. Similarly, LH contours are transcribed with a grave+acute accent sequence if the syllable has two vowels, e.g. *mèé́* 'oil', or with a hatchek (ˇ) if there is only one vowel: *bvǐm* 'theft'. The rising-falling LHL contour is transcribed with a (ˇ`) sequence written either over a VV, e.g. *mǎàn* 'ground', on a VN, e.g. *lǎŋ̀* '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. *bwɔ̀* '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', *mĕɛ* (LH) 'wine', *mằàn* 'ground'.)

[3.1]	*H:*	(129)	nwí	'bee'	máán	'wine'
			wén	'sun'	mwáán	'heat, perspiration'
	L:	(169)	bwɔ	'mushroom'	bvuur	'load'
			duu	'sky'	men	'mouth'
	HL:	(116)	kît	'chair'	lôŋ	'teacher'
			nûr	'body'	lût	'spoon'
	LH:	(60)	mɛ̀ɛ́	'oil, fat'	tàá	'father'
			bvĭm	'theft'	kĭl	'pineapple'
	LHL:	(11)	dzĭ`	'eye'	lwŏ`	'hand, arm'
			mằàn	'ground'	mwằàn	'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]	*H:*	ŋkún	'that very one'
	L:	okun	'to bury, plant'
	HL:	ekûn	'firewood'
	LH:	ikŭn	'trunk'
	LHL:	kŭn̄	'bury! plant!'

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

[3.3]	*H*		*L*		*HL*		*LH*	
	mbyɛ́	'often'	ɛbyɛ	'rash'	obyê	'many'	mbyĕ	'bushknife'
	ŋkáá	'crab'	okaa	'to be'	ikáà	'charcoal'	ŋkà̀á	'ancestor'
	ŋkúm	'chief'	okum	'to knock'	okûm	'to become'	ŋkŭm	'all, entire'

Minimal stem-triplets are more common:

[3.4]	*H*		*L*		*HL*	
	ebáá	‘paste’	ibaa	‘man’	o-báà	‘to receive’
	ibúl	‘valley’	ebul	‘iron’	o-bûl	‘to hit’
	ŋkáŋ	‘snake (sp.)’	o-kaŋ	‘to close’	ŋkâŋ	‘fainting’
	epúú	‘cloth’	epuu	‘louse’	mpúù	‘rat’
	esáŋ	‘tear’	esaŋ	‘island’	o-sâŋ	‘to refrain’

[3.5]	*H*		*L*		*LH*	
	ibúm	‘madness’	mbum	‘fruit’	mbŭm	‘maggot’

[3.6]	*H*		*L*		*LHL*	
	o-yá	‘to be ripe’	o-ya	‘to come’	yǎ`	‘you (sg.)’

[3.7]	*L*		*HL*		*LH*	
	ekul	‘leg, foot’	ŋkûl	‘tortoise’	ŋkŭl	‘cane’
	o-lyaŋ	‘to rot’	o-lyâŋ	‘to lick’	ilyăŋ	‘childhood’
	o-taŋ	‘to drip’	o-tyâŋ	‘to count’	ntăŋ	‘mat, bed’

[3.8]	*L*		*HL*		*LHL*	
	ebaan	‘bamboo’	o-báàn	‘to climb’	bǎàn	‘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]	*H*		*HL*		*LHL*	
	máán	‘wine’			mǎàn	‘ground, soil’
	mwáán	‘heat’			mwǎàn	‘child’
			dzî	‘feed!’	dzǐ`	‘eye’
			dzîm	‘lie!’	dzǐm̀	‘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’, *ondǎàl* ‘vegetable (sp.)’. Only 11 lexical entries have been found with a H tone prefix, mostly the *í-* of numerals. These produce all of the sequences except H-LHL:

[3.10]	*H-H:*	íná	‘four’	ísyémɛ	‘six’
	H-L:	ípe	‘two’	íŋki	‘which’
	H-HL:	ísâr	‘three’	ítáàn	‘five’
	H-LH:	íŋkěn	‘(an)other’	ómɔ̌	‘(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]	*L-L:*	(50)	o-balul	‘to turn’	o-mɔnka	‘to be visible’
			o-gɔnsa	‘to expand’	o-sakan	‘to play’
	L-L-L:	(2)	o-tambika	‘to sacrifice’	o-zabakan	‘to know each other’
	L-L-L-L:	(1)	o-baluluka	‘to turn around’		
	H-L:	(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]	*H-H:*	(6)	isíké	‘horn’	mpémbɛ́	‘white’
	H-L:	(13)	iméməɛ	‘sheep’	ikásu	‘kola’
	H-HL:	(0)				
	H-LH:	(2)	ikíkěr	‘small’	ipááfŭl	‘butterfly’
	H-↓HL:	(2)	okpú↓kpê	‘short’	otí↓tâl	‘long’
	L-H:	(11)	osisá	‘vein’	mpɔndɔ́	‘millet’
	L-L:	(9)	iziba	‘lake’	entsaŋga	‘island’
	L-HL:	(20)	nzɛtɔ̂l	‘voyage’	ndikîl	‘poison’
	L-LH:	(1)	embvakɔ̌l	‘afternoon’		
	HL-H:	(2)	ntsíìrí	‘canerat’	ntsɔ̂lɔ́	‘caterpillar (sp.)’
	LH-L:	(1)	nɔ̌wɛ	‘today’		
	LH-LH:	(2)	dɔ̌ŋdɔ̌ŋ	‘okra’	màáŋgŭl	‘mango’
	H-H-H:	(1)	osákátá	‘Sakata person’		
	L-H-L:	(2)	simísi	‘shirt’	mbwɛtétɛ	‘star’
	L-L-HL:	(1)	sukamûnt	‘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’, *kɔkɔ̂* ‘coconut’, *pɛpê* ‘papaya’, *sabât* ‘shoe’, *kamyɔ̂* ‘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’, *tufîn* ‘pus’, *mabáńtsa* ‘thought’, *mpɔndɔ́* ‘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-$^{\downarrow}$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 $^{\downarrow}$H only after another H (or $^{\downarrow}$H)
(ii) $^{\downarrow}$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 $^{\downarrow}$H)
(iii) downstep is recursive, such that a sentence can have several $^{\downarrow}$Hs, e.g. *ekún* $^{\downarrow}$*é mí* $^{\downarrow}$*nápɛ* '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 ($^{\downarrow}$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]

L tone absorption:	HL-L	→	H-L
	HL-LH		H-LH
	HL-LHL		H-LHL
	LHL-L	→	LH-L
	LHL-LH		LH-LH
	LHL-LHL		LH-LHL
H tone absorption:	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'
	/dzǐǹ/	'name'	→	dzǐn mùùr	'the person's name'
			→	dzǐn tàá	'the father's name'
			→	dzǐn mwǎàn	'the child's name'
	/ŋgèé/	'pity'	→	ŋgèè wén	'the sun's pity'
				ŋgèè 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'
	/dzǐn`/	'name'	→	dzǐn mǐ`	'my name'
			→	dzǐn yǎ`	'your (sg.) name'
cf.	/ŋgèé/	'pity'	→	ŋgèé mǐ`	'my pity'
				ŋgèé 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 *tûm* 'send', *sûm* 'buy', and *okáàr* 'woman' are all absorbed into the following L tone *o-* prefixes:

[3.16]	/ndé â tûm okáàr òŋkàán/	→	ndé â túm òkáár òŋkàán
			'he has sent the woman a book'
	/ndé â sûm okáàr òŋkàán/	→	ndé â súm òkáár 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 *oŋkàán* 'book' is not obligatorily absorbed (although it may be in fast speech):

[3.17]	/ndé â tûm òŋkàán kó okáàr/	→	ndé â túm òŋkàán kókáàr
			'he has sent a book to the woman'
	/ndé â sûm òŋkàán sâm é okáàr/	→	ndé â súm òŋkàán sám ↓ókáàr
			'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’
/akɔ̌ŋ íná / → akɔŋ 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’
/akɔ́ɔ́r iwa/ → akɔ́ɔ́r 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’ [ŋ̀]
/akɔ́ɔ́r ŋkám/ → akɔ́ɔ́r ŋkám ‘a hundred frogs’ [ŋ̀]

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] /akɔ̌ŋ iwa/ → akɔ̌ŋ 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] /akɔ̌ŋ ŋkám/ → akɔŋ 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] /mbwɔ̌m okáàr/ → mbwɔm okáàr 'the woman's nose'
/mbŭn mbéè/ → mbun mbéè 'the friend's forehead'

[3.24] /ikɔ̌ŋ é ibaa/ → ikɔŋ ibáà 'the man's spear'
/ikɔ̌ŋ é mùùr/ → ikɔŋ e múùr '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 ˡH when preceded by H and followed by L, i.e. H-LH-L → H-ˡH-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 dììr + ´/ → mi é dìír 'I am watching'
/mi ê sɔnka + ´/ → mi é ˡsɔ́nka 'I am writing' (< é sɔ̌nka)

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 sɔ̌nka* to produce the H-ˡH-L output in the last example.

Since pronouns often have LH tone, they too undergo the downstep contour simplification rule: *fòtó mǐ* 'my photograpph' vs. *fòtó ˡmí mwǎàn* 'my photograph of the child'. Compare also the realization of /bɔ̌/ 'they' in the following two sentences:

[3.26] koŋgó bàán ò dzé bɔ̌ 'where did the children eat?'
koŋgó bàán ò dzé ˡbɔ́ fùfú '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'
	/okáàr â bva/	→	okáár ↓á bva	'a woman has fallen'
	/mwǎàn â bva/	→	mwàán ↓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'
	/okáàr 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 *↓â*, 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 ˩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 bvíbvă	ndzɔɔ a dzîdzá	‘an elephant will fall/eat’
	ŋgwuu a bvíbvă	ŋgwuu a dzîdzá	‘a hippopotamus will fall/eat’
	mbvá á bvíbvă	mbvá á dzîdzá	‘a dog will fall/eat’
	okáár ˩á bvíbvă	okáár ˩á dzîdzá	‘a woman will fall/eat’
	mwàán ˩á bvíbvă	mwáán ˩á dzîdzá	‘a child will fall/eat’

In this case the tense marker appears to be /á/ which becomes L after both *ndzɔɔ* ‘elephant’ and *ŋgwùú* ‘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’
	ŋgwùú ó bvê	ŋgwùú ó dzê	‘a hippopotamus fell/ate’
	mbvá ó bvê	mbvá ó dzê	‘a dog fell/ate’
	okáár ˩ó bvê	okáár ˩ó dzê	‘a woman fell/ate’
	mwàán ˩ó bvê	mwáán ˩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 *okáàr* ‘woman’: *okáár ó sɔ́nka oŋkàán* ‘the woman wrote a letter’, *okáár é díír mwǎàn* ‘let the woman wait for the child!’ vs. downstep before /á/: *okáár ˩á sɔ́nka oŋkàán* ‘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]	mǐ`	‘I, me, my’	bǐ	‘we, us, our’
	yǎ`	‘you(r) sg.’	byĕn	‘you(r) pl.’
	ndé	‘s/he, him/his/her’	bɔ̌	‘they, them, their’ (human)
	nɔ̌	‘it(s)’	mɔ̌	‘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’	byɛn 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]	*L:*	muur	‘person’	kó múùr	kó a múùr	‘to a person’
	H:	nwí	‘bee’	kó nwî	kó a nwî	‘to a bee’
	HL:	lɔ̂ŋ	‘teacher’	kó lɔ̂ŋ	kó a lɔ̂ŋ	‘to a teacher’
	LHL:	mwǎàn	‘child’	kó mwáàn	kó a mwáàn	‘to a child’
cf.	*LH:*	tàá	‘father’	kó tàá	kó ↓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]	*LHL:*	mǐ`	‘me’	kó mî	kó a mî	‘to me’
		yǎ`	‘you sg.’	kó yâ	kó a yâ	‘to you (sg.)’
	LH:	bǐ	‘us’	kó bǐ	kó ↓á bǐ	‘to us’
		byěn	‘you pl.’	kó byěn	kó ↓á byěn	‘to you (pl.)’
		bɔ̌	‘them’	kó bɔ̌	kó ↓á bɔ̌	‘to them’
cf.	*L-H:*	ndé	‘him/her’	kó ńdé	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 ↓H: *kó ↓á byěn* ‘to you pl.’, *kó ↓á bɔ̌* ‘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]	*L-L:*	ibaa	‘man’	kó íbáà	kíbáà	‘to a man’
	L-H:	ikɔ́ɔ́r	‘frog’	kó íkɔ́ɔ̀r	kíkɔ́ɔ̀r	‘to a frog’
	L-HL:	akáàr	‘women’	kó ákáàr	kákáàr	‘to women’
cf.	*L-LH:*	eŋkpěn	‘fleas’	kó éŋkpěn	kéŋkpěn	‘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 míbvâ* ‘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 ńdé* 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 ˡH 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]

inputs:

ko	+	a	+	muur
|		|	|
H		L H		L L

outputs:

ko	+	a	+	muur	‘to a person’
|		|	∧	
H		L		H L	L

inputs:

ko	+	a	+	nwi
|		|	|
H		L H		L H

outputs:

ko	+	a	+	nwi	‘to a bee’
|		|	∧	
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]

input:

ko	+	a	+	taa
|		|	∧
H		L H		L L H

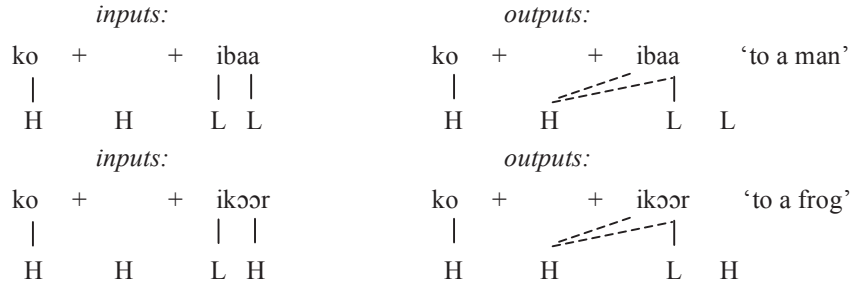
output:

(no change) ‘to father’

As indicated, there is no change: the floating L before /á/ produces the downstep, and LH remains in the output *kó ↓á 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.

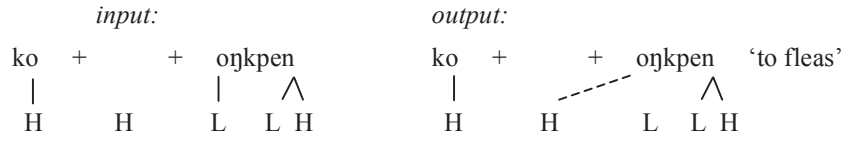
A problem arises, however, in [3.34], where the nouns have a L prefix, as well as in the pronominal forms in [3.33] not involving /a/. Here it would appear that it is the H of /kó/ itself which both spreads and removes any trace of L on the noun prefix. Or could it be a floating H tone, as in [3.37]?

[3.37]



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

[3.38]



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 ˊ/, rather than a H tone preceded by a floating low, i.e. /ˋ 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_1 of N_2' possessive construction, the two nouns are juxtaposed with no marker if a singular N_1 derives from Proto-Bantu class 1 or 9 (the latter marked by a N- prefix), e.g. *mbum* 'fruit'. Thus, the N_2 noun does not change in [3.39].

[3.39]

L:	muur	'person'	mbum muur	'the person's fruit'
H:	nwí	'bee'	mbum nwí	'the bee's fruit'
HL:	lɔ̂ŋ	'teacher'	mbum lɔ̂ŋ	'the teacher's fruit'
LHL:	mwǎàn	'child'	mbum mwǎàn	'the child's fruit'
LH:	tàá	'father'	mbum tàá	'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]	*L:*	muur	'person'	okal e múùr	'the person's place'
	H:	nwí	'bee'	okal e nwî	'the bee's place'
	HL:	lɔ̂ŋ	'teacher'	okal e lɔ̂ŋ	'the teacher's place'
	LHL:	mwǎàn	'child'	okal e mwáàn	'the child's place'
cf.	*LH:*	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]	*L-L:*	ibaa	'man'	okal ibáà	'the man's place'
	L-H:	ikɔ́ɔ́r	'frog'	okal ikɔ́ɔ̀r	'the bee's place'
	L-HL:	okáàr	'woman'	okal okáàr	'the woman's place'
cf.	*L-LH:*	eŋkpěn	'fleas'	okal eŋkpěn	'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 ńdé	'his/her fruits'
	mbum bǐ	'our fruit'	mbum é bǐ	'our fruits'
	mbum byěn	'your pl. fruit'	mbum é byěn	'your pl. fruits'
	mbum bɔ̌	'their fruit'	mbum é bɔ̌	'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]	*L-H:*	oté	‘tree’	okal óte	‘the tree’s place’
		iyó	‘market’	okal íyo	‘place of the market’
		ibá	‘palmtree’	mán íba	‘palm wine’ (wine of palmtree)
		adzá	‘water’	etaar ádza	‘water bridge’ (bridge of water)
		ɔtsɔ́	‘head’	ɛbɛ ɔ́tsɔ	‘skull’ (skull of head)
		ndzɔ́	‘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 okpâ* ~ *okal ókpa* ‘the place of the salt’. A second variation concerns N_2 L-L which is occasionally realized H-L:

[3.45]	*L-L:*	eso	‘tree’	okal éso	‘place of the dry season’
		ɔsɔɔ	‘flamingo’	okal ɔ́sɔɔ	‘place of the flamingo’
		ɔtɔk	‘pipe’	okal ɔ́tɔk	‘place of the pipe’
		epaŋ	‘compound’	ntsúk épaŋ	‘hedge of compound’

Again, sometimes both realizations are possible, e.g. *etaar* ‘bridge’ → *okal etáàr* ~ *okal étaar* ‘place of the bridge’. In most cases when the N_2 has a bisyllabic stem, frequently a borrowing, there is no tonal change, and /é/ or the N_2 prefix is realized H:

[3.46]	*L-L:*	iziba	‘lake’	okal íziba	‘place of the lake’
	L-H:	mpɔndɔ́	‘millet’	mpfer é ḿpɔndɔ́	‘millet flour’
	L-HL:	ntsumbûl	‘root’	okal é ńtsumbûl	‘place of the root’
	H-L:	makɛ́mba	‘plaintains’	ilɔŋ é makɛ́mba	‘plate of plantains’

Still, the following tonal changes have been noted on polysyllabic N_2 stems:

[3.47]	sokamûnt	‘gorilla’	okal sókamunt	‘place of the gorilla’
	pɔtpɔ̂t	‘mud’	okal e pɔ́tpɔt	‘place of the mud’
	osákátá	‘Sakata person’	okal osákata	‘place of Sakata person’
	ntsumbûl	‘root’	okal é ntsumbûl	‘place of the root’

3.3.3. Verb Tones

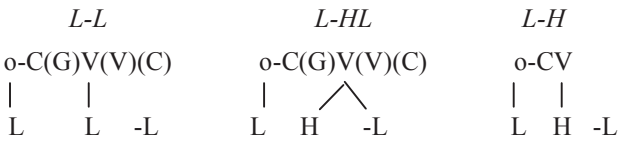
The tones on verb stems vary considerably by tense, aspect, and mood, which are treated separately in Chapter 7. In this section we will consider the basic tonal possibilities on verb stems, which bears on the issue of whether it is the syllable or the mora that is the tone-bearing unit. As seen in [3.46],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

[3.48]

L-L	(82)	*L-HL*	(112)	*L-H*	(12)
o-ya	‘to be ripe’	o-vyâ	‘to call’	o-yá	‘to be ripe’
o-dzya	‘to immerse’	o-dzwâ	‘to kill’	o-dzá	‘to eat’
o-lya	‘to fish with hook’	o-lyâ	‘to pass’	o-fá	‘to come from’
o-sii	‘to frighten’	o-tsíì	‘to float’	o-kpá	‘to die’
o-bul	‘to be bitter’	o-bûl	‘to hit’	o-lɛ́	‘to be tired’
o-kul	‘to carve’	o-kûl	‘to pick fruit’	o-nɔ́	‘to drink’
o-kum	‘to knock’	o-kûm	‘to become’	o-pá	‘to give’
o-laŋ	‘to like’	o-lâŋ	‘to plaster’	o-sá	‘to put’
o-lum	‘to throw in air’	o-lûm	‘to remove’	o-tá	‘to bite’
o-lyaŋ	‘to rot’	o-lyâŋ	‘to lick’	o-tsá	‘to descend’
o-men	‘to swallow’	o-mên	‘to dance’	o-tsɔ́	‘to pound’
o-saŋ	‘to allow’	o-sâŋ	‘to refrain’	o-wá	‘to finish’
o-suk	‘to dish out’	o-sûk	‘to finish’		
o-sum	‘to take out’	o-sûm	‘to buy’		
o-taŋ	‘to drip’	o-tâŋ	‘to count’		
o-tum	‘to bake in ashes’	o-tûm	‘to send’		
o-yaŋ	‘to be happy’	o-yâŋ	‘to dry’		
o-ziŋ	‘to lose, forget’	o-zîŋ	‘to be alive’		
o-zuŋ	‘to scoop’	o-zûŋ	‘to go around’		
o-baan	‘to begin’	o-báàn	‘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-byɛ́ɛ̀r* ‘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]



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 *Cɛ*, *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 be 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]	ŋkǒ	'snail'	ɔ́mǒ	'(a) certain'
	pě	'here'	dzǐ	'eye'
	ɔŋkǒ	'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]

	Root =L			*Root =H*		
	infinitive/imperative			*infinitive/imperative*		
CV:	o-bva	bvâ	‘fall!’	o-dzá	dzâ	‘eat!’
	o-ya	yâ	‘come!’	o-zî	zî	‘hide!’
CGV:	o-zwi	zwî	‘wake up!’	o-tswâ	tswâ	‘bring!’
	o-dzya	dzyâ	‘immerse!’	o-vyâ	vyâ	‘call!’
CVV:	o-kii	kǐì	‘defend!’	o-báà	báà	‘receive!’
	o-wɛɛ	wɛ̌ɛ̀	‘choose!’	o-tsíì	tsíì	‘float!’
CVC$_1$:	o-dzik	dzîk	‘uproot!’	o-yûp	yûp	‘ask!’
	o-lek	lêk	‘surpass!’	o-tît	tît	‘avoid!’
	o-fup	fûp	‘grill!’	o-sûk	sûk	‘finish!’
CVC$_2$:	o-mɛk	mɛ̌k`	‘try!’	o-kûl	kûl	‘pick!’
	o-mat	mǎt`	‘stand!’	o-kât	kât	‘catch!’
	o-lil	lǐl`	‘swim!’	o-lôŋ	lôŋ	‘teach!’
	o-men	mɛ̌ǹ	‘swallow!’	o-zîm	zîm	‘extinguish!’
CVVC:	o-yaam	yǎàm	‘embrace!’	o-swáàn	swáàn	‘argue!’
	o-nwaan	nwǎàn	‘fight!’	o-byɛ́ɛ̀r	byɛ́ɛ̀r	‘drum!’
CVCVC:	o-balul	bálul	‘turn!’			
	o-sakan	sákan	‘play!’			
CVCCVC:	o-luŋguk	lŭŋguk	‘think!’	o-báńtsa	báńtsa	‘think!’
	o-tɛndul	tɛ̌ndul	‘preach!’	o-yúńtsa	yúńtsa	‘try!’
CVCCV:	o-sarsa	sǎrsa	‘help!’			
	o-sɔnka	sɔ̌nka	‘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 *o-ker* ‘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; 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 *dzyâ* 'immerse!' should instead be transcribed as *dzyă*` 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 *lŭŋguk* 'think!' and *sărsa* 'help!' instead of **luŋgûk* and **sarsâ*. It has already been pointed out that bisyllabic verb stems are L-L except for *obáńtsa* 'to think' and *oyúńtsa* '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]	*L-L*	mbum	'fruit'	mbŭm, mi ó pé mwăàn	'a fruit I gave the child'
	L-LH	mbŭm	'maggot'	mbŭm, mi ó pé mwăàn	'a maggot I gave the child'
	L-HL	mpúù	'rat'	mpúú, mi ó pé mwăàn	'a rat I gave the child'
	L-H	epúú	'cloth'	epúú, mi ó pé mwăàn	'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 sîsúm mbŭm... ndzùú... yɛ mfer	'Tukumu will buy fruit... groundnuts... and flour'
	Tukúmu ó mɔ́n ŋgúl... ŋkáám... yɛ okyâŋ	'Tukumu saw a pig... a goat... and a hyena'

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	bɔ	a	díír	bàár...	sám	↓ó-líŋ	ésàá...
	they	HAB	visit	people.H%	reason	to get	food.H%
	yɛ	bɔ́	kà	láŋ	↓ó-ker	kisál	bɔ
	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↓kábul mantɛtɛ	'the friends will share the squash'
	↑ba-mbéé a kí↓kábul mantɛtɛ	'will the friends share the squash?'
	mwàán ↓ó bve kó ntse	'the child fell down'
	↑mwàán ↓ó bve kó ntse	'did the child fall down?'
	oŋgbatyɛm â dzá otúŋ	'the lizard has eaten the fly'
	↑oŋgbatyɛm â dzá otúŋ	'has the lizard eaten the fly?'

Because of the overall pitch raising, a final sequence of Ls, as on *mantɛtɛ* 'squash' will sound like a mid-mid-low sequence. By the same token, an initial sequence of Ls, as on *oŋgbatyɛm* '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!', ↑*ntsɔ́n 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

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'	ikɔ́ɔ́r	'frog'	ikpá	'death'	(70)
	e-	ebin	'door'	etààr	'bridge'	ebààn	'bamboo'	(56)
	ɛ-	ɛkɛ́	'leaf'	ɛbɛ	'nail'	ɛpɛɛ	'grasshopper'	(7)
	u-	---		---		---		
	o-	okáàr	'woman'	oté	'tree'	osɛɛ	'cockroach'	(82)
	ɔ-	ɔtɔk	'pipe'	ɔtsɔ́	'head'	ɔsɔɔ	'flamingo'	(7)
	a-	adzá	'water'	até	'saliva'	avúp	'dew'	(7)
	N-	mbum	'fruit'	ndzàà	'hunger'	ŋgwɔ́m	'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 /ɛ/ 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', *oŋgîr* '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'
	bwɔ́m	'fear'	mɛ̀ɛ́	'oil'	siŋ	'net'
	dzĭ̀ǹ	'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. *mwăàn* 'child', *băàn* 'children', *dzĭ̂* 'eye', *mĭ̂* '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'	pɔtpôt	'mud'
	osisá	'vein'	mpandzí	'rib'	fufú	'fufu' (cassava meal)
	intúntu	'flower'	mbwɛ̀tétɛ̀	'star'	tsébo	'sneezing'
	ipááfŭ̀l	'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 *mʊ, class 3)
	likɛmbɛ	'hand piano'	(cf. PB *dɪ-, class 5)
	mantɛtɛ	'courage'	(cf. PB *ma-, class 6)
	kimvûk	'group'	(cf. PB *kɪ-, class 7)
	tufĩ̀ŋ	'pus'	(cf. PB *tʊ-, class 13)

It should be noted that nouns like *ìmémɛ̀* 'sheep', *ìzìbà* 'lake', and *ìsíké* '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. *okáàr* 'woman', *akáàr* '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 **mʊ-*, other human nouns are marked with other prefixes or lack a prefix. Thus compare the nouns in [4.5].

[4.5]	olûm	'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'	lɔ̂ŋ	'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]	*singular i-*	*singular e-/ɛ-*	*singular o-/ɔ-*	*singular N-*
Totals:	70	63	89	159
# body parts	11	15	12	11
%	15.7	23.8	13.5	6.9
# animals	10	13	15	40
%	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	'palmtree'	mbá	'palmnut'		
	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]	elûm	‘tongue’	olûm	‘husband’
	epàŋ	‘fence’	ipàŋ	‘machete’
	epúú	‘cloth, shirt’	mpúú	‘rat, mouse’
	avúp	‘dew’	ivúp	‘stump of a plant whose leaves jet out’

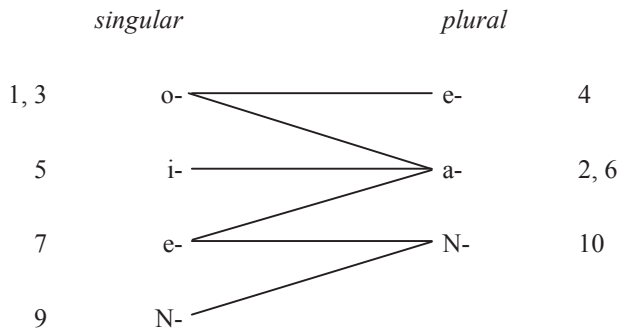
The third and most important argument for recognizing /i-/, /e-/, /o-/, /a-/ and /N-/ as prefixes is that they participate in singular-plural pairings. This is the subject of the next section.

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. *òndzéé* ‘an Nzadi person’, *àndzéé* ‘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]



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 *nápɛ* in the singular, but *mápɛ* in

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

[4.10]	ebin nápɛ	'this door'	okal nápɛ	'this place'	mbvá ↓nápɛ	'this dog'
	mbin mápɛ	'these doors'	ekal mápɛ	'these places'	mbvá ↓mápɛ	'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]	okáàr / akáàr	'woman/women'	okwâ / akwâ	'younger sibling(s)'
	olûm / alûm	'husband(s)'	otûŋ / atûŋ	'relative(s)'
	oŋgaa / aŋgaa	'owner(s)'	okěl / akěl	'parent(s)-in-law'

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

[4.12]	ondzéé / andzéé	'Nzadi person(s)'	oyánsi / ayánsi	'Yansi person(s)'
	ombuun / ambuun	'Mbuun person(s)'	olwăl / alwăl	'Lwal person(s)'
	osákátá / asákátá	'Sakata person(s)'	odzíŋ / adzíŋ	'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, *mpìk* ‘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] ondyéɛ́ / endyéɛ́ ‘white man/men’ oŋgyɛŋ / ɛŋgyɛŋ ‘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)’ sɛmɛ̂k ‘brother/sister-in-law(s)’
màá ‘mother(s)’ bɔ̂y ‘servant(s)’
lɔ̂ŋ ‘teacher(s)’ mɛ́mɛ ‘deaf and dumb person(s)’

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

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

[4.16] muur ‘person’ mwǎàn ‘child’
baar ‘persons, people’ bǎàn ‘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 *mwǎàn* ‘child’ (which may simplify to *mwǎ*):

[4.17] mwa íbaa / bàán abáà ‘boy(s)’ muur bvǐm / baar bvǐm ‘thief/thieves’
mwǎ okáàr / bàán akáàr ‘girl(s)’ muur ndɔk / baar e ndɔ̂k ‘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 **mʊ-/*mɪ-*:

[4.18]	okal / ekal	‘place(s)’	osìsá / 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)’	ɔtɔk / etɔk	‘pipe(s)’
	osɛɛ / ɛsɛɛ	‘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)’
	ondyɛ́ɛ́ / ɛndyɛ́ɛ́	‘white man/men’	ɔŋkàán / eŋkàán	‘book(s)’
	ondûk / endûk	‘gun(s)’	ompfí / empfí	‘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’	imɛ́mɛ / amɛ́mɛ	‘sheep’
	ibúl / abúl	‘valley(s)’	imɔ́ŋ / amɔ́ŋ	‘knee(s)’
	idzîn / adzîn	‘tooth/teeth’	ipăp /apăp	‘wing(s)’
	ikìé / akìé	‘egg(s)’	itâr / atâr	‘stone(s)’
	ikɔ̌ŋ / akɔ̌ŋ	‘spear(s)’	iyó / ayó	‘market(s)’
	ikɔ́ɔ́r / akɔ́ɔ́r	‘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 **dì-*:

[4.21]	dzĭ̀ / mĭì	‘eye’	dzŭm̀ / akûm	‘ten(s)’
	dzĭ̂ǹ	‘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 ˡápe* ‘twenty’, *àkúm ˡásâr* ‘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 *dzǐm̀* 'song' should also be noted in this context, derived from PB **jímbo*, but probably not in class 5. Finally, it should be noted that *i-* is used to refer to sister Bantu languages, e.g. *isákátá*, *idzíŋ*, *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)'	ɛpɛɛ / apɛɛ	'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 **dʊ-*, 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)’	ɛkéɛ́ / ŋkéɛ́	‘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)’	ɛsyɛ / ntsyɛ	‘caterpillar(s)’
	eká / ŋká	‘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)’	ŋkɔ̀ɔ́	‘snail(s)’
	mbvìl	‘impala(s)’	ŋkûl	‘tortoise(s)’
	ndzɔɔ	‘elephant(s)’	ŋkwɔ́	‘chicken(s)’
	ndzyén	‘cricket(s)’	mpfùú	‘bird(s)’
	ŋgwɔ́m	‘cow(s)’	mpúú	‘rat(s)’
	ŋgwŭ	‘hippopotamus(es)’	ntɛn	‘snake(s)’
	ŋkáá	‘crab(s)’	ntsúr	‘animal(s)’
	ŋkáàm	‘goat(s)’	ntswɛ́	‘fish’
	ŋkîm	‘monkey(s)’	ntûr	‘ant(s) (sp.)’

Others nouns are, however, also found:

[4.26]	mbá	‘palmnut(s)’	ŋkăl	‘headpad(s)’
	mbyĕ	‘bushknife/knives’	ŋkáb	‘paddle(s)’
	mbín	‘calabash(es)’	ŋkûn	‘firewood(s)’
	mbŏŋ	‘brain(s)’	ŋkwɔ̂n	‘bean(s)’
	mbum	‘fruit(s)’	mpep	‘cave(s)’
	mbvwâ	‘path(s)’	mpó	‘throat(s)’
	ndzó	‘house(s)’	ntáŋ	‘mat(s), bed(s)’
	ŋgúm	‘hill(s), mountain(s)’	ntsaa	‘basket(s)’
	ŋgwɛn	‘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, *mpîk* 'slave' reconstructs as class 1/2 **mʊ-pika/ba-pika* in PB. Similarly, *mpandzí* 'rib' is reconstructed as 11/10 **dʊ-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]

Nzadi			*Proto-Bantu*		
singular	*plural*	*gloss*	*class*	*singular*	*plural*
muur	baar	'person(s)'	1/2	*mʊ-ntʊ	*ba-ntʊ
mwǎàn	bǎàn	'child(ren)'	1/2	*mʊ-jánà	*ba-jána
dzǐ`	mǐì	'eye(s)'	5/6	*di-jíco	*ma-jíco
dzǔm`	akûm	'ten(s)'	5/6	*di-kúmi	*ma-kúmi
wàá	mǎn	'village(s)'	?/6		
wǎàr	mǎàr	'canoe(s)'	14/6	*bʊ-játo	*mà-játo

Although one might analyze 'canoe' as *ò-âr* 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 *mèɛ́* 'oil' and *máán* 'wine' as *m-èɛ́* and *má-án* (cf. PB class 6 **ma-jadí* 'oil', **ma-jáná* '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	*mʊ-/mɪ-
likɛ́mba	makɛ́mba	'plantain(s)'	PB	5/6	*di-/*ma-
kisâl	bisâl	'work, farming'	PB	7/8	*kɪ-/*bi-
kífu	bífu	'error(s)'	PB	7/8	*kɪ-/*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, leprosies'	PB	4	*mɪ-
	likɛmbe	(ba-) likɛmbe	'hand piano(s)'	PB	5	*di-
	mabáńtsa	(ba-) mabáńtsa	'thought(s)'	PB	6	*ma-
	kimvûk	(ba-) kimvûk	'group(s)'	PB	7	*kɪ-
	lulên	(ba-) lulên	'boasting(s)'	PB	11	*dʊ-

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', *ilɛ́* 'tiredness', *esaa* 'food', *mpfêr* 'flour'. We have already illustrated the agreement test which distinguishes singular vs. plural on N-prefix nouns: *mbvá ˩nápɛ* 'this dog', *mbvá ˩mápɛ* '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]	ekɔ́ napyá	‘that cloud’	ekɔ́ mapyá	‘those clouds’
	ekul nápɛ	‘this foot’	ekul mápɛ	‘these feet’
	elá okúùr	‘an old lie’	elá ekúùr	‘old lies’
	elúm e mî	‘my tongue’	elúm e bɔ̌	‘their tongues’
	ekwɔ́m ↓ómɔtúk	‘one broom’	ekwɔ́m ↓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 mápɛ* ‘this dust’ (plural). While the singular form, *efur nápɛ*, may be ungrammatical, in other cases singular agreement “individuates” what would normally be an inherent plural, e.g. *etíír ↓mápɛ* ‘this grass’ vs. *etíír ↓nápɛ* ‘this piece (e.g. blade) of grass’. A rather revealing comparison between three *N-* prefix nouns is seen in [4.31].

[4.31]	mbvá mǐ`	‘my dog’	mbvá é mî	‘my dogs’
	mbvá ↓nápɛ	‘this dog’	mbvá ↓mápɛ	‘these dogs’
	mpfer mǐ`	‘my flour’	mpfer e mî	‘my flour’
	mpfer nápɛ	‘this bit of flour’	mpfer mápɛ	‘this flour’
	*ndzii mǐ`		ndzii e mî	‘my money’
	ndzii nápɛ	‘this piece of money’	ndzii mápɛ	‘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 *mápɛ* 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 *nápɛ* with the meaning ‘a piece of’. *ndzii nápɛ* 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]

expected semantic singular			
abal nápɛ	‘this belly’	abal mápɛ	‘these bellies’
avoká ˩nápɛ	‘this avocado’	avoká ˩mápɛ	‘these avocados’
nuanced singular			
adzá ˩nápɛ	‘this (container of) water’	adzá ˩mápɛ	‘this water’
odd or disallowed singular			
?? aduur nápɛ		aduur mápɛ	‘this fatigue’
?? avúp ˩nápɛ		avúp ˩mápɛ	‘this dew’
?? até ˩nápɛ		até ˩mápɛ	‘this saliva’

As seen, *abal* ‘belly’ and *avokâ* ‘avocado’, a borrowing, are countable nouns, just like *ekɔ́* ‘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 *dìír adzá ˩mápɛ* ‘look at this water!’ would be appropriate. The unacceptability of the last three nouns with *nápɛ* 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 ésya* ‘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 ˩nápɛ	‘this chair’	kít ˩mápɛ	‘these chairs’
núr ˩nápɛ	‘this body’	núr ˩mápɛ	‘these bodies’
tsya nápɛ	‘this fire’	tsya mápɛ	‘these fires’
mwáán ˩nápɛ	‘this light’	mwáán ˩mápɛ	‘these lights’

In other cases, the singular demonstrative implies a container:

[4.34]

máán ˩nápɛ	‘this (container of) wine’	máán ˩mápɛ	‘this wine’
mɛ̀ɛ́ ˩nápɛ	‘this (container of oil)’	mɛ̀ɛ́ ˩mápɛ	‘this oil’

In the case of *mámpa* ‘bread’, the use of the singular vs. plural demonstrative depends on whether one is thinking of the bread as a unit or as a substance: *mámpa nápɛ* ‘this (loaf of) bread’, *mámpa mápɛ* ‘this bread’.

Although such nouns as the above do not have an overt segmental prefix, there is considerable evidence that they are preceded by a tonal prefix, a floating L. For example, the infinitives *odzá* ‘to eat’ and *opá* ‘to give’, which are pronounced L-H in isolation, become L-HL when immediately followed by a noun with initial H or HL: *odzâ lɔ́sɔ* ‘to eat rice’, *opâ kyês* ‘to give happiness’, *opâ bwɔ́m* ‘to frighten’ (lit. to give fear). Similarly, whenever prefixless H tone nouns follow each other in succession, multiple HLs are produced:

[4.35]	opâ nwî bwɔ́m	‘to frighten a bee’	(nwí ‘bee’)
	opâ nwî dzô bwɔ́m	‘to frighten a quiet bee’	(dzó ‘quiet’)
	opâ nwî kûn bwɔ́m	‘to frighten that particular bee’	(kún ‘that particular’)

The second and third examples in [4.35] show that other prefixless words also have a floating L prefix (cf. *ndzó* ‘house’, *ndzô tsɛ́* ‘a clean house’, *ndzô zyɛ́* ‘a white house’). While there are Nzadi words which begin with a H prefix, e.g. numerals such as *ómɔtúk* ‘one’ and *ípe* ‘two’, it appears that all segmentally prefixless stems have a floating L prefix.

4.3.3. The ba- Pluralizer

One way to clearly express the plurality of a noun is by using the general pluralizer *ba-*, which is a proclitic that attaches to what would otherwise be an independent prefixless word. Although always optional, *ba-* most readily is used with invariant nouns, prefixed or not:

[4.36]	kît	‘chair’	kît	~ ba-kît	‘chairs’
	màá	‘mother’	màá	~ ba-màá	‘mothers’
	ndzɔɔ	‘elephant’	ndzɔɔ	~ ba-ndzɔɔ	‘elephants’
	ŋkàá	‘ancestor’	ŋkàá	~ ba-ŋkàá	‘ancestors’
	ekɔ́	‘cloud’	ekɔ́	~ ba-ekɔ́	‘clouds’
	etum	‘war’	etum	~ ba-etum	‘wars’

While *ba-* clearly derives from Proto-Bantu class 2 **bà-*, a human plural class, it has been generalized to any noun which requires an overt mark of plurality. In general, *ba-* is not used before a singular noun if there is a corresponding plural, nor is it generally used with the plural form. Hence it would be quite odd to say either *ba-okal* or *ba-ekal* for ‘places’. However, *ba-* can be used with certain plural nouns with the effect of “individuation”:

[4.37]	abaa bápɛ	‘these men’	ba-abaa bápɛ	‘these (individual) men’
	abá ˡmápɛ	‘these palmtrees’	ba-abá ˡmápɛ	‘these (individual) palmtrees’
	akaa mápɛ	‘these charcoals’	ba-akaa mápɛ	‘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 ˡmápɛ* ‘this water’ (lit. ‘these water’), *ba-adzá ˡmápɛ* ‘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: *măn*, *ba-wàá*, *ba-măn*. 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, ŋgyovûl, kisâl, luzîŋ*):

[4.38]	ntsûk	‘end, limit’	o-sûk	‘to finish’
	entîn	‘haste, speed’	o-tîn	‘to escape’
	ekwɔ̂m	‘broom’	o-kwɔ̂m	‘to sweep’
	mabáńtsa	‘thought’	o-báńtsa	‘to think’
	obûr	‘birth’	o-bûr	‘to give birth’
	bvuur	‘load’	o-bvuur	‘to be heavy’
	ŋgyovûl	‘question’	o-yuvul	‘to ask, interrogate’
	okal	‘place’	o-kal	‘to return, bring back’
	ikpá	‘death’	o-kpá	‘to die’
	ilɛ́	‘tiredness’	o-lɛ́	‘to tire, be tired’
	lɔ̂ŋ	‘teacher’	o-lɔ̂ŋ	‘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, *lɔ̂ŋ* ‘teacher’, and relatively few abstract deverbal nouns, e.g. *ikpá* ‘death’, *ilɛ́* ‘tiredness’. Agentives expressing professions involve relative clauses in Nzadi:

[4.39]	muur na nga kɛ ndzéé	‘fisherman’	lit. ‘a person who goes to the river’
	muur na nga kɛ opàá	‘hunter’	lit. ‘a person who goes hunting’
	muur na nga kɛ (~ 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 kɛ ndzéé* ‘fishermen’. Other agentives are typically built on genitive or noun + modifier constructions:

[4.40]	muur bvĭm	baar é bvĭm	‘thief/thieves’	lit. ‘person(s) of theft’
	muur kisál ndzɔ́	baar é kisál ndzɔ́	‘servant(s)’	lit. ‘person(s) of housework’
	muur ndɔk	baar é ndɔk	‘sorcerer(s)’	lit. ‘person(s) of sorcery’
	muur ŋgadzîm	baar ngadzîm	‘liar(s)’	lit. ‘lying person(s)’
	muur ŋgayɛɛ	baar ŋgayɛɛ	‘seller(s)’	lit. ‘selling person(s)’

In many cases, even the headword *muur* ‘person’ would not even be required: *yă bvĭm* ‘you thief!’ (lit. ‘you theft’), *mwàán ˩nápɛ 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 mĭ̀	‘my badness’
	duu bulɛ́ɛ̀	‘blue sky’	bulɛ́ɛ́ é dúù	‘the blue of the sky’
	ntswé óbvo	‘fresh fish’	obvo é ntswe	‘freshness of the fish’
	oŋkaan é ´mpa	‘new book’	mpa oŋkàán	‘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-dzím ˩é ye obé	‘to lie is bad’	o-dzîm	‘to lie’
	o-lyaa e ndé ó ŋkér mĭ̀ mpâs	‘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 *mwăàn /băàn* ‘child(ren)’ to the noun in question. The final *-n*

of the singular *mwǎàn* 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]	mwa íbaa	bàán abáà	'boy(s)'	ibaa / abaa	'man/men'
	mwa okáàr	bàán àkáàr	'girl(s),'	okáàr / akáàr	'woman/women'
	mwàá mbyě	bàán ↓é mbyě	'knife/knives'	mbyě	'bushknife/-ves'
	mwàá ndzɔɔ	bàán ↓é ndzɔ́ɔ̀	'baby elephant(s)'	ndzɔɔ	'elephant(s)'
	mwàá lwǒ`	bàán ↓é lwô	'finger(s)'	lwǒ`	'hand(s), arm(s)'
	mwa oté	bàán ↓étê	'branch(es)'	oté / eté	'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]	izí íbaa	azyɛ́ ábaa	'older brother(s)'	izí / azyɛ́	'older sibling'
	izí okáàr	azyɛ́ àkáàr	'older sister(s)'		
	ŋka íbaa	ŋka ábaa	'grandfather(s)'	ŋkàá	'grandparent'
	ŋká okáàr	ŋká àkáàr	'grandmother(s)'		
	ŋkwɔ́ íbaa	ŋkwɔ́ ábaa	'rooster(s)'	ŋkwɔ́	'chicken'
	ŋkwɔ́ okáàr	ŋkwɔ́ akáàr	'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]	ndzɔ̂ nwí	‘beehive’	ndzɔ́	‘house’	nwí	‘bee’
	mɛɛ nwí	‘honey’	mɛ̀ɛ́	‘oil’	nwí	‘bee’
	du é ndzɔ	‘ceiling’	duu	‘sky’	ndzɔ́	‘house’
	adzá é mbvwâ	‘dew’	adzá	‘water’	mbvwâ	‘path’
	okál ↓ɔ́tsɔ	‘madness’	okâl	‘illness’	ɔtsɔ́	‘head’
	adzá íbvyô	‘milk’	adzá	‘water’	ibvyô	‘breast’
	ɛbɛ ɔ́tsɔ	‘skull’	ɛbɛɛ	‘shell’	ɔtsɔ́	‘head’
	mpété itíì	‘earring’	mpété	‘ornament’	itíì	‘ear’
	mpfye adzíŋ	‘pottery’	mypfɛ̌	‘pot’	adzíŋ	‘Dzing people’
	ntswe e dzî	‘eyebrow’	ntswɛ̌	‘hair’	dzǐ`	‘eye’
	mwa oté	‘branch’	mwǎàn	‘child’	oté	‘tree’

As can be seen, the above examples are transparent ‘N_1 of N_2’ 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 okúùr	‘uncle’ (father’s older brother)	tàá	‘father’	okúùr	‘old’
	maa okúùr	‘aunt’ (mother’s older sister)	màá	‘mother’	okúùr	‘old’
	okáár osó	‘first wife’	okáàr	‘woman, wife’	osó	‘front’
	ŋgaŋ ndzàám	‘priest’	oŋgaŋ	‘doctor’	ndzàám	‘God’
	okel ibáà	‘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 ŋkɔ̌	‘praying mantis’	obwâ	‘to break’	ŋkɔ̌	‘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-kŭr	‘ant (big) (sp.)’	ntsáŋ	‘?’	kŭr	‘?’

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

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]

	singular		*plural*	
	human	*non-human*	*human*	*non-human*
pronouns (3rd person)	ndé	nɔ̌	bɔ̌	mɔ̌
demonstratives (e.g. 'this')	ná-pɛ		bá-pɛ	má-pɛ
adjectives (some; e.g. 'big')	o-nân		e-nân	
adjectives (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]

	singular	*plural*
1st person	mǐ̀	bǐ
2nd person	yǎ̀	byěn
3rd person [+human]	ndé	bɔ̌
3rd person [-human]	nɔ̌	mɔ̌

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, *ndzɔ́ bǐ* '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]

mǐ̀	'I, me, my'	bǐ	'we, us, our'
yǎ̀	'you (sg.), your (sg.)'	byěn	'you (pl.), your (pl.)'
ndé	'he, she, him, her, his, her'	bɔ̌	'they, them, their' (human)
nɔ̌	'it, its'	mɔ̌	'they, them, their' (non-human)

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

[5.4]

mi ó pé ndé nɔ̌	'I gave him it'
bɔ ó mɔ́n mǐ̀	'they saw me'
bi ó yíb mbvá bɔ̌	'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 tyɛ́n ningé ndé e láŋ yǎ` 'he$_i$ said that he$_{i,j}$ likes you'
he PAST say that he PRES like you
bɔ ó tyɛ́n ningé bɔ e láŋ yǎ` 'they$_i$ said that they$_{i,j}$ like you'
they PAST say that they PRES like you

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

[5.6]	mí-ŋ́gyizâ	'myself"	bí-ŋ́gyizâ	'ourselves'
	yá-ŋ́gyizâ	'yourself"	byɛ́n-ŋ́gyizâ	'yourselves'
	ndé-ŋ́gyizâ	'himself, herself"	bɔ́-ŋ́gyizâ	'themselves' (human)
	nɔ́-ŋ́gyizâ	'itself"	mɔ́-ŋ́gyizâ	'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]	mi á diir mí-ŋ́gizyâ kó taltál	'I've looked at myself in the mirror'
	ndé e dzí mwàán ndé-ŋ́gizyâ	'she is feeding her own child'
	bí-ŋ́gizyá ó kěr nɔ̌	'we ourselves did it' =
	bi ó kěr nɔ̌ bí-íŋ́gizyâ	'we did it ourselves'
	bɔ ó búl ↓bɔ́-ŋ́gizyâ	'they hit themselves/each other'

The last example shows that *-ŋ́gizyâ* provides either a reflexive or reciprocal sense in the plural.The reflexive may also express a possessor: *mwàá ↓mí-ŋ́gizyâ* '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$_1$ of Noun$_2$ ("N$_1$ of N$_2$"), 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 mwǎàn* 'the child's dog', *mbvá mɨ̌`* 'my dog'. In the other, a genitive linker (GL) /é/ 'of" occurs before the dependent noun: *ìkɔ́ɔ́r é mwáàn* 'the child's frog', *ìkɔ́ɔ́r é mî* 'my frog'. Whether the GL is required depends on the nature of the head noun (N$_1$). If N$_1$ 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]	*PB class 1*		*PB class 9*	
	mwàán mǐ̀	'my child'	ŋkwɔ́ mǐ̀	'my chicken'
	okáár wàá	'woman of the village'	ŋgɔm mwǎàn	'the child's drum'
	oŋgaa ndzɔ́	'owner of the house'	ntsaa mbum	'basket of fruit'
	muur ndɔk	'sorcerer' ('person of sorcery'	ndzɔ̂ 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 *mwǎàn* 'child' and *okáàr* 'woman' before a L tone in the first two examples. Note that *mwǎàn* may become *mwǎà* when possessed. Similarly, when it has the meaning 'wife', *òkáàr* becomes *òkáà* when possessed by a pronoun: *òkáá mǐ̀* 'my wife'; cf. *okáár muur* 'a person's wife', *àkáár ↓é mî* 'my wives'.

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

[5.9]	*PB class 2*		*PB class 10*	
	bàán ↓é mî	'my children'	(ba-) ŋkwɔ́ é mî	'my chickens'
	akáár ↓é wàá	'women of the village'	(ba-) ŋgɔm é mwáàn	'the child's canoes'
	aŋgaa é ndzɔ̀	'owners of the house'	(ba-) ntsaa e mbûm	'baskets of fruit'
	baar e ndɔ̂k	'sorcerers' ('people of sorcery'	(ba-) ndzɔ́ é nwì	'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. *ŋkwɔ́ + é + mǐ̀ → ŋkwɔ́ é mî* '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 + ndzɔ́ → aŋgaa é ndzɔ̀* 'owners of the house'.

(iii) If the stem of the N_2 or possessive pronoun has LH tone, it will not change, e.g. *akáàr + é + wàá → akáár ↓é wàá* '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_1 is LH, it will become L before /é/, e.g. *(ba-) mpfùú + é + mwǎàn → (ba-) mpfùù è mwáàn* 'the child's birds'.

(v) If the stem of N_1 is L or LH, and if /é/ is able to produce a HL on the N_2 stem, /é/ will be realized L, e.g. *(ba-) ntsaa + é + mbum → (ba-) ntsaa e mbûm* 'baskets of fruit'.

(vi) If the stem of N_2 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 + ndzɔ́ → aŋgaa é ndzɔ̀* 'owners of the house'.

Whenever the N_2 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_2:

[5.10]	(ba-) mbum + é + olwǎl	→	(ba-) mbum ólwǎl	'fruits of the Lwal person'
	(ba-) mbum + é + odzíŋ	→	(ba-) mbum odzîŋ	'fruits of the Dzing person'
	(ba-) mbum + é + okáàr	→	(ba-) mbum òkáàr	'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 *odzíŋ* to *odzîŋ* tells us that /é/ is present. The only time one cannot detect the deleted [e] is when the N_1 ends L or LH and the N_2 has a HL stem, as in the third example.

The above predictable tone changes conditioned by the GL /é/ occur when the N_2 has a monosyllabic stem. When longer, the HL contour may be stretched over the first two syllables of the N_2 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 + oŋgbatyɛm	→	(ba-) mbum oŋgbátyɛm	'fruits of the lizard'
	(ba-) mbum + é + nzɛtɔ̂l	→	(ba-) mbum é ńzɛtɔ̂l	'fruits of the voyage'

As seen in the last example, there is no change when the N_2 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_1 is singular vs. its presence when the N_1 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 ↓é mî	‘my belt’
		okyá é ŋ́kêm	‘the monkey’s tail’	okpá é bĭ	‘our salt’
	class 5	ikɔŋ e múùr	‘the person’s spear’	itɔ́m é yâ	‘your garden’
		ibá é wàá	‘palmtree of the village’	ikɔ́ɔ́r é ńdé	‘his frog’
	class 7	ekwut e mwáàn	‘the child’s ear’	etwá ↓é byĕn	‘your pl. bag’
		esáá é ḿpfùú	‘the bird’s feather’	eka é bɔ̌	‘their fur’

The GL is uniformly present in the corresponding plural forms:

[5.13]	class 4	esim e mwáàn	‘the child’s ropes’	eŋkáp ↓é mî	‘my belts’
		ekyá é ŋ́kêm	‘the monkeys’ tails’	ekpá é bĭ	‘our salts’
	class 6	akɔŋ e múùr	‘the person’s spears’	atɔ́m é yâ	‘your gardens’
		abá é wàá	‘palmtrees of village’	akɔ́ɔ́r é ´ndé	‘his frogs’
	class 7	akwut e mwáàn	‘the child’s ears’	etwá ↓é byĕn	‘your pl. bags’
	class 10	ntsáá é mpfùú	‘the bird’s feathers’	ŋka é bɔ̌	‘their furs’

While /é/ is generally required unless N_1 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 *oŋgêr* ‘thing, something’, which has the shape of class 3, but which is followed directly by a possessor noun or pronoun: *oŋgér mĭ̀* ‘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]	ondyéɛ́ wàá	~	òndyéɛ́ é wàá	‘white man of the village’	(pl. endyéɛ́)
	ontsum ndzɔ́	~	ontsum é ńdzɔ	‘young man of the house’	(pl. entsum)
	oŋgyɛn mĭ̀	~	oŋgyɛŋ é mî	‘my guest’	(pl. ɛŋgyɛn)
	oŋgaŋ bĭ	~	oŋgaŋ é bĭ	‘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 ndzɔ́ ~ ibaa é ndzɔ̀* ‘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 ndzɔ́ ~ aŋgaa é ńdzɔ* ‘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 mǐ`	'my net'	bvuur e mî	'my load'
	siŋ yǎ`	'your sg. net'	bvuur e yâ	'your sg. load'
	siŋ ndé	'his/her net'	bvuur e ndé	'his/her load'
	siŋ nɔ̌	'its net'	bvuur é nɔ̌	'its load'
	siŋ bǐ	'our net'	bvuur é bǐ	'our load'
	siŋ byĕn	'your pl. net'	bvuur é byĕn	'your pl. load'
	siŋ bɔ̌	'their net'	bvuur é bɔ̌	'their load'
	siŋ mɔ̌	'their net'	bvuur é mɔ̌	'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 mǐ`	'my fire'	bwɔ́m é mî	'my fear'
	sɔ́k mǐ`	'my axe'	dzĭn ↓é mî	'my name'
	lút mǐ`	'my spoon'	mɛɛ e mî	'my oil'
	tuu mǐ`	'my termite'	wàár ↓é mî	'my canoe'
	tɔ̀ɔ́ mǐ`	'my sleep'	kyés ↓é mî	'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 mî* 'my nets'. *(ba-) tsya e mî* '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]		*All*	*Borrowings*	*Bisyllabic*
	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]				
	pɔ̀tpɔ́t mǐ`	'my mud'	pɛpɛ́ mǐ`	'my papaya'
	sùkàmúnt mǐ`	'my gorilla'	lɔ́sɔ mǐ`	'my rice'
	tùfín mǐ`	'my pus'	sabát mǐ`	'my shoe'
	kɔ̀kɔ́ mǐ`	'my coconut'	kafɛ́ mǐ`	'my coffee'

The two borrowings which take /é/ are *kyês* 'happiness' (from Kikongo) and *fùfú* '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/: *mɛs mǐ`* 'my table', *bóy mǐ`* 'my servant', *tí mǐ`* '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]	*No GL /é/*			*GL /é/*	
	líkɛmbɛ mǐ̀	'my handpiano'		lukán ↓é mî	'my group'
	likémba mǐ̀	'my plantain'		kífu e mî	'my error'
	mantɛtɛ mǐ̀	'my squash'		luzíŋ ↓é mî	'my life'
	kimvúk mǐ̀	'my group'		mawét ↓é mî	'my sweetness'
	musumbwá mǐ̀	'my fish (sp.)'		makás ↓é mî	'my anger'
				matɔnd e mî	'my thanks'
				lulén ↓é mî	'my boasting'
	mikéén mǐ̀	'my leprosy'	~	mikéén é mî	'my leprosy'
	kìsál mǐ̀	'my work'	~	kìsál ↓é mî	'my work'

If used with a plural meaning, the first five nouns do take /é/: *(ba-) líkɛmbɛ 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_1 would normally not take a GL:

[5.20]	mwàán ↓mí ↓nápɛ	~	mwàán ↓nápɛ e mî	'this child of mine'
	mbvá ↓mí ↓ómɔtúk	~	mbvá ómɔtúk 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_1 of N_2 genitive constructions. Depending on the N_1, /é/ will either be present or absent in the singular:

[5.21]	*No GL /é/*		*compare:*	
	ndzɔ̂ nwí	'beehive'	ndzɔ́ mǐ̀	'my house'
	(ndzɔ́ 'house' + nwí 'bee')			
	muur ndɔk	'sorcerer'	muur mǐ̀	'my person'
	(muur 'person' + ndɔk 'sorcery')			
	ntsúk épaŋ	'hedge fence'	ntsúk mǐ̀	'my limit'
	(ntsûk 'hedge, limit' + epaŋ 'compound')			
	mpúú ɛndyéɛ́	'rabbit'	mpúú mǐ̀	'my rat'
	(mpúù 'rat' + ɛndyéɛ́ 'white men')			

[5.22] *With GL /é/* *compare:*

mɛɛ e nwî	'honey'	mɛɛ e mî	'my oil'
(mɛ̀ɛ́ 'oil' + /é/ + nwí 'bee')			
etaar e mbvwâ	'road bridge'	etaar e mî	'my bridge'
(etaar 'bridge' + /é/ + mbvwâ 'path, road')			
ikwɔ é makɛ́mba	'plantain'	ikwɔ e mî	'my banana'
(ikwɔ 'banana' + /é/ + makɛ́mba 'plantains')			
adzá é ḿbvwâ	'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: /òté/ 'stick' + /é/ + /ŋkó/ 'mortar' → *oté ŋ́ko* 'pestle'.

Although /é/ is generally predictable based on the N_1, the N_2 appears to determine its presence or absence in some cases, e.g. *okyáŋ mpó* 'necklace', lit. 'ring of throat' (cf. *okyáŋ ↓é mî* 'my ring', *mpó mǐ̀* 'my throat'). Although /é/ is usually present, as in plural N_1 of N_2 possessives, it is sometimes absent in plural compounds. Thus compare *(ba-) ndzô nwí* 'beehives' vs. *baar e ndɔ̂k* 'sorcerers'. In the first case the structure appears to be [*(ba-)* $[N_1\text{-}N_2]_{sg}$ $]_{pl}$, 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] *No GL /é/*

ndzô nwí mǐ̀	'my beehive'	ndzô 'house'	nwí 'bee(s)'
muur kisál mǐ̀	'my servant'	muur 'person'	kisâl 'work'

[5.24] *With GL /é/*

mɛ̀ɛ́ ḿba e mî	'my palm oil'	mɛ̀ɛ́ 'oil'	mbá 'palmnut'
ntsúk épaŋ e mî	'my hedge fence'	ntsûk 'hedge'	epaŋ 'compound'

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

[5.25] máán íba e mî = máán é mí òkáàr ‘my palm wine’
(máán ‘wine’, ibá ‘palmtree’)
osap e lwó ↓é mî = osap e mí ↓é lwô ‘my finger’
osap ekúl ↓é mî = osap e mí ↓é lwô ‘my toe’
(osap ‘digit’, lwŏ` ‘hand’, ekul ‘foot’)
ŋkwɔ́ iba e mî = ŋkwɔ́ mì íba ‘my rooster’
ŋkwɔ́ òkáár ↓é mî = ŋkwɔ́ ↓mí òkáàr ‘my hen’
(ŋkwô ‘chicken’, ibaa ‘man, male’, òkáàr ‘woman, female’)
ntsá ndzó mĭ` = ntsá ↓mí ndzó ‘outside my house’
(ntsá ‘outside’, ndzɔ́ ‘house’)

Placement of the possessor may also mark a subtle difference in meaning:

[5.26]	ndzɔ́ ↓mí mbvá	‘my dog house’	ndzɔ́ mbvá mĭ`	‘house of my dog’
	ŋkwɔ̆m ↓mí ↓ésuŋ	‘my sugarcane bag’	ŋkwɔm ésuŋ e mî	‘bag of my sugarcane’
	ŋkɔ́p ↓mí àdzá	‘my water cup’	ŋkɔ́p àdzá é mî	‘my cup of water’ ~ ‘cup of my water’

As seen in the left column in [5.26], an internally-placed possessor modifies the head noun, thereby treating the N_1 of N_2 as a compound. In the right column, where the possessor is external, the result is a sequence of genitives: N_1 of N_2 of Pronoun. Kinship terms generally require the possessor to be internal:

[5.27]	mwă mi íbaa	‘my son’	mwăàn ‘child’, ibaa ‘man, male’
	mwă mĭ okáàr	‘my daughter’	okáàr ‘woman, female’
	okwá mi íbaa	‘my younger brother’	okwâ ‘younger sibling’
	ìzí mí òkáàr	‘my older sister’	ìzí ‘older sibling’

When *mwăàn* (→ *mwàá*) ‘child’ is used to diminutivize an inanimate, the possessor must follow the compound:

[5.28]	mwàá lwŏ ↓é mî	‘my finger’	lwŏ` ‘hand, arm’
	mwàá ḿbyĕ mĭ`	‘my knife’	mbyĕ ‘bushknife (large)’

As noted above, word order may affect meaning possibilities. The two expressions in [5.29] can both mean ‘my buffalo’.

[5.29] ŋgwɔ́m mĭ osûr ≈ ŋgwɔ́m osúr ↓é mî ‘my buffalo’
(ŋgwɔ́m ‘cow’, onínân ‘big’)

However, given that 'buffalo' is literally 'forest cow', *ŋgwɔ́m osúr ˡé mî* can also mean 'the cow of my forest'. In contrast, *ŋgwɔ́m mɨ̌ osûr* 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]	nduŋ-ŋgbé mɨ̌ˋ	'my back'	nduŋ '?', ŋgbé '?'
	ŋgal-mbíí mɨ̌ˋ	'my cat'	ŋgal '?', mbíí '?'
	ntsaŋ-kŭr mɨ̌ˋ	'my ant (sp.)'	ntaŋ '?', kŭr '?'
	ntsáá mpwɔ́p	'my armpit'	ntsáá '?', mpwɔ́p '?'
	ŋkpi-ŋkɔ́p mɨ̌ˋ	'my leopard'	ŋkpi 'lion', ŋkɔ́p '?'
but cf.	ntsúr-tii e mî	'my porcupine'	ntsúr 'animal', tii '?'

5.3.3. Headless Genitives and Genitive Sequences

It is possible for the head noun (N_1) 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]	na e mî	'mine'	na é bɨ̌	'ours'
	na e yâ	'yours sg.'	na é byĕn	'yours pl.'
	na e ndé	'his/hers'	na é bɔ̌	'theirs' (human)
	na é nɔ̌	'its'	na é mɔ̌	'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]	na e mwáàn	'the child's'	na e báàn	'the children's'
	na e múùr	'a person's'	na e báàr	'the people's'
	na é ndzàám	'God's'	na ibáà	'the man's'
	na é ŋgwùú	'the hippo's'	na okáàr	'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 bằàn* , *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 mɨ̌ˋ* 'mine', which can also be expressed as *oŋgér mɨ̌ˋ* 'mine' (literally, 'my thing').

The marker *na* can also optionally cooccur with an expressed N_1:

[5.33]	eŋkàán (na) e báàn	'books of the children'
	mbvá na e báár bàpyá	'the dog of those people'
	okáár na e mî =okáá mǐ`	'my wife' (=okáá mǐ`)
	pɛtpét ébáàn	'softness of the bamboo'
~	pɛtpét 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 *mwàán muur* 'the person's child', both *mwàán na muur* and *mwàán 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]	mwàán òkáár na é wàá	'the child of the woman of the village'
	mbvá mwàán na e ŋkûm	'the dog of the child of the chief'
	enkàán é báán na ibáà	'the books of the children of the man'

While the phrases in [5.34] have the right-branching structure [N_1 of [N_2 of N_3]], it is also possible to get a tripartite left-branching genitive, [[N_1 of N_2] of N_3]. Thus note the first two examples in [5.35] which contrast left- vs. right-branching structures:

[5.35]	fòtó mǐ mwǎàn	'my photo of the child'
	fòtó mwàán mǐ`	'my photo of the child' / 'the photo of my child'
	fòtó byĕn mwàán mǐ`	'your pl. photo of my child'
	fòtó mǐ mwàán byĕn	'my photo of your pl. child'

The last two examples show that each noun can be possessed, producing a [[N_1 of N_2] of [N_3 of N_4]] structure. Again, *na* may appear, e.g. *fòtó mí na e mwáán byĕn* '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’	mpémbɛ́	‘white’
	ikíkěr	‘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’
	odzɔ́	‘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 ònân	‘big palmtree’	abá enân	‘big palmtrees’
	mbvá ósya	‘beautiful dog’	mbvá ésya	‘beautiful dogs’
	mwàán 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 ikíkěr	‘small palmtree’	abá ikíkěr	‘small palmtrees’
	mwàán òbé	‘bad child’	bàán òbé	‘bad children’
	mbum obvo	‘fresh fruit’	(ba-)mbum obvo	‘fresh fruits’
	mbvá ódzɔ	‘good dog’	(ba-)mbvá ódzɔ	‘good dogs’
	oŋkàán ´mpa	‘new book’	eŋkàán ´mpa	‘new books’

A smaller group of adjectives lack a prefix:

[5.39]						
	bùlê	‘blue’	nyê	‘calm’	swíì	‘red’
	bvìir	‘strong, hard’	pɛtpɛ́t	‘soft’	tsɛ́	‘clean, neat’
	dzó	‘quiet’	pyòò	‘black’	zyɛ́	‘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*), *mɛs tsɛ́* ‘clean table’ (pl. (*ba-*) *mɛs 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 zyɛ́	‘white dog’
	ndzɔ́	‘house’	ndzɔ̂ tsɛ́	‘clean house’
	ndzéé	‘river’	ndzéè 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-$^{\downarrow}$HL tone pattern:

[5.41]	òbyê	‘many’	obí$^{\downarrow}$byê
	òkpé	‘strong, hard’	òkpú$^{\downarrow}$kpê
	ònân	‘big’	òní$^{\downarrow}$nân
	òtál	‘long, tall, far’	òtí$^{\downarrow}$tâl

A fifth adjective, *ikíkěr* 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]	mwàán òbé	‘bad child’	mwàán 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-mɛs tsɛ́	‘clean tables’	ba-mɛs tsɛ́ tsɛ́	‘very clean tables’

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

In addition, *òbyê* ‘very’ can be added for intensification: *ntál òbyê* ‘very expensive’ (cf. *bàán obí$^{\downarrow}$byê* ‘very many children).

Further evidence that adjectives are nouns is seen from the fact that they can be the head of an N_1 of N_2 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]	*No GL /é/*		*compare:*	
	mpɛ́mbɛ́ ndzɔ́	‘whiteness of house’	ndzɔ́ mpɛ́mbɛ́	‘white house’
	mpa oŋkàán	‘newness of the book’	oŋkaan é mpa	‘new book’
	zyɛ́ mbvá	‘whiteness of dog’	mbvâ zyɛ́	‘white dog’
	ŋkyee ndzéé	‘shallowness of river’	ndzéé ŋ́kyee	‘shallow river’

[5.44]	*With GL /é/*			
	obé é mwáàn	‘badness of child’	mwàán obé	‘bad child’
	bviir e múùr	‘strength of person’	muur bviir	‘strong person’
	dzó é ndzéè	‘quiet of the river’	ndzéè dzó	‘quiet river’
	obvo é ńtswe	‘freshness of the fish’	ntswé óbvo	‘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]	*With GL /é/*		*compare:*	
	baar e bvíìr	'strong people'	muur bviir	'strong person'
	ebin é bulɛ́ɛ̀	'blue door'	ndzéé bulɛ́ɛ̀	'blue river'
	oŋkaan é mpa	'new book	oŋkàán m̀pi	'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 /ê/ becomes *é* by tone absorption and should not confused with the GL (cf. §7.2.3):

[5.46]	mɛs é ye mpfyô	'the table is cold'
	muur nápɛ é ye bviir	'this person is strong'
	ba-ndzó é ye zyɛ́	'the houses are white'
	nɔ̌ kà ye mpúr bɔ	'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]

	near speaker	*near hearer*	*far*	*'that particular'*
singular	↓nápɛ ~ nɛ	↓nyá	napyá	ninyâ
plural [+human]	↓bápɛ ~ pɛ	↓byá	bapyá	bibyâ
plural [-human]	↓mápɛ ~ mɛ	↓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 *ˡnápɛ*, *ˡbápɛ*, *ˡmápɛ* and the short forms *nɛ*, *pɛ*, *mɛ*:

[5.48]	mwàán ˡnápɛ	mwàán nɛ	'this child'
	oŋkàán ˡnápɛ	oŋkàán nɛ	'this book'
	bàán ˡbápɛ	bàán pɛ	'these children'
	eŋkàán ˡmápɛ	eŋkàán mɛ	'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 *ˡnyá*, *ˡbyá*, *ˡmyá* and *napyá*, *bapyá*, *mapyá* look to be parallel short vs. long forms, they mark the indicated semantic difference:

[5.49]	mwàán ˡnyá	'that child' (near you)	mwàán napyá	'that child' (far)
	oŋkàán ˡnyá	'that book' (near you)	oŋkàán napyá	'that book' (far)
	bàán ˡbyá	'those children' (near you)	bàán bapyá	'those children' (far)
	eŋkàán ˡmyá	'those books' (near you)	eŋkàán mapyá	'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]	mwàán ninyâ	'that particular child, that very child'
	oŋkàán ninyâ	'that particular book, that very book'
	bàán bibyâ	'those particular children, those very children'
	eŋkàán mimyâ	'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: *ˡnyáá, ˡbyáá, ˡmyáá*. Both these and the 'near speaker' forms have been written with ˡ in [5.47], since a downstep will always be present if they are preceded by a H tone, e.g. *oté* 'tree', *oté ˡnápɛ* 'this tree', *oté ˡnyá(á)* '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-á-pɛ*, **bV-á-pɛ*, **mV-á-pɛ*, 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]	lɔ́ŋ ˩nápɛ	‘this teacher’	lɔ́ŋ ˩bápɛ	‘these teachers’
	siŋ nápɛ	‘this net’	siŋ mápɛ	‘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 mápɛ	‘this dust’	ba-efur mápɛ	‘these (different) dusts’
	avúp ˩mápɛ	‘this dew’	ba-avúp ˩mápɛ	‘these (different) dews’
	etíir ˩mápɛ	‘this grass’	ba-etíir ˩mápɛ	‘these grasses/kinds of grass’
	etíir ˩nápɛ	‘this piece/blade of grass’		
	adzá ˩mápɛ	‘this water’	ba-adzá ˩mápɛ	‘these (bodies of) water’
	adzá ˩nápɛ	‘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 *etíir* ‘grass’ and *àdzá* ‘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: *nápɛ* ‘this one’, *bápɛ*, *mápɛ* ‘these’: *nápɛ á bva* ‘this one has fallen’, *mi ó súm ˩mápɛ* ‘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 *pɛ* ‘here’ (near speaker) and *pyá* ‘there’ (far from speaker):

[5.53]	mi ô sé ˩nɔ́ pɛ	‘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: *lɔ́sɔ ŋga mbyɛ́ o ki pípyâ* ‘how much rice was there?’

Both *pɛ* and *pyá* are frequently used with the clitic *kó* ‘to, at’: *kópɛ* ‘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 *ómɔ̌* ‘(a) certain’, which is invariant, whether modifying a singular or plural, human or non-human:

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

ómɔ̌ is clearly related to the numeral *ómɔtúk* ‘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 ómɔtúk naŋga súm ↓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 ómɔtúk ntə̂m.
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 ómɔtúk* ‘one fish’, *okal ómɔtúk* ‘one place’.

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

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

As seen, *íŋ́kěn* 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 íŋ́kěn ó ki a mɔ́nka ‘(some) other people were visible’
ó mpe mǐ ikwo ǁŋkěn ‘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 *íŋkěn* stands in opposition to another determiner, *kún*. Besides the series *nìnyâ, bìnyâ, minyâ* 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 *íŋkěn* 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 yɛ ntswé ómɔtúk naŋga tún bǐ oyɛɛ.
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 ↓dzín e nɔ̌ 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’, *ntswê kún ~ ntswé ŋkún* ‘that particular fish’. The HL tone on *ntswê 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 ńtâŋ kún nápɛ* ‘at this particular time’. *muur kún ninyâ* ‘that very person’. All of the following mean ‘at that particular time’: *kó ńtâŋ kún*, *kó ńtáŋ ninyâ*, *kó ńtâŋ kún ninyâ*.

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 lûm 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 naŋgó mwàán ↓ó mɔ̂n ‘which person did the child see?’
kó ńdzɔ̀ naŋgó mwàán ↓ó 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, *ŋgó* means ‘where’ by itself: *mwàán ↓ó ké ŋgó* ‘where did the child go?’ It is thus possible to view these forms as *na* + *ŋgó* as having had the original meaning ‘that/those of where?’

The forms *naŋgó*, *baŋgó*, and *maŋgó* 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) *nɛ* ‘who’ has been observed with human nouns, especially *muur* ‘person’: *muur nɛ* ‘which person?’, *baar nɛ* ‘which people?’ (lit. ‘person who?’, ‘people who?’). Note that *muur né* is ambigous, as it could also mean ‘whose person?’. The same is true of *mwàán nɛ* ‘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 ↓é nɛ* ‘whose children?’. Since the base meaning of *nɛ* is ‘who’, it cannot be used with a non-human. Also, the form *banɛ* ‘who (plural)?’ is not used in the sense of ‘which’.

(ii) *ŋge* ‘what’, on the other hand, can be used with nouns other than humans: *mbvá ńge* ‘what dog?’, *oté ńge* ‘what tree?’, *eté ńge* ‘what trees?’. In some cases, the GL /é/ has been found to optionally appear or be elided except for its H tone: *oté éńge* ‘what tree?’, *okal* + *é* + *ŋge* → *okal ńge* ‘what place, where?’. Just as *nɛ* is most commonly used with the generic human noun *muur* ‘person’, *ŋge* is especially used with generic nouns such as *oŋgêr* ‘thing’, *okal* ‘place’, *sâm* ‘reason’, *ntâŋ* ‘time’, *esuu* ‘day’, the last two commonly used with the sense of ‘when’:

[5.63] oŋgér ŋgé o dzé bɔ̌ ‘what did they eat?’ (‘what thing’)
thing what PAST eat they
okal ńgé ó dzik ndé ndzii ‘where did he bury the money?’ (‘what place’)
place what PAST bury he money
bàán ó túl ntáŋ ńge ‘when did the children arrive?’ (‘what time’)
children PAST arrive time what
sám ↓é ńgé bàán á lyá ‘why do the children cry?’ (‘what reason’)
reason of what children PRES cry

In the above we have translated *ŋge* as ‘what’, since a question like *mbvá ńge* ‘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, *ŋge* has H tone if followed by another word, but L tone before pause.

(iii) The last alternative is the determiner *íŋki*, which precedes the noun: *íŋki muur* 'which person?', *íŋ́ki 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]
	muur naŋgó	oŋgér naŋgó
	muur nɛ	oŋgér ŋge
	íŋki muur	íŋki oŋgêr

In §10.2 it will be seen that *ŋge* 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]	ómɔtúk	'one'	ísyémɛ	'six'
	ípe	'two'	ntsaamɔ̌n	'seven'
	ísâr	'three'	ínáána	'eight'
	íná	'four'	iwa	'nine'
	ítáàn	'five'	dzǔm̀	'ten'

As seen, the tone of the vowel prefix /ó-/ of 'one' and the /í-/ 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 *ntsaamɔ̌n* 'seven'.) While none of these prefixes alternate in form, *dzǔm̀* 'ten' has a plural form *akûm* 'tens, -ty' used to express decades:

[5.67]	dzǔm`	'ten'	akúm ↓ísyémɛ	'sixty'
	akúm ↓ípe	'twenty'	akúm ntsaamɔ̌n	'seventy'
	akúm ↓ísâr	'thirty'	akúm ↓ínáána	'eighty'
	akúm ↓íná	'forty'	akúm iwa	'ninety'
	akúm ↓ítáàn	'fifty'	ŋkám	'hundred'

As seen, 'twenty' =2 x 10, 'thirty' =3 x 10, and so forth. The initial L of the LHL tone of *dzǔm̀* 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 **-kúmi* '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 *yɛ* 'and'. The numbers 11-19 and 21-29 illustrate:

[5.68]				
	dzŭm yɛ ómɔtúk	'11'	akúm ípe yɛ ómɔtúk	'21'
	dzŭm yɛ ípe	'12'	akúm ípe yɛ ípe	'22'
	dzŭm yɛ ísâr	'13'	akúm ípe yɛ ísâr	'23'
	dzŭm yɛ íná	'14'	akúm ípe yɛ íná	'24'
	dzŭm yɛ ítáàn	'15'	akúm ípe yɛ ítáàn	'25'
	dzŭm yɛ ísyémɛ	'16'	akúm ípe yɛ ísyémɛ	'26'
	dzŭm yɛ ntsaamɔ̆n	'17'	akúm ípe yɛ ntsaamɔ̆n	'27'
	dzŭm yɛ ínáána	'18'	akúm ípe yɛ ínáána	'28'
	dzŭm yɛ iwa	'19'	akúm ípe yɛ iwa	'29'

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

[5.70]		
	ŋkám ómɔtúk yɛ ómɔtúk	'101'
	ŋkám ómɔtúk yɛ ípe	'102'
	ŋkám ómɔtúk yɛ dzŭm̀	'110'
	ŋkám ómɔtúk yɛ akúm ípe	'120'
	ŋkám ómɔtúk yɛ akúm ípe yɛ ísâr	'123'
	ŋkám ípe	'200'
	ŋkám íwa	'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]				
	muur ómɔtúk	'one person'	ekwá dzŭm̀	'ten bones'
	baar ípe	'two people'	akáár dzŭm yɛ iwa	'19 women'
	aman ísâr	'three stones'	ɛsɛɛ akúm ípe yɛ íná	'24 cockroaches'
	ekal íná	'four places'	ndzáá ŋkám	'100 claws'
	etɔk ítáàn	'five pipes'	eté ŋkám íná yɛ ísâr	'403 trees'

Once again, numerals can disambiguate number on invariant nouns: *siŋ ómɔtúk* 'one net', *siŋ ípe* 'two nets'; *mbvá ómɔtúk* '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 dzŭm̀* 'the tenth person' etc. Cf. *muur óntɛt*

'the first person', *baar óntɛt* 'the first people'; *muur ntsûk* 'the last person', *baar é ntsûk* 'the last people' (*ntsûk* 'end, limit').

5.6.2. Quantifiers

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

[5.72]	muur ómɔtúk	'a/one person'		
	muur ómɔ	'a certain person'	baar ómɔ	'certain people'
	muur íŋkěn	'another person'	baar íŋkěn	'other people'

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

[5.73]	muur nɔ áŋkŭm	'the whole person'	baar bɔ áŋkŭm	'all the people'
	oŋkàán nɔ áŋkŭm	'the whole book'	eŋkàán mɔ áŋkŭm	'all the books'

Because of vowel elision, these forms are often heard as *nă̰ŋkŭm*, *bă̰ŋkŭm* and *mă̰ŋkŭm*. As an alternative *o(ŋ)kin* means 'whole' in both singular and plural: *oŋkaan óŋ́kin* 'a/the whole book', *eŋkaan óŋ́kin* 'whole books'.

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

[5.74]	ndé ô tâŋ kó ntsɔ oŋkàán	'he read every book'
	kó ntsɔ esúù mi a zwí kó ntâŋ ísyémɛ	'every day I wake up at six o'clock'
	kó ntsɔ mbal bɔ má yă̰, mi a tyén yɛ bɔ̌	'every time they come, I talk with them'

The quantifier *obyê* is used with plural and mass/liquid nouns to mean 'many, much': *bàán òbyê* 'many children', *eŋkàán òbyê* 'many books', *esaa obyê* 'much food'. In combination with *ŋga*, the related word *mbyê* means 'how much, how many': *ŋga mbyé bàán ↓ó dzê* 'how much did the children eat?'.

5.7. Participials

The last modifer 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	:	ŋga-dzá	‘eaten, eating’
						H-L	:	ŋgá-dza	
	HL	:	o-láà	‘to cook’	→	L-HL	:	ŋga-láà	‘cooked, cooking’
						H-HL	:	ŋgá-láà	
	L	:	o-bva	‘to fall’	→	L-L	:	ŋga-bva	‘fallen, falling’
						H-L	:	ŋgá-bva	
			o-diir	‘to watch’	→	L-L	:	ŋga-diir	‘watched, watching’
						L-HL	:	ŋga-díìr	
						H-HL	:	ŋgá-díìr	

As seen, *ŋga-* 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 *ŋga-* 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]	mwàán ŋgá-mât	‘a standing child, a child standing’	(o-mat ‘to stand’)
	muur ŋga-yɛɛ	‘seller, the person selling’	(o-yɛɛ ‘to sell’)
	muur ŋga-sûm	‘buyer, the person buying’	(o-sûm ‘to buy’)
	muur ŋga-láà	‘cook, the person cooking’	(o-láà ‘to cook’)
	oté ŋga-bva	‘a falling/fallen tree’	(o-bva ‘to fall’)

[5.77]	ndzii ŋga-yîb	‘money stealing, stolen money’
	fufú ŋga-láà	‘cooked fufu’
	kil ŋgá-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 ŋgá-bwâ	‘broken calabash’	(o-bwâ ‘to break’)
	ebin ŋgá-kâŋ	‘closed door’	(o-kâŋ ‘to close’)
	ebin ŋgá-káŋgul	‘open door’	(o-kaŋgul ‘to open’)
	mpfyĕ ŋgá-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 ŋga-dzá fufú	‘a/the person eating fufu’
	ŋga-dzá muur fufú	(=same)
	mwàán ŋga-súm ntswé	‘a/the child buying fish’
	kǐl ŋga-dzá mpfŭ	‘pineapple eaten into by the bird’
	muur ŋga-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 ŋga-bûl* means ‘beating person’ not ‘beaten person’, while *fufú ŋga-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 *ŋga* (< *ŋg* + *a*), or both (§10.2):

[5.80]	oté na ŋgá bva	‘the tree which has fallen’
	= oté na á bva	
	= oté ŋgá 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 ŋga-dzá* ‘eaten-into fufu’ vs. a relative clause (**fufú na (ŋga) dzá* is ungrammatical). Even if the subject is indefinite and non-specific, it must be expressed: *fufú na ŋga dzá bɔ̌* ‘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 ↓é ye obé	‘to steal is bad’
	o-yíb ndzii é ye obé	‘to steal money is bad’
	ndzii ŋga-yíb ↓é ye obé	‘stealing money/money stealing is bad’

The bare participial cannot occur as subject (**ŋga-yíb ↓é ye obé* is ungrammatical).

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

[5.82]	ŋga-dzá mǐ`	‘me (by) eating’
	ŋga-dzá ↓mí fufú	‘me (by) eating fufu’
	ŋga-dzá ↓mí fufú é yâ	‘me (by) eating your fufu’

If these had been relative clauses the pronoun would have had to precede the verb: *mǐ 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-díir	‘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 *íŋ́ki* ‘which’ (§5.5.3). In addition, demonstratives have been occasionally observed to precede the noun, especially when a second modifier is present:

[5.84]	nápɛ mbvá mǐ`	‘this dog of mine’
	nápɛ mbvá onân	‘this big dog’
	nápɛ mbvá ómɔtúk	‘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’, *ómɔtúk, mbvá ê tá mǐ`* ‘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 ↓nápɛ	‘this my dog’
	POSS + NUM	:	mbvá ↓mí ómɔtúk	‘my one dog’
	ADJ + DEM	:	mbvá ònán ↓nápɛ	‘this big dog’
	ADJ + NUM	:	mbvá ònán ↓ómɔtúk	‘one big dog’
	DEM + ADJ	:	mbvá ↓nápɛ onân	‘this big dog’
	DEM + NUM	:	mbvá ↓nápɛ ómɔtúk	‘this one dog’
	NUM + ADJ	:	mbvá ómɔtúk onân	‘one big dog’
	NUM + DEM	:	mbvá ómɔtúk ↓nápɛ	‘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 mǐ`* ‘my dog’. In no case can such an “unmarked” genitive noun or possessive pronoun follow a modifier. Thus, **mbvá ònán mǐˆ*, **mbvá nápɛ mǐˆ*, and **mbvá ómɔtúk mǐˆ* are all ungrammatical. What is found instead is the following:

[5.87]				
	ADJ + na + é + POSS	:	mbvá ònán na e mî	‘my big dog’
	DEM + na + é + POSS	:	mbvá ↓nápɛ na e mî	‘this dog of mine’
	NUM + na + é + POSS	:	mbvá ómɔtúk na e mî	‘my one dog’

In these examples *na e mî* ‘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 onán ↓é ye na e mî* ‘the big dog which is mine’). Phrases without *na* are marginally acceptable:

[5.88]				
	ADJ + é + POSS	:	mbvá ònán ↓é mî	‘my big dog’
	DEM + é + POSS	:	mbvá ↓nápɛ e mî	‘this dog of mine’
	NUM + é + POSS	:	mbvá ómɔtúk é mî	‘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 ↓nápɛ] 'this my dog'
[[Noun DEM] of POSS] : [[mbvá ↓nápɛ] na e mî] 'this dog of mine'
[Noun [DEM of POSS]] : [mbvá [↓nápɛ 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 ↓nápɛ 'this my garden'
POSS + NUM : itóm é mí ↓ómɔtúk 'my one garden'

[5.91] [Noun POSS ADJ] : [itóm é mí ↓nápɛ] 'this my garden'
[[Noun ADJ] of POSS] : [[mbvá ↓nápɛ] na e mî] 'this dog of mine'
[Noun [ADJ of POSS]] : [mbvá [↓nápɛ 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 ↓nápɛ 'this dog of the child, dog of this child'
GEN + NUM : mbvá mwàán ↓ómɔtúk '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 ↓nápɛ 'this dog of the children'
GEN + NUM : mbvá bàán ↓ómɔtúk 'the children's one dog'

[5.94] GEN + ADJ : mbvá mwàán ènân 'the child's big dogs'
GEN + DEM : mbvá mwàán ↓mápɛ '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 *bǎàn* '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 nápɛ e mwáàn ‘this dog of the child’
GEN + NUM : mbvá ómɔtúk 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 ↓nápɛ e báán bapyá ‘this dog of those children’
mbvá ómɔtúk é báán ↓ípe ‘the one dog of the two children’

Compare also:

[5.97] ŋkɔ́p ↓máán ‘cup of wine’
ŋkɔ́p ònán ↓é máàn ‘big cup of wine’
ŋkɔ́p ònán ↓é máán ↓é swíì ‘big cup of red wine’

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

[5.98] okal é éŋ́kàán é báàn ‘the place of the books of the children’
eŋkàán é báán ↓é báár bapyá ‘the books of the children of those people’
fotó ndzɔ́ ŋ́kúm ‘the photo of the chief’s house’ [N_1 of [N_2 of N_3]]
fotó ndzɔ́ é ŋ́kûm ‘the chief’s photo of the house’ [[N_1 of N_2] of N_3]

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 *yɛ* or *tí*, both meaning ‘and’ or ‘with’:

[5.99] mbvá é yè onán yɛ okúùr ‘the dog is big and old’
ndzɔ́ é ye zyé yɛ pyoo ‘the house is white and black’
= ndzɔ́ é ye zyé tí pyoo
mi ô mɔ́n ibaa yɛ 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 tî 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’	mwàán 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 yɛ okáár ndzii	‘a man and a rich woman’	
	ibaa yɛ okáár ↓é ndzíì	‘a rich man and woman’	(both are rich)

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

CHAPTER 6: THE VERB

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-tsɔ́* 'to pound (yams)' vs. *ɔtsɔ́* '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 /ó/ 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-dɛ̂f	‘to borrow’	o-lɛ́	‘to be tired’
	o-kaŋ	‘to tie, close’	o-kât	‘to hold, touch’	o-nɔ́	‘to drink’
	o-lyaa	‘to cry’	o-láà	‘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-mɔ̂n	‘to see, find’	o-tsá	‘to descend’
	o-suun	‘to jump’	o-sûm	‘to buy’	o-tsɔ́	‘to pound’
	o-taŋ	‘to drip’	o-tâŋ	‘to read, count’	o-wá	‘to finish (intr.)’
	o-wum	‘to run’	o-tît	‘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-mɔ̂n	‘to see’	o-mwɛ̂	‘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 *obíì* ‘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-píì	‘to throw away’	(‘make give’ ?)
	o-sá	‘to assemble, gather’	o-sî	‘to accompany’	(‘make assemble’ ?)
	o-tsá	‘to descend’	o-tsíì	‘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’ (< **dʊ-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-báńtsa	‘to think, meditate, believe’	o-mantsa	‘to finish (tr.)’
	o-bɔŋsa	‘to repair, fix’	o-niksa	‘to grind’
	o-dɛfsa	‘to lend’	o-paŋsa	‘to brush, wipe, rub’
	o-dyatsa	‘to lead’	o-sarsa	‘to help, save, rescue’
	o-gɔŋsa	‘to expand’	o-taŋsa	‘to teach’
	o-kaŋsa	‘to fold’	o-vuksa	‘to mix, put together’
	o-kumsa	‘to praise’	o-yúńtsa	‘to try’
	o-lutsa	‘to overflow’	o-zitsa	‘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-dɛf	‘to borrow’	→	o-dɛfsa	‘to lend’	(‘cause to borrow’)
	o-kaŋ	‘to tie, close’	→	o-kaŋsa	‘to fold’	(‘cause to close’)
	o-nik	‘to scrape off’	→	o-niksa	‘to grind’	(‘cause to scrape off’?)
	o-tâŋ	‘to read, count’	→	o-taŋsa	‘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-sûk* ‘to finish (intr.)’).

6.2.2. CVCka

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

[6.6]	o-mɔnka	‘to shine, be visible’	cf.	o-mɔ̂n	‘to see’
	o-sɔnka	‘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-ɪk-a* ‘be visible’ (cf. **bón-* ‘see’), **cón-*, **cón-ɪk-a* ‘draw a line, write’. It is likely that these derive from the homophonous stative and impositive extensions **-ɪk-*.

6.2.3. CVCul

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

[6.7]	o-balul	‘to turn’	o-pasul	‘to break (tr., intr.)’
	o-bɛlul	‘to heal’	o-sakul	‘to clear brush’
	o-fuŋgul	‘to open’	o-sukul	‘to clean’
	o-kabul	‘to share, split’	o-tobul	‘to pierce’
	o-kaŋgul	‘to open, uncover, untie’	o-yindul	‘to think’
	o-kasul	‘to divide’	o-yuŋgul	‘to sift’
	o-kɔsul	‘to cough’	o-yuvul	‘to ask s.o., interrogate’
	o-kulul	‘to peel, strip bark’	o-zaŋgul	‘to lift up’
	o-lulul	‘to forgive’	o-tɛndul	‘to preach’
	o-pakul	‘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]	o-bɛlul	‘to heal’	cf.	o-bɛl	‘to suffer’
	o-kaŋgul	‘to open, uncover, untie’	cf.	o-kaŋ	‘to close, cover, tie’
	o-kulul	‘to peel, strip bark’	cf.	o-kul	‘to scrape’
	o-yuvul	‘to ask s.o., interrogate’	cf.	o-yûp	‘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 **-ʊd-*, 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-bɔkɔl 'to bring up, bring to' o-bɔndɔl 'to please'

6.2.4. CVCuk

Only three verbs have been found to correspond to the PB intransitive reversive extension **-ʊk-*: *o-luŋguk* '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 múùr) '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 **-ɪd-* 'to/for' extension. Since Kituba and other languages in the area retain the applicatve, the verbs in [6.10] may turn out to be borrowings.

6.2.6. CVCan

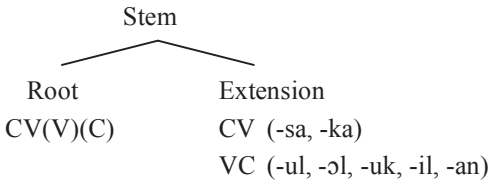
Two verbs have been found with a second syllable containing the PB reciprocal **-an-* extension:

[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-bɛlul* '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-mɔnka	'to shine, be visible'	cf.	o-mɔ̂n	'to see'
	o-taŋsa	'to teach'	cf.	o-tâŋ	'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] byɐn â dzá fufú ‘you (pl.) have eaten the fufu’ (perfect)
byɐn ó dzé fufú ‘you (pl.) ate the fufu’ (past)
byɐn 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]

Infinitive		*Past tense*	*Subjunctive/Progressive*
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. Cɛ *and* Cɔ *Verbs*

Cɛ 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]	*Infinitive*		*Past tense*	*Subjunctive/Progressive*
	o-kɛ	'to go'	kɛ̂ ~ kê	kê
	o-lɛ́	'to be tired'	lɛ̂ ~ lê	lê
	ɔ-nɔ́	'to drink'	nɔ̂ ~ nwê	nwê
	ɔ-pɔ́ tɔ̀ɔ́	'to sleep'	pɔ̂	pɔ̂ ~ pwɛ̂
	ɔ-tsɔ́	'to pound' (e.g. yams)	tsɔ̂ ~ tswê	tswê

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

6.3.3. Caa *Verbs*

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

[6.17]	*Infinitive*		*Past tense*	*Subjunctive/Progressive*
	o-báà	'to get'	báà ~ béè	béè
	o-kaa	'to be'	káà ~ kíì	kíì
	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]	*Infinitive*		*Past tense*	*Subjunctive/Progressive*
	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'	lyáà ~ líì	líì
	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]	*Infinitive*		*Past tense*	*Subjunctive/Progressive*
	o-mɔ̂n	'to see'	mɔ̂n	mɔ̂n
	o-kap	'to warn'	kâp	kâp
	o-pɛɛ	'to look for'	pɛ́ɛ̀	pɛ́ɛ̀
	o-wɛɛ	'to choose'	wɛ́ɛ̀	wɛ́ɛ̀
	o-taŋsa	'to teach'	táŋsà	táŋsà
	o-sɔnka	'to write'	sɔ́nkà	sɔ́nkà

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]

Infinitive		*Future Tense*
o-báàn	'to climb'	bîbáán
o-bûl	'hit'	bîbúl
o-bva	'to fall'	bvíbvă
o-diir	'to watch, visit'	dídìír
o-dzá	'to eat'	dzîdzá
o-kɛ	'to go'	kíkĕ
o-ker	'to make'	kíkĕr
o-nɔ́	'drink'	nînɔ́
o-sɔnka	'to write'	sí$^{\downarrow}$sɔ́nka

6.4.1. Reduplication with Glide Onsets

Glides in *Cw* and *Cy* onsets are in general not reduplicated. Only one example *kwô-kwɔ́m* '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]

Infinitive		*Future Tense*		
o-kwa	'to be sufficient'	kíkwă	=kúkwă	(*kwikwa)
o-lyaa	'to cry'	lílyàá		(*lyilyaa)
o-lwâ	'to vomit'	lîlwá,	=lûlwá	(*lwilwa)
o-nwô	'to rain'	nînwó	=nûnwó	(*nwinwo)
o-zwâ	'to hear'	zîzwá	=zûzwá	

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

[6.22]

Infinitive		*Future Tense*	
o-wá	'to finish'	wûwá	=wîwá

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-kɔ́t	‘to enter’	kôkɔ́t	=kîkɔ́t
	o-sɔnka	‘to write’	só↓sɔ̀nkà	=sí↓sɔ̀nkà
	o-dzek	‘to tremble’	dzə́dzěk	=dzídzěk
	o-dɛ̂f	‘to borrow’	də̂dɛ́f	=dîdɛ́f

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 bvìir* (lit. ‘to make strong’), and ‘to mould’ (PB **bÚmb*) is *o-ker mpfyě àdzíŋ* (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-báà ‘get’ + mpúr ‘wound’
	o-kɛ osó	‘to precede’	o-kɛ ‘go’ + osó ‘face, ahead, forward, first’
	o-ker ntîn	‘to hurry’	o-ker ‘make, do’ + ntîn ‘haste’
	o-lúm ntswèé	‘to shave’	o-lûm ‘remove’ + ntswèé ‘facial hair’
	o-túl okúùr	‘to age’	o-tûl ‘become’ + okúùr ‘old’

The most common light verbs used in complex verbal expressions include *o-báà* ‘receive, get, become’, *o-kaa* ‘to be’, *o-kɛ* ‘to go’, *o-ker* ‘to make, do’, *o-lûm* ‘to leave, remove’, *o-sá* ‘to put’, *o-tûl* ‘to become’, and *o-zwâ* ‘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’ + akyě ‘eggs’
	o-sá m̀byě	‘to stab’	o-sá ‘put’ + mbyě ‘knife’
	o-sá mpúr	‘to sharpen’	o-sá ‘put’ + mpúr ‘sharpness’
	o-sá m̀pwɔ̌n	‘to tease’	o-sá ‘put’ + mpwɔ̌n ‘insults’
	o-sá ŋ̀kɔɔn	‘to snore’	o-sá ‘put’ + ŋkɔɔn ‘snoring, snores’
	o-sá ontsêl	‘to bark (dog)’	o-sá ‘put’ + ontsêl ‘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-bɛ́n áduur	‘to rest, stretch’	o-bɛ̂n ‘pull’ + aduur ‘fatigue’
	o-sim áduur	‘to rest’	o-sim ‘lengthen, stretch’ + aduur ‘fatigue’
	o-tá ńdzàám	‘to swear’	o-tá ‘bite’ + ndzàám ‘God’
	o-twi mwáán	‘to perspire, dawn’	o-twi ‘exit’ + mwáán ‘heat, sweat, daylight’
	o-tɔ́ dzĭm̀	‘to sing’	o-tɔ́ ‘pick up’ +dzĭm̀ ‘song’

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

[6.27]	o-lé ndwɛ	‘to dream’
	ɔ-pɔ tɔ́ɔ́	‘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’ + bvìír ‘strong’
	o-túl okúùr	‘to age’	o-tûl ‘become’ + okúùr ‘old’

[6.29]	o-ker mpil ómɔtúk	‘to imitate’	o-ker ‘make, do’ + mpil ‘manner’ + ómɔtuk ‘one’

[6.30]	o-ker tsébo	‘to sneeze’	o-ker ‘make, do’ + tsébo ‘sneezing, sneeze’
	o-lúm épwe	‘to skin’	o-lûm ‘remove’ + epwe ‘skin’
	o-káár lukân	‘to decide’	o-káàr ‘take’ + lukân ‘decision’
	o-zwá áduur	‘to be tired’	o-zwâ ‘sense’ + aduur ‘fatigue’

[6.31]	o-fɛ́l yɛ́ mbwɔ̆m	‘to blow nose’	o-fɛl ‘blow’ + yɛ ‘with’ + mbwɔ̆m ‘nose’
	o-kɛ yɛ muur	‘to accompany’	o-kɛ ‘go’ + yɛ ‘with’ + muur ‘person’
	o-kaa kóńtse	‘to be seated’	o-kaa ‘be’ + kó ‘at’ + ntse ‘down, bottom’
	o-sá ↓kíbvúù	‘to insert’	o-sá ‘put’ + kó ‘at’ + bvuu ‘inside’

[6.32]	o-kaa ŋgá mât	‘to be standing’	o-kaa ‘be’ + ŋgá-mât ‘standing’ (o-mat ‘stand’)
	o-kaa ŋgá díir	‘to be awake’	o-kaa ‘be’ + ŋgá-díir ‘watching’ (o-diir ‘watch’)

[6.33]	o-líŋ o-ker	‘to dare’	o-lîŋ ‘want’ + o-ker ‘to do’
	o-tún ó-laŋ	‘to hate’	o-tûn ‘fail, refuse’ + o-laŋ ‘to love’
	o-tún o-mɔ̀n	‘to be blind’	o-tûn ‘fail, refuse’ + o-mɔn ‘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 m̀pen	‘to touch’	o-tá ‘bite’ + mpen ‘fingers’
	o-sá m̀byɛ̌	‘to stab’	o-sá ‘put’ + mbyɛ ‘knife’

Or they may describe manner or goal:

[6.36]	o-kɛ kífu	‘to limp’	o-kɛ ‘go’ + kifu ‘error, limping’
	o-kɛ duu	‘to ascend’	o-kɛ ‘go’ + duu ‘sky, up’
	o-kɛ osó	‘to precede’	o-kɛ ‘go’ + osó ‘face, ahead, first’
	o-lya dzyɛn	‘to walk’	o-lya ‘pass’ + dzyɛn ‘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-kɛ 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]	nkɔ́p a zúúr adzá	‘the cup is full of water’

The transitive / intransitive alternation may also account for the dual meaning of the copular verb *o-mâŋ*, which functions as both 'to have' (*yɛ* 'with' may cooccur) and 'to be':

[6.39]	mi a máŋ (yɛ) onkàáŋ	'I have a book' (lit. 'I am/have (with) book')
	mi a máŋ tàá	'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 kér nɔ̌ 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 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
a-PRESENT	a	HL	no	§7.2.3
e-PRESENT	ê	L → LH H, HL → H L-L → ↓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-↓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 *mɪ̂,* which simplifies to *mɪ̌* 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 kê* 'I went' (CV), *mi ó líì* 'I cried' (CVV), *mi ó dzîk* 'I buried' (CVC), and *mi ó díìr* '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 *sâ*, and the (2sg.) negative imperative marker is *pâ*. Other negations may be realized periphrastically with the verbs *o-tûn* '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]		*Infinitive*		*Aff. Past Tense*	*Tone Pattern*
				('I X-ed')	*(Marker + Stem)*
	L	o-kɛ	'to go'	mi ó kê	H # HL
		o-lyaa	'to cry'	mi ó lyáà (~ líì)	H # HL
		o-dzik	'to bury'	mi ó dzîk	H # HL
		o-diir	'to visit'	mi ó díìr	H # HL
	H	o-dzá	'to eat'	mi ó dzê	H # HL
	HL	o-zî	'to hide'	mi ó zî	H # HL
		o-láà	'to cook'	mi ó láà (~ léè)	H # HL
		o-tâŋ	'to count'	mi ó tâŋ	H # HL
		o-báàn	'to climb'	mi ó báàn	H # HL
	L-L	o-balul	'to turn'	mi ó bálul	H # H-L
		o-sɔnka	'to write'	mi ó sɔ́nka	H # H-L
		o-tɛndul	'to preach'	mi ó tɛ́ndul	H # H-L
	H-L	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]		*Infinitive*		*Negative Past*	*Tone Pattern*
				('I didn't X')	*(Marker + Stem +* bɔ*)*
	L	o-kɛ	'to go'	mǐ ko kɛ 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
	H	o-dzá	'to eat'	mǐ ko dzá bɔ	L # H # L
	HL	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
	L-L	o-balul	'to turn'	mǐ ko balul bɔ	L # L-L # L
		o-sɔnka	'to write'	mǐ ko sɔnka bɔ	L # L-L # L
		o-tɛndul	'to preach'	mǐ ko tɛndul bɔ	L # L-L # L
	H-L	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]	*Infinitive*		*Affirmative Perfect* *('I have X-ed')*	*Tone Pattern* *(Marker + Stem)*
L	o-lyaa	'to cry'	mi á lyaa	H # L
H	o-dzá	'to eat'	mi â dzá	H # H
HL	o-láà	'to cook'	mi â láà	H # HL
L-L	o-balul	'to turn'	mi á balul	H # L-L
H-L	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]	*Infinitive*		*Negative Perfect* *('I haven't X-ed')*	*Tone Pattern* *(Marker + Stem + bɔ)*
L	o-lyaa	'to cry'	mǐ ka lyáá bɔ	L # H # L
H	o-dzá	'to eat'	mǐ ka dzá bɔ	L # H # L
HL	o-láà	'to cook'	mǐ ka láá bɔ	L # H # L
L-L	o-bálul	'to turn'	mǐ ka bálul bɔ	L # H-L # L
H-L	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 lɛ́	'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 ndzéè. bɔ â báà ntswé késúú ìyó.
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 ↓kíiyo yɛ bɔ á baan ìyó
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 bɔ̌ bɔ â báán ndzéé kasáì.
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 ómɔtúk,
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 nɔ̂ ŋkɛ́nya kó mbíí ílɛbɔ̂...
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	máŋ	á	yúntsà	o-tyén	yɛ	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]	*Infinitive*		*Aff. a-PRESENT* *('I X/am X-ing')*	*Tone Pattern* *(Marker + Stem)*
L	o-lyaa	'to cry'	mi a lyáà	L # HL
H	o-dzá	'to eat'	mi a dzâ	L # HL
HL	o-láà	'to cook'	mi a láà	L # HL
L-L	o-balul	'to turn'	mi a bálul	L # H-L
H-L	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]	*Infinitive*		*Aff. e-Present* *('I am X-ing / X')*	*Tone Pattern* *(Marker + Stem)*
L	o-lyaa	'to cry'	mi é lìí	L # LH
H	o-dzá	'to eat'	mi ê dzé	HL # H
HL	o-láà	'to cook'	mi ê léé	HL # H
L-L	o-balul	'to turn'	mi é ↓bálul	H # ↓H-L
H-L	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-↓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]	*Infinitive*		*Negative a-PRESENT ('I don't X / I'm not X-ing')*	*Tone Pattern (Marker + Stem + bɔ)*
L	o-lyaa	'to cry'	mǐ ka lyáá bɔ	L # H # L
H	o-dzá	'to eat'	mǐ ka dzá bɔ	L # H # L
HL	o-láà	'to cook'	mǐ ka láá bɔ	L # H # L
L-L	o-balul	'to turn'	mǐ ka bálul bɔ	L # H-L # L
H-L	o-báńtsa	'to think'	mǐ 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 *mǐ̂*. There is no downstep after a L-toned subject, hence *mǐ ꜜkê 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]	*Infinitive*		*Negative e-Present ('I'm not X-ing')*	*Tone Pattern (Marker + Stem + bɔ)*
L	o -lyaa	'to cry'	mǐ ꜜké lìí bɔ	ꜜH # LH # L
H	o-dzá	'to eat'	mǐ ꜜkê dzé bɔ	ꜜHL # H # L
HL	o-láà	'to cook'	mǐ ꜜkê léé bɔ	ꜜHL # H # L
L-L	o-balul	'to turn'	mǐ ꜜké ꜜbálul bɔ	ꜜH # ꜜH-L # L
H-L	o-báńtsa	'to think'	mǐ ꜜkê báńtsa bɔ	ꜜHL # 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	eŋgér	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 ↓sɔ́nka 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 tɔ̀ɔ́	'they are sleeping'	*context: the speaker doesn't see them*
	bɔ é pɔ̌ tɔ̀ɔ́	'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 lǐ	'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 ↓sɔ́nka	'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 ↓sɔ́nka	'[they told me that] they are writing'	*context: speaker just got off the phone with the writing people*
	bɔ ê 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:

[7.20]	mi a báńtsa bɔ a sɔ́nka	'maybe they're writing' (lit. 'I think they're writing')	*context: the speaker is making a presumption*
	mi a báńtsa bɔ é ↓sɔ́nka	'maybe they're (still) writing' (lit. 'I think they're writing')	*context: the speaker knows for certain that they* started *writing*

The epistemic distinction is also seen in copular constructions. Nzadi has two copulas: *ye* 'be' and *o-mâŋ* 'to be, have' (§7.5). The choice between these copulas is influenced by the level of epistemic certainty:

[7.21]	bɔ a máŋ mbin	'they are dirty' *context: the speaker doesn't see them*
	bɔ é ye mbin	'they are dirty' *context: the speaker sees them*

Even the preference for the *a*-PRESENT in habitual contexts may apparently be overridden for pragmatic purposes:

[7.22]	...bɔ é yĕ	[Even if you don't call them] '...they come'

In addition, the *e*-PRESENT example in [7.20] above can also mean 'maybe they still write (habitually)'. Finally, with the copular construction, the e-PRESENT can also be used in habitual contexts:

[7.23]	bɔ	é	ye	mbin	ntsúú	mɔ-ánkŭm
	they	PRES	be	dirty	days	all
	'they are always dirty'					
	(lit. 'they are dirty every day')					

Interestingly, while the *a*-PRESENT is compatible with the aspectual adverb *osó* 'already', the *e*-PRESENT is apparently infelicitous with this form (see §8.3.2).

Despite their seeming differences in modal force, the *a*-PRESENT and *e*-PRESENT are glossed elsewhere in this work as PRES and PROG, respectively, for the sake of simplicity of presentation.

Before leaving the present tenses, it should also be noted that there may be a further tonal distinction for monosyllabic H-toned stems only. Sometimes, a H # L pattern was elicited with a progressive meaning, in contrast with the habitual pattern:

[7.24]	mi a dzâ	'I eat'	(habitual)
	mi á dza	'I am eating'	(progressive)

Monomoraic L-toned stems sometimes also take this pattern, optionally.

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] *Verbs with Stative Event Semantics*

o-pɔ tɔ́ɔ́	'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_iî /__ C_iX

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*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-$^{\downarrow}$H-L).

[7.27]

	Infinitive		*Affirmative Future* *('I will X')*	*Tone Pattern* *(Marker + Redup + Stem)*
L	o-lyaa	'to cry'	mi a lílyàá	L # H-LH
H	o-dzá	'to eat'	mi a dzîdzá	L # HL-H
HL	o-láà	'to cook'	mi a lîláá	L # HL-H
L-L	o-balul	'to turn'	mi a bíbálul	L # H-$^{\downarrow}$H-L
H-L	o-báńtsa	'to think'	mi a bí$^{\downarrow}$báńtsa	L # H-$^{\downarrow}$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 m*ǐ*, 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 *bɔ*.

[7.28]		*Infinitive*		*Negative Future ('I won't X')*	*Tone Pattern (Marker + Stem + bɔ)*
	L	o-lyaa	'to cry'	mi sá lyaa bɔ	H # L # L
	H	o-dzá	'to eat'	mi sâ dzá bɔ	HL # H # L
	HL	o-láà	'to cook'	mi sâ láá bɔ	HL # H # L
	L-L	o-balul	'to turn'	mi sá sɔnka bɔ	H # L-L # L
	H-L	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]		*Infinitive*		*Imperative ('X!')*	*Tone Pattern*
	L	o-kɛ	'to go'	kɛ̌`	LHL
		o-lyaa	'to cry'	lyǎà	LHL
		o-dzik	'to bury'	dzîk	HL
		o-diir	'to visit'	dǐir	LHL
	H	o-dzá	'to eat'	dzâ	HL
	HL	o-zî	'to hide'	zî	HL
		o-láà	'to cook'	láà	HL
		o-tâŋ	'to count'	tâŋ	HL
		o-báàn	'to climb'	báàn	HL
	L-L	o-balul	'to turn'	bálul	H-L
		o-sɔnka	'to write'	sɔ̌nka	LH-L
	H-L	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]

L stem shape	*Conditions*	*Imp. Tone*
CV	kɛ̌` (‘go!’)	LHL
	all others	HL
CGV		HL (a few LHL)
CVC	lax vowel	LHL
	tense vowel + (p, t, k, r)	HL
	continuant coda (ŋ, l)	LHL
CVVC		LHL
CVCVC		H-L
CVCCV		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]

	Infinitive		*Negative Imp. ‘Don’t X!’*	*Tone Pattern (Marker + Stem)*
L	o-lyaa	‘to cry’	pá lyaa	H # LL
H	o-dzá	‘to eat’	pâ dzá	HL # H
HL	o-láà	‘to cook’	pâ tɔ̂	HL # HL
L-L	o-balul	‘to turn’	pá balul	H # L-L
H-L	o-báńtsa	‘to think’	pâ báńtsa	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. *byɛn 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]	*Infinitive*		*Hortative (2pl) ('may you all X!')*	*Tone Pattern (Marker + Stem)*
L	o-lyaa	'to cry'	byɛn e líì.	L # HL
H	o-dzá	'to eat'	byɛn e dzê	L # HL
HL	o-láà	'to cook'	byɛn e léè	L # HL
L-L	o-balul	'to turn'	byɛn e bálul	L # H-L
H-L	o-báńtsa	'to think'	byɛn 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., persistive forms (§7.3.6). Note also that the infinitive forms are truly infinitives, and do not show the past/subjunctive vowel changes.

[7.34]	*Infinitive*		*Neg. Hortative (2pl) ('may you all not X!')*	*Tone Pattern (Marker + sâŋ + Inf.)*
L	o-lyaa	'to cry'	byɛn e sáŋ ó-lyaa	L # H # H-L
H	o-dzá	'to eat'	byɛn e sáŋ o-dzá	L # H # L-H
HL	o-láà	'to cook'	byɛn e sáŋ o-láà	L # H # L-HL
L-L	o-balul	'to turn'	byɛn e sáŋ ó-balul	L # H # L-L-L
H-L	o-báńtsa	'to think'	byɛn e sáŋ 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]	*with e*		*with ké*	
	byɛn e yê	'come (pl.)!'	byɛn 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-fɛ̂t* ('should'), *o-lîŋ* 'to want', *o-mâŋ* '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 *oŋkâŋ* '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]

	Infinitive		*'Already':* PERF â + INF *('I have already X-ed')*
L	o-lyaa	'to cry'	mi á ↓ó-lyaa
H	o-dzá	'to eat'	mi á o-dzá
HL	o-láà	'to cook'	mi á o-láà
L-L	o-balul	'to turn'	mi á ↓ó-balul
H-L	o-báńtsa	'to think'	mi á o-báńtsa

The semantic negation of 'already' is 'not yet', expressed in Nzadi by *tí pii ... bɔ*.

[7.38]

	Infinitive		*'Not yet':* tí pii + *stem* + bɔ *('I have not yet X-ed')*
L	o-lyaa	'to cry'	mi tí pií lyaa bɔ
H	o-dzá	'to eat'	mi tí pii dzá bɔ
HL	o-láà	'to cook'	mi tí pii láá bɔ
L-L	o-balul	'to turn'	mi tí pií balul bɔ
H-L	o-báńtsa	'to think'	mi tí pii báńtsa bɔ

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(í)*'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 *ntêt* (also meaning 'first') may be inserted: *mi tí pii dzá ntét bɔ* 'I haven't yet eaten'. Another historical source might be *o-tît* '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 kîì*, simplifies to *ó ki* before the perfect marker of the auxiliary form.

[7.40]

	Infinitive		*Past Anterior:* PAST ó +*aux* ki + *'already' stem ('I had X-ed')*
L	o-lyaa	'to cry'	mi ó ki á ↓ó-lyaa
HL	o-láà	'to cook'	mi ó ki á o-láà

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]		*Infinitive*		*Negative Past Anterior:*	
				PAST *neg* ko + *aux* ka + *'already' stem* + bɔ	
				('I hadn't X-ed')	
	L	o-lyaa	'to cry'	mǐ ko ka bɔ á ó-lyaa	= mǐ ko ka á ó-lyaa bɔ
	HL	o-láà	'to cook'	mǐ ko ka bɔ á o-láà	= mǐ ko ka á ó-láá bɔ

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]		*Infinitive*		*Future Anterior:*	
				A-PRES a + fêt + INF *aux* ka + INF *stem*	
				('I will have X-ed')	
	L	o-lyaa	'to cry'	mi a fét ↓ó ká ↓ó-lyaa	
	HL	o-láà	'to cook'	mi a fét ↓ó ká o-láà	

Here, the past tense of *o-kaa* does not make the optional stem change to *kîì*; the stem-change form is also possible, however: *mi a fét ↓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, *bɔ* may be placed after the auxiliary or after the main verb.

[7.43]		*Infinitive*		*Negative Future Anterior:*	
				neg. FUT sá + *aux* ka + *'already' stem* + bɔ	
				('I won't have X-ed')	
	L	o-lyaa	'to cry'	mi sá ká bɔ á ↓ó-lyaa	= mi sá ká á ↓ó-lyaa bɔ
	HL	o-láà	'to cook'	mi sá ká bɔ á o-láà	= mi sá ká á o-láá bɔ

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]		
	bɔ a máŋ ↓á dzá fufú kó luzíŋ ↓é bǒ	'have they ever eaten fufu in their lives?'
	ndzéé ↓nápɛ á máŋ a káá mpfyô	'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]	ndzéé	é	ye	mpfyó	baan	ngwɛn	ómɔtúk
	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]	*Infinitive*		*Past Prog. / Habitual:* PAST ó + *aux* kâ + A-PRES *stem* *('I was X-ing / I used to X')*
L	o-lyaa	'to cry'	mi ó ká á lyáà
H	o-dzá	'to eat'	mi ó ká á dza
HL	o-láà	'to cook'	mi ó ká á láà
L-L	o-balul	'to turn'	mi ó ká á bálul
H-L	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]	*Infinitive*		*Negative Past Progressive / Habitual:* *Negative* PAST ko + *aux* kâ + A-PRES *stem* + bɔ *('I wasn't X-ing / I didn't use to X')*
L	o-lyaa	'to cry'	mǐ ko ká bɔ á lyáà / mǐ ko ká ↓á lyáá bɔ
H	o-dzá	'to eat'	mǐ ko ká ↓á dzá bɔ
HL	o-láà	'to cook'	mǐ ko ká ↓á láá bɔ
L-L	o-balul	'to turn'	mǐ ko ká ↓á bálul bɔ
H-L	o-báńtsa	'to think'	mǐ ko ká ↓á báńtsa 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 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]	*Infinitive*		*Past Progressive:* PAST ó + *aux* ki +A-PRES *stem* *('I was (just) X-ing')*
L	o-lyaa	'to cry'	mi ó ki á lyáà
HL	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]

	Infinitive		*Future Prog/Hab:* a kó-ká + A-PRES *stem* *('I will be X-ing / I will (habitually) X')*
L	o-lyaa	'to cry'	mi a kó-ká á lyáà
H	o-dzá	'to eat'	mi a kó-ká á dza
HL	o-láà	'to cook'	mi a kó-ká á láà
L-L	o-balul	'to turn'	mi a kó-ká á bálul
H-L	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]

	Infinitive		*Negative Future Progressive / Habitual:* *negative* FUT sá + *aux* ka + A-PRES *stem* *('I won't be X-ing / I won't (habitually) X')*
L	o-lyaa	'to cry'	mi sá ká bɔ á lyáà / mi sá ká ↓á lyáá bɔ
HL	o-láà	'to cook'	mi sá ká ↓á láá 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 láá 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 Contructions 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-díìr 'to be awake' (from *o-diir* '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 lìí	'I was crying' (past progressive)
	mi ó ki é lìí	'I was (just) crying' (immediate past progressive)
	mǐ ko ká é lìí bɔ	'I wasn't crying' (negative past progressive)
	mi a kó ká ↓é lìí	'I will be crying' (future progressive)
	mi sá ká ↓é lìí 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-fɛ̂t* to the past habitual form (see §7.3.3.1).

[7.54] mi a fɛ́t ↓ó ká ↓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-fɛ̂t*:

[7.55] mi sá ka fɛ́t ↓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]

	Infinitive		*Past prospective:* *past* ó + *aux* lîŋ + *infinitive* *('I was about to X')*
L	o-lyaa	'to cry'	mi ó líŋ ↓ó-lyáà / ó-lyaa
H	o-dzá	'to eat'	mi ó líŋ ↓ó-dza / o-dzá
HL	o-láà	'to cook'	mi ó líŋ ↓ó-báàn / o-báàn
L-L	o-balul	'to turn'	mi ó líŋ ↓ó-bálul / ó-balul
H-L	o-báńtsa	'to think'	mi ó líŋ ↓ó-báńtsa / o-báńtsa

The negation of this form is as expected:

[7.57] mǐ ko líŋ ↓ó-lyáá bɔ = mǐ ko líŋ 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]		*Infinitive*		*Present prospective:* A-PRES + *aux* lîŋ + *infinitive stem* *('I am about to X')*
	L	o-lyaa	'to cry'	mi a líŋ ↓ó-lyáà / ó-lyaa
	HL	o-láà	'to cook'	mi a líŋ ↓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] mǐ ka líŋ ↓ó-lyáá bɔ / 'I am not about to cry'
mǐ ka líŋ bɔ 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]		*Infinitive*		*Future prospective:* FUT + *aux* ka + A-PRES. + *aux* lîŋ + *infinitive stem* *('I will be about to X')*
	L	o-lyaa	'to cry'	mi a kí ka a líŋ ↓ó-lyáà
	HL	o-láà	'to cook'	mi a kí ka a líŋ ↓ó-láà / o-láà

Its negation also negates *o-kaa*:

[7.62] mi sá ka a líŋ ↓ó lyáá bɔ 'I won't be about to cry'

7.3.5. Immediate Past ('Just')

The immediate past is formed with the auxiliary *oŋkâŋ*:

[7.63]		*Infinitive*		*Immediate past:* oŋkâŋ + *infinitive stem* *('I am about to X')*
	L	o-lyaa	'to cry'	mi oŋkáŋ ↓ó-lyáà / o-lyaa
	HL	o-láà	'to cook'	mi oŋkáŋ ↓ó-láà

7.3.6. Persistive Forms ('Still')

Persistive ('still') forms involve the auxiliary *o-fûl*. The present is formed using the *e-* PRESENT form of *o-fûl* ('still'):

[7.64]		*Infinitive*		*Persistive:* E-PRES + fûl + *infinitive stem* *('I am still X-ing')*
	L	o-lyaa	'to cry'	mi ê fúl ó lyaa
	HL	o-láà	'to cook'	mi ê fúl o láà

Past and future forms also inflect *o-fûl* for tense:

[7.65]	mi ó fúl ó-lyaa	'I was still crying'	(past)
	mi a fîfúl o-láà	'I will still be cooking'	(future)

The direct negation of the 'still' forms negates *o-fûl:*

[7.66]	mǐ ke fúl ó-lyaa bɔ	'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 *dyâk*, 'again' (cf. *ndé ó kér nɔ̌ dyâk* 'he did it again'):

[7.67]	mǐ ↓ké lii dyák bɔ	'I'm not crying anymore'	(o-lyaa 'to cry')
	mǐ ↓ké léé dyák bɔ	'I'm not cooking anymore'	(o-láà 'to cook')

Other tenses of 'not anymore' are formed similarly:

[7.68]	mǐ ko lyáà dyák bɔ	'I didn't cry anymore'	(past)
	mǐsâ lyáà dyák bɔ	'I won't cry anymore'	(future)

7.4. Modals and Modal-like Auxiliaries

7.4.1. o-fɛ̂t *(Weak Obligation)*

The modal verb *o-fɛ̂t* expresses weak obligation ('should') in both the epistemic sense and the deontic sense. Deontic uses are illustrated in [7.69], using *o-fɛ̂t* and the infinitive (the infinitive prefix *o-* changes to *e-* to agree with the 3pl. human direct object pronoun *bɔ̌* 'them' in the second and third sentences – see §8.37 for more on object pronoun agreement):

[7.69]	mi a fɛ́t ↓ó-díír ndé oswâ	'I should visit him tomorrow
	(mɛ mǐ ka báńtsa bɔ mi a dídiír ndé)	(but I don't think I will visit him).'
	mi a fɛ́t ↓é-díír bɔ̌ ntsú mǎŋkǔm	'I should visit them every day'
	mǐ ka fɛ́t ↓é-díír bɔ̌ bɔ	'I shouldn't visit them'

As seen in the first example, *o-fɛ̂t* 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-fɛ̂t* can also combine with complex TAM expressions such as the progressive (see §7.3.3).

[7.70]		bɔ a fɛ́t ↓ó-ká a sɔ́nka	'they should (might) be writing'
	cf.	bɔ a sɔ́nka	'they must be writing'

Recall that *o-fɛ̂t* is also used in the future anterior (§7.3.2.2), which may also be lacking in certainty.

A final use of *o-fɛ̂t* 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 fɛ́t ↓ó ké ↓ná ko Ipakála	you only have to go to Ipakála's'

7.4.2. o-fɛ̂n *(Possibility)*

In contrast, *o-fɛ̂n* is a modal of possibility, ability, and permission:

[7.72]	mpfyé á fɛ́n 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 *bɔ̌*.

[7.73]	mi ó fɛ́n o-dzá fufú	'I may/can eat the fufu'
	mi é fɛ́n ↓é-sarsa bɔ̌ (mɛ̀ mi sá sarsa bɔ̌ bɔ)	'I can help them (but I won't help them)'

Negation of *o-fɛ̂n* takes the tense matching the reference time. Interestingly, *o-fɛ̂n* cannot be negated in the future.

[7.74]	mɨ̌ ka fɛ́n ↓é-sarsa bɔ̌ bɔ	'I can't help them' (e.g. because I'm too busy'
	mɨ̌ ko fɛ́n ↓é-sarsa bɔ̌ bɔ	'I couldn't help them'
	*mi sá fɛ́n ↓é-sarsa bɔ̌ bɔ	intended: 'I won't be able to help them'
	mi sé sarsa bɔ̌ bɔ	'I won't (be able to) help them'

The modal *o-fɛ̂n* 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 tîtúl otâl	'If I eat fufu I will become tall'
	mɨ̌ ko fɛ́n ↓é sarsa bɔ̌ bɔ	'I couldn't have helped them'
	ker mi ô dzé fufu mi ó fɛ́n 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 fùfú…	'if he is eating fufu...'
	if he COND be PRES eat fufu	

[7.77]	ker bàán ↓má à dzá fufú…	'if the children have eaten the fufu…'
	ker bàán ↓â dzá fufú…	'if the chidren 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 ómɔ̌* 'at a certain time' (lit. 'time certain') is used to give an idea of possible intentionality ('perhaps'):

[7.78] mbal ómɔ̌ mi a kíkɛ̌ ‘Perhaps I will leave’

The similar modal concept of ‘might’ has been translated using the periphrastic expression *ka láŋ o-zyá bɔ* (‘don’t want to know’):

[7.79] mǐ ka láŋ o-zyá bɔ ker mi a kîkɛ̌ ‘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 *yɛ* ‘with’. The second copula, *o-mâŋ* is generally used with or without *yɛ* 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-máŋ yɛ* or *o-kaa yɛ*. The *o-mâŋ* form is also used in at least some attributive copula that don’t allow *yɛ*.

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 lôŋ	‘Tukumu is a teacher’	(present)
	Tukúmu ó kìí lôŋ	‘Tukumu was a teacher’	(past)
	Tukúmu á kíkaa lôŋ	‘Tukumu will be a teacher’	(future)

In the *e*-PRESENT, *ye* is apparently simplified from *yɛ̌* (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 *lôŋ* ‘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 lôŋ bɔ	‘Tukumu isn’t a teacher’ (negative present)
	Tukúmu kó kìí lôŋ bɔ	‘Tukumu wasn’t a teacher’ (negative past)
	Tukúmu sá kaa lôŋ bɔ	‘Tukumu won’t be a teacher’ (negative future)

As mentioned above, *é ye* (*o-kaa*) forms are used in identity, attributive, and locative constructions:

[7.82]	Tukúmu é ye lɔ̂ŋ	'Tukumu is a teacher' (identity)
	bàán ↓é ye dzó	'the children are quiet' (attributive)
	mi é ye kó ndzɔ́	'I am in the house' (locative)

With *yɛ* 'with', *o-kaa* forms can also be used in possessive copula:

[7.83]	mi é ye yɛ bǎàn	'I have children' (lit. I am with children)

In possessive constructions, however, *o-mâŋ* seems to be preferred in the present tense. It can also be used in at least some attributive copula. If the *o-kaa* (*é ye*) forms do not allow *yɛ* ('with'), neither does *o-mâŋ*. ǎà

[7.84]	mi a máŋ yɛ bǎàn	'I have children'
	bàán ↓á mâŋ (*yɛ) dzó	'the children are quiet'
cf.	bàán ↓é ye (*yɛ) dzó	'the children are quiet'

The verb *o-mâŋ* is defective, appearing only in the *a*-PRESENT. We therefore have a three-way complementary distribution with *ye* and *o-kaa* forms. Inflected forms of *o-kaa* are also used in past and future possessive constructions.

As noted, many attributive constructions are made with nouns and *o-kaa yɛ* or *o-mâŋ yɛ* (both meaning 'be with'). In some cases, *yɛ* may be optional following *é ye*.

[7.85]	ndzɔ́ a máŋ yɛ okúb ↓é swíì	'the house is red' (lit. 'the house is with the color of red')
	bɔ a máŋ yɛ ndzaa	'they are hungry' (lit. 'they are with hunger')
	mi é ye (yɛ) kyê̂s	'I am happy' (lit. 'I am (with) happiness')
	mi a máŋ yɛ kyê̂s	'I am happy' (lit. 'I am with happiness')
	mi a máŋ yɛ mbvê̂l dzŭ̀m	'I am 10 years old' (lit. 'I am with 10 years')

The copula *o-mâŋ*, as mentioned, is also sometimes used to express identity. In the second example, the meaning is idiomatic:

[7.86]	mi a máŋ tàá	'I am a father'
	mi a máŋ mwǎàn	'I am a very small boy' (lit. 'I am a child')

The *o-kaa* copula can also be used in the imperative mood:

[7.87]	kǎà lôŋ	‘be a teacher!’
	pá kaa lôŋ	‘don’t be a teacher!’
	kǎà dzó	‘be quiet!’
	kàá yɛ bǎàn	‘have children!’
	kǎà kó ndzɔ́	‘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]	nápɛ é ye máán	‘this is a container of wine’
	o-dzá fufú é ye ɔdzɔ	‘to eat fufu is good’
	ŋkwɔ́ é ye oŋgér Tukúmu o súm ndé	‘a chicken is what Tukumu bought’ (lit. ‘chicken is thing Tukumu bought he’)
	mbvwá ˩e yě ker ilíŋ éntên	‘the road is like the (winding) trace of a snake’

In some cases the copula may deleted, e.g. after a demonstrative (cf. §10.4.1 for other contexts):

[7.89]	mápɛ avúp	‘this is dew’	(=mápɛ é ye avúp)

CHAPTER 8: BASIC SENTENCE STRUCTURE

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 *bɔ* (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'	byɛn 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 mɔ́n 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	bàán	fufú
we	PAST	give	children	fufu
S	AUX	V	IO	DO

'we gave the children fufu'

[8.7]

bi	ó	pé	fufú	kó	(a)	báàn
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	oŋkàán	mwǎàn
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	bǎàn
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 ↓bɔ́ fùfú
we PAST give them children
S AUX V IO DO
'we gave them fufu'

[8.11] mi ô túm ndé bǎàn
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 bàán nɔ̌
we PAST give children it
S AUX V IO DO
'we gave the children it'

[8.13] mi ô túm mwàán mɔ̌
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 bàán 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 ↓nɔ́ bǎàn
we PAST give it children
S AUX V DO IO
'we gave it [to] the children'

[8.16] mi ô túm ↓mɔ́ mwǎàn
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 ↓nɔ́ kó (a) báàn
we PAST give it LOC children
S AUX V DO Obl-IO
'we gave it to the children'

[8.18] mi ô túm mɔ̌ ↓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 ŋ̀kûm
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 mwàán ↓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 nɔ̌
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 byɛ̌n
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 mwǎàn
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 nɔ̌
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 ↓nɔ́ 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 ńdé
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 ↓nɔ́ kó yâ
we PAST give it LOC you
S AUX V DO Obl-IO
'we gave it to you'

[8.32] bi ó pé ↓kó yá nɔ̌
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 [iloŋ oní↓nán-oní↓nán na adzá iniir é fufú] kó yâ
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 ↓yá [iloŋ oní↓nán-oní↓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 ɔ́tsɔ]
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	ɔ́tsɔ]	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-tûm* '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-mɔ̂n* '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	oŋkàán
	we	PAST	buy	child	book
	S	AUX	V	IO	DO

'we bought the child a book'

[8.34]	mi	â	láá	bàán	fufú
	I	PAST	cook	children	book
	S	AUX	V	IO	DO

'I have cooked the children fufu'

[8.35]	bɔ	ó	túŋ	baar	ndzɔ́
	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 *sâm* 'reason', which takes the genitive linker (GL) /é/ 'of' (§5.3.1):

[8.36] bi ó súm oŋkàán sám ↓é mwáàn
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 báàn
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 ndzɔ́ sám ↓é báàr
they PAST build house reason of people
S AUX V DO Obl-IO
'they built a house for the people'

Although *sâm* 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 ndzɔ́ 'they have built the people a house'
bɔ â túŋ bɔ̌ ndzɔ́ 'they have built them a house'
bɔ â túŋ baar nɔ̌ 'they have built the people it'
bɔ â túŋ bɔ̌ nɔ̌ 'they have built them it'

[8.39] bɔ â túŋ ndzɔ́ sám ↓é báàr 'they have built a house for the people'
bɔ â túŋ ndzɔ́ sám ↓é bɔ̌ 'they have built a house for them'
bɔ â túŋ ↓nɔ́ sám ↓é báàr 'they have built it for the people'
bɔ â túŋ ↓nɔ́ sám ↓é bɔ̌ '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 báár ndzɔ́* '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 mî
he PAST break leg of me
S AUX V DO
'he broke my leg'

[8.41] ndé ó (ḿ)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 (ḿ)bwí mi ḿpfyě
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] bɔ ó (ḿ)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:

	no agreement	*with agreement*	
[8.44]	bɔ â zwɛ́		'they will bathe (tr.)'
	bɔ â zwɛ́ mwǎàn		'they will bathe a child'
[8.45]	bɔ â zwɛ́ mǐ`	bɔ â nzwɛ́ mǐ`	'they will bathe me'
	bɔ â zwɛ́ yǎ`	bɔ ê zwɛ́ yǎ`	'they will bathe you sg.'
	bɔ â zwɛ́ ǹdé	bɔ ô zwɛ́ ǹdé	'they will bathe him/her'
	bɔ â zwɛ́ bǐ	bɔ ê zwɛ́ bǐ	'they will bathe us'
	bɔ â zwɛ́ byěn	bɔ ê zwɛ́ byěn	'they will bathe you pl.'
	bɔ â zwɛ́ bǒ	bɔ ê zwɛ́ bǒ	'they will bathe them [+human]'
[8.46]	bɔ â zwɛ́ nǒ		'they will bathe it'
	bɔ â zwɛ́ 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 mǐ`* 'they have beaten me', *bɔ â ntáŋ mǐ`* '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 ndzwîndzwɛ́ mǐ`* 'they will bathe me' (cf. *bɔ â dzwîdzwɛ́ 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 **mʊ*- (cf. the realization of the identical class 1 and 3 **mʊ*- prefixes as *o*- in §4.1).

(iii) Tense and aspect markers change to *e* with the second person singular *yǎ`* and all plural object pronouns. Compare: *bɔ ê búl yǎ`* 'they have beaten you', *bɔ ê búl bǐ* 'they have beaten us', *bɔ ê táŋ byěn* '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]	*no agreement*	*with agreement*	
	bɔ ê búl (mwǎàn)		'they are beating (the child)'
	bɔ ê búl mǐ `	bɔ ê mbúl mǐ`	'they are beating me'
	bɔ ê búl yǎ`	(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]	*no agreement*	*with agreement*	
	bɔ ó búl (mwǎàn)		'they beat the child' (PAST)
	bɔ ó búl mǐ `	bɔ ó ḿbúl mǐ`	'they beat me'
	bɔ ó búl yǎ`	bɔ é búl yǎ`	'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]	*basic, with L-toned root*	*1sg*	*2sg*	*3sg*	*1,2,3pl*
PRES	*a* + L	aŋ + L	e + L	o + L	e + L
PERF	*â* + L	âŋ + L	ê + L	ô + L	ê + L
PROG	*é* + LH	éŋ + LH	é + LH	ó + LH	é + LH
PAST	*ó* + HL	óŋ + HL	é + HL	ó + HL	é+ HL
FUT	*a* + RÊD + H	aŋ + RÊD + H	e + RÊD + H	o + RÊD + H	e + RÊD + H
INF	*o*-L	oŋ + L	e + L	o + L	e + L

Ditransitive constructions also optionally exhibit object agreement with the indirect object:

[8.50]		
	ndé ó (ḿ)pá mǐ fufú	'He gave me fufu'
	ndé é pá yǎ fufú	'He gave you sg. fufu'
	bɔ ó (ḿ)bwí ↓mí lwǒ`	'they broke my arm' (lit. 'they broke me arm')

[8.51] shows the full paradigm of the infinitive *o-dzî* 'to feed' agreeing with an IO pronoun, as appearing for example after *bɔ à líŋ* 'they want' (cf. *bɔ a líŋ o-dzí mwàán fufú* 'they want to feed the child fufu'):

[8.51]	o-ndzí mǐ fufú	‘to feed me fufu’	e-dzí bǐ fufú	‘to feed us fufu’
	e-dzí yǎ fufú	‘to feed you sg. fufu’	e-dzí byěn fufú	‘to feed you pl. fufu’
	o-dzí ndé fufú	‘to feed him fufu’	e-dzí bɔ̌ fufú	‘to feed them fufu’

In some cases a tonal change has been noted when there is 1sg. agreement: *o-fur* ‘to pay’ → *o-mpfur mǐ*ˋ ‘to pay me’, *o-taŋsa* ‘to teach’ → *o-n̄*↓*táŋsa mǐ*ˋ ‘to teach me’. Such realizations suggest both that the N- prefix carries a H tone which can also affect the stem tone. Compare also the infinitive forms in the following sentences:

[8.52]	ya a fĕt ó-díír ndé oswâ	‘you should visit him tomorrow’
	ya a fĕt é-díír bǐ oswâ	‘you should visit us tomorrow’

The following example shows that there is optional agreement with a reflexive pronoun as well: *mi ô mbúl* ↓*mí-ŋgizyâ* ‘I hit myself’.

Object agreement is also possible in negative constructions. In the following sentences the negative markers are underlyingly /ko/ and /bɔ/:

[8.53]	mǐ ko pé ↓yá fufú bɔ	‘I didn’t give you fufu’
	mǐ ke pé ↓yá fufú bɔ	(=same, with object pronoun agreement)

[8.54]	mǐ ko pá fufú ↓kó yá bɔ	‘I didn’t give fufu to you’
	mǐ ke pá fufú ↓kó yá bɔ	(=same, with object pronoun agreement)

In [8.53] the optional change of /ko/ to *ke* represents agreement with the IO *yǎ*ˋ ‘you sg.’. In [8.54] *ke* may also occur agreeing with the oblique *kó yâ* ‘to you sg.’. Since object agreement represents what is left of the earlier prefixal pronouns inherited from PB, it appears to have originated as pronoun doubling, e.g. ‘I didn’t give you fufu to you’. The 1sg. *N*- prefix has in fact been observed to occur by itself:

[8.55]	bɔ â mbûl	‘they have beaten me’
	ndé ó mpé fufú	‘he gave me fufu’
	mi â mbwá lwɔ̌ˋ	‘I have broken my arm’ (lit. I have broken me arm)

The occurrence of an agreement marker without the post-verbal pronoun has been mostly found to express an external possessive, often malefactive. The following sentences all involve the perfect marker /â/:

[8.56]	bɔ â mbúl mwǎàn	'they have beaten my son'
	bɔ â ndzá fufú	'they have eaten my fufu'/the fufu on me'
	bɔ ô dzá (ndé) fufú	'they have eaten his fufu/the fufu on him'
	mi ê bwá (bɔ́) lwɔ̌`	'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 mwàán 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 bɔ̌ akwo	'give them bananas!'

Two interesting observations can 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)’
	ŋgyɛ̌	‘under, south, downriver, below, down’
	ŋgbee	‘heel’; also ‘beside, side’
	osó	‘face’; also ‘ahead, in front of’
	nduŋ-ŋgbé	‘back’; also: ‘behind’
	ibvuu	‘inside’ (*cf.* PB *bumo ‘abdomen’)
	ŋgbee e lwó ibaa	‘east’ (lit. ‘side of the arm of man’)
	ŋgbee 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 mɛ̂s	‘on the table’
	kó ŋgyɛ é mɛ̂s	‘under the table’
	kó ŋgbee é mɛ̂s	‘next to the table’
	kó óso e mɛ̂s	‘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 ńdzɔ
I E-PRES be LOC house
‘I am in the house’

[8.61] tukúmu o dzé fufú kó ńdzɔ
Tukumu PAST eat fufu LOC house
‘Tukumu ate fufu in the house’

[8.62] akáár o kɔ́t ↓kó ndzɔ
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 kɛ búún
person PRES go Buun
'the person is going to Buun'

muur ê fé 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] mpfŭ ↓ó bvé kó óte
bird PAST fall LOC tree
'the bird fell onto the tree'

mpfŭ ↓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 tíí ko ndzéè
he PAST run speed loc inside market up to LOC river
'he ran through the market up to the river'

ndé ó wám entín yɛ (ndé) o kɔ́t 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 *okalí* 'yesterday' are quite free in their placement in the Nzadi clause. [8.68] shows possible placements. (See also §8.4.4.)

[8.68] (okalí) mi (okalí) o dzé (okalí) fùfú (okalí)
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]

okalí	'yesterday'
nɔ̆wɛ	'today'
oswâ	'tomorrow'
sɛ́sɛ̆p ↓nápɛ	'soon' (lit. 'this moment')
ntáŋ ↓nápɛ	'now' (lit. 'this time')
okalí 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 yĕ ↓kó ntáŋ ↓nápɛ
children PROG come LOC time this
'the children are coming now'

[8.71] mi ó dzé fufú ↓kó ntáŋ ↓ɔ́mɔtúk
I PAST eat fufu LOC time/hour one
'I ate fufu for an hour'
mi ó kér nǒ 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 kér nǒ kó ndzɔ oŋkáàn 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 oŋkáàn sɛ́sɛ̌p ↓nápɛ
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 kér nǒ obé
I PAST do it bad
'I did it badly'

mi a tɔ́ɔ́ 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 entîn
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 wɛ́ɛ́ ḿbum 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 exemplifed in [8.79-81]:

[8.79] ndé ó káŋsa entútu sám ↓é ndzíì
he PAST collect flowers for of money
‘he collected flowers for money’

[8.80] mi ô pé ńdzii kó múùr sám ↓óŋkàán
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 ↓kó ńtsa ndzɔ́ sám o-tyén yɛ yâ
I PAST wait LOC outside house reason INF-talk with you
'I waited outside the house to talk to you'

[8.84] indzéé 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 *sâm* with the meanings of 'why' and 'because', see §9.3.2 and §10.3.4, respectively.

8.4.5. Instrumentals, Manner, and Comitatives (tí, yɛ)

Instrumentals are introduced by the preposition *tí* 'with' (see also [8.92-93]):

[8.85] ndé ó ké ó-paa e ba-mpfùú tí ondûk
he PAST go INF-hunt of birds with gun
'he hunted birds with a gun'

[8.86] ndé ó wɛ́ɛ́ ḿbum 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 *yɛ* 'with, and':

[8.88] ibaa tí okáár o tûl
ibaa yɛ okáár o tûl
man with woman PAST arrive
'a man and a woman arrived'

Manner can also be expressed by *yɛ* 'with':

[8.89] bi ó kê búún yɛ ekul
we PAST go Bundu with foot
'we went to Bundu on foot'
bi ó yé yɛ bwɔ́m
we PAST come with fear
'we came in fear'

Here again the prepositions *tí* and *yɛ* are interchangeable:

[8.90] bi ó kê búún tí kamyɔ́ / tí velô / tí wǎàr
bi ó kê búún yɛ kamyɔ́ / yɛ velô / yɛ wǎàr
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 fùfú 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] mì ô páŋsa tsétsɛ́ mês tí epúú
I PAST wipe clean table with cloth
'I wiped the table clean with a cloth'

[8.93] mì 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 *okalí* 'yesterday' in [8.94]:

[8.94]	(okalí)	mi	(okalí)	ó	(*okalí)	dzê	(okalí)	fùfú	(okalí)
		I		PAST		eat		fufu	
	'I ate fufu yesterday'								

Adverbs may also appear between indirect and direct objects:

[8.95]	mi	â	pá	bàán	nɔ̌wɛ	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 taŋgsa 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 kê dzé fufú bɔ	'they are not eating fufu'
	mǐ ko taŋsa mwàán bɔ	'I didn't teach the child'

Although strongly dispreferred, *bɔ* is sometimes observed between the verb and the object:

[8.98] bɔ kê dzé bɔ fufú ‘they are not eating fufu’
mǐ ko taŋsa bɔ mwǎàn ‘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	fufú	bɔ
	I	NEG.PAST	give	you	fufu	NEG
	mǐ	ke	pá	ya	bɔ	fufú
	I	NEG.PAST	give	you	NEG	fufu
	*?mǐ	ke	pá	bɔ	ya	fufú
	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	fufú	kó yá	bɔ
	I	NEG.PAST	give	fufu	to you	NEG
?	mǐ	ke	pá	fufú	bɔ	kó yâ
	I	NEG.PAST	give	you	NEG	to you
*?	mǐ	ke	pá	bɔ	fufú	kó yâ
	I	NEG.PAST	give	NEG	you	to you

‘I didn’t give fufu ot 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	fufú	bɔ	sám	↓é	mwáàn
woman	NEG.PAST	cook	fufu	NEG	reason	of	child
okáár	ko	láá	fufú	sám	↓é	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 pɔ́ tɔ̀ɔ́ bɔ ‘he isn’t sleeping’
ndé ka pɔ́ bɔ tɔ̀ɔ́ (o-pɔ + tɔ̀ɔ́ =‘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 ↓ké búún bɔ ‘the person isn’t going to Buun’
muur ké ↓ké bɔ búún

Placement of *bɔ* with respect to adverbials is similarly free:

[8.104] tukúmu ko bva nɔ̌wɛ bɔ
Tukumu NEG.PAST fall today NEG
tukúmu ko bva bɔ nɔ̌wɛ
Tukumu NEG.PAST fall NEG today
‘Tukumu didn’t fall today’

[8.105] tukúmu ko pá mwàán fufú kó kát ndzɔ́ bɔ
Tukumu NEG.PAST give child fufu LOC inside house NEG
tukúmu ko pá mwàán fufú bɔ kó kát ndzɔ́
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]

Affirmative	*Negative*		
S-V	S-V-*bɔ*	*S-*bɔ*-V	**bɔ*-S-V
S-V-O	S-V-O-*bɔ*	?S-V-*bɔ*-O	
S-V-IO-DO	S-V-IO-DO-*bɔ*	S-V-IO-*bɔ*-DO	*?S-V-*bɔ*-IO-DO
S-V-DO-Obl	S-V-DO-Obl-*bɔ*	?S-V-DO-*bɔ*-Obl	*?S-V-*bɔ*-DO-Obl
S-V-X	S-V-X-*bɔ*	S-V-*bɔ*-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]

mǐ	ko	mɔn	mwàán	bɔ	na	ó	bvê
I	NEG.PAST	see	child	NEG	DET	PAST	fall.PAST
mǐ	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 *okalí* 'yesterday' modifies the verb in the relative clause.)

[8.108]

mǐ	ko	pá	yǎ	bɔ	fufú	na	o	léé	mî	okalí
I	NEG.PAST	give	you	NEG	fufu	DET	PAST	cook.PAST	I	yesterday
mǐ	ko	pá	yǎ	fufú	bɔ	na	o	léé	mî	okalí
I	NEG.PAST	give	you	fufu	NEG	DET	PAST	cook.PAST	I	yesterday
mǐ	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]	mǐ	ka	láŋ	mbum	bɔ	na	é	ye	oyá	bɔ
	I	NEG.PRES	like	fruit	NEG	DET	PRES	be	ripe	NEG
	mǐ	ka	láŋ	mbum	na	é	ye	oyá	bɔ	mǐ
	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]		mǐ	ka	láŋ	mbum	bɔ	na	é	ye	oyá
		I	NEG.PRES	like	fruit	NEG	DET	PRES	be	ripe
	*	mǐ	ka	láŋ	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 *tukúmu 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]	tùkúmu ko dzá fufú nɔ̌wɛ bɔ…	Tukumu didn't eat fufu today…
	…ndé ó dzé lɔ́sɔ	…he ate rice
	…ndé o yɛ́ɛ́ nɔ̌	…he sold it
	…mi ô dzé nɔ̌	…I ate it
	…ndé ó dzé nɔ̌ 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	ńdé	a	lék	otál	↓é	ńdé
	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 *ŋgá-lek* 'surpassing':

[8.114] muur okúúr ŋgá-lek `the older person'
muur okúúr ŋgá-lek ŋgá-lek 'the oldest person'

As seen in the second example above, a superlative meaning can be expressed by repeating *ŋgá-lek*. Two other alternatives involve use of Ci- adjective reduplication, which has an intensifying effect:

[8.115] muur okîkúúr ŋgá-lek 'the oldest person'
muur okîkúúr okîkúúr '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 *yɛ* 'with', as in [8.116].

[8.116] oŋkàán ↓nápɛ é ye okúùr yɛ oŋkàán napyáá
book this PROG be old with book that
'this book is older than that book'

[8.117] shows an equative clause using *mpîl ɔ́mɔtúk* 'one manner' (='the same way').

[8.117] oŋkàán ↓nápɛ é ye okúùr mpîl ɔ́mɔtúk yɛ oŋkàán 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

Nzadi's main coordinator is *yɛ* '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]	tí	'and, with'	
	mɛ	'but' (from French *mais*)	
	mbal íŋ́kěn	'or, maybe, lit. another time'	
	atá	'although, even'	
	kókâl	'instead, in place of'	(cf. okal 'place')
	sâm	'because (of), for'	(cf. sâm 'reason')
	kó ńtáŋ ˡómɔtúk	'while, at the same time'	(cf. ntâŋ 'time')
	osó	'before, forward, first'	(cf. osó 'face')
	nduŋ-ŋgbé	'after	(cf. nduŋ-ŋgbé '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 *niŋgé* '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 *yɛ* '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 yɛ *'and, with, to'*

Like NPs, clauses can be coordinated with *yɛ* '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	yɛ	(mi)	ó	dzé	fufú		
I	PAST	cook	and	I	PAST	eat	fufu		
'I cooked and ate fufu'									
bɔ	ó	súm	ntswé	(bɔ)	ó	lûm			
they	PAST	buy	fish	they	PAST	leave			
'they bought fish and left'									
okáár	o	yé	yɛ	(ndé)	ó	mpé	mǐ	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	yɛ	ó	súún	iyó
I	PAST	run	speed	and	PAST	jump	market
'I ran past the market'							
ndé	â	wíwǎm	entin	yɛ	â	tîtúl	ndzéé
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 kaŋgul
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 tɔ́ɔ̀ dzǐm (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 tɔ́ɔ̀ dzǐm 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 bɔ̌ 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] nápɛ mwàán na o mɔ́n mí yɛ mi ó lûm
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 tɔ́ɔ̀ 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 íŋ́kěn* 'maybe, another time', from *mbal* 'time' and *íŋ́kěn* 'other, another, a certain, some'. The resulting meaning is similar to English 'or' and 'or maybe':

[9.15] mi a tîtɔ́ɔ́ dzĭm mbal íŋ́kĕn mi a mîmén
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 tîtɔ́ɔ́ dzĭm atá mi a líŋ o-mên
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 *kókal*, the resulting meaning is 'in place of' or 'instead of':

[9.17] kókál o-mên mi a tî-tɔ́ɔ́ dzĭm`
LOC.place to dance I FUT sing.RED song
'instead of dancing, I will sing'

kókál o-dzá mi sâ dzá bɔ
LOC.place to eat I NEG.FUT eat NEG
'instead of eating, I will not eat'

The last coordinator to consider is *sâm* 'because', derived from the noun *sâm* 'reason', which has a number of functions. One of these is to coordinate clauses:

[9.18] ndé ó tɔ́ɔ̀ dzĭm̀ sám mi ó mên
she PAST sing song reason I PAST dance
'she sang because I danced'

ndé ó lûm sám ya ó búl ndé
he PAST leave reason you PAST hit him
'he left because you hit him'

mi a lûm 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] mwàán o bvé yɛ ndé ko lyaa bɔ
I PAST fall and he NEG.PAST cry NEG
'the child fell without crying'

kěr nɔ̌ 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-kɛ
I PRES refuse to go
'I refuse to go'

[9.23] bɔ ó yé (sám) o-mpá mĭ fùfú
they PAST come reason to me.give me fufu
'the came (in order) to give me fufu'

As seen, the noun *sâm* '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 ésaa
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-tyɛ̂n
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-tûn* '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 mɛ́k ó-lil
Tukumu PAST try to swim
'Tukumu tried to swim'

Tukúmu kó mɛk 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 kɔ̂t
I PRES want them SBJV enter
= mi a líŋ bɔ ké kɔ̂t
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 lûm
I PRES say you SBJV leave
'I tell/order you to leave'

mi a láŋ 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 săŋ bǒ bɔ e kôt
SBJV allow they they SBJV enter
= é săŋ 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 kíì lɔ̂ŋ
they PRES want I SBJV be teacher
'they want me to be a teacher'

bɔ a líŋ mǐ e sáŋ ↓ó-kaa lɔ̂ŋ
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 mɔ̂n (niŋgé) ya ó mên
I PAST see that you PAST dance
'I saw that you danced'
mi ó zwá (niŋgé) bɔ 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 mɔ́n yǎ ya é yě
I PAST.you see you you PROG come
'I saw you coming'
mǐ ko mɔ́n bɔ bàán ↓é yě
I NEG.PAST see NEG children PROG come
'I didn't see the children coming'

[9.35] mǐ ka zyá bɔ ya a mîmén
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 tɔ́ɔ̀ dzǐm̀
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 mǐ ka láŋ o-zyá bɔ oŋgér Tukúmu ó mɔ́n ńdé
I NEG.PRES manage to know NEG thing Tukumu PAST see he
'I don't know what Tukumu saw'
mǐ ka láŋ 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 tyén 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 oŋgwá 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 pɛ! "
they PAST say come here
'they said, "come here!"'

[9.41] bɔ ó tyên " bi e láŋ 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$_i$ ó tyén (niŋgé) bɔ$_{i,j}$ e láŋ yǎ`
they PAST say that they PRES like you
'they$_i$ said they$_{i,j}$ 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 lyáà
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 ńtáŋ ↓ɔ́mɔtúk*:

[9.45] mi ó tɔ́ɔ̀ dzǐm yɛ mi ó mên kó ńtâŋ ↓ɔ́mɔ̀túk
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 ńtáŋ ↓ɔ́mɔtúk* is preposed, *yɛ* is not needed. The temporal clause in [9.46] can be translated with 'while'.

[9.46] kó ńtâŋ ↓ɔ́mɔ̀túk mi ó tɔ́ɔ̀ dzǐm 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 *nduŋ-ŋgbé* ('back'). These are used along with the *yɛ* 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 tɔ̋ɔ̀ dzĭm yɛ mi ó mên
before I PAST sing song and I PAST dance
'before I sang, I danced'

mi ó tɔ̋ɔ̀ dzĭm osó yɛ mi ó mên
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, *yɛ* 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 *nguŋ-ŋgbé* 'after'.

[9.48] ndé ó lûm osó mi ke tûl
she PAST leave before I SBJV arrive
'she left before I arrived'

[9.49] mi ó tûl nduŋ-ŋgbé ndé ke lûm
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 fɛ̋t ↓ó-kɛ̂ ntɛ́t ndzéé.
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 kɛ bɔ ndzéé, bɔ á ker kisál kó ndzéè.
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 bɔ̌, bɔ a kútan yɛ 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 fɛ́t ↓ópii fup nɔ̌ 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 lûm mpwe é nɔ̌
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 nɔ̌, 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] nápɛ mpíl akúúr ↓é bǐ a tyén bɔ o fé ŋgyɛ̌.
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 bɔ̌, 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'

ndzéé kasáì. 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] bǐ ka láŋ o-zyá ntét bɔ. me kó mpíl àkúúr a tyén bɔ̌,
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 zíŋ ̄kókát bentsaŋga. ó kíí bɔ̌ a zíŋ
they PAST be PRES live inside islands PAST be they PRES live
they lived on islands. When they lived

kukwâ bɔ̌, ba-mbyɛ́ ↓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 fɛ́t o-káá á nɔ máán ḿpi
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 nɔ̌
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 tî-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 bɔ
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 ↓â dzá fufú bi ó fɛ̋n ó-kɛ
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 lɔ̂ŋ …
if Tukumu PRES be teacher
'if Tukumu is a teacher…'

[9.62] ker Tukúmu má kaa lɔ̂ŋ …
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 lɔ̂ŋ bɔ …
if Tukumu NEG.PRES.COP be teacher NEG
'if Tukumu is not a teacher…'

[9.64] ker Tukúmu má saŋ o-kaa lɔ̂ŋ …
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 (yɛ) 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 fɛ́n 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

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 kɔ́t ↓kó ńdzɔ* 'the children entered the house' are the following four subject relative possibilities:

[10.1] bàán na ŋgo kɔ́t ↓kó ńdzɔ
children DET WH.PAST enter LOC house
= bàán na o kɔ́t ↓kó ńdzɔ
= bàán ŋgo kɔ́t ↓kó ńdzɔ
= bàán o kɔ́t ↓kó ńdzɔ
'the children who entered into the house'

(ii) Negative tenses cannot appear in relative clauses. Instead the verbs *o-tûn* 'to refuse' and *o-saŋ* '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] mwàán na o tún o-dzá fufú é ńdé
child DET PST refuse INF-eat fufu GL his
= mwàán 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] bàán ó kɔ́t ↓kó ńdzɔ
children PAST enter LOC house
'the children entered into the house'

bàán o kɔ́t ↓kó ńdzɔ
children PAST enter LOC house
'the children who entered into the house'

[10.5] baar o wɛ́ɛ̀ máán
people PAST choose wine
'the people who chose the wine'

máán ↓ó wɛ̀ɛ́ 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'
	oŋkàán	na	ŋgo	bvê	'the book that fell'
	eŋkàán	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 mî* '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]	mwàán	na	ŋga	dzá	fufú
	child	DET	WH.HAB	eat	house
	'the child who eats fufu'				
	mwàán	na	ŋgâ	dzá	fufú
	child	DET	WH.PERF	eat	house
	'the child who has eaten fufu'				

mwàán	na	ŋgê	dzé	fufú
child	DET	WH.PRES	eat	house

‘the child who is eating fufu’

mwàán	na	ŋgo	dzé	fufú
child	DET	WH.PAST	eat	house

‘the child who ate fufu’

mwàán	na	ŋga	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	ŋgê	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	mwǎàn	
people	PAST	fed	child	

‘the people fed the child’

baar	o	dzí	mwàán	é	ye	ba-mbé	mǐ`
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] mǐ ko mɔ́n 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 kôkɔ́t ↓kó ńdzɔ
children DET FUT enter.RED LOC house
'the children who will enter into the house'

bàán ↓á kôkɔ́t ↓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 sûm
person DET WH.HAB buy
'buyer' (lit. 'a person who buys')

muur na ŋga yɛɛ
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	ŋga	kɛ	ndzée	‘fisherman’
	person	DET	WH.HAB	go	river	
	muur	na	ŋga	kɛ	opàá	‘hunter’
	person	DET	WH.HAB	go	hunting	
	muur	na	ŋga	kɛ	izwɔŋ	‘farmer’
	person	DET	WH.HAB	go	field	
	muur	na	ŋga	pasul	ntsúr	‘butcher’
	person	DET	WH.HAB	cut	meat	
	muur	na	ŋga	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	ŋga	kɛ	ndzée	
	DET	WH.HAB	go	river	
	‘(the) one who goes to the river’				
	na	ŋga	kôkɔ́t	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-tûn* ‘to refuse’ and *o-saŋ* ‘to refrain’ are used to express negation:

[10.15]	okáár	na	ŋga	tún	↓ó-sɔnkil	bɔ̌
	child	DET	WH.HAB	refuse	to write to	them
	‘the woman who doesn’t write to them’					

	mwàán	na	ŋgo	sáŋ	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 ozwâ* ‘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) bàán (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 bàán ŋgo dzé bɔ̌
fufu DET children WH.PAST eat they
= fùfú na bàán o dzé bɔ̌
= fùfú bàán ŋgo dzé bɔ̌
= fùfú bàán o dzé bɔ̌
'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 bɔ̌
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 mɔ́n ńdé
ibaa na bàán ŋgo mɔ́n bɔ̌
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 nɔ̌
ibaa na ba-mbvá ŋgo té mɔ̌
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 mɔ́n okáár yɛ mwằàn
man DET WH.PAST see woman and child
'the man that the woman and child saw'

ibaa na ŋgo mɔ́n okáár yɛ yă`
man DET WH.PAST see woman and you (sg.)
'the man that the woman and you saw'

ibaa na ŋgo mɔ́n yă yɛ mĭ`
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	yɛ	mwàán	ŋgo	mɔ́n	bɔ̌
man	DET	woman	and	child	WH.PAST	see	they

'the man the woman and child saw'

ibaa	na	okáár	yɛ	yǎ	ŋgo	mɔ́n	byɛ̌n
man	DET	woman	and	you (sg.)	WH.PAST	see	you (pl.)

'the man the woman and you saw'

ibaa	na	yǎ	yɛ	mǐ	ŋgo	mɔ́n	bǐ
man	DET	you (sg.)	and	I	WH.PAST	see	we

'the man that you and I saw'

Again, both *na* and *ŋg-* are optional: *ibaa na okáár yɛ mwàán o mɔ́n bɔ̌*, 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) (ŋg)o mɔ́n mǐ`	'the child that I saw'
mwàán (na) (ŋg)o mɔ́n yǎ`	'the child that you (sg.) saw'
mwàán (na) (ŋg)o mɔ́n ńdé	'the child that s/he saw'
mwàán (na) (ŋg)o mɔ́n nɔ̌	'the child that it saw'
mwàán (na) (ŋg)o mɔ́n bǐ	'the child that we saw'
mwàán (na) (ŋg)o mɔ́n byɛ̌n	'the child that you (pl.) saw'
mwàán (na) (ŋg)o mɔ́n bɔ̌	'the child that they [+human] saw'
mwàán (na) (ŋg)o mɔ́n mɔ̌	'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) mi (ŋg)o mɔ́n (mǐ`)	'the child that I saw'
*mwàán (na) ya (ŋg)o mɔ́n (yǎ`)	'the child that you (sg.) saw'
*mwàán (na) ndé (ŋg)o mɔ́n (ńdé)	'the child that s/he saw'
*mwàán (na) nɔ (ŋg)o mɔ́n (nɔ̌)	'the child that it saw'
*mwàán (na) bi (ŋg)o mɔ́n (bǐ)	'the child that we saw'
*mwàán (na) byɛn (ŋg)o mɔ́n (byɛ̌n)	'the child that you (pl.) saw'
*mwàán (na) bɔ (ŋg)o mɔ́n (bɔ̌)	'the child that they [+human] saw'
*mwàán (na) mɔ (ŋg)o mɔ́n (mɔ̌)	'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 bǒ, á sɔnkil bǒ
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 obyɛ̂
man DET PAST eat people many
= fufú na baar obyɛ́ o dzé bǒ
man DET people many PAST eat they
= fufú na baar o dzé bǒ obyɛ̂
man DET people PAST eat they many
*fufú na baar o dzé obyɛ́
man DET people PAST eat many
'the fufu that many people ate'

The third example above may be acceptable because of the ambiguity of *obyɛ́*, 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-áŋkǔm
man DET PAST eat people they all
= fufú na baar bɔ-áŋkǔm o dzé bǒ
man DET people they all PAST eat they
*fufú na baar o dzé (bǒ) bɔ-áŋkǔm
man DET people PAST eat they they all
'the fufu that all the people ate'

fufú na o dzé baar bápɛ
fufu DET PAST eat people these
= fufú na baar bápɛ o dzé bǒ
fufu DET people these PAST eat they
*fufú na baar o dzé (bǒ) bápɛ
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	byɛn	ípe		
	fufu	DET	PAST	eat	you pl.	two		
=	?fufú	na	byɛn	ípe	o	dzé	byĕn	
	fufu	DET	you pl.	two	PAST	eat	you pl.	
	‘the fufu that you two ate’							

fufú	na	byɛn	báár	ípe	o	dzé	byĕn
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	ńdé	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]

	bàán	na	o	pé	okáár	fufú	
	children	DET	PAST	give	woman	fufu	
=	bàán	na	okáár	o	pé	ńdé	fufú
	children	DET	woman	PAST	give	she	fufu
	*bàán	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	ńdé	bǎàn	
fufu	DET	PAST	give	she	children	
*fufú	na	ndé	o	pé	(ńdé)	bǎàn
fufu	DET	she	PAST	give	she	children

‘the fufu that she gave the children’

[10.32]

bàán	na	o	pé	ńdé	fufú	
children	DET	PAST	give	she	fufu	
*bàán	na	ndé	o	pé	(ńdé)	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	ńdé	bɔ̌
fufu	DET	PAST	give	she	them

‘the fufu that she gave them’

bàán	na	o	pé	ńdé	nɔ̌
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	bɔ̌
fufu	DET	PAST	give	woman	them

‘the fufu that the woman gave them’

*bàán	na	o	pé	okáár	nɔ̌
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 bɔ̌*). 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 ńdé bɔ̌
fufu DET woman PAST give she them
'the fufu that the woman gave them'

bàán na okáár o pé ńdé nɔ̌
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-tûn* 'to refuse' or *o-saŋ* 'to refrain' are used to express negation within a relative clause:

[10.36] dzĭm na ŋga tún yă ↓ó-laŋ
song DET WH-HAB refuse you to like
'the song that you do not like'

baar lɔ́ŋ a tún ńdé ó-sɔnkil
people teacher HAB refuse she to write to
'the people that the teacher doesn't write to'

[10.37] mi ó pé ndɔ́l bàán na o tún o-dzá fufú é bɔ̌
I PAST give punishment children DET PST refuse INF-eat fufu GL their
= mi ó pé ndɔ́l bàán na ó sáŋ o-dzá fufú é bɔ̌
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 ńdé fufú
to person woman PAST give she fufu
'the person that the woman gave fufu'

tí ḿbyɛ̌ (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] mbyɛ̌ na ó piŋ ndé ntsúr
knife DET PAST CUT she meat
'the knife that she cut meat (with)'

ntǎŋ na ó pɔ mí tɔ̀ɔ́
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 ńdé fùfú
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 ńdé fufú
day DET PAST eat he fufu
'the day that he ate fufu'

esúú na o dzé ńdé nɔ̀
day DET PAST eat he it
'the day that he ate it'

*esúú na o dzé mwàán nɔ̀
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 ńdé 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 ńdé mǐ fùfú
day DET PAST me.give she me fufu
'the day that she gave me fufu'

esúú na o mpé ńdé mǐ nɔ̀
day DET PAST me.give she me fufu
'the day that she gave me it'

*esúú na o mpé okáár mǐ nɔ̀
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 bvĭm o yíb ńdé fufú ↓é bŏ
children DET person theft past steal he fufu of them
'the children whose fufu the thief stole'

ibaa na o mɔ́n mí izí ndé okáàr
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 *nŏwɛ* 'today' can intervene if the subject is a noun, but not if it is a pronoun:

[10.46] fufú na o dzé Tukúmu nɔ̌wɛ
day DET PAST eat Tukumu today
= fufú na o dzé nɔ̌wɛ Tukúmu
day DET PAST eat today Tukumu
'the fufu that Tukumu ate today'

fufú na o dzé ńdé nɔ̌wɛ
day DET PAST eat Tukumu today
*fufú na o dzé nɔ̌wɛ 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-tûn* 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 oŋkáŋ ↓mí o-dzá
day DET IMM.PAST I to eat
'the fufu that I have just eaten'

fufú na á kal mi ó-làp o-sûm
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	bɔ̌	o-mpá	mǐ`
	bananas	DET	PAST	come	they	to me.give	me
=	akwɔ	na	ó	yé	o-mpá	bɔ̌	mǐ`
	bananas	DET	PAST	come	to me.give	they	me

'the bananas that they came to give me'

	mbyɛ̌	na	ó	wɛɛ	ndé	o-piŋ	ntsúr
	knife	DET	PAST	take	he	to cut	meat
=	*mbyɛ̌	na	ó	wɛɛ	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]

bǐ	baar	Tukumu	ó	wɛɛ	ndé	bi	a	kíkěr	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	mɔ́n	bɔ̌	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]

ŋkɔ́p	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] ŋkɔ́p 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 *ŋkɔ́p*, [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 bɔ̌
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 ˩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] wɛ̀ɛ́ fufú na o súm akáár, sáŋ owɛɛ fufú na o súm ábaa
= wɛ̀ɛ́ fufú na akáár o súm bɔ̌, sáŋ owɛɛ fufú na abaa òsúm bɔ̌
= wɛ̀ɛ́ fufú na o súm akáár, sáŋ owɛɛ fufú na abaa òsúm bɔ̌
= wɛ̀ɛ́ fufú na akáár o súm bɔ̌, sáŋ owɛɛ 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 ńdé
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 mɔ́n 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-mɔ̂n* 'to see', or it could be an object relative with *okáàr* being the postposed subject of *o-mɔ̂n*. However, with the right post-verbal noun or pronoun, the two can be disambiguated:

[10.57] ibaa na ŋgo mɔ́n mǐ`
man DET WH.PAST see me
'the man who saw me'

ibaa na ŋgo mɔ́n mî
man DET WH.PAST see me
'the man whom I saw'

[10.58] ibaa na ŋgo mɔ́n muur
man DET WH.PAST see person
'the man who saw the person' *or*
'the man who the person saw'

ibaa na ŋgo mɔ́n múùr
man DET WH.PAST see person
'the man who the person saw'

In [10.57] the first person singular pronoun *mǐ`* 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 wɛ́ɛ́ mǐ`
man DET WH.PAST choose me
'the man who chose me'

ibaa na ŋgo wɛɛ mî
man DET WH.PAST choose me
'the man whom I chose'

[10.60] ibaa na ŋgo wɛ́ɛ́ muur
man DET WH.PAST choose person
'the man who chose the person'

ibaa na ŋgó wɛ̀ɛ́ muur
man DET WH.PAST choose person
'the man who the person chose'

ibaa na ŋgó wɛɛ 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]	*/mɔ́n/ 'see'*	*/wɛɛ/ 'choose'*	
	baar ó mɔ̂n máán	baar ó wɛ́ɛ̀ máán	'the people saw/chose the wine'
	baar o mɔ̂n máán	baar o wɛ́ɛ̀ máán	'the people who saw/chose the wine'
	máán o mɔ́n bààr	máán ↓ó wɛ̀ɛ́ bààr	'the wine that the people saw/chose'
	máán o mɔ́n bá<u>àà</u>r	máán ↓ó wɛɛ bá<u>àà</u>r	
	/mɔ́n + ´ + bààr/	/wɛɛ + ´ + bààr/	

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]	*underlying verb tone*			*main clause*		*non-subject relative*	
	/H/	/mɔ́n/	'see'	HL	[mɔ̂n]	H	[mɔ́n]
	/L/	/wɛɛ/	'choose'	HL	[wɛ́ɛ̀]	LH	[wɛ̀ɛ́]

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 mɔ́n mî	'the people that I saw'
			baar na o mɔ́n yâ	'the people that you (sg.) saw'
	/L-H/	:	baar na o mɔ́n ńdé	'the people that he/she saw'
	/LH/	:	baar na o mɔ́n nǒ	'the people that it saw'
			baar na o mɔ́n bǐ	'the people that we saw'
			baar na o mɔ́n byěn	'the people that you (pl.) saw'
			baar na o mɔ́n bǒ	'the people that they [+human] saw'
			baar na o mɔ́n mǒ	'the people that they [-human] saw'

Similar changes are observed in other tenses:

[10.64]			
	fufú na â súm mî	'the fufu that I have bought'	(perfect)
	fufú na ê súm mî	'the fufu that I am buying'	(progressive)
	fufú na o súm mî	'the fufu that I bought'	(past)
	fufú na a sîsúm 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]

ndzɔ́	na	ó	diir	íbaa
house	DET	PAST	watch	person

'the house that the person watched'
(*o-diir* 'to watch', *ibaa* 'person')

ndzɔ́	na	ó	diir	ńdzàám
house	DET	PAST	watch	God

'the house that God watched'
(*ndzàám* 'God')

ndzɔ́ na ó dìír 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 ˡH tones are thus preserved. This raising of pitch is indicated by (ˆ):

[10.66] ˆya ó ké iyó
you PAST go market
'did you go to the market?'

ɛɛ, mi ó ké iyó
yes I PAST go market
'yes, I went to the market'

[10.67] ˆmwàán ˡê dzé fufú
child PROG eat fufu
'is the child eating fufu?'

bɔ, ndé ê dzé ˡlɔ́sɔ
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 *ɛske* (from French *est-ce que* 'is it that?'):

[10.68] *ɛske* muur ó ké iyó
man PAST go market
'did the man go to the market?

ɛɛ, 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, *ɛɛ* 'yes' or *ɛɛ, ndé ó kê* '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] ↑*Tukúmú́* ó súm mantɛtɛ
Tukumu PAST buy squash
'did Tukumu buy squash?'

ɛske Tukúmu ó súm mantɛtɛ
Tukumu PAST buy squash
'did Tukumu buy squash?'

As seen above, the H% is less likely present when *ɛske* 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] nɛ ó bwá mpfyě
who PAST break pot
'who broke the pot?'

ŋgé ó té mwǎàn
what PAST bite child
'what bit the child?'

Although the human WH word *nɛ̌* 'who(m)' and its plural *ba-nɛ̌* may appear alone, *nɛ̌* often co-occurs with the noun *muur* 'person', pl. *baar* 'persons, people':

[10.71]
nɛ ó bvê
who PAST fall
= nɛ̌ muur ó bvê
who person PAST fall
'who fell?'

ba-nɛ ó bvê
who (pl.) PAST fall
= nɛ̌ baar ó bvê
who persons PAST fall
'who (pl.) fell?'

Similarly, the corresponding non-human WH word *ŋge* 'what, which', plural *ba-ŋge*, is usually reinforced by *oŋgêr* 'thing', plural *eŋgêr*:

[10.72]
ŋgé ó bvê
what PAST fall
= oŋgér ↓ŋgé ó bvê
thing what PAST fall
'what fell?'

ba-ŋgé ó bvê
what (pl.) PAST fall
= eŋgér ↓ŋgé 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 ŋ́gé ó bvê
tree which PAST fall
'which tree fell?'

eté ŋ́gé 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 *nɛ* may also be used with human nouns: *muur nɛ* 'which person?', *muur nɛ ó bvê* 'which person fell?'. The reverse order seen in [10.71] is likely an historically reduced cleft: *nɛ̌ muur ó bvê* 'who (is the person that) fell?'. This would also explain the change from L to LH tone on nɛ̌ (from *nɛ 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	mɔ́n	nɛ	(WH in situ)
		you	PAST	see	who	
	=	nɛ̌	ya	ó	mɔ̂n	(fronted WH)
		who	you	PAST	see	
	=	nɛ̌	o	mɔ́n	yâ	(fronted WH and post-verbal subject)
		who	PAST	see	you	
		'who did you (sg.) see?'				
	cf.	nɛ	ó	mɔ́n	yǎ`	(=subject WH question)
		who	PAST	see	you	
		'who saw you (sg.)?'				

The first sentence shows the WH word *nɛ* 'who' in situ, i.e. in object position. In the second sentence, *nɛ̌* is fronted before the subject. The third sentence shows *nɛ̌* 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 /mɔ́n + ˊ/,

as in a non-subject relative, while the underlying tone of the subject WH question verb is /mɔ́n + `/ (or /mɔ̂n/), 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	mɔ́n	nɛ	
		woman	PAST	see	who	
	=	nɛ̌	okáár	↓ó	mɔ̂n	
		who	woman	PAST	see	
	=	nɛ̌	o	mɔ́n	okáàr	
		who	PAST	see	woman	
	=	nɛ	okáár	o	mɔ́n	ńdé
		who	woman	PAST	see	she

'who did the woman see?'

The first three sentences correspond to those in [10.74], with *okáàr* '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 forth 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	sûm	
		thing	what	child	PAST	buy	
	=	oŋgér	↓ŋgé	o	súm	mwǎàn	
		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 kěr ŋge
person PAST do what
'what is the person doing?'

ndé a dzyá oŋgêr
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 ńdé bǎàn
thing what woman PAST give she children
= oŋgér ŋge o pé okáár bǎàn
thing what PAST give woman children
'what did the woman give the children?'

oŋgér ŋge okáár o pé ńdé bɔ̌
thing what woman PAST give she them
*oŋgér ŋge o pé okáár bɔ̌
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] nɛ̌ muur okáár o pé ńdé ndzii
who person woman PAST give she money
= nɛ̌ muur o pé okáár ndzii
who person PAST give woman money
'who did the woman give the money?

nɛ̌ muur okáár o pé ńdé nɔ̌
who person woman PAST give she it
*nɛ̌ muur o pé okáár nɔ̌
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] lɔ́ŋ o pé oŋkàán kó nɛ
teacher PAST give book LOC who
'the teacher gave the book to whom?'

= kó nɛ o pé lɔ́ŋ oŋkàán
LOC who PAST give teacher book
= kó nɛ lɔ́ŋ o pé (ńdé) oŋkàán
LOC who teacher PAST give he book
'to whom did the teacher give the book?

Again, the parenthetical (*ńdé*) 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 ŋgé
child PAST eat fufu with what
'the child ate fufu with what?'

= tí ŋgé o dzé mwàán fufú
with what PAST eat child fufu
'with what did the child eat fufu?

Locative WH questions are expressed by *(ko)ŋgó* 'where'. As seen in the following sentences, similar alternates are found as with object WH questions:

[10.82] baar â mén koŋgó
people PERF dance where
= koŋgó baar â mên (bɔ̌)
where people PERF dance they
= koŋgó â mén baar
LOC PERF dance people
'where have the people danced?'

[10.83] mǐ é ye koŋgo
people PERF dance where
= koŋgó é ye mǐ`
LOC where people PERF
'where am I?'

A common alternative to *ŋgó* is *okal ŋ́ge* or *okal naŋgó* 'which place, where':

[10.84] okal ŋ́ge o zí ńdé ndzii
place which PAST hide he money
'where did he hide the money?'

okal naŋgó bàán ↓ó mɔ́n (bɔ) mbvá
LOC which children PAST see they
'where did the children see the dog?'

While *koŋgó* is used to query static locations, either *koŋgó* or *ŋgó* by itself expresses locative goals and sources:

[10.85] (ko)ŋgó ó ké bɔ̌
where PAST go they
'where did they go?'

mwàán ↓ó ké ŋgó
LOC which children PAST
'where did the child go?'

adzá mápɛ a fá ŋ́go
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 **kʊ-*. Since *naŋgó* (pl. *baŋgó*, *maŋgó*) means 'which', *koŋgó* 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 ŋ́ge
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 tûl
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 *ŋgambó* 'how', which is L-H if followed by another word, otherwise L-L before pause. It too shows multiple word order possibilities:

[10.88]
bɔ̌ ó bɔ́ŋsa nɔ̌ ŋgambo
they PAST fix it how
= ŋgambó bɔ̌ ó bɔ́nsa nɔ̌
how they PAST fix it
= ŋgambó ó bɔ́ŋsa bɔ̌ nɔ̌
how PAST fix they it
'how did they fix it?'

[10.89]
ya ó dzwí ntsúr ŋgambo
you PAST kill animal how
= ŋgambó ó dzwí yá ntsúr
how PAST kill you animal
'how did you kill the animal?'

'How much' is expressed with *ŋga mbyɛ́*, either by itself or after a noun:

[10.90]
ŋga mbyɛ́ mwàán ó dzê
how much child PAST eat
= ŋga mbyɛ́ mwàán o dzé ńdé
how child PAST eat he
'how much did the child eat?'

[10.91]
lɔ́sɔ ŋga mbyɛ́ o kii pípyâ
rice how much PAST be
'how much rice was there?'

'Why' is expressed as *sám é ŋgé* (lit. reason of what):

[10.92]
sám ↓é ŋgé mwàán ↓á lyáà
reason of what child PRES cry
= sám ↓é ŋgé mwàán ↓á lyáá ńdé
reason of what child PRES cry
= mwàán á lyáà sám ↓é ŋgé
child PRES cry reason of what
'why does the child cry?'

'Whose' is expressed by placing *nɛ* 'who' in a genitive construction after the noun in question, e.g. *mbvá nɛ* 'whose dog', *ba-mbvá é nɛ̂* 'whose dogs'. Compare the following sentence, where the copula is optional (cf. [10.122]):

[10.93] nápɛ (é ye) mwàán nɛ
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 ńdé
mí ka zyá bɔ ker Tukúmu o túl ńdé
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 yɛ 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 ńdé 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' *oŋgêr* '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 mɔ́n ńdé
I PRES know person Tukumu PAST see he
'I know who Tukumu saw'

[10.97] mi a zyá oŋgér Tukúmu o mɔ́n ńdé
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 bɔ̌
I PRES know time which children PAST leave they
'I know when the children left'

[10.100] mí ka zyá bɔ mpíl ó dzwí bɔ̌ 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 *sâm* clauses meaning 'why' require a post-verbal subject, where *sâm* 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 tyɛ́n yɛ mǐ muur ó búl ndé
you PAST say with me person PAST hit him
'did you tell me who hit him?'

ya ó tyɛ́n yɛ mǐ muur o búl ńdé
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 nɛ́ o tyɛ́n yá (niŋgé) bɔ ó mɔ̂n
person who PAST say you that they PAST see
'who did you say (that) they saw?'

oŋgér ŋge o tyɛ́n bǒ (niŋgé) mi ó sûm
thing which PAST say they that I PAST buy
'what did they say (that) I bought?'

As seen, the subject of *o-tyɛ̂n* 'to say' must appear after the verb, but the subject of *o-mɔ̂n* 'to see' appears before the verb. An alternative structure is shown in [10.105].

[10.105] muur nɛ́ o tyɛ́n yá na o mɔ́n bǒ
person who PAST say you DET PAST see they
'who did you say that they saw?'

oŋgér ŋge o tyɛ́n bǒ na o súm mî
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 mɔ́n bɔ̌ 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 bɔ̌
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 mĭ ndé ka mbúl mĭ`
he PERF me.hit me he NEG.PERF me.hit me
'YOU hit me, HE didn't hit me'

ndé â mbúl mĭ, ndé ke búl yă`
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 ńtsun
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 ómɔtúk ko ya bɔ
even person one NEG-PAST come NEG
'no one came' (lit. even one person didn't come)

mí ko mɔ́n àtá muur ómɔtúk
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 mɔ́n àtá muur ómɔtúk
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 ómɔtúk ó yê
even person one PAST come
'did anyone come?' (lit. did even one person come?)

[10.114] ↑atá ker ya o mɔ́n (atá) muur ómotúk, pá tyén yɛ 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 ↓ómɔtúk ko lyaa bɔ
even CHILD one NEG.PAST cry NEG
ka mwàán ↓ómɔtúk ko lyaa bɔ
not CHILD one NEG.PAST cry NEG
atá ka mwàán ↓ómɔtúk ko lyaa bɔ
even not CHILD one NEG.PAST cry NEG
ka atá mwàán ↓ómɔtúk 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 ómɔtúk (bɔ) a máŋ yɛ ŋkúb ↓é swíì (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 *nɔ̌* '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] nɔ̌ ↓é yé oŋkàán (na) o bvê
it PRES be book DET PAST fall
'it's a book that fell'

= nɔ̌ ó kìí akáár o súm 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] nɔ̌ ↓é yé fufú mwàán ↓ó dzê
it PRES be fufu child PAST eat
= nɔ̌ ↓é yé fufú o dzé mwǎàn
it PRES be fufu PAST eat child
'it's the fufu that the child ate'

[10.119] nɔ̌ ó kìí ntswé na o súm akáàr
it PAST be fish DET PAST buy women
= nɔ̌ ó kìí ntswé na okáár o súm bɔ̌
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 *nɔ̌* 'it':

[10.120] é ye fufú na okáár o pé ńdé mwǎàn
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 ńdé 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 mɔ́n ńdé
PRES be me person child PAST see he
'it's the fufu that the woman gave the child'

nɔ̌ ó kìí bàán (baar) o kɔ́t ↓kó ńdzɔ
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] mǐ (é ye) muur na o súm ntswé
I PRES be person DET PAST buy fish
'I am the person who bought the fish'

bàán (↓é ye) baar okáár o sársa 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] mwàán ↓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'

mwàán ↓é ye muur na o pé okáár nɔ̌
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: *okáàr* '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 mɔ́n mí é ↓yé Tukúmu
person DET PAST see I PRES be Tukumu
'who/the person I saw is Tukumu'

oŋgér (na) o dzé bɔ̌ 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]

eŋgér	o	súm	mî	é	ye	ba-ntswé	ísár	↓mápɛ
things	PAST	buy	I	PRES	be	fish (pl.)	three	these

'what I bought are these three fish'

ba-ntswé	ísár	↓mápɛ	é	ye	eŋgér	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')

nápɛ	mwàán	nɛ
this	CHILD	who

'whose child is this?'

ndzii	ó	dzǐ	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:

[10.127] bàán, mi é mɔ́n bɔ̌
children I PAST.them see them
'the children, I saw them'

bɔ̌, mi é mɔ́n bɔ̌
children I PAST.them see them
'(as for) them, I saw them'

ba-ntswé ísár ↓mápɛ mi ó súm mɔ̌
fish (pl.) three these I PAST buy them
'those three fish, I bought them'

The following extract from Text 1 shows a typical left dislocation as occurring spontaneously in discourse (*o-lâŋ + o-zyâ*, lit. 'to want/manage to know') is a fixed expression meaning 'to know'):

[10.128] akúúr ↓é bǐ, bí ka láŋ o-zyá bɔ ŋgbee o fé bɔ̌
elders of ours we NEG.PRES manage to know NEG side past come from they
'our elders, we don't know from which direction they came'

As seen, the left dislocation refers to the subject pronoun at the end of the sentence.

Left-dislocations also occur which do not take a resumptive pronoun, especially when a non-human noun is involved. The following illustrates the assignment of the H% to the left-dislocated item (which cannot be recapitulated by *nɔ̌* 'it'):

[10.129] sǐŋ, Tukúmu o pé mwǎàn 'the net (siŋ), Tukumu gave the child'
mbǔm, Tukúmu o pé mwǎàn 'the fruit (mbum), Tukumu ....'
ekwɔ̀m, Tukúmu o pé mwǎàn 'the broom (ekwɔ̀m), Tukumu ....'
Tukumu PAST give child

When fronting is accompanied by a recapitulative pronoun in the main clause, the result is a contrastive topic:

[10.130] ndé mi ó món ndé ókalí,
him I PAST see him yesterday
(mɛ) mǐ ko mɔ́n ya ókalí bɔ
but I NEG-PAST see you yesterday NEG
'HIM I saw yesterday, but you I didn't see yesterday'

[10.131] yǎ yɛ mǐ ndé ó zí bǐ okalí,
you and I he PAST know us yesterday
mwàán ndé-ŋ́gizyá na okáár ndé ko zí ńdé bɔ
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 ↓ípe o kɔ́t ↓kó ńdzɔ nɔ̌wɛ
women two PAST enter LOC house today
'two women entered the house today'

nɔ̌wɛ akáár ↓ípe o kɔ́t ↓kó ńdzɔ
today women two PAST enter LOC house
'today two women entered the house'

[10.133] bi a kûkúm awɔ̂ŋ mbvél ↓nápɛ
we PAST plant.RED maize year this
'we will plant maize this year'

mbvél ↓nápɛ bi a kûkúm awɔ̂ŋ
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] nɔ̌wɛ ó kɔ́t akáár ↓ípe ↓kó 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 kɔ́t akáár ↓ípe
LOC house PAST enter women two
'into the house entered two women'

*kó	ńdzɔ	o	kɔ́t	bɔ̌
LOC	house	PAST	enter	they

'into the house entered they'

*kó	ńdzɔ	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	kɔ́t	↓kó	ńdzɔ	tí	bǎàn
women	PAST	enter	LOC	house	with	children

'the women entered the house with children'

akáár	↓ó	kɔ́t	↓tí	bǎàn	kó	ńdzɔ
women	PAST	enter	with	children	LOC	house

'the women entered with children the house'

akáár	↓tí	bǎàn	ó	kɔ́t	↓kó	ńdzɔ
women	with	children	PAST	enter	LOC	house

'the women with children entered the house'

tí	bǎàn	akáár	↓ó	kɔ́t	↓kó	ńdzɔ
with	children	women	PAST	enter	LOC	house

'with children the women entered the house'

*tí	bǎàn	ó	kɔ́t	akáár	kó	ńdzɔ
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 mbyĕ
women PAST cut meat with knife
'the women cut the meat with a knife'

tí mbyĕ akáár o píŋ ntsúr
with knife women PAST cut meat
'with a knife the women cut the meat'

*tí mbyĕ 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] mwàán ó táŋ oŋkàán
child PAST read book
'the child read the book'

oŋkaan ó táŋ mwǎàn
book PAST read child
'the child read the book'
(lit. the book read the child)

*oŋkaan ó táŋ ńdé
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 dzĭ 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]

main clause				*temporal clause*			
bɔ̀	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	ndzéé,	bɔ	á	ker	kisál	↓kó	ndzéè...
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	lûm	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	↓yâ	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 mâ dzá fufú ↓nápɛ, bɔ a tîtúl 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 yɛ bɔ̌
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 bɔ̌, tyén ye bɔ̌
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, nápɛ é ye ŋkɔ̂p
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] ŋgambo yǎ` 'how are you (sg.)?'
ŋgambo byěn 'how are you (pl.)?'
how you
mbɔ́t yǎ` 'greetings to you (sg.)'
mbɔ́t byěn 'greetings to you (pl.)'
greetings you

The above pronoun has a recipient connotation, as seen also in the expression *ntsɔ́n yǎ`* 'shame on you!' (lit. shame you). While the second person pronoun follows the greeting, it precedes an epithet:

[10.154] yă elá
you lie
'you liar!'

yă bvǐm
you theft
'you thief!'

yă endzǐn
you idiot
'you idiot!'

There is no vocative marker per se. A similar raised pitch intonation is used to call people by name as as in questions (§3.4): ↑*Tukúmu!* ↑*Ipakála*!

APPENDIX A: AN OVERVIEW OF THE NZADI PEOPLE AND THEIR HISTORY

Simon Nsielanga Tukumu

A.1. Introduction

The language whose grammar is described in this work is [indzéé], 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 [idzíŋ], 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.[1]

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 *Ndzéé 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 *Ndzéé-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 deriives 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, were 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 (*Ndzéé-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 Rive. Here, the group was divided. One group followed the Kwilu River and founded the village of Salaminta (*sal-bian-taa*), which means 'stay behind at a low point as we are progressing'.

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[1] 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.[2]

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, Mangaï-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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[2] 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.[3] 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 advsior 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

[3] The reference of Mr. Gérard Gifuza 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
Eliliam	*IgnEte* (a fish); *Nikol* (small sparrow hawk)
Enum	*IpEr* (a fish); *Engúm* (a fish)
Esang	*IpEr* (a fish); *Engúm* (a fish); *Nkuk* (pigeon of the river)
Nsampar	*Njiem and Eluom* (birds), *Nkáa* (The impala of the forest)
Nsim	*Engúm* (a fish) and *NsiEm* (anguilla), *Nkpé-Nkpup* (leopard)
Nsong	*Ngùú* (hippopotamus)
Okun	*Nkûl* (tortoise) and *Ngwóm* (bushcow)
Ombio	I*sín* (squirrel)
Onsien	*Ibor-E-Nkam* (a fish), *Elab-E-nsa-nkwo* (a type of tilapia)
Osie	*Iluk* (a small river bird)
Otun	*NkÊm* (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*, invocating 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-nkàá* (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, particularily 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. *Ndzîm* 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 *ngùú* (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 *Ndzéé-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.[4] 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.

[4] 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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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]

	labials	*alveolars*	*palatals*	*velars*
voiceless:	p	t	c	k
voiced:	b	d	j	g
nasals:	m	n	ɲ	
voiceless prenasalized:	mp	nt	nc	ŋk
voiced prenasalized:	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.[5]

[B.2]

PB	*Nzadi*	*Gloss*	*PB*	*Nzadi*	*Gloss*
*cádá	e-sáá	'feather'	*cónì	n-tsɔ̂n	'shame'
*cádá	o-sâl	'work'	*cùkí	n-tswèé	'facial hair'
*càngà	e-sàŋ	'island'	*cúí	n-tswé	'fish'
*cìmb- 'dig'	e-sìm	'root'	*còbó	n-tswɔ̀ɔ́	'cassava'
*céndé	o-syén	'thorn'	*cíngá	n-tsíŋ	'fish (sp.)'

[5] 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_2 affricates in the correspondences in [B.3].[6]

[B.3]	*PB*	*Nzadi*	*Gloss*
	*cìcá	o-sìsá	'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-bántsa* 'to think', *ma-bántsa* 'a thought', *o-mantsa* 'to finish (tr.)', and *o-yúntsa*. 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_1 position: *dz*, *y*, and occasionally *z,* the latter two shown in [B.4]

[B.4]	*PB*	*Nzadi*	*Gloss*	*PB*	*Nzadi*	*Gloss*
	*jàmbà	i-yam	'crocodile'	*jíngà `blood'	o-zîŋ	'to be alive'
	*jánɪkà	o-yâŋ	'spread to dry'	*jígù	o-zwâ	'hear'
	*jíbà	o-yîb	'steal'	*jógà	o-zwô	'bathe (intr.)'
	*jómà	o-yûm	'to dry'	*jángà '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_1 *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

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[6] 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'	*jùgú	e-dzuu	'groundnut'
	*jádé	n-dzéé	'river'	*jókà	o-dzwó	'snake'
	*jó	n-dzó	'house'	*jínà	dzǐn̄	'name'
	*jàdà	n-dzaa	'hunger'	*jícò	dzǐ̀	'eye'
				*jímbò	dzǐm̀	'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_1 position, Proto-Bantu **d* split quite neatly into two reflexes: before **i* and **ɪ* it became *dz*, thus merging with one of the reflexes of **j*. Elsewhere it became *l*—both in C_1 and in C_2 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 'bite'	o-lûm	'to peel, pluck'
	*díɪci-	o-dzî	'to feed'	*dúmè	e-lûm	'husband'
	*dìbà	n-dzya	'deep'	*dàngò	e-laŋ	'doorway'
	*dìì̀k-a	o-dzya	'to bury'	*kùdù̀dà	o-kulul	'to scrape off bark'
	*dímà	n-dzyěm	'bat'[7]	*kudu	ŋ-kûl	'tortoise'
	*dìngà	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_2 **d* does not become *l*, but rather was lost entirely, resulting in coalescence of the vowels appearing before and after it:

[7] 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]	*PB*	*Nzadi*	*Gloss*	*PB*	*Nzadi*	*Gloss*
	*kádà	i-kâa	‘charcoal’	*bédà	e-bul	‘iron, metal’
	*kádá	ŋ-káá	‘crab’	*búda	m-bvêl	‘rain’
	*kódá	ŋ-kɔ̌	‘snail’	*tádí	o-tál	‘length’
	*kídà	o-kyá	‘tail’	*gòdà	ŋ-gɔl	‘fish (sp.)’
	*dìdà	o-lyaa	‘to cry’	*kádì ‘trouble’	o-kâl	‘illness’
	*bídà	o-vyâ	‘to call’	*gìdá	i-kěl	‘blood’
	*pùdú	m-pfùú	‘bird’	*gòdò	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 CVl. 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.[8] Most of the instances of this are given in [B.8] below.

[B.8]	*PB*	*Nzadi*	*Gloss*
	*kádìà	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_1, it usually corresponds to modern *t*. As C_2, 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:

[8] 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'	*pùtà	o-fùr	'to pay'
	*tádí	o-tál	'long, far'	*dùtà	o-dùr	'to pull'
	*tĺ	o-té	'tree'	*pútá	m-púr	'wound'
	*túmà	o-tûm	'send'	*kítà	o-kèr	'to make, do'
	*tàngí	n-tăŋ	'bed'	*titu 'forest, thicket'	e-tíir	'grass'
	*té	a-tÉ	'saliva'			

*B.1.2.2. Labials (*p, *b)*

In C_1 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 **ʊ.* 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'
	*búgà	m-bvwâ	'path'	*bíndá	m-bín	'calabash'
	*bùjá	e-bvw`á	'fish (sp.)'	*bèbù,	e-bèp	'lip'
	*búkù	e-bvûu	'fish (sp.)'	*bòngó	m-bŏŋ	'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'
	*pʊkʊ	i-fùu	'hole'	*pogo	m-pó	'throat'
	*pùmbʊk-	o-fùm	'to fly'	*papa	i-păp	'wing'
				*pìipí	m-pìp	'dark'

The trend of (af)frication of labial stops before PB **u,* and **ʊ* is quite robust and the counterexamples are few—although not nonexistant, as **pʊ́tá > 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 C2 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]	*PB*	*Nzadi*	*Gloss*	*PB*	*Nzadi*	*Gloss*
	*kábá	oŋ-kâp	‘belt’	*dìbà	n-dzyà	‘deep’
	*bàbá	i-pǎp	‘wing’	*gùbú	ŋ-gwùú	‘hippo’
	*bèbù	e-bèp	‘lip’			

An exception is **jíbà* > *o-yíb* ‘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_1 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]	*PB*	*Nzadi*	*Gloss*	*PB*	*Nzadi*	*Gloss*
	*kádà	i-kâa	‘charcoal’	*gòngà	ŋ-gùŋ	‘bell’
	*kádá	ŋ-káa	‘crab’	*gèdé	ŋ-gyě	‘under, south’
	*kímà	ŋ-kêm	‘monkey’	*gòdà	ŋ-gɔl	‘fish (sp.)’
	*kíngó	ŋ-kíŋ	‘neck’	*gèní	oŋ-gyÈn	‘stranger’
	*kódó	o-kûur	‘old’	*gòngá	i-kɔ̌ŋ	‘spear’
	*kámá	ŋ-kám	‘hundred’	*gàngà	o-kaŋ	‘tie’
	*kúmà	o-kûm	‘to become’	*gìdá	i-kěl	‘blood’

As with the other stops, **k* remained *k* in C_2 position, while **g* alternately devoiced (very rarely) or disappeared (much more common):

[B.14]	*PB*	*Nzadi*	*Gloss*	*PB*	*Nzadi*	*Gloss*
	bègà	i-pèk	‘shoulder’	dúgà	o-dwâ	‘paddle’
				jùgó	e-dzuu	‘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’
	*kócì 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,[9] 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-sìm	‘root’
	gòmà	ŋ-gɔm	‘drum’	kómbà ‘scrape’	e-kwɔ̂m	‘broom’
	kúmà	o-kûm	‘to become’	dímbà	o-dzîm	‘to deceive’

[9] Although that does not account for the pair **kúmà* > *o-kûm, ‘become’*, which also contains a sequence of velar, rounded vowel, and following labial, and yet did not result in a labiovelar.

[B.17]

PB	*Nzadi*	*Gloss*	*PB*	*Nzadi*	*Gloss*
nénè	o-nân	'big'	gòndè	ŋ-gwɛn	'moon'
jínò	i-dzên	'tooth'	kùndà	o-kùn	'to bury'
mènà 'swallow'	mèn	'mouth'	bìndò	m-bìn	'dirt'
cóni	n-tsɔ̂n	'shame'	kúndè	ŋ-kwɔ̂n	'bean (sp.)'
(mányà)	(i-măn)	(stone)	cíndí	i-sín	'squirrel'

[B.18]

PB	*Nzadi*	*Gloss*
dúngú	n-dúŋ	'red pepper'
gùngà	ŋ-gùŋ	'bell'
gòngá	i-kŏŋ	'spear'
dàngò	e-làŋ	'door'
dòngà	i-lɔŋ	'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 **nj* 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]

[±ATR] High Vs		*[±ATR] Mid Vs*	
*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]	*PB*	*Nzadi*	*Gloss*	*PB*	*Nzadi*	*Gloss*
	*pììpí	m-pìp	‘dark’	*cíndí	i-sín	‘squirrel’
	*dìngà	o-dzìŋ	‘smoke’	*cìmba ‘to dig’	e-sìm	‘root’ (cl. 7)
	*jíbà	o-yîb	‘to steal’	*bíndá	m-bín	‘calabash’
	*jíngà ‘blood’	o-zîŋ	‘to be alive’	*cíngá	n-tsíŋ	‘fish (sp.)’
	*kíngó	ŋ-kíŋ	‘neck’			

[B.21]	*PB*	*Nzadi*	*Gloss*	*PB*	*Nzadi*	*Gloss*
	*pùdú	m-pfùú	‘bird’	*dóma ‘bite’	o-lûm	‘to peel, pluck’
	*pùngà	m-pfúŋ	‘monkey (sp.)’	*gòngà	ŋ-gùŋ	‘bell’
	*kúdù	ŋ-kûl	‘tortoise’	*jògó	e-dzuu	‘groundnut’
	*pùtà	o-fùr	‘to pay’	*gòdò	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]	*PB*	*Nzadi*	*Gloss*
	*pʊpa ‘to fall drop by drop’	m-pwɔ́p	‘dripping pus’
	*kóndè	ŋ-kwɔ̂n	‘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]	*PB*	*Nzadi*	*Gloss*
	*tàngí	n-tăŋ	‘bed’
	*cádá	o-sâl	work’
	*càngà	e-sàŋ	island’
	*gàngà	o-kàŋ	‘to tie’
	*jángà ‘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]	PB	Nzadi	Gloss	PB	Nzadi	Gloss
	*còbó	o-swɔ̀ɔ́	‘intestine’	*bémbédé	m-byɛ́m	‘mosquito’
	*dómba	o-lwɔ̂m	‘to ask for’	*ndédé	on-dyɛ́ɛ́	‘white man’
	*bòmbó	m-bwɔ̌m	‘nose’	*gèdé	n-gyɛ̌	‘downstream’
	*kómbà	o-kwɔ̂m	‘sweep’	*céndé	o-syɛ́n	‘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]	*PB*	*Nzadi*	*Gloss*
	*kádà	i-kâa	‘charcoal’
	*kádá	ŋ-káa	‘crab’
	*còbó	n-tswɔ̀ɔ́	‘cassava’
	*jògó	e-dzuu	‘groundnut’
	*pùdú	m-pfùú	‘bird’
	*ndédé	on-dyéɛ́	‘white man’
	*gèdé	n-gyɛ̌	‘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]	*PB*	*Nzadi*	*Gloss*	*PB*	*Nzadi*	*Gloss*
	*kídà	o-kyá	‘tail’	*dú,g-à	o-dwâ	‘to paddle’
	*dìdà	o-lyàa	‘to cry’	*gùbú	ŋ-gwùú	‘hippo’
	*bídà	o-vyâ	‘to call	*bùjá	e-bvwǎ	‘fish (sp.)’
	*dìbà	n-dzyà	‘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).[10] Some examples are given below in [B.27].

[B.27]	*PB*	*Nzadi*	*Gloss*
	*jógà	o-zwô	‘to bathe (intr.)’
	*jògù	n-dzɔɔ	‘elephant’
	*jókà	o-dzwó	‘snake’
	*kódá	ŋ-kɔ̌	‘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.

[10] This is not without exception. In **jádé* > *n-dzéé*, ‘river,’ for example, V_2 clearly wins out over V_1. The same might also be true of **tákò* > *i-tɔ̂*, ‘buttock,’ unless it is analyzed as a case of a low vowel **a* and a mid vowel **o* coalescing into a lowered mid-vowel *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]	*PB*	*Nzadi*	*Gloss*
	*cùki	e-swě	'hair'
	*cúí	n-tswé	'fish'
	*kúpí	o-kpé	'short'
	*gìdá	i-kěl	'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_2 disappeared—usually when it was a voiced stop—or the final vowel (V_2) 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_2 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_2) 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_2 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 apocape.

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 σ́σ́ would appear in Nzadi as σ́, PB σ̀σ̀ would show up as Nzadi σ̀, PB σ́σ̀ became Nzadi σ̂, and PB σ̀σ́ became Nzadi σ̌. 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]

PB	*Nzadi*	*Gloss*	*PB*	*Nzadi*	*Gloss*
*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-kíŋ	‘neck’	*pègà	i-pek	‘shoulder’

[B.30]

PB	*Nzadi*	*Gloss*	*PB*	*Nzadi*	*Gloss*
*bòmbó	m-bwɔ̌m	‘nose’	*jádà ‘fingernail’	e-dzáà	‘claw’
*gòngá	i-kɔ̌ŋ	‘spear’	*kúndè	ŋ-kwɔ̂n	‘bean (sp.)’
*gìdá	i-kěl	‘blood’	*dúmè	o-lûm	‘husband’
*pùdú	m-pfùú	‘bird’	*kúdù	ŋ-kûl	‘tortoise’
*còbó	o-swɔ̀ɔ́	‘intestine’	*jínò	i-dzên	‘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]

PB	*Nzadi*	*Gloss*	*PB*	*Nzadi*	*Gloss*
*jíb-à	o-yîb	‘steal’	*dìd-à	o-lyàa	‘to cry’
*jóm-à	o-yûm	‘to dry’	*kùnd-à	o-kùn	‘to bury’
*bák-à	o-báà	‘to get’	*gàng-à	o-kàŋ	‘tie’
*kúm-à	o-kûm	‘to become’	*dììk-a	o-dzyà	‘to bury’
*dúm-a ‘bite’	o-lûm	‘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]

PB	*Nzadi*	*Gloss*
*ɗí-à	o-dzá	‘to eat’
*kú-à	o-kpá	‘to die’
*nyó-à	o-nɔ́	‘to drink’
*pá-à	o-pá	‘to give’
*tó-à	o-tá	‘to bite’
*tó-à	o-tsɔ́	‘to pound’

Note that all of these verbs end in [a] or [ɔ], clearly indicating that the final **-à* has fused with the *CV root (realized [ɔ] after *o). It is likely that the above tonal pattern is regular, having to do with the lack of a *C_2 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]

PB	*Nzadi*	*Gloss*	*PB*	*Nzadi*	*Gloss*	*PB*	*Nzadi*	*Gloss*
*búà	m-bvá	‘dog’	*bádè	i-bá	‘palm tree’	*búgà	m-bvwâ	‘path’
*túè	ɔ-tsɔ́	‘head’	*kídà	o-kyá	‘tail’	*kúpà	o-kwâ	‘bone’
*kúà	i-kpá	‘death’	*jókì	nwí	‘bee’	*kádà	i-káà	‘charcoal’
			*jókà	o-dzwó	‘snake’	*púkù ‘mouse’	m-púù	‘rat’

It is thus likely that earlier HL contours, i.e. those which existed before the loss of intervocalic C2, were simplified to H. Perhaps some of the irregular PB *óð > 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_2, which then fed into the simplification of HL as H. Since other nouns show regular *H-L > HL with loss the intervocalic C2, 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] nápɛ é ye mpíl akúúr ↓é bǐ ó ↓yé bǒ 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 nǒ ↓nɔ́wɛ akúúr ↓é bǐ bǐ ka láŋ o-zyá ŋgbèè 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 ↓bɔ́ bɔ, mi a máŋ á yúntsà o-tyén yɛ ndám akúùr
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 íŋ́ki ŋgbee o fé bǐ, mɛ tíí esú ↓é ↓nɔ́wɛ
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 niŋgé bi o fé ŋgyɛ̌, mɛ ngyɛ kókál ŋge
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 láŋ o-zyá bɔ. bɔ â fá ŋgyɛ̌. nápɛ 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 ŋgyɛ̌. 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] bǒ, bɔ â báán e ndzéé kasáì. tíí bɔ á kɛ 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 ɔ́mɔtúk bɔ a bvyá nǒ ŋkénya kó mbíí ílɛbɔ̂, mɛ
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] íŋ́ki mpíl ↓ó ↓yé bǒ o-túl wàà é bǐ tíí ↓késu é ↓nɔ́wɛ
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] bĭ ka láŋ o-zyá ntét bɔ. mɛ kó mpíl akúúr a tyén bŏ,
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 zíŋ ↓kókát bintsaŋga ó kíí bɔ a zíŋ kukwâ 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 ↓ó ká obyɛ. baar ó ki á kpá obyê. nŏ ninyáá ↓ó
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 bŏ o-túl kókál ↓é wàá é yé nŏ ↓nŏwɛ. nápɛ 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 bŏ sám ↓é itswár ↓é bĭ ↓é wàá, 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] máŋ yɛ mpfún o-kɛ ko-ker ba-rechérche sám mi e sɔ́nka 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 íŋ́ki ŋgbee o fé bŏ, íŋ́kI
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 ↓ó yé bŏ, íŋ́ki mpíl o zíŋ bŏ 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] íŋ́kI mpíl ↓ó yé bŏ o-tul tíí okal é wàá é ↓yé nŏ.
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 íŋ̀ki mpíl a súm
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] bɔ iyó kó waa e mî. sám o-súm iyó baar a fɛ̂t ↓ó-kɛ̂
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] ntɛ́t ndzéé á kɛ bɔ ndzéé, bɔ á ker kisál ↓kó ndzéè. bɔ â
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] báà ntswé. ↓késúú iyó bɔ â dwâ ŋkíí tíí ↓kíiyo yɛ bɔ 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 ɔ́mɔtúk baar a yá obyɛ̂. 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 obyɛ̂. yɛ kíiyo é wàá, 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 obyɛ̂ 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 ntswɔ̀ɔ́. adzíŋ a fá bɔ̌ man é bɔ̌, bɔ 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-ntswɔ̀ɔ́. bɔ a tswá ba-entúŋ, bɔ a tswá eŋgér obyɛ̂. 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 bə̌ ndzéé, 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] yɛ késú iyó, baar á ya bə̌, bɔ á baan o-sûm, 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-yɛ́è. iyó mpii é ye okal ɔ́mɔtúk baar á ya bə̌ 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 ɔ́mɔtúk 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 bə̌ sám bO e zí mpii ndáá mpíl ↓é lĭ nə̌ 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] ntɔ̂t, mpil é lĭ nə̌ kó măn íŋ̀kin, mpíl ↓é lĭ nə̌ 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] măn é bĭ. yɛ kíyɔ, á ya bə̌ bɔ a kútan yɛ 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 bi a máŋ yɛ mpíl bĭ 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] adzíŋ a fá bɔ man é bə̌, á ↓yá bə̌ 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] bi a máŋ yE okal ɔ́mɔtúk naŋga súm ↓bɔ́ iyó. mpii kó ntsú nà
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-kɔ́t iyó nɔ a maŋ yɛ 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 adzíŋ ↓á ya bɔ̌ bɔ ké kɔ́t 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] yɛ bɔ ké báán kisál é bɔ̌ sám o-súm ntswé, sám o-súm esàá
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-tɛ́k ba-ntswé é bɔ̌ o-tɛ́k 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] bɔ̌ o-tɛ́k engér mɔ-ánkŭm naŋga fâ ndzéé. akúúr ↓é bĭ 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 bɔ̌ káá yɛ ba-ntsúù sám ↓ó-súm iyó mɛ kó ntán ↓nápɛ bi a
first they be with PL-days reason INF-buy market but LOC time this we PRES
had days to do the market,[11] but now [when] we

[26] súm iyó kó ba-ntsúú bi a lí esúú ɔ́mɔtúk kó ésúú ↓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 nɔ̆wɛ 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 ɔ́mɔtúk. bɔ a lí esú ɔ́mɔtúk kó esú íŋ́kĕn 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] mâŋ bɔ a lí esú ɔ́mɔtúk yɛ èsú íŋ́kĕn iyó a mâŋ ḿpi 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

[11] 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 ↓nɔ̌wɛ iyó dyâk 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-yă dyâk obyé bɔ sám e nge sám ba-pecheur ka (máŋ) 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] bɔ̌ obyé bɔ yɛ mpi kó ndzéé 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. adzíŋ ka kál o-yă dyák obyɛ́ bɔ sám bɔ̌ 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] máŋ yɛ 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] nɔ̌ ninyáá iyó a máŋ 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. ḿpi 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. nɔ̌ ninyáá baar a tsá kókát iyó. nápɛ mpíl iyó á kɛ
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] nɔ̌ kó waa é bɨ̌ iyó á ké nɔ̌ kó (ba-)man é bɨ̌ na andzéé
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 wàá é bĭ, bì a máŋ yɛ ntswé ɔ́mɔtúk naŋga tún bĭ o-yɛɛ
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 nɔ̌ okúŋ. okúŋ e yĕ ntswé ɔ́mɔtúk ntɔ̂m. ntɔ̂m
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 nɔ̌ é ↓yé ker ntsúr, me nɔ̌ ↓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 fĕt ↓ópii fup nɔ̌ kó tsyă. á fup nɔ yă kó tsyă,
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 lûm mpwe é nɔ̌. a lúm ↓yâ mpwe é nɔ̌, 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 is skin, you make

[6] ibvyê. yă a sá nɔ̌ kibvyê. a sá ↓yá nɔ kíbvyê, nɔ
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] máà yá ya á kɛ kokúl iláàr. a kúl ↓yá iláàr, 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] nɔ́ iláàr, nɔ á ya ntɔ̂m. sam ↓é ngɛ́ okúŋ akúúr ↓é bĭ 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-yɛ́ɛ́ nɔ̌ bɔ sám bɔ o zí niŋgé ntswé ninyá é ye
reufse 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] ntə̂m. yɛ kó luzíŋ ↓é bï andzéé bǐ ka yɛ́ɛ̀ 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 ìkíkěr bǐ ka yɛ́ɛ́ ↓nɔ́ bɔ. nɔ á ya ker luzíŋ
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 bǐ ker traditíon ↓bǐ, sám é ↓ntswé ninyá. nɔ̌ ↓é yě ntswé andzéé
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:

a.	adjective	*interj.*	interjection	*prep.*	preposition
adv.	adverb	*i.*	interrogative	*pron.*	pronoun
aux.	auxiliary	*n.*	noun	*q.*	quantifier
c.	conjunction	*nc.*	noun compound	*v.*	verb
d.	determiner	*num.*	numeral	*vc.*	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: *ekɔ́ (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 ~, e.g. *ovyâ (vya~vi; vi)* 'to call'. Verb complexes (e.g. verb + noun) are identified as *vc*.

able, be : ofɛ̂n *v.* (=be possible, may can)
accept : otsî v.
accompany : osî v.
accompany : okɛ yɛ muur vc. (=go with someone)
accompany : osap v.
accuse : oba ndáá vc.
adapt : oswɔm v. (=change)
add : oyîk v.
afternoon : embvakɔ̆l n.
again : dyâk adv.
again (do sth. again) : okal v. (also òŋ́kal)
age : otûl okúùr vc. (=become old)
ago; a long time ago : ntámá adv.
algae (sp. in water) : mbɔl n.
all : nɔ-áŋkŭm (bɔ-áŋkŭm, mɔ-áŋkŭm) q.
allow : osaŋ v.
also : ḿpi adv., c.
among : gangán prep.
ancestor : ŋkàá n.
and : tí c., prep.
anger : makâs n.
animal : ntsúr n. (=meat)
ankle : ikɔ́ɔ́n (a-) n. (also ikóón ékûl 'ankle of foot')
answer : okal v. (also òŋ́kal)
ant : ŋkɛ̂n n. (generic for ants which bite)
ant (big) : ntsáŋ kür nc.
ant (small) : ntûr n.
argue : oswáàn v.
arm : lwɔ̆` n. (=hand)
armpit : ntsáà mpwɔ́p nc.
arrest : okaŋ v. (=stop)
arrive : otûl v.
ask : olwɔ̂m *v.*
ask (for sth.) : olîŋ *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 okúùr *nc.*
aunt (mother's younger sister) : màá ílyăn. *nc.*
aunt (sister of father) : kakál *n.*
avocado : avokâ *n.*
avoid : otît *v.* (=leave sth.)
awake, be : okaa ŋgàdíìr *vc.* (lit. to be watching)
axe : sɔ̂k *n.*
back : nduŋ-ŋgbé *nc.*
bad : obé *a., n.*
bad spirit : mpêv obé *nc.* (=ghost)
bag : etwâ (a-) *n.*
bag : ŋkwɔ̆m *n.*
bag : osuk (e-) *n.* (big one women carry on back)
bake in ashes : otum *v.* (=roast (meat))
bamboo : ebaan (m-) *n.*
banana : ikwɔ (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 : ndzyĕm *n.*
bathe (intr.) : ozwô (zwo~zwi; zwi) *v.*
bathe (tr.) : ozwê (zwɛ; zwɛ) *v.*
be : ye *v.* (used with é-)
be : okaa (kaa~kii; kii) *v.*
be alive : ozîŋ *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 : ntswèé *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 : ntăn *n.*
bee : ekɔɔ (a-) *n.*
bee : nwí *n.*
beehive : ndzɔ̂ nwí *nc.* ('house of bee')
beg (for), : olîŋ *v.* (=request, ask for sth., want)
begin : obaan *v.*
belch : oker ogyŏ *vc.*
believe : okwikil *v.*
bell : ŋguŋ *n.*
belly : abal *n.*
belly : okɛɛr (ɛ-) *n.*
belt : oŋkâp (e-) *n.*
bend : obwɔ̂n *v.* (=bend over)
bicycle : velô *n.*
bicycle : kéŋglõ *n.*
big, fat, wide : onân (e-) *a.* (=fat, wide)
bird : mpfùú *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 omɔ̂n *vc.* (=to not see; lit. to refuse to see)
blood : ikěl (a-) *n.*
blow (through mouth) : ofɛ̂l yɛ men *vc.*
blow nose : ofɛ̂l yɛ mbwɔm *vc.*
blow up : ofɛl *v.*
blue : bulɛ̂ *a*
boa : mbɔ̆m *n.*
boasting : lulɛ̂n *n.*
body : nûr *n.*
boil : otɔk *v.*
bone : okwâ *n.*
book : oŋkàán (e-) *n.* (=letter, grammar)
borrow : odɛ̂f *v.*
bottle : olwan (e-) *n.*
bottom : ntsé *n.* (=down(river))
bow : ɔtɔ́ (e-) *n.* (also =bow and arrow)
bowl : ilɔŋ (a-) *n.*
boy : mwă íbaa *nc.*
brain : mbɔ̆n *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 : ibvyŏ` (a-) *n.*
breath : oful mun *nc.*
breath, soul : mɔy *n.*
breathe : ozûm *v.*
bridge : etaar (a-) *n.*
bridge over water : etaar ádza *nc.*
bridge, road bridge : etaar mbvwâ *nc.*
bright : ntsɛ̂m *a*
bring : otswâ (tswa~tswi; tswi) *v.*
bring out : otûl *v.* (=arrive)
bring up : obɔkɔl *v.*
broom : ekwɔ̂m (e-) *n.*
brother in-law : sɛmɛ̂k ↓íbàà *nc.*
brother, older (of brother or sister) : izí íbaa (a-) *nc.*
brother, younger (of brother or sister) : okwâ ↓íbaa (a-) *nc.*
buffalo : ŋgwɔ́m 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 : ntsyɛ̂ *n.*
but : mɛ *c.* (from French mais)
butterfly : ipááfŭl (a-) *n.*

buttock : itɔ̂ (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 : ŋkül *n.*
canerat : ntsíìrí *n.*
canoe : ŋgab *n.*
canoe : wǎàr (mǎàr) *n.*
car : kamyɔ̂ *n.*
carry : okáàr *v.*
carve : okul *v.*
cassava, cocoyam : ntswɔ̀ɔ́ *n.*
cassave leaf : inìír (a-) *n.* (cf. àdzá ínìír ‘water of cassave leaf’ ='green')
cat : ŋgal-mbíí *nc.*
caterpillar (sp.) : ɛsyɛ (ntsyɛ) *n.*
caterpillar (sp.) : ntsɔ̂lɔ́ *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 ndzɔ *nc.* (‘sky of house’)
certain : ómɔ̌ *d*
certain, a certain : íŋkěn *d.* (=other)
chair : kît *n.*
change : oswçm *v.* (=adapt)
charcoal : ikáà (a-) *n.*
chase : olap *v.* (=follow)
cheek : itâm (a-) *n.*
chest : ntûl *n.*
chew : otafun *v.*
chicken : ŋkwɔ́ *n.*
chief : ŋkúm *n.*
child : mwǎàn (bǎàn) *n.*
childhood, youth : ilyǎŋ (a-) *n.*
chimpanzee : sukamûnt *n.* (=gorilla)
chin : elep (a-) *n.*
choose, pick : owɛɛ (wɛɛ; wɛɛ) *v.*
claw : edzáà (n-) *n.*
clay : ibúm (a-) *n.* (for making bricks, not too solid; used in compound màán ìbûm)
clean : pwɔɔ *a.*
clean, neat : tsɛ́ *a.* (=well-fitting)
clean, rinse : osukul *v.* (=clear)
clear brush, weed : osakul *v.* (=clean)
climb : obáàn *v.*
close (tr.), stop, arrest : okaŋ *v.*
cloth(ing) : epúú (e-) *n.*
cloud : ekɔ́ (e-) *n.*
cockroach : osɛɛ (ɛ-) *n.*
coconut : kɔkɔ̂ *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 ɛpyém)
come (intr.) : oya (ye; ye) *v.*
come from : ofa (fe~fo; fe) *v.*
compound : epaŋ (a-) *n.*
consult a local doctor : otî (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 : opwɔŋ *v.*
corpse : mbvûm *n.*
correct : oswɔŋ *v.*
cough : okɔsul *v.*
count, read : otâŋ *v.* (=read)
country, world : ntôt *n.* (=world)
cover : okaŋ *v.* (=close, tie, stop)
cow : ŋgwɔ́m *n.*
cowry, money : ndzii *n.*
crab : ŋkáá *n.*
crab (sp.) : osum (e-) *n.*
crawl : ofur *v.*
cricket : ndzyén *n.*
crocodile : iyam (a-) *n.*

crocodile : ŋkwăn *n.*
cross : obât *v.*
cry (intr) : olyaa (lyaa~lii; lii) *v.*
cultivate : oker kisál *vc.* (‘to do farming’)
cup : ŋkɔ̂p *n.*
cut : opasul *v.* (=break, tear)
cut (off), cut loose : opiŋ *v.*
damage : obî *v.*
dance (intr) : omên *v.*
dare : olîŋ oker *vc.* (‘to want to do’)
dark : mpip *a.*
daughter : mwă okáàr *nc.* (=‘girl’)
dawn : otwâ mwáán (twi~twa; twi) *vc.*
day : esuu (ntsúù) *n.*
day after tomorrow : okampwân *nc.*
day before yesterday : okali na pyáá *nc.*
daytime : ompê mwáán *nc.*
deaf and dumb person : méməɛ *n.*
death : ikpá (a-) *n.*
debark : okul *v.* (=scrape, carve)
debt : mpfûk *n.*
decay : opwɔn *v.*
deceive : odzîm *v.*
decide : okáàr lukân *vc.* (‘to carry a decision’)
decide : owɛɛ lukân *vc.* (‘to take a decision’)
decision : lukân *n.*
deep : ndzya *a.*
defend : okii *v.*
deformation : kífu (bí-) *n.* (=error, limping)
descend : otsá (tse; tse) *v.*
devil : ontsûŋ (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 : ilɔŋ (a-) *n.*
dish out food from pot onto plate, serve : osuk *v.*
distance : otál (e-) *n.*
divide : okasul *v.*
do : oker *v.* (=make)
doctor : oŋgaŋ (e-) *n.*
dog : mbvá *n.*
door : ebin (m-) *n.*
door : elaŋ (a-) *n.*
down : ŋgyĕ *prep.* (=under)
down(river) : ntsé *n.*
dream : ndwɛ *n.*
dream : olé ndwɛ *vc.*
dress, get : owáàr *v.* (=put on clothing)
drink, suckle : onɔ́ (nɔ~nwe; nwe) *v.*
drip : otaŋ *v.*
drive away : oyêr *v.*
drum : obyéèr *v.*
drum : ŋgɔ̂m *n.*
drunk, be : oyûr *v.*
dry : oyâŋ *v.*
dry season : eso (e-) *n.*
dry under the sun : oyûm *v.*
dumb (non-speaking) person : bába *n.*
dust : efur (e-) *n.*
Dzing person : odzíŋ (a-) *n.*
each : kɔ́nsɔ *d.*
ear : ekwut (a-) *n.*
ear : itíì (a-) *n.*
earring : mpétĕ itíì *nc.* (‘ornament of ear’)
easily; easiness? : ndáábên *adv.?*
eat : odzá (dze; dze) *v.*
echo : iyám (a-) *n.*
egg : ikyĕ (a-) *n.*
eight : ínáána *num.*
eighty : akûm ìnáánà *num.*
elephant : ndzɔɔ *n.*
embrace : oyaam *v.*
empty sth. : olûm *v.*
end : ntsûk *n.*

enter : okɔ̂t *v.*
entire : okin *q.*
error : kífu (bí-) *n.* (=deformation)
escape : otîn *v.*
even : atá *adv.*
every : ntso *n.* (used in kó ntsò)
excite, push : opûs *v.*
excrement : tìí *n.*
excrete : onya (nya~ni; ni) *v.*
exit, come out : otwâ (twi~twa; twi) *v.*
expand : ogɔŋsa *v.*
expensive : ntâl *a*
explode : opasuk *v.*
extinguish : ozîm *v.* (also + tsyǎ 'fire)
extirpate : odzik *v.* ('uproot')
eye : dzǐ` (mǐ) *n.*
eyebrow, eyelash : ntswě e dzî *nc.*
face : osó (e-) *n.*
fact : oŋgwá (or oŋgwâ?)
faeces : tìí *n.*
fainting : ŋkâŋ *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 *vc.*
fast, quickly : mɔnmɔn *adv.*
fat : onân (e-) *a.* (=big, wide)
father : tàá *n.*
father-in-law : okěl ibáà *nc.*
fatigue : aduur *n.*
fear : bwɔ́m *n.*
fear : otîn bwɔ̌m *vc.*
feather : esáá (ntsáá) *n.*
feed : odzî (dzi; dzi) *v.*
fell (tree) : obvii *v.*
female sex organ (euphemism) : itô ↓ókâar *nc.*
field, farm : izwɔŋ (a-) *n.*
fifty : akûm ↓ítáàn *num*
fight : onwaan *v.*
finger : mwǎ lwŏ` *nc.*
finger : osap è lwô *nc.* (cf. epen)
finish : osûk *v.*
finish (intr) : owá (we~wa; ---) *v.*
finish (tr.) : omantsa *v.*
fire : tsyǎ *n.*
fireplace : iyɔ́r ↓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.) : ibɔɔr (a-) *n.*
fish (sp.) : mbatên *n.*
fish (sp.) : mbvwǎ *n.* (auchenoglanis occidentalis)
fish (sp.) : ontêŋ (e-) *n.* (belonophago)
fish (sp.) : ŋgɔl *n.* (big, catfish-like, clarias?)
fish (sp.) : musumbwâ (mi-) *n.* (chrysichrthys cranchii)
fish (sp.) : ebvúù (m-) *n.* (citharinus)
fish (sp.) : eka (ŋ-) *n.* (ctenopoma)
fish (sp.) : ŋkwéé *n.* (distichodus, used also for carp; from Japanese?)
fish (sp.) : bukbuk *n.* (electric malapterus)
fish (sp.) : ɔmpɔŋ (e-) *n.* (labeo)
fish (sp.) : ntsélá *n.* (labeo longipinnis)
fish (sp.) : okaŋ (e-) *n.* (mastacembalus; small narrow fish)
fish (sp.) : epim (m-) *n.* (mormyridae)
fish (sp.) : ntsíŋ *n.* (parachanna)
fish (sp.) : okúŋ (e-) *n.* (polypterus, delicious eaten, not sold)
fish (sp.) : idzér (a-) *n.* (schiberidae)
fish (sp.) : dzwǎàn *n.* (species of mormyrops, weak electric, gets quite large)
fish (sp.) : ikúù (a-) *n.* (synodontis angelicas, small beautiful fish, black and white)

fish (sp.) : tukíìr *n.* (tetradon, poisonous, not eaten)
fish (sp.) : olyɛl (ɛ-) *n.* (tigerfish, hydrocynus)
fish (sp.) : ebál (m-) *n.* (tilapia)
fish (sp.) : oswɔ̌n (e-) *n.* (varicorhinus)
fish (sp.) : elim (e-) *n.* (xenomystus nigri)
fish (sp.), eel : ntsyɛm *n.*
fish (with hook) : olyâ (lya~li) *v.*
fish spear : ntsâr *n.*
fish with net : olyâ sìŋ *vc.*
fishhook : ndɔ̂b *n.*
fishing method (with a long mat not a net) : olaam *n.*
fist : iŋkɔ̌m (a-) *n.*
fit : okwa (kwa~kwi; kwi) *v.*
fitting, well-fitting : tsé *a.* (=clean, neat)
five : ítáàn *num.*
flamingo : ɔsɔɔ (ɔ-) *n.*
flatter : olâŋ *v.*
flea, jigger : oŋkpěn (e-) *n.*
fling up earth : opî măàn *vc.*
float : otsíì *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 : mbŭn *n.*
forest : osûr (e-) *n.* (=land)
forge (make strong) : oker bviir *vc.*
forget : oziŋ *v.*
forgive : olulul *v.*
fork : ntsɔ́ɔ̀m *n.*
forty : akûm ˩íná *num.*
forward, ahead : osó (e-) *n.* (=‘face’)
four : íná *num.*
fresh : obvo *a.*
Friday : kitáán *n.*
friend : mbéè *n.*
frighten, scare : osii *v.*
frog : ikɔ́ɔ́r (a-) *n.*
fruit : mbum *n.*
fruit (sp.) : ntsúù *n.* (purple color)
fry : okaliŋ *v.*
fufu : fufú *n.* (made of cassava)
full, be : ozúùr *v.*
funnel : iyáàr (a-) *n.*
fur : eká (ŋ-) *n.*
garbage place : iya (a-) *n.*
garden : itɔ́m (a-) *n.*
gather : osá ókàl ómɔtûk *vc.* (=‘put in one place’)
gather together, collect : otɔ́ɔ̀ (tɔɔ; tɔɔ) *v.*
get, receive, become : obáà (baa; bee) *v.*
get up (in morning), rise : ozwi (zwi; zwi) *v.*
ghost : mpêv obé *nc.* (=bad spirit)
girl, daughter : mwă okáàr *nc.*
give : opá (pe; pe) *v.*
glue : olem (e-) *n.*
go : okɛ (ke; ke) *v.*
go around (sth.) : ozûŋ *v.*
goat : ŋkáàm *n.*
God : ndzàám *n.*
good spirit : mpêv ˩ódzɔ *nc.*
good, beautiful : ɔdzɔ *a.*
gorilla : onya ntsyɛ *nc.*
gorilla : sukamûnt *n.* (=chimpanzee)
grandfather : ŋka íbaa *nc.*
grandmother : ŋká okáàr *nc.*
grandparent : ŋkàá *n.*
grasp : ofin *v.*
grass : etíír (e-) *n.*
grasshopper : ɛpɛɛ (a-) *n.*
greeting : mbɔ̂t *n.*
grill (meat, f ish) : ofup *v.*
grill used for smoking fish, meat : ŋkyáŋ *n.*

grind : oniksa *v.*
ground, soil, sand : măàn *n.*
groundnut : edzuu (n-) *n.*
group : kimvûk *n.*
grow : ozyê (zyɛ; zyɛ) *v.*
gun : ondûk (e-) *n.*
hair : eswĕ (ntswĕ) *n.*
hammer : ebul na ŋga-búl bɔ *nc.* (lit. iron that the hit (with))
hand : lwŏ` *n.* (=arm)
handpiano : likɛmbɛ *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 : ɔtsɔ́ (e-) *n.*
headpad : ŋkal *n.*
heal : obɛlul *v.*
hear : ozwâ (zwa~zwi; zwi) *v.*
heart, stomach : otûm (e-) *n.*
heat : osá tsyă *vc.* (to put fire)
heat, hot : mwáán *n.*
heavy : obvuur *v.*
hedge fence : ntsúk épaŋ *nc.* (limit of compound)
help : osarsa *v.*
hen : ŋkwɔ́ okáàr *nc.*
here (near speaker) : pè *d*
hiccup : ogyòó (e-) *n.*
hide (tr & intr) : ozî *v.*
hill : ŋgúm *n.*
him, her, he, she : ndé *pron.*
hip : ekúún (e-) *n.*
hippo : ŋgwùú *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 : mèɛ́ nwî *nc.* (‘oil of bee’)
hook, hang : oyân *v.*
horn : isíké (a-) *n.*
house : ndzɔ́ *n.*
how : ŋgambó *q.*
how much : ŋga mbyɛ́ *q.*
hundred : ŋkám *num.*
hunger : ndzaa *n.*
hunt : okɛ opàá *vc.* (‘to go hunting’)
hunt(ing) : opàá (e-) *n.*
hurry : oker entîn *vc.*
hurt, get : obâ mpúr *vc.*
husband : olûm (a-) *n.*
hyena : okyâŋ (e-) *n.*
idea : ŋgîn *n.*
idiot, stupid person : ondzĭn (e-) *n.*
if : ker *c.*
ill (be ill) : okaa okâl *vc.*
illness, sickness : okâl (e-) *n.*
imitate : oker mpìl ómɔtúk *vc.* (‘do the same way’)
immerse : odzya (dzya~dzi; dzi) *v.*
impala : mbvel *n.*
incompetent : ekâr *a.*
incompetent, be : okaa ekâr *vc.*
injury : ndyɛ́ *n.* (e.g. a , scratch, e.g. from lemon-grass)
insect : ntûr *n.* (=small ant (sp.))
insert : osá ↓kíbvúù *vc.* (‘put inside’)
inside : ibvuu (a-) *n.*
inside : kókât *prep*
insult : otwâ (twi; twa; twi) *v.*
insult, teasing : epwŏn (m-) *n.*
interrogate : oyuvul *v.*
intestines : oswɔ̀ɔ́ (e-) *n.*

iron : ebul (m-) *n.* (=metal)
island : esaŋ (a-) *n.*
island : entsaŋga (e-) *n.*
it : nɔ̌ *pron*
itch : bviŋ *n.*
itch : oker vìŋ *vc.*
itch : viŋ *n.*
jaw : ekee (a-) *n.*
journey : ndzɛ tôl *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 : imɔ́n (a-) *n.*
kneel : okaa kímɔ̂n *vc.*
knife : mwǎ-mbyɛ̌ *nc.*
knife (large bushknife) : mbyɛ̌ *n.* (cf. mwá mbyɛ̌ '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 : ntsûk *n.* (=end, limit)
laugh (intr), smile : osyâŋ *v.*
lay (+ ìkyɛ̌ 'egg') : obɛ̂l *v.*
lay (eggs) : osá ákyɛ̌ *vc.* ('to put eggs')
lay egg : obûr *v.* ('give birth')
lead : odyatsa *v.*
leaf : ɛkɛ́ɛ́ (ŋ-) *n.*
learn : oluŋguk *v.*
leave : otît *v.* (=avoid)
leave behind (tr) : osî (si; si) *v.*
leave, leave behind : olûm *v.*
left (side) : okáàr (a-) *n.* ('woman')
leg : ekul (e-) *n.* (=foot)
lemon : iláàr (a-) *n.*
lemon juice : adzá ↓íláàr *nc.*
lend : odɛfsa *v.*
length : otál (e-) *n.*
lengthen, stretch : osîm *v.*
leopard : ŋkpi ŋkɔp *nc.* (lion + ?)
leprosy : okâ ↓é lépre *nc.*
leprosy : mikɛ́ɛ́n. *n.*
let, let go : osaŋ *v.*
letter : oŋkàán (e-) (=book, grammar)
lick : olyâŋ *v.*
lie : elá (e-) *n.*
lie : odzîm *v.*
lie down : okaa ŋgá sîm *vc.*
life : mwɛ *n.*
life, existence : luzîŋ *n.*
lift up : ozaŋgul *v.*
light, daylight : mwáán *n.*
like : ker *prep.*
like, love, admire : olaŋ *v.*
limit : ntsûk *n.* (=end)
limit : olul (e-) *n.*
limp : okɛ kífù *vc.*
limping : kífu (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 : oŋgbatyɛm (e-) *n.*
load : bvuur *n.*
log : sakûb *n.*
long : otí↓tâl (e-) *a.*
long : otál (e-) *a.*
look for (tr) : opɛɛ (pɛɛ; pɛɛ) *v.*
look, observe : odiir *v.*

lose (tr.) : oziŋ *v.*
lose weight : olûm bvuur *vc.* (‘to remove load’)
lose, be lost : okɛ ntó *vc.*
lost : ntó *n.?*
lost, be : ovîl *v.* (=disappear)
loud : bviir *a.*
louse : esen (ntsen) *n.*
louse : epuu (m-) *n.*
Lwal person : olwǎl (a-) *n.*
machete : ipaŋ (a-) *n.*
mad, become : obáà ìbúm *vc.*
madness : okâl ↓ótsô *nc.*
madness : ibúm (a-) *n.*
maggot : mbüm *n.*
maize : iwôn (a-) *n.*
make : oker *v.* (=do)
make free : olúŋ ↓kó ki mpik *vc.*
male sex organ (euphemism) : itô ↓íbâ (a-) *nc.*
man : ibaa (a-) *n.*
manage (to do sth.) : olaŋ *v.*
mango : màáŋgǔl *n.*
manner : mpîl *n.*
many : obyê *q.*
market : iyó *n.*
marrow : mbǒn *n.* (=brain)
marry : otûk *v.*
mat : ntăn mbaan *nc.* (‘mat of bamboo’)
maybe : mbal ínkěn *nc.* (‘another time’)
Mbuun person : ombuun (a-) *n.*
me, I : mǐ` *pron.*
measure : omɛk *v.*
meat : ntsúr *n.* (=animal)
medicine : ŋkîs *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 : mpɔndɔ́ *n.*
mirror : taltál *n.*
missing : ntó *n.?*
mix : ovuksa *v.*
Monday : kintɛ́t *n.*
monkey : ŋkêm *n.*
monkey (sp.) : ibvuk (a-) *n.*
monkey (sp.) : mpfüŋ *n.*
month : ŋgwɛn *n.* (=moon)
moon : ŋgwɛn *n.*
moon (full) : ŋgwɛn ònínân *nc.*
morning : ompfí (e-) *n.*
mortar : ŋkó *n.*
mosquito : ɛbyɛ́m (m-) *n.*
mother : màá *n.*
mother-in-law : okěl okáàr (a-) *nc.*
motorcycle : tuktuk *n.*
mouse : mpúù ndzɔ́ *n.* (‘house rat’)
mouth, beak (of bird) : men *n.* (also mîn)
much, often : mbyɛ́ *adv., q.* (cf. ŋga mbyÉ ‘how much’)
mud : pɔtpɔ̂t *n.*
mud (a house) : olaŋ *v.*
muscle : osisá *n.* (=vein)
mushroom : bwɔ *n.*
mushroom (sp.) : ntsî *n.* (white, small)
nail (of finger, toe) : ɛbɛɛ (m-) *n.* (=shell)
name : dzĭǹ *n.*
navel : okwúm (e-) *n.*
neck : ŋkíŋ *n.*
necklace : okyâŋ mpó (e-) *nc.* (‘ring of throat’)
negative copula : ka *adv.*
negative imperative marker : pâ *adv.*
nest : iyàám (a-) *n.*
net : siŋ *n.*
new : mpa *a*
night : otû (e-) *n.*
nine : iwa *num.*
ninety : akûm ìwà *num.*
no, negative marker : bɔ *interj.*

noise : ontsêl (e-) *n.*
north : duu *n.* (=sky)
nose : mbwŏm *n.*
not : sâŋ *adv.* (from osaŋ 'to refrain')
now : sɛ́sɛ́p ↓nápɛ *adv.*
now, right now : ko ntáŋ ↓nápɛ *nc.* ('at this time')
Nzadi language : indzéé *n.*
Nzadi person : ondzéé (a-) *n.*
oar : ŋkíí *n.*
obey : ozitsa *v.*
odor : ntsun *n.*
often : mbyɛ́ *adv.*
oil, fat : mɛ̀ɛ́ *n.*
okra : dŏŋdŏn. *n.*
old : okúùr (e-) *a.*
old : ntâm *a.*
old, become : otûl okúùr *vc.* (=to age)
one : ómɔtúk *num*
only, just : ná *adv.*
open (tr.) : okaŋgul *v.*
open (tr.) : ofuŋgul *v.*
order : ntswa *n.*
ornament : mpɛ́tɛ́ *n.* (decoration that one wears)
other : íŋkěn *d.* (=another, some)
outside : ntsá *n.*
overflow : olutsa *v.*
overflow : otsyak *v.*
owl : eŋkûr *n.*
owner : oŋgaa (a-) *n.*
paddle : ŋkáb *n.*
paddle : odwâ (dwa~dwi; dwi) *v.*
pain : oseɛ (e-) *n.*
pain, difficulty, anger : mpâs *n.*
palm kernel, pit of fruit : oŋgyĕ (e-) *n.*
palm leaf : lăn̰. *n.*
palm oil : mɛɛ mba *nc.*
palm tree : ibá (a-) *n.*
palm wine : máán íba *nc.*
palmnut : mbá *n.*
papaya : pɛpê *n.*
parent-in-law : okěl (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 : mbvwâ *n.*
pay : ofur *v.*
peel, debark : obvul *v.*
peeling : mpwe *n.* (=bark)
penis : ikàár (a-) *n.*
pepper (red) : ndúŋ *n.*
person : muur (baar) *n.*
perspiration, sweat : mwáán *n.*
perspire : ɔsɔk *vc.* (used with mwáán)
perspire : otwâ mwáán *vc.* ('to exit heat')
pestle : oté ŋko *nc.* ('stick of mortar')
photograph : fotó *n.*
pick (fruit) : ɔtɔ́ɔ̀ *vc.* (+ mbum 'fruit')
pick (fruit) : okûl *v.*
pick up : otɔ́ɔ̀ (tɔɔ; tɔɔ) *v.*
pierce : otobul *v.*
pig : ŋgûl *n.*
pineapple : kǐl *n.*
pipe : ɔtɔk (e-) *n.*
pity : ŋgèé *n.*
place : okal (e-) *n.*
place : iyɔ́r (a-) *n.*
plait : okaŋ ntswèé *vc.* ('tie' + 'hair')
plait (hair) : otûŋ *v.*
plant : okun *v.* (=sow seeds)
plantain : ikwɔ é màkɛ́mba (a-) *nc.*
plantain : likɛ́mba (ma-) *n.*
plaster, mud (a house) : olaŋ *v.*
plate : ilɔŋ (a-) *n.*
play : osakan *v.*
please : obɔndɔl *v.*
pluck : olûm *v.* (=remove)
poison : ndikîl *n.*
porcupine : ntsúr tii *nc.*

possible, be able, may, can : ofɛ̂n *v.* (=be able, may, can)
pottery : mpfyě adzíŋ *nc.* (lit. pot of the Dzing)
pound (e.g. yams) : ɔtsɔ́ (tsɔ~tswe; tswe) *v.*
pour, throw (e.g. water) : otsyak *v.*
poverty, poor : ntsu káàm *nc.*
praise : okumsa *v.*
pray : osáàm *v.*
praying mantis : ibwá ŋkɔ̌ (a-) *nc.*
preach : otɛndul *v.*
precede : okɛ osó *vc.*
pregnancy : iyûm (a-) *n.*
press : ozîn *v.*
priest : ŋgaŋ ndzàám *n.* ('doctor' + 'God')
protect : obâk *v.* (=keep)
pull : obɛ̂n *v.*
pull : odur *v.*
punishment : ndɔ̂l *n.*
pus : tufîn *n.*
pus, running external : mpwɔ́p *n.*
push : otâk *v.*
put (on, to), assemble : osá (se; se) *v.*
put on (clothing) : owáàr *v.* (=get dressed)
put s.o./sth. somewhere : osap *v.*
put together : ovuksa *v.* (=mix)
question : ŋgyovûl *n.*
quiet : dzó *a*
rabbit : mpúù endyéé *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 : ɛbyɛ (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 : swíì *a.*
refrain from doing sth. : osaŋ *v.* (used in negative relative clauses and subjunctive)
refuse : otûn *v.*
relative : otûŋ (a-) *n.*
release : osaŋ *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) : obÊn aduur *vc.*
return (tr, intr), bring back : okal *v.* (also òŋ́kal)
rib : mpandzí *n.*
rice : lɔ́sɔ *n.*
right (as opposed to wrong) : mambɔ̂t *n.*
right (side) : ibaa (a-) *n.* (from ‘man’)
right, be : opá ma mbɔ̂t *vc.*
ring : okyâŋ (e-) *n.*
ripe, ready, be cooked (intr.) : oyá *v.*
ripen : osul *v.*
rise : obáàn *v.*
rise, ascend : okɛ duu *vc.*
river : ndzéé *n.*
road : mbvwâ *n.*
roast (meat) : otum *v.* (=bake in ashes)
roof : ɔtwɔ̂m (e-) *n.*
rooster : ŋkwɔ ibaa *nc.*
root : esim (a-) *n.*
root : ntsumbûl *n.*
rope : osim (e-) *n.*
rot : olyaŋ *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 oŋkáàn *nc.* (‘house of book’)
scoop : ozUŋ *v.* (with hand or instrument)
scrape : okul *v.* (=carve)
scrape off : onik *v.*
scratch : okwaŋ *v.*
see : ɔmɔ̂n *v.*
seed : ŋkên *n.*
self, oneself, one’s own : ŋgizyâ *n. ?* (e.g. mí-ŋgyìzyâ 'myself')
sell : oyɛɛ *v.*
send (person, thing) : otûm *v.*
servant : bɔ̂y *n.*
servant, domestic : muur kisâl *nc.*
serve : osap *v.*
serve food from pot onto plate : osuk *v.*
seven : ntsaamɔ̂n. *num.*
seventy : akûm ntsaamɔ̌n. *num.*
sew, weave; plait hair, build up : otûŋ *v.*
shade, shadow : elíŋ (a-) *n.*
shallow : ŋkyee *a.*
shame : ntsɔ̂n. *n.*
share : okabul *v.*
sharpen : osá mpúr *vc.*
sharpness : mpúr *n.*
shave : obvul ntswèé *vc.* (‘peel facial hair’)
shave : olûm ntswèé *vc.* (‘remove facial hair’)
sheep : iméɛ́mɛ (a-) *n.*
shell : ɛbɛɛ (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↓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 : ɔŋkɔ̌ (e-) *n.*
sibling in-law : sɛmêk *n.*
sibling, older : izí (a-) *n.*
sibling, younger : okwâ (a-) *n.*
sick, be : ozwâ okâl *vc.*
sick, become : otûl okâl *vc.*
side, heel : ŋgbee *n.* (or ŋgbèè èkùl ‘of foot’)
sift : oyuŋgul *v.*
sift : opwɔp *v.*
sing : ɔtɔ́ɔ̀ dzǐm̀ *vc.*
sing : otɔ́ɔ̀ (tɔɔ; tɔɔ) + dzǐm̀ *vc.*
sink (tr.) : odzya (dzya~dzi; dzi) *v.*
sister in-law : sɛmêk okáàr *nc.*
sister, older (of brother or sister) : izí okáàr (a-) *nc.*
sister, younger (of sister or brother) : okwâ okáàr (a-) *nc.*
sit down : okaa kó ntse *vc.*
six : ísyɛ́mɛ *num.*
sixty : akûm ↓ísyɛ́mɛ *num.*
size : obek (e-) *n.*
skin : epwe (m-) *n.*
skin (an animal) : olûm épwe *vc.* (‘remove skin’)
skull : ɛbɛ ótsɔ (m-) *nc.* (‘shell of head’)
sky : duu *n.*
slander : obaŋ *v.*
slave : mpîk *n.*
sleep : tɔ̀ɔ́ *n.*
sleep : ɔpɔ tɔ̀ɔ́ (pɔ~; pɔ~pwɛ) *vc.*
slow(ly) : ikyê *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 : ŋkɔ̌ *n.*
snake : ntɛn *n.*
snake (sp.) : odzwó (e-) *n.*
snake (sp.) (poisonous) : mpêl *n.*
snake (sp.) (poisonous) : ŋkáŋ *n.*
sneeze : oker tsébo *vc.*
sneezing, sneeze : tsébo *n.*
snore : osá ŋkɔɔn *vc.*
snore, snoring : ŋkɔɔn *n.*
snot : twɔ̂n *n.*
soft(ly) (of speaking) : ikyɛ̂ *a.* (of speaking)
soft, softness : pɛtpɛ́t *a*
son : mwǎ íbaa *nc.* (=boy)
song : dzim *n.*
sorcerer : muur ndɔk *nc.*
sorcery : ndɔk *n.*
south : ntsé *n.* (=downriver)
south : ŋgyɛ̌ *prep.* (=under)
speak evil : otyÊn obé *vc.*
spear : ikɔ̌n (a-) *n.*
spear : onuk ikɔ̌n *vc.* (‘to lance’ + ‘spear’)
speed, haste : entîn *n.*
spider : ndzàám
spirit : mpɛ̂v *n.*
spit : otûl até *vc.*
split : obaar *v.*
split : okabul *v.*
spoil (tr. & intr.) : obî *v.*
sponge : inǔk (a-) *n.*
spoon : lût *n.*
spoon (small) : lût ikíkěr *nc.*
squash : mantɛtɛ *n.*
squeeze : ofin *v.* (=grasp)
squeeze, twist : onwÔn *v.*
squirrel : isín (a-) *n.*
stab : osá mbyě *vc.* (‘put’ + ‘knife’)
stand : omat *v.*
star : mbwɛtétɛ *n.*
steal : oyîb *v.*
step on : okaa kó dû *vc.*
still (do sth.) : ofûl *v. aux.*
sting : odzwî *v.*
stir : obalul *v.*
stone : imǎn (a-) *n.*
stone : itâr (a-) *n.*
stool : ifakâm (a-) *n.*
stop : okaŋ *v.* (=arrest)
story, history : ndáá *n.*
stranger, guest : oŋgyɛn (ɛ-) *n.*
stream : ntÓ *n.*
strength : osîm *v.*
strip the bark : okulul *v.*
strip the bark : olûm mpwe *vc.* (‘remove bark’)
strong : bviir *a.*
strong, become; become hard : otûl bvìír *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 : eŋkum *n.*
suck : odur *v.* (=pull)
suckle : onɔ́ (nɔ~nwe; nwe) *v.* (=drink)
suffer : obɛ̂l *v.*
suffer : ozwâ okâl *vc.* (‘feel illness’)
sufficient (be) : okwa (kwa~kwi; kwi) *v.*
sugarcane : osuŋ (e-) *n.*
sun : itâá (a-) *n.*
sun : wén *n.*
Sunday : obiŋ (e-) *n.* (also èsú ↓óbîŋ)
supervise : olaŋdil *v.*
surpass : olek *v.*
surround : ozwɔ̂n *v.*
swallow : omen *v.*
swear : otá ndzàám *vc.*
sweep : ɔkwɔ̂m *v.*
sweet yam : okpá é maŋgwɔ̂m *nc.*
sweetness : mawɛ́tɛ *n.*
swell : otûl onân *vc.* (‘to become big, fat’)
swim : olil *v.*
table : mɛs *n.*
tail : okyá (e-) *n.*

take : owɛɛ (wɛɛ; wɛɛ) *v.*
take out : osum *v.*
tall : otál (e-) *a.*
taste : ntôm *n.*
taste : omɛk *v.*
tea : tî *n.*
teach : otaŋsa *v.*
teach : ɔlôn *v.*
teacher : lôn *n.*
tear : opasul *v.* (=cut, break)
tear : ɔkɔ́ɔ̀ *v.*
tear : esáŋ (ntsáŋ) *n.*
tease : osup *v.*
tease, insult by teasing : osá mpwɔ̌n. *vc.*
tell (+ ndá 'story') : okap *v.*
tell the truth : otyên ɔ́dzɔ *vc.* (‘say good’)
tempt : opukmun *v.*
ten : dzüm̀ (akûm) *num.*
termite : tuu *n.*
termite mount : ikúú (a-) *n.*
thanks : matɔ́nd *n.*
that (introduces complement clause) : niŋgé *c.*
that (very), the one in question : (ŋ)kún *d.*
that very (in question) : ninyâ (bibyâ, mimyâ) *d.*
that/the one (of) : na *d.* (used when a noun is not overtly expressed)
that/those (near hearer) : nyá (byá, myá) *d.*
thatch : opakul *v.*
theft : bvǐm *n.*
there : kukwâ *d.*
there (far from speaker) : pyáá *d.*
they, them (human) : bɔ̌ *pron.*
they, them (non-human) : mɔ̌ *pron.*
thief : muur bvǐm *nc.*
thigh : epên (a-) *n.*
thin : ikyê *a.*
thing : oŋgêr (e-) *n.*
think : obáńtsa *v.*
think : oyindul *v.*
think : oluŋguk *v.*
thirst : mpwí *n.*
thirty : akúm ↓ásâr *num.*
this : nápɛ *d.*
this/these (human) : nápɛ (bápɛ, mápɛ) *d.*
thorn, fishbone : osyén (ɛ-) *n.*
thought : mabáńtsa *n.*
thought : ŋgîn *n.*
three : ísâr *num.*
throat : mpó *n.*
throw (away) : opíì *v.*
throw (in air) : olum *v.*
thunder : ndzǎl *n.*
Thursday : kiyá *n.*
tick : ikpí (a-) *n.*
tie : okaŋsa *v.* (=fold, collect)
tie, knot : okaŋ *v.* (=close, cover)
time (instantiation) : mbal *n.*
time, hour : ntâŋ *n.*
tired, be : ozwâ ìlé *vc.*
tired, be : ozwâ áduur *vc.*
tired, be : olé (lɛ~le; le) *v.*
tiredness : aduur *n.*
tiredness : ilé *n.*
to just do sth. : oŋkâŋ *v. aux.*
to mould : oker mpfyě adzíŋ *vc.* (lit=‘to make pottery of Dzing people’)
to, at : kó *prep.*
tobacco : oŋgul (e-) *n.*
today : nɔ̌wɛ *n.*
toe : osap èkûl (e-) *nc.* (cf. epen)
tomorrow : oswâ *n.*
tongue : elûm (e-) *n.*
tooth : idzên (a-) *n.*
tortoise, turtle : ŋkûl *n.*
touch (in the hand), catch : otá mpen *vc.*
trace (of sth.), e.g. where a snake has been : ilíŋ (a-) *n.*
trap : okaŋ *v.*
trap : otáám (e-) *n.*
travel : okɛ nzɛtôl *vc.*

tree : oté (e-) *n.*
tremble : odzek *v.*
trouble, get : obáà ntsaŋ *vc.*
trouble, palaver : ntsaŋ *n.*
trousers, pants : mpaantru *n.*
trunk : ikŭn (a-) *n.*
try : oyúńtsa *v.*
try : omɛk *v.*
Tuesday : kizɔ̂l *n.*
turn (around) (intr.) : obaluluka *v.*
turn (around) (tr., intr.) : obalul *v.*
twenty : akûm ↓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 ílyăn. *nc.*
uncovered : epúl *a.* (e.g. a container)
under, below : ŋgyĕ *prep.*
undress : olûm 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 : ontûŋ (e-) *n.*
vegetable (sp.) : ondààl (e-) *n.*
vegetable (sp.) : okyii (e-) *n.*
vegetable, bitter (sp.) : olŭl (e-) *n.*
vein : osisá (e-) *n.*
very clean : tsétsɛ *a*
village : wàá (măn) *n.*
visible, be : omɔnka *v.* (=shine)
visit : odiir *v.*
visitor : ndzé ndza *nc.*
voice : ndáá *n.*
vomit : olwâ (lwa~lwi; lwi) *v.*
voyage : nzɛtɔ́l *n.*
wait : odzel *v.*
wake up, wake (s.o.) up : ozwi (zwi; zwi) *v.*
walk : olya dzyɛn *vc.*
walking : dzyɛn *n.*
want : olaŋ *v.*
war : etum (e-) *n.*
warn, ask : okap *v.*
wash (things) : osuŋ *v.*
watch : odiir *v.*
water : adzá *n.*
wave (river) : ntín *n.*
we, us : bĭ *pron*
weave : otûŋ *v.* (=sew)
Wednesday : kitát *n.*
weed : osakul *v.* (=clear brush)
what, which : ŋge *i.*
where : koŋgó *i.*
whether : kan *c.*
which (precedes noun) : íŋki *i.*
which, who : ŋgó *i.*
white : zyɛ́ *a*
white : mpɛ́mbɛ́ *a*
white color of solid (e.g. of chalk) : ɛpyɛ́m (sg. only) *n.*
white man : ondyɛ́ɛ́ *n.*
white, become : otûl zyɛ́ *vc.*
white, become : otûl mpɛ́mbɛ́ *vc.*
who : nɛ *i.*
whole (sg.) : nɔ-áŋkŭm *q.* (=‘all’)
why : sám ↓é ŋgé *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 mĭ ` 'my wife')
wife, first : okáàr osó (a-) *nc.*
wife, other (non-first wife) : mbaan *n.*
wind : mwɛ́l *n.*

wine : máán *n.*
wing : ipăp (a-) *n.*
wish, desire, need : mpfûn *n.*
with, and : tí *prep*
with, to, and : yɛ *prep., c.*
woman, wife : okáàr (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 : osɔnka *v.*
write (to someone) : osɔnkil *v.*
yam, potato : okpá (e-) *n.*
Yansi person : oyánsi (a-) *n.*
yawn : mwii *n.*
yawn : oker mwii *vc.*
year : mbvêl *n.* (=rain)
yes : ɛɛ *interj.*
yesterday : okalí (e-) *n.*
you (pl.) : byĕn *pron*
you (sg.) : yă` *pron*
young man (15-25 years old) : ontsum (e-) *n.*
younger, junior (people) : ilyăn *a.*

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