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# A Grammar of Eton

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by

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*dɔ̌ ɛ́ˡvwág dàáˡté ˡbɛ́d íˡlé*
'One hand does not climb a tree.'

La description d'une langue sans tradition écrite est évidemment impossible sans l'investissement considérable de temps et d'effort de ses locuteurs. Je suis très reconnaissant envers Désiré Essono Biyebe pour sa patience au début de la description, quand le travail avançait lentement. Depuis huit ans je peux compter sur son aide, qui a souvent été indispensable pour l'avancement du travail. Les dernières années j'ai surtout travaillé avec Pie-Claude Ondobo, qui a appris à utiliser l'orthographe pratique de l'éton, et avec Pierre-Patrick Eloundou. Je remercie cordialement les autres locuteurs de l'éton qui m'ont aidé avec la collection de données, à savoir Hyacinthe Elomo Tomo, papa Pierre Tomo, †grand-père Essono, Eliane Nga, Arsène Eyengue, Parfait Messi Tomo, Pacôme Elouna Eyenga, Judith Akini et Jacqueline Amos.

[The description of a language without a written tradition is evidently impossible without a considerable investment of time and effort by its speakers. I am very grateful to Désiré Essono Biyebe for his patience at the beginning of the description, when work progressed slowly. Since eight years I can count on his help, which has often been vital for the progress of this work. The last few years I have mostly worked with Pie-Claude Ondobo, who learnt to write Eton, and with Pierre-Patrick Eloundou. I also wish to thank the other Eton speakers who helped me collect data, viz. Hyacinthe Elomo Tomo, papa Pierre Tomo, †grand-père Essono, Eliane Nga, Arsène Eyengue, Parfait Messi Tomo, Pacôme Elouna Eyenga, Judith Akini and Jacqueline Amos.]

Lors de mes voyages au Cameroun j'ai toujours été très bien accueilli chez maman Marie-Louise Tomo, son mari papa Pierre, ses enfants Germaine, Parfait, Rosine, Jean-Materne, et Michel, et ses petits-enfants Alexandra, Yann et Rick. Je remercie également les parents de maman Marie-Louise, qui m'ont accueilli chez eux au village de Ngwabo et toute la communauté Eton en Belgique qui m'a vite adopté.

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# Contents

# Abbreviations and conventions

This description uses the glossing conventions set forth in the Leipzig Glossing Rules (http://www.eva.mpg.de/lingua/files/morpheme.html), version of April 2003. Some abbreviations have been added or modified. For the sake of clarity, derivational morphemes are not separated from the stem and glossed separately, except in the morphological chapters. When dependent morphemes are introduced in these chapters, they are given in orthographic notation, augmented with the special symbols for morpheme boundaries and for morphophonemes and with the symbols V and C for vowels and consonants.

| | |
|---|---|
| # | word boundary |
| ǂ | boundary between an expansion and the rest of the stem |
| = | clitic boundary |
| - | affix boundary |
| (sp.) | species |
| * | ungrammatical form |
| \|x\| | structural notation |
| ~ | unconditioned alternative |
| | *or:* |
| | boundary between two parts of a reduplicated stem |
| ♦ | discontinuity of speech / pause |
| C1 | onset position of a prominent syllable |
| /x/ | phonological notation |
| /ˈá/ | downstepped high tone |
| <x> | orthographical notation (in the phonology chapter) |
| | *or:* |
| | infix boundary (elsewhere) |
| [x] | phonetic notation |
| a̲ | nasalised vowel |
| cvc | prominent syllable (underlined) |
| x | orthographical notation (except in the phonology chapter) |
| I | agreement prefix of agreement pattern one |
| 1 | nominal prefix of gender one |
| 1PL | first person plural |
| 1SG | first person singular |
| AG | agentive noun derivational suffix |
| ANA | anaphoric modifier |
| AND | andative (quasi-auxiliary) |

| | |
|---|---|
| asa | as soon as |
| AU | augment |
| AUG | augmentative |
| CH | close to hearer |
| *chez* | at (somebody's place) |
| CMP | complementiser |
| CON | connective morpheme |
| CONC | concessive |
| COP | copula |
| CR | contrastive resultative |
| CPR | contrastive pronominal |
| CS | consecutive |
| DEM | demonstrative |
| DIM | diminutive |
| DP | discourse particle |
| F | focus reduplicant |
| FOC | focus particle |
| FPPR | final form of the personal pronominal |
| G | suffix or infix that occurs in several TAM-forms (see VII:2.2) |
| HAB | habitual (quasi-auxiliary) |
| HD | high distance |
| ID | intermediate distance |
| IDE | ideophone |
| IF | indefinite future |
| IMP | imperative |
| IMPF | imperfective |
| INC | inceptive |
| INF | infinitive |
| INT | interjection |
| INTS | intensifier |
| IPS | impositive suffix |
| LC | locative connective |
| LOC | locative |
| NEC | necessity (quasi-auxiliary) |
| NEG | negative |
| NF | suffix of the non-final form of the Hesternal and Hodiernal past perfective |
| NPOS | impossibility (quasi-auxiliary) |
| NPPR | non-final form of the personal pronominal |
| ONO | onomatopoeia |
| PAS | passive |
| PCOP | past form of the copula (hodiernal and remote) |

PER persistive (quasi-auxiliary)
PF priority (quasi-auxiliary)
PL plural
PN pronominaliser
PNL positional suffix
POL politeness, deference (adverb)
POS possibility (quasi-auxiliary)
PPR personal pronominal
PR present
PRO prospective (quasi-auxiliary)
PRP perfect of recent past (quasi-auxiliary)
PST past tense
Q interrogative particle
QP quotative pronominal
RCOP relative form of the copula
REL relative verb form
REP repetitive (quasi-auxiliary)
RL relativiser
RP remote past
RPOS relative form of the quasi-auxiliary that expresses possibility
RS resultative
SB subjunctive
SCOP persistive ('still') copula
SF derivational suffix
SG singular
SP "southern" present
SPS "southern" past
TIMPF hodiernal past form of the imperfective auxiliary
TMN terminative (quasi-auxiliary)
V agreement prefix of agreement pattern five
VEN venitive (quasi-auxiliary)
VIS valency increasing suffix
VOL volition (quasi-auxiliary)
VP subject prefix
VRS valency reducing suffix
Y hesternal past form of the verb 'be' (same form as YCOP)
YCOP hesternal past form of the copula
YIMPF hesternal past form of the imperfective auxiliary

# Tables

# Figures

# User manual

The text contains many references to other sections. References within the chapter consist of arabic numbers only (e.g. *see 1.1.1*). A reference to a section in another chapter begins with the number of the chapter in roman numbers (e.g. *see II:1.1.1*).

Table 1 provides an overview of gender markers and gender agreement markers. The following abbreviations are used: VP for the prefixes marking subject agreement on the verb, PPR for personal pronominals, DEM for adnominal demonstratives, ANA for the adnominal anaphoric marker and CON for the connective ("genitive") proclitic.

*Table 1.* Nominal gender markers and forms agreeing in gender

| gender | noun prefix | agreement pattern | VP | PPR | DEM | ANA | CON |
|---|---|---|---|---|---|---|---|
| 1 | Ǹ- | I | à- | ɲé | ɲɔ́ | ìtè | à= |
| 2 | bè- | II | bé- | bɔ́ | bá | bétê | bé=/H= |
| 3 | Ǹ-/à-/ù- | III | ú- | wɔ́ | ɲú/ví | útê | H= |
| 4 | mì- | IV | mí- | mjɔ́ | mí | mítê | mí=/H= |
| 5 | ɛ̀-/d- | V | ɛ́-/d- | dɔ́ | dí | ɛ́tê | ɛ́=/H= |
| 6 | mè- | VI | mé- | mɔ́ | má | métê | mé=/H= |
| 7 | ì- | VII | í- | yɔ́ | yí | ítê | í=/H= |
| 8 | bì- | VIII | bí- | bjɔ́ | bí | bítê | bí=/H= |
| 9 | | IX | ì- | jɔ̀ | ɲí | ítè | ì= |
| 10 | | X | í- | jɔ́ | ɲí | ítè | í=/H= |

Since the verbal morphology of Eton is not entirely compositional (i.e. several morphemes occur in different, functionally unrelated (or hardly related) verb forms), the following list of TAM-forms may be handy. The glosses of the different verb forms are given in alphabetical order (ignoring *'stem'*). Note that glossed examples will have one of the following options instead of VP: 1SG, 2SG, 1PL, 2PL, or a roman number from I to X.

| | |
|---|---|
| 'stem'-IMP | Imperative singular (monosyllabic stems) |
| 'stem'<IMP> | Imperative singular (other stem types) |
| SB-VP-'stem'-SB | Subjunctive (monosyllabic stems) |
| SB-VP-SB'stem'<SB> | Subjunctive (other stem types) |
| VP-CR-'stem'-RS | Contrastive resultative |
| VP-'stem'-CS | Consecutive |
| VP-'stem'-G | Relative imperfective |

| | |
|---|---|
| VP-FUT INF-‘stem’ | Future |
| VP-IF-‘stem’-IF | Indefinite future |
| VP-INC INF-‘stem’ | Inceptive |
| VP-PR INF-‘stem’ | Present |
| VP-PST-‘stem’ | Hodiernal past perfective (in clause-final position) |
| VP-PST-‘stem’-G | Hesternal past perfective (in clause-final position) *or* Past imperfective (in all positions) |
| VP-PST-‘stem’-G-NF | Hesternal past perfective (in non-final position) |
| VP-PST-‘stem’-NF | Hodiernal past perfective (in non-final position) |
| VP-RP-‘stem’ | Remote past perfective |
| VP-RP-IMPF INF-‘stem’-G | Remote past imperfective |
| VP-‘stem’-RS | Resultative |
| VP-SP-‘stem’ | Southern present |
| VP-SP-PST-‘stem’ | Southern past |
| VP-TIMPF INF-‘stem’-G | Hodiernal past imperfective |
| VP-YIMPF INF-‘stem’-G | Hesternal past imperfective |

A note on the reliability of the glossing of verb forms: Very often the formal differences between different verb forms are neutralised, depending on the tonality of the verb stem and the subject prefix, the syllable structure of the verb stem and the right context of the verb form. In example IX(128), for instance, (reproduced below), the verb form *ùkwáb* is analysed and glossed as a Consecutive (ù-kɔ́b-H), but formally it could equally well have been a Hodiernal past perfective (|ù-H-kɔ́b|). In such cases the correct analysis has always been established by substituting parts of the verb form with a consultant. In this case, substituting *kwáb* ‘find’ by *kùz* ‘buy’ gave the form *úˡkúz*, clearly a Consecutive.

[Somebody would like to eat some meat, but sees that the pot is empty. His mother says:]
bɛ́n nâ ùsɔ́ ˡtédé bínùtɛ̀n bítán, ŋgé úˡkwáb tíd
|bɛ́n nâ ù-H-sɔ́ tə̄də́ bì-nútɛ́n bí-tán ŋgɛ́ ù-kɔ́b-H tíd
if.CF CMP 2SG-PST-come simply 8-minute VIII-five then 2SG-find-CS [9]meat
‘If you had come five minutes earlier, you would have found meat.’

Finally, I wish to invite all users of this grammar who did not find the information they were looking for in this book to contact me with their questions and to check my website (currently at http://webh01.ua.ac.be/markvandevelde), which contains among others a French-Eton dictionary.

# Chapter 1
# Introduction

## 1. The Eton language

### 1.1. Situation

Eton (*ìtón*) is spoken in the Lékié department of the Centre province of Cameroon, a densely populated area just north of the capital Yaoundé. The Lékié department is bordered in the north by a curve in the Sanaga river.

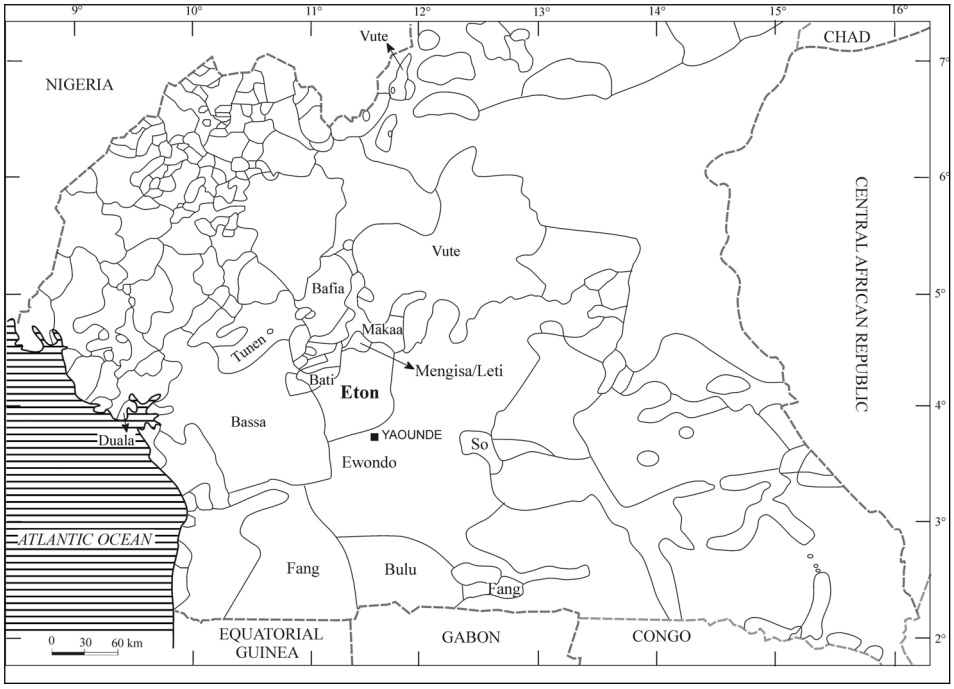


*Figure 1.* Eton and some neighbouring languages[1]

1. I wish to thank Jacqueline Renard of the RMCA in Tervuren who drew this map on the basis of a map from the Atlas linguistique de l'Afrique centrale.

The number of Eton speakers is unknown. The Cameroonian government does not include ethnic/linguistic data in its censuses. Ethnologue (Gordon, Raymond 2005) cites 52.000 speakers (based on a 1982 count/estimate by SIL). This is certainly a very important underestimation. The number cited by Bernard Delpech (1985:261), viz. 250.000 inhabitants of the Eton area in 1985, seems to be much closer to reality, although it is not entirely clear on which data these figures are based.[2] In rural areas people still raise their children in Eton, but in Yaoundé the youngest generation of Eton people often speaks only French.

Eton is a Bantu language, numbered A71 in Guthrie's classification. Together with Mengisa, Eton forms the northernmost tip of the Beti-Bulu-Fang language cluster, which reaches south into Gabon. With some effort on the part of their speakers, the languages of this cluster are mutually intelligible. However, the borders between them are clear. The mutual intelligibility with Ewondo seems to be the principal reason why Eton has never been studied before. On the one hand, Ewondo sufficed as a language of Christianisation. On the other hand, the study of smaller, more endangered languages from lesser-known subfamilies in Cameroon has often been given priority.

Little can be said about the dialectal variation within Eton as long as no dialectological study is available. Nevertheless, Ethnologue cites four dialects: Essele, Mvog-Namve, Mvo-Nangkok and Beyidzolo. However, these are the (Ewondo!) names of some lineages, which have little to do with dialect subgroupings. Eton speakers themselves generally distinguish two dialects: a northern dialect *ìtón ŋ́ʻké* and a southern dialect, which is closer to Ewondo, named *ìtón é́ʻkwé́*. Although the dialect situation is definitely more complex than this, I find the distinction useful and I will call these (super)dialects Northern Eton and Southern Eton respectively. The main differences between the subgroupings are phonological. Where Northern Eton has /ʤ/, Southern Eton often has /j/, as in /ʤɛ̀m/ versus /jɛ̀m/ 'know'. Some vocalic differences that seem spectacular at first sight are the result of different applications of the rule of glide formation as a strategy of vowel hiatus resolution. Thus, |mbóé| 'friend' is represented as /mbwé/ in Northern Eton and as /mbój/ in the Southern dialects (see Section II:6.3.2). In the Northern dialects, a non-initial |l| is often lenited to an /i/, which in turn causes raising and lengthening of the preceding vowel, giving rise to the opposition [swɛ̀ːʲ] (Northern) ~ [swàlì] (Southern) 'hide'. There are also some lexical differences and there is some dialectally

2. This is perhaps an extrapolation of the average of 80 inhabitants per square kilometre, which Delpech cites in the same article, probably excluding the important Eton community in Yaoundé (12% of the inhabitants in 1985). Given a rate of 2,5% of annual population growth in Cameroon, the number of Etons might have reached about 400.000 today.

conditioned allomorphy. The noun prefix of gender 5, for instance, is *è-* in Northern Eton and *lə̀-* in Southern Eton. See Section VII:2.5 for a difference in tense-aspect morphology.

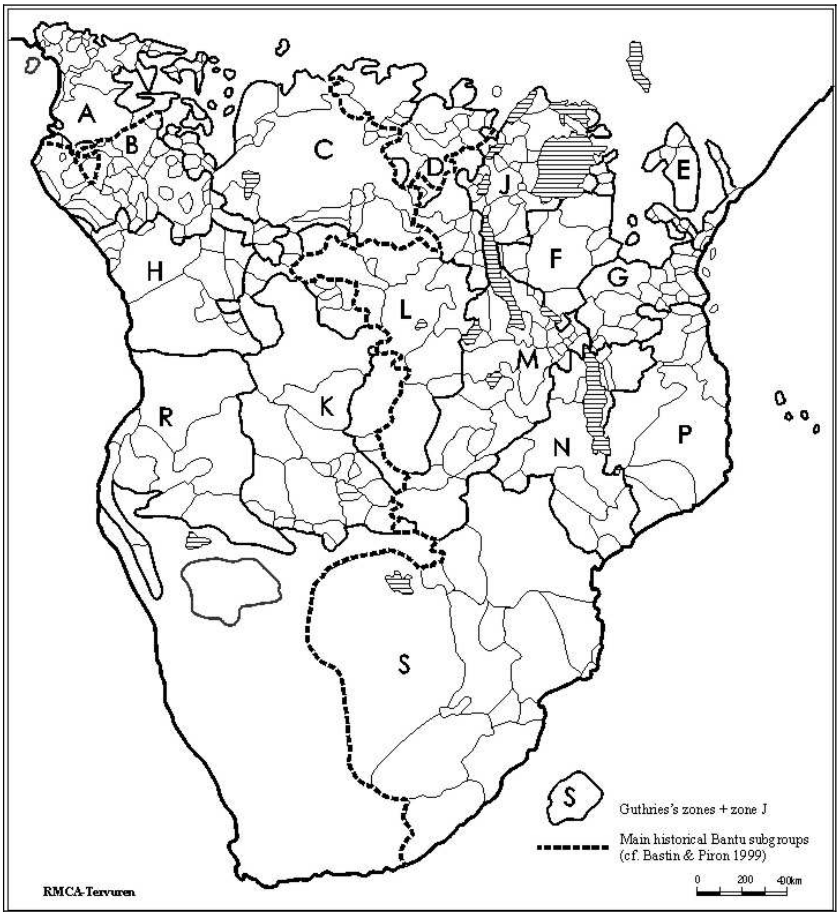


*Figure 2.* The Bantu languages. Eton is situated in the northern part of zone A

## 1.2. Brief typological sketch

Eton has in common with other North-Western Bantu languages that there are maximality constraints on stems, viz. three syllables in the case of Eton. This gave rise historically to a great number of closed syllables, which is untypical for Bantu languages. Moreover, it led to the merger of verbal derivational suffixes, which highly complicates the analysis of the verbal morphology. Erosion of segments in word-final position goes on today, giving rise to rules of word-final elision and lenition.

Eton has both tone and syllabic prominence. Every first syllable of the prosodic stem is prominent.[3] The phonetic correlate of prominence is consonant length. Onset consonants of prominent syllables are longer than other consonants, all other things being equal. The recognition of prominence is crucial for a successful description of the tone system of Eton. Prominent syllables can carry two structural tones, non-prominent syllables only one. There are two tone levels in Eton, low and high. These tones can combine in a falling pattern, a rising pattern and a downstepped high pattern. Structurally, three tones must be distinguished: low, high and dissimilating high. The opposition between structural low and high tones is equipollent. That is, a low tone cannot be analysed in terms of the absence of a high tone. Tone is the most robust part of the speech signal. When segmental material is deleted (either diachronically or synchronically) the tones that were initially linked to that material survive, giving rise to a very high number of floating tones. Nevertheless, the behaviour of tones often varies on the surface level between dialects, between idiolects but also within a single idiolect. The contrast between structural robustness and surface variability can be illustrated by means of the schematic example in (1), in which the following abbreviations are used: *v* vowel, *c* consonant, *#* word boundary, *cV* prominent syllable, *cv* non-prominent syllable, - affix boundary, *H* floating high tone. When the non-prominent stem vowel in (1a) is deleted, its high tone obligatorily survives. The surface realisation of the resulting underlying pattern can take at least four different forms. In all cases, the high tone that became floating attaches to the left and then copies to the right. This is directly reflected in the first surface pattern in (1b). The rising high melody can be simplified to low high, as in the second surface pattern in (1b). The first two surface patterns obey the rule that exists in some idiolects that tone copy across a word boundary does not feed into tone spread. The latter two surface patterns do not conform to this rule, giving rise to high tone plateauing on the prominent syllable of the second word (with or without simplification of the rising-high melody).

(1) a. |cv̀-cv̄cv́ # cv̀-cv̆| → /cv̀-cv̀cH # cv̀-cv̆/
b. [cv̀cv̆c cv́cv̆] ~ [cv̀cv̀c cv́cv̆] ~ [cv̀cv̆c cv́ˡcv́] ~
[cv̀cv̀c cv́ˡcv́]

Some of these alternatives are not described in the phonological chapter, because they were not found in the idiolects on which this description is mainly based. For instance, the tendency that a high tone does not spread if it is the result of floating high tone attachment across a word boundary (as in the first two patterns of (1b)) is stated as a rule in Chapter 2.

3. The prosodic stem coincides with the morphological stem, unless the latter begins in a vowel. In that case, any prefix is incorporated in the prosodic stem.

As is typical for a Bantu language, Eton is a gender language. There are ten genders, of which eight are overtly marked. Eton does not have locative genders. Reduplication plays an important role in nominal derivation. There are no adjectives in Eton. Verbal derivation is rather complex and very few productive rules can be established. Moreover, it is not always clear where morphological boundaries have to be drawn. Verbal inflection is relatively restricted, certainly as compared to the agglutinative systems of most Eastern Bantu languages. The complex tense-aspect distinctions are expressed by combinations of auxiliaries and affixes. The form of inflectional suffixes depends on the syllable structure of the stem to which they are attached. Due to the large number of tense-aspect categories and the scarcity of transcribed texts, it is impossible to arrive at a reliable description of the tense-aspect system. Some features of the system are clear, however, such as the three-way division of past time reference and the opposition between perfective and imperfective forms in the past. However complex the system may be, it has in common with most other grammars of Niger-Congo languages that it is regular. Eton has very few words dedicated to the propositional act of modification, i.e. no adjectives and almost no manner, time or place adverbs.

As for word order, Eton is a very consistent head-before-dependent language, except that the subject precedes the verb. One type of connective construction (a construction that connects two nominals to each other) is a bit of a challenge to this generalisation, since the second nominal is the head of the construction from a semantic point of view (2).

(2) ìsé$^{l}$sáŋ í pùpó
|ì-sə́sə̌ŋ í=pùpó|
7-unripe VII.CON=papaya
'an unripe papaya'

Regarding grammatical relations there are few or no clear syntactic criteria to distinguish between the different non-subject nominals in the clause, e.g. to distinguish between direct, indirect and oblique objects. Finally, a noteworthy characteristic of Eton syntax is the existence of numerous quasi-auxiliaries. These generally express aspect, manner or modality and are followed by the infinitive of the lexical verb. Quasi-auxiliaries are conjugated as other main verbs. They can occur in series. In that case, only the first is finite, the others being infinitival.

## 2. History, goals and methods

My descriptive work on Eton began when I was a student at the Université Libre de Bruxelles. When I made clear my intentions to make a language descrip-

tion, my teachers from the RMCA proposed Eton for two reasons. First, it was an undescribed language from a very interesting subgroup of the Bantu family. Second, there was a native speaker of Eton, Désiré Essono, who was then also a student at ULB and who was willing to invest time and effort in the description of his mother tongue as a language consultant. For my PhD research, I looked for a subject in the domain of word order typology. Still interested in Eton, I decided to make a study of word order (change) in the North-Western Bantu and Grassfields languages. Word order in these languages is interesting for several reasons. On clause level, the Cameroonian language Tunen is the only (described) Bantu language that has basic OV-order (see e.g. Mous 2003). On the level of the noun phrase, Grassfields languages present orders that are found nowhere else in the world (Rijkhoff 1990). However, it soon became clear that the languages of the region were not described well enough to allow for a thorough comparative study of their syntactic structures. Therefore, I decided that a continuation of my descriptive work on Eton was more relevant at this point.

To my knowledge, the only publication that contains data on the Eton language before my work is Klaus Piper's (1989) comparative study on the verbal morphology of the Beti-Bulu-Fang languages. This study is based on Piper's previous work on Bulu and on a fieldwork period of three months for data on the eleven other languages/dialects, including Eton. However, there are several descriptions of other Beti languages. For Mengisa (or *Njɔwi*), the closest relative of Eton, there is a doctoral dissertation by Geslin-Houdet (1984). There are also some published descriptions of Ewondo. I consulted Redden (1979) and Essono (2000).

The goal of this study is to provide a basically theory-neutral synchronic description of Eton that is useful for typologists and comparativists and that (hopefully) provides a solid base for any future research on the language. The term *theory-neutral* by no means implies that the work was carried out in ignorance of theoretical achievements in linguistics, or that its results lack theoretical relevance. Rather, it refers to the fact that this description is not meant to prove or to test the totality of claims made by a given framework. Moreover, the results are presented in a way that should remain easily interpretable long after the current theories have evolved or disappeared together with their formalisms and specific terminologies. Relatively little time was spent on finding the best term for grammatical phenomena (although I hope to have avoided using terms wrongly!), directing all the attention to the description of their function and use and to their illustration by means of contextualised examples.

The description of a language is hardly a goal in itself. As expected, the grammar of Eton contains elements that contribute to our understanding of human language and to our knowledge of the crosslinguistic variation in grammatical structures. The description of the gender system and of the grammatical behaviour of proper names, for instance, inspired a new analysis of gender in

Bantu that challenges the traditional approach to gender in both linguistic typology and comparative Bantu studies (Van de Velde 2006). However, in the current text these phenomena are discussed only to the extent that they are relevant for the synchronic description of Eton. A more elaborate discussion is or will be given in separate publications.

The position I held while working at this description required that I stay in Belgium most of the year. During two short field trips (each about seven weeks) I recorded texts, which I transcribed and analysed at home. Fortunately, there is a rather large community of Eton native speakers in Belgium, so that I could consult native speakers at all times. Most recordings were transcribed with the help of Pie-Claude Ondobo, who learned to use the spelling. Usually, Pie-Claude first made a provisional transcription with a free translation and then we listened to the recording together. I compared Pie-Claude's transcription with what I heard and we made corrections where necessary. This method allowed me to immediately elicit systematic data on new or problematic constructions encountered in the text.

Elicitation, observation and description can only be successful if they are steered by clear hypotheses. My pattern of expectations derives from a multitude of sources that often remain unacknowledged in the text. As a student at ULB, I was introduced to the structure of the Bantu languages by Yvonne Bastin and Baudouin Janssens and to the description of languages without a written tradition by Claire Grégoire. The most difficult and time-consuming part of this description was the (morpho-)phonology. Interest in the sound structure of languages is definitely an acquired taste. I acquired that taste in the courses of Didier Demolin. My description of Eton (morpho-)phonology is inspired by Meeussen (1954), Hyman (1985), Creissels (1994) and by discussions with Karel Van den Eynde and Piet Mertens. The morphological description, and especially the description of tense-aspect-modality, is shaped to a high extent by lengthy discussions with Dmitry Idiatov and thus indirectly by the Russian linguistic tradition in which he was educated. I also profited from the many discussions with my supervisors Willy Van Langendonck and Pierre Swiggers in the framework of our research project on word order typology. The general organisation of the grammar is inspired by Carlson's (1994) description of Supyire. Getting the mass of data organised was a major challenge in which the lexical database Shoebox proved to be of great help.

# Chapter 2
# Phonology

## 1. Introduction

The model used in this phonological description consists of three levels of analysis: a structural or morphophonological level (noted between vertical bars |a|), a phonological level (noted between slashes /a/) and a surface level (noted between square brackets [a]). Between the structural level and the phonological level there is a relation of representation: a structural form is represented by a phoneme, depending on its structural context. Between the phonological and the phonetic or surface level there is a relation of realisation: phonemes are realised by sounds, depending on the phonological context. This can be illustrated by means of the words *àbwǐ* 'a lot' and *m̀vwǎd* 'body hair'.

| | | |
|---|---|---|
| \|à-bùí\| | \|Ǹ-vɔ̌d\| | STRUCTURAL LEVEL |
| | representation | |
| /àbwǐ/ | /m̀vwǎd/ | PHONOLOGICAL LEVEL |
| | realisation | |
| [àbu̯ǐ] | [m̩̀vwǎd̥̀] | PHONETIC LEVEL |

This model was chosen in order to keep the distance between structural forms and surface realisations as small as possible, with a minimal number of rules. This should allow the reader to check the consistency of the morphological analysis throughout the description and to be able to construct well-formed phrases on the basis of the available structural forms. In the case of alternative analyses, the simpler one was consistently chosen, sometimes to the detriment of higher generalisations. For example, the description makes use of a dissimilating high morphotoneme. This is a morphotoneme that is represented by a low toneme if preceded by a high morphotoneme and by a high toneme elsewhere. A less *ad hoc* solution would have involved a structural succession of a high and a low morphotoneme and a series of rules that apply only in the constructions now described with a dissimilating high morphotoneme. This alternative comes at the cost of complex rule orderings, which complicate the relation between structural forms and surface realisations, at the expense of expository clarity in the chapters on morpho-syntax, whereas nothing is gained in descriptive accuracy (see Section 7.2.6 for the dissimilating high morphotoneme).

The reader should keep in mind that there is a discrepancy between the IPA notation used in the phonology chapter and the practical orthography used elsewhere. The practical orthography conforms to the general guidelines set forth for the spelling of the languages of Cameroon (Hartell 1993). In cases where confusion is possible, angle brackets will mark the practical orthography <a>. The most cumbersome differences are those where the same symbol is used for different segments in the two notations:

| IPA | | Eton orthography |
|---|---|---|
| \|j\| /j/ [j] | → | <y> |
| \|ʤ\| /ʤ/ [ʤ] | → | <j> |

Hence, /j/ alveolar approximant ≠ <j> voiced alveolar affricate. The practical orthography is presented in Section 8.

Words are separated by a space in this chapter, as everywhere in this description. This space does not have any phonological relevance. It is only meant to provide the reader with a first acquaintance with the morpho-syntactic structure of the language. Whenever a word boundary is morphophonologically relevant, it will be made explicit by the symbol #. Finally, it must be pointed out that tone marking is (evidently) phonological where square brackets point to a phonetic notation of segments. Sections 6 and 7 give an explicit account of the structural representation of tones. Section 7 also contains phonetic information on tone.

## 2. Phoneme inventory

### 2.1. Consonants

Consonants differ from vowels in that they need not be syllabic; i.e. they do not have to form the nucleus of a syllable. They are best divided into obstruents and sonorants. The former contain plosives and fricatives and can never be syllabic, the latter are nasals and approximants and can be syllabic either structurally (only nasals) or as the result of syllabification rules (see the discussion of examples (59-60)). Table 1 lists all consonant phonemes.

*Table 1.* Consonant phonemes

| | | | labial | alveolar | palatal | velar | lab-velar |
|---|---|---|---|---|---|---|---|
| obstruent | stop | -voice | p | t | ʧ | k | k͡p |
| | | +voice | b | d | ʤ | g | g͡b |
| | fricative | -voice | | s | | | |
| | | +voice | v | z | | | |
| son. | nasal | | m | n | ɲ | ŋ | ŋ͡m |
| | appr. | | | l | j | | w |

*2.1.1. Discussion of some phonemes and oppositions*

/ʧ/ & /ʤ/

Phonetically /ʧ/ and /ʤ/ are affricates. They contain a stop part and a fricative part. Phonologically, positing a separate class of affricates will lead to a proliferation of feature distinctions, so it is better to classify them as either fricatives or stops. The morphophoneme |S| is represented by /ʧ/ after |N| and by /s/ elsewhere. This alternation suggests that phonetic affricates are best categorised as fricatives phonologically (see Section 5.1.2.5).

(1) a. |ǹ-Sílá| → /ɲtʧílá/ ‘question’
b. |mì-Sílá| → /mìsílá/ ‘questions’

However, since the number of fricatives is small in Eton, I chose to range the affricates with the stops. As for place of articulation, /ʧ/ and /ʤ/ belong phonetically to a class of their own as well. They are post-alveolar. For morphonological reasons it is best to treat them as palatal consonants (see 5.1.1 & 5.1.2.3).

/k/ & /g/

The opposition between /k/ and /g/ carries a very low functional load. The distribution of /k/ is restricted to the onset of the initial syllable of prosodic stems (see Section 3.2.1). In this position, /g/ is always preceded by a non-syllabic velar nasal /ŋ/. If /k/ is preceded by a nasal, the latter is *structurally* always syllabic, but in one context this |ǹ-| is desyllabified on the phonological level.[1]

1. Namely where the gender 3 prefix *ǹ-* is retained after the gender 4 prefix *mì-*.

This gives rise, in theory, to minimal pairs. I found the following near-minimal opposition:

(2) a. |mə̀-ŋgɔ́l| → /mə̀ŋgwál/ ‘pity (pl.)’
b. |mìɴ-kɔ́l| → /mìŋkwál/ ‘ropes’

It is possible to describe these facts in terms of a phonological opposition between /k/ and a prenasalised stop /ŋg/. There definitely is a strong phonological integration between a voiced stop and a preceding homorganic nasal, as illustrated by the rule of homorganic nasal branching onset formation and the resulting (phonetic) compensatory lengthening of any preceding prominent vowel (see 6.2) and by the retention of the segmental form of a gender 3 noun prefix after the prefix of gender 4 (see III:3.3.4).

/ɲ/ & /ŋ/

The phonotactic distribution of /ŋ/ and /ɲ/ is such that both phonemes are almost in complementary distribution. The palatal nasal can only be the onset of a stem-initial syllable (where it is never followed by a stop) or the phonological representation of a homorganic nasal morphophoneme. The velar nasal, on the other hand, occurs in all positions, but at the onset of prominent syllables it is always followed by the voiced velar stop /g/, except in the word *ŋ̀ŋ́ál* ‘wife’, which is presented as an exception in 5.1.5.

*2.1.2. Functional oppositions*

The following list of forms illustrates that the occurrence of the consonant phonemes is not predictable from their context (v stands for *verb stem*):

**/p/ vs. /t/**
/pám/ ‘go out’ (v)
/tám/ ‘feather’

**/p/ vs. /ʧ/**
/pám/ ‘go out’ (v)
/ʧàm/ ‘chase away’ (v)

**/p/ vs. /k͡p/**
/pám/ ‘go out’ (v)
/k͡pám/ ‘jump over’ (v)

**/p/ vs. /k/**
/pà/ ‘shine’ (v)
/kà/ ‘help’ (v)

**/p/ vs. /b/**
/pád/ ‘pick’ (v)
/bád/ ‘simulate’ (v)

**/t/ vs. /ʧ/**
/twàg/ ‘boil’ (v)
/ʧwág/ ‘misfire’ (v)

**/t/ vs. /k͡p/**
/tám/ ‘feather’
/k͡pám/ ‘cross’ (v)

**/t/ vs. /k/**
/tɛ̀g/ ‘weaken’ (v)
/kɛ́g/ ‘break’ (v)

**/t/ vs. /d/**
/dìŋ/ ‘love’ (v)
/tìŋ/ ‘weave’ (v)

**/t/ vs. /s/**
/tám/ ‘feather’
/sǎm/ ‘flower bud’

**/ʧ/ vs. /k͡p/**
/ʧàm/ ‘chase away’ (v)
/k͡pám/ ‘jump over’ (v)

**/ʧ/ vs. /k/**
/ʧàmnì/ ‘spread out’ (v)
/kàmnì/ ‘prohibit’ (v)

**/ʧ/ vs. /ʤ/**
/ʧwág/ ‘misfire’ (v)
/ʤwág/ ‘construct’ (v)

**/k͡p/ vs. /k/**
/ùk͡pɛ̀ŋ/ ‘hare’
/ùkɛ̀ŋ/ ‘knife’

**/k͡p/ vs. /g͡b/**
/g͡bà/ ‘throw’ (v)
/k͡pāl/ ‘be talkative’ (v)

**/k/ vs. /g/**
/mìŋkwǎl/ ‘ropes’
/mə̀ŋgwál/ ‘pity (pl.)’

**/b/ vs. /d/**
/bá/ ‘marry’ (v)
/dá/ ‘lose’ (v)

**/b/ vs. /ʤ/**
/báb/ ‘warm up’ (v)
/ʤàb/ ‘be long’ (v)

**/b/ vs. /g͡b/**
/bá/ ‘marry’ (v)
/g͡bà/ ‘throw’ (v)

**/b/ vs. /g/**
/díbân/ ‘be edible’ (v)
/dígá/ ‘sting’ (v)

**/b/ vs. /v/**
/bòm/ ‘hit’ (v)
/vòm/ ‘lose oneself’ (v)

**/b/ vs. /m/**
/lób/ ‘bite’ (v)
/lóm/ ‘send’ (v)

**/d/ vs. /ʤ/**
/dá/ ‘lose’ (v)
/ʤá/ ‘be full’ (v)

**/d/ vs. /g͡b/**
/dá/ ‘to lose’ (v)
/g͡bà/ ‘to throw’ (v)

**/d/ vs. /g/**
/á bíˈdí/ ‘in the food’
/á ˈlígí/ ‘to stay’

**/d/ vs. /z/**
/dìŋ/ ‘love’ (v)
/zíŋbá/ ‘hate’ (v)

**/d/ vs. /n/**
/dàŋ/ ‘cross’ (v)
/náŋ/ ‘grow’ (v)

**/d/ vs. /l/**
/dàŋ/ ‘cross’ (v)
/láŋ/ ‘read’ (v)

**/ʤ/ vs. /g͡b/**
/ʤà/ ‘sing’ (v)
/g͡bà/ ‘lance’ (v)

**/ʤ/ vs. /g/**
impossible

**/ʤ/ vs. /ɲ/**
/ʤàb/ ‘be long’ (v)
/ɲàb/ ‘tear apart’ (v)

**/ʤ/ vs. /j/**
/ʤà/ ‘sing’ (v)
/àjá/ ‘pain’

**/g͡b/ vs. /g/**[2]
/ŋm̀g͡bél/ ‘witchcraft’
/ŋ̀gɛ́d/ ‘cruelty’

**/g͡b/ vs. /ŋ͡m/**
/g͡bà/ ‘lance’ (v)
/ŋ͡mám/ ‘be acid’ (v)

**/g͡b/ vs. /w/**
/g͡bà/ ‘lance’ (v)
/wàz/ ‘comb’ (v)

**/g/ vs. /ŋ/**
/dígá/ ‘prick’ (v)
/mìmpìŋá/ ‘cover’

**/s/ vs. /z/**
/săm/ ‘flower bud’
/zám/ ‘pleasure’

**/v/ vs. /z/**
/vá/ ‘here’
/zá/ ‘who’

2. A minimal pair is impossible, since /gb/ occurs only in the onset of prominent syllables and in that position both phonemes are always preceded by a homorganic nasal.

**/z/ vs. /n/**
/zà/ ‘hunger, famine’
/nâ/ ‘that’ (complementizer)

**/m/ vs. /n/**
/múŋ/ ‘smile’ (v)
/nùm/ ‘stink’ (v)

**/m/ vs. /ɲ/**
/múŋ/ ‘smile’ (v)
/ɲúŋ/ ‘drink’ (v)

**/m/ vs. /ŋ͡m/**
/màn/ ‘finish’ (v)
/ŋ͡mám/ ‘be acid’ (v)

**/m/ vs. /ŋ/**
/sùm/ ‘labour’ (v)
/sùŋ/ ‘discuss st’ (v)

**/n/ vs. /ɲ/**
/náŋ/ ‘grow’ (v)
/ɲáŋ/ ‘suckle (intr.)’ (v)

**/n/ vs. /ŋ͡m/**
/ǐnàm/ ‘arm’
/ŋ͡màm/ ‘eight’

**/n/ vs. /ŋ/**
/sùn/ ‘deteriorate’ (v)
/sùŋ/ ‘discuss’ (v)

**/n/ vs. /l/**
/náŋ/ ‘to grow’ (v)
/láŋ/ ‘to read’ (v)

**/ɲ/ vs. /ŋ͡m/**
/ɲámá/ ‘melt (tr.)’ (v)
/ŋ͡mám/ ‘be acid’ (v)

**/ɲ/ vs. /ŋ/**
/ɲ̀ɲám/ ‘preparation’
/ŋ̀ɲám/ ‘residue’

**/ɲ/ vs. /j/**
/ɲáŋá/ ‘suckle (tr.)’ (v)
/jàŋà/ ‘wait’ (v)

**/ŋ͡m/ vs. /ŋ/**
/zàŋ͡mál/ ‘seven’
/nʤàŋá/ ‘tontine’

**/ŋ͡m/ vs. /w/**
/ŋ͡mám/ ‘be acid’ (v)
/wág/ ‘swim’ (v)

**/l/ vs. /j/**
/láŋ/ ‘read’ (v)
/jáŋ/ ‘grill’ (v)

**/l/ vs. /w/**
/àlɔ́g/ ‘fishing technique’
/á ˩wóg/ ‘to hear’

**/j/ vs. /w/**
/jáŋ/ ‘grill’ (v)
/wáŋ/ ‘crawl’ (v)

## 2.2. Vowels

The vowel phonemes of Eton are summarised in table 2.

*Table 2.* Vowel phonemes

| | front | mid | back |
|---|---|---|---|
| 1 | i iː | | u uː |
| 2 | e eː | | o oː |
| 3 | ɛ ɛː | ə | ɔ ɔː |
| 4 | a aː | | |

The opposition between the vowels of the second and the third degree carries a low functional load. In prefixes, /ɔ/ and /o/ do not occur. Elsewhere, their phonological status is lexically determined. There exist minimal pairs, but there are many other stems in which /ɔ/ and /o/ alternate freely, sometimes depending on the idiolect.[3]

(3) /tɔ́g/ ~ /tóg/ ‘spoon’

The front vowels /e/ and /ɛ/ alternate freely in prefixes. Elsewhere, the relation between /e/, /ɛ/ and /ə/ is intricate (see Section 5.2.2). Treating them as three different phonemes is the simplest of a number of alternative analyses, even though the phonological status of schwa cannot be proved by means of minimal pairs. The front vowel of the second degree /e/ is rare. It was found only in monosyllabic stems, usually in closed word classes. There is a phonological opposition between long and short vowels. Long vowels are relatively rare. This section is concluded with a list of minimal pairs.

**/i/ vs. /e/**
/ɛ́lɛ́n dî/ ‘this palm tree’
/ɛ̀lɛ́n ˈdé/ ‘his palm tree’

**/i/ vs. /ɛ/**
/mbì̀d/ ‘filth’
/mbɛ́d/ ‘traditional guitar’

**/i/ vs. /a/**
/zíŋ/ ‘hatred’
/záŋ/ ‘dispute’

**/i/ vs. /ə/**
/dí/ ‘eat’ (v)
/də́/ ‘bury’ (v)

3. Therefore, there will be “inconsistencies” throughout the grammar in the notation of words with a back vowel of the second or third degree.

**/i/ vs. /u/**
/m̀pím/ ‘wall’
/m̀púm/ ‘blond’

**/i/ vs. /o/**
/ndím/ ‘blindness’
/ndóm/ ‘brother’

**/i/ vs. /ɔ/**
/mbí/ ‘palm nut’
/mbɔ́/ ‘grain’

**/e/ vs. /ɛ/**
/wé/ ‘kill’ (v)
/wɛ̀/ ‘laugh’ (v)

**/e/ vs. /u/**
/wé/ ‘kill’
/wú/ ‘die’

**/e/ vs. /o/**
/í ˈdé/ ‘his one’
/ìdò/ ‘member’

**/e/ vs. /ɔ/**
/wé/ ‘kill’ (v)
/wɔ́/ ‘give birth’ (v)

**/ɛ/ vs. /a/**
/lɛ̀d/ ‘be difficult’ (v)
/làd/ ‘sew’ (v)

**/ə/ vs. /u/**
/və́/ ‘to give’
/vú/ ‘to resemble’

**/ə/ vs. /o/**
/və́/ ‘give’ (v)
/vó/ ‘declare’ (v)

**/ə/ vs. /ɔ/**
/məpám/ ‘I left’
/mɔ̀ pâm/ ‘boy’

**/u/ vs. /o/**
/vú/ ‘resemble’ (v)
/vó/ ‘declare’ (v)

**/u/ vs. /ɔ/**
/kú/ ‘chicken’
/kɔ́/ ‘tuber’

**/o/ vs. /ɔ/**
/ŋ̀kóŋ/ ‘rank’
/ŋ̀kɔ́ŋ/ ‘pipe’

**/i/ vs. /iː/**
/tín/ ‘push’ (v)
/tìːnì/ ‘detach itself’ (v)

**/e/ vs. /eː/**
no minimal pair found

**/ɛ/ vs. /ɛː/**
/bɛ̀dí/ ‘put down!’
/bɛ̀ːdí/ ‘bread’

**/a/ vs. /aː/**
/mànà/ ‘finish (tr.)’ (v)
/màːnà/ ‘swear’ (v)

**/u/ vs. /uː/**
/bùlà/ ‘accumulate’ (v)
/bùːlà/ ‘stir vigorously’ (v)

**/o/ vs. /oː/**
/bóːnì/ ‘purge oneself’
/bònì/ ‘create’ (v)

## 3. The prosodic stem

### 3.1. Introduction

The position of a syllable in the prosodic stem is the most important context specification in the (mopho-)phonology and tonology of Eton, in that the first syllable of the prosodic stem is prominent as compared to the others. The prosodic stem usually coincides with the morphological stem (4a).[4] When the morphological stem is vowel-initial, the first syllable of the prosodic stem has a prefixal onset (4b). Reduplicated stems contain two prosodic stems (4c). In this chapter, the first syllable of the prosodic stem is underlined in structural representation.

(4) a. |mə-kómgó| → /məkómgó/ 'admiration'
b. |b-ìnŋgá| → /bìnŋgá/ 'women'
c. |ì-vú~vúmní| → /ìvúvúmní/ 'family member'

This section will first discuss the phonotactic skewing linked to stem-initial prominence (3.2.) and then describe the major phonetic correlate of prominence, viz. length of the onset consonant (3.3.). The structural importance of initial prominence will be illustrated throughout the sections on realisation rules (4) and representation rules (5).

### 3.2. Phonotactic generalisations

#### *3.2.1. Consonants*

The most notable phonotactic generalisation is that almost half of the consonant phonemes are restricted to the onset of prominent syllables, either as the only segment or as part of a branching onset. These are /ʤ/, /g͡b/, and /v/ and all voiceless consonants (/p, t, ʧ, k͡p, k & s/). When /ɲ/ is not the onset of a prominent syllable, it is a syllabic homorganic nasal prefix immediately preceding it. The only exceptions to this generalisation are found in borrowings. In the following examples the segment that does not conform is bold.

4. There are some cases of mismatch between the prosodic and the morphological structure of a word, especially in noun stems of which the first syllable formally resembles a gender prefix. Thus, the borrowing *mətwâ* 'car' is morphologically simple, but prosodically it contains a prefix and a stem. The first syllable contains a schwa in non word-final position and cannot carry more than one toneme, which are prosodic characteristics of prefixes. The second syllable begins in a consonant that normally occurs only in the onset of a prominent syllable.

(5) a. /àlàpágá/ ‘rabbit’ < French *lapin*?
b. /ì-nútên/ ‘minute’ < German? *Minute*
c. /sítà/ ‘sister’ < English[5] *sister*
d. /pùlàsí/ ‘Frenchman’ < French? *français*
e. /zəkúlî/ ‘school’ < English? *school*
f. /dwáktên/ ‘doctrine’ < French? *doctrine*
g. /lɛnkɔ́d/ ‘raincoat’ < English *raincoat*

A survey in a sample of 1500 words did not show a clear preference for either voiced or unvoiced stops in the onset of prominent syllables (/p/ 31% versus /b/ 69%, but /t/ 61% versus /d/ 39%). The labiovelar consonants are relatively rare in the Eton lexicon. As has been said, the stops only occur in the onset of prominent syllables, the nasal also elsewhere in at least one word (*zàŋ͡mál* ‘seven’). There are some more phonotactic restrictions concerning consonants: /d/ never shows up in suffixes and /z/ never in prefixes. The bilabial nasal /m/ is not often found at the onset of a prominent syllable, and when it is, this syllable tends to have a nasal coda.

### *3.2.2. Vowels*

As in many Bantu languages Eton shows restrictions on the co-occurrence of vowels in a stem (i.e. a root plus any suffixes). Tables 3 and 4 show collocations of vowel phonemes[6] in bisyllabic stems, where the vowels are separated from each other by one and two consonants respectively. Since /e/ is restricted to monosyllabic stems, it is left out of the tables. Note that reduplications contain two prosodic stems. They are disregarded here. Sometimes a single exception on the restrictions was found, usually in borrowings. These are given below the tables.

5. English borrowings most probably reached Eton via Pidgin English. For some borrowings, such as *zəkúlî*, it is not clear from which European language they come, the source language might be German as well.
6. In two cases the table rather represents vowel morphophonemes. First, the sequence /wa/ is often the representation of |ɔ| in a prominent syllable, and is treated as /ɔ/ in this table. An /ə/ that represents |ɛ| before a word boundary is treated as an /ɛ/ in this table. This has no consequences for the table, since the relevant representation rule is independent of the position of these vowels in the prosodic stem.

*Table 3.* Vowel collocations in bisyllabic stems ($V_1CV_2$)

| σ2→ / σ1↓ | i | u | o | ɛ | ɔ | a |
|---|---|---|---|---|---|---|
| i | + | - | - | -[4] | - | + |
| u | + | -[1] | -[3] | - | - | + |
| o | + | -[2] | + | -[5] | - | +[6] |
| ɛ | + | - | - | +[7] | - | + |
| ɔ | + | - | - | - | + | +[6] |
| a | + | - | - | - | - | + |

[1] è-ŋgúnû 'tin can', [2] òpùmá 'orange', [3] pùpó 'papaya', [4] brìké 'lighter', [5]twònĕ 'do better', [6]only in closed syllables, [7] this cell in the table refers to a lower mid central vowel, which will be analysed as a realisation of /a/ (see Section 4.2.6)

*Table 4.* Vowel collocations in bisyllabic stems ($V_1CCV_2$)

| σ2→ / σ1↓ | i | u | o | ɛ | ɔ | a |
|---|---|---|---|---|---|---|
| i | + | - | - | | - | + |
| u | + | - | - | | - | + |
| o | + | - | + | ?[1] | - | +[3] |
| ɛ | + | - | - | +[4] | - | + |
| ɔ | + | - | + | ? | + | +[3] |
| a | + | - | - | | - | + |

[1]tólbé 'noon', [2]wágbê 'rest', kwàgdè 'do really', [3]only in closed syllables, [4] this cell in the table refers to a lower mid central vowel, which will be analysed as a realisation of /a/ (see Section 4.2.6)

From these tables it can be concluded that only two structural vowels contrast in non-prominent stem syllables, viz. |i| and |a|.

## 3.3. Phonetic correlates

The phonetic correlate of prominence in Eton is consonant length. All other things being equal, onset consonants of prominent syllables (henceforth *prominent consonants*) are longer than consonants elsewhere. Table 5 presents measurements of the length of the consonants /b/, /l/ and /n/ in intervocalic position (in seconds, mean value of at least ten tokens). The left hand column gives the length of prominent consonants, the right hand column that of non-prominent

consonants.[7] The figures show that prominent consonants are more than twice as long as other consonants in the same conditions.

*Table 5*. Consonant length in spontaneous speech (mean values in seconds)

| | VC̲V | VCV |
|---|---|---|
| b | .14 | .06 |
| l | .13 | .05 |
| n | .16 | .07 |

By way of an experiment, I made a number of nonsense words with two occurrences of either /b/, /d/, /l/, /n/ or /m/, one of which is stem-initial. These nonsense words respect all phonotactic restrictions of Eton and are morphologically recognisable as nouns, consisting of an existing gender prefix and a non-existing stem, e.g. *è-nànà* (sg.), *mə-nànà* (pl.). In some of them, /m/ is a prefix that is integrated in the prosodic stem (6).

(6) a. d-ànà (sg.)
b. m-ànà (pl.)

These words were pronounced in isolation and in clauses where they agreed in gender with the verb, as predicted by their prefix, e.g. (7). Each word or clause was pronounced four times by one male speaker.[8]

(7) ènànà /mənànà 'an enana / enanas'
mə̀jɛ́n ɛ́nânà 'I saw an enana.'
mə̀jɛ́ngí mə́nânà 'I saw enanas.'[9]

7. The number of consonants of which the length in different environments can be compared is limited, since half of the consonants are restricted to the onset of prominent syllables (see Section 2.1.1). Moreover, the other consonants are often subject to lenition if not in the onset of a prominent syllable. Note, however, that lenition is optional. The measurements for /l/ and /b/ in the right hand column of Table 5 are from non-lenited occurrences. There are different ways to measure the length of a consonant. Only the relative length differences are relevant here, all tokens of the same consonant have been measured in the same way.
8. Namely Pie-Claude Ondobo. Note that the measurements presented in table 5 are based on another speaker, Désiré Essono.
9. In order to have all consonants of the nonsense words in intervocalic position, also the prefix consonants, I used different past tenses.

ɛ̀nànà ɛ́kû ‘The enana fell.’
mənànà məkû ‘The enanas fell.’

As expected, these nonsense words were all pronounced with stem-initial prominence. The voiced obstruents /d/ and /b/ were lenited in post-prominent position, but /l/ never was. This suggests that lenition of /l/ is no longer productive (see Section 5.1.3). The consonant lengths in the experiment, presented in Table 6, are comparable to those of spontaneous speech in Table 5. The mean value for prominent /m/’s in the table is calculated on the basis of the cases where /m/ is the initial consonant of the morphological stem only. Interestingly, when /m/ is a prefix consonant integrated in the prosodic stem, as in (6b), it is considerably longer, viz. 0.22 seconds on average.

*Table 6.* Consonant length in nonsense words

| | VCV | VCV |
|---|---|---|
| b | .12 | .06 |
| l | .11 | .06 |
| n | .13 | .06 |
| m | .16 | .08 |

The spectrogram of the nonsense noun /ɛ̀-nànà/ in Figure 1 shows the difference in length between a prominent and a non-prominent /n/. In this example, the length and intensity of both stem vowels are more or less equal. This is not always the case. The second stem vowel is often reduced in intensity, especially when it is not followed by a pause. In contrast, the clear difference in length of prominent versus non-prominent consonants is exceptionless. Any reduction of non-prominent vowels must therefore be seen as a secondary phonetic correlate of prominence in Eton.

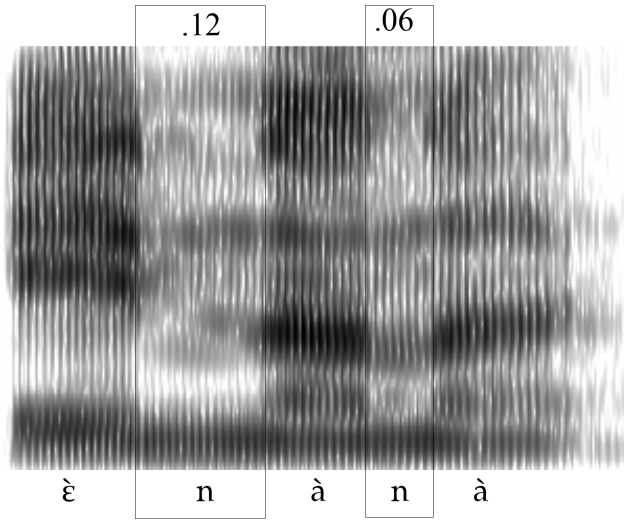


*Figure 1.* Consonant length in the nonsense word è-nànà

The length of prominent consonants is so salient that in some dialets and in some morphological contexts a prominent consonant can be reinterpreted as a succession of two consonants, as the following data illustrate. The preposition that precedes infinitives in the citation form of verbs is either *á* or *ə́*, depending on the speaker (8a). One consultant (Pierre Tomo), however, has *ə́* before stem-initial obstruents but no segmental preposition before stem-initial sonorants. In the latter context, the preposition consists of a floating high tone. The low tone prefix before the stem behaves as it does with other speakers: it downsteps a following high tone or merges with a following low tone, but the high tone attaches to the stem initial consonant and splits it in two. The first part becomes syllabic and the second part remains the onset of the stem-initial syllable (8b).

(8) a. |á # L-lán̪| → /á ˈlán̩/~/ə́ ˈlán̪/ ‘to read’ (stem: lán̩)
|á # L-wé| → /á ˈwé/~/ə́ ˈwé/ ‘to kill’ (stem: wé)
b. /Íˈlán̩/ ‘to read’
/ẃˈwé/ ‘to kill’

So far, the discussion was mainly restricted to consonants in the prosodic stem. As for their length, prefix consonants that are not part of the prosodic stem are somewhere in between prominent and non-prominent stem consonants. They are clearly shorter than stem-initial consonants in intervocalic position, but a bit longer than non-prominent stem consonants. The mean values of non-prominent prefix consonants in the experiment are 0.10 s for /m/ and 0.08 s for /b/. In sum, prefix consonants are non-prominent, but the difference with prominent consonants is less clear than within the prosodic stem.

The differences in length between consonants can be described by means of a realisation rule that weakens non-prominent consonants in intervocalic position. This weakening always involves shortening, sometimes also one of the lenition rules listed in 4.1.2.[10]

## 4. Realisation rules

Realisation rules specify the speech sounds by which phonemes are realised, depending on their phonological context. The context specification does not only contain other phonemes, but also two auxiliary phenomena: discontinuity of speech (or pause, symbolised as ♦) and positional prominence.

### 4.1. Consonants

#### *4.1.1. Devoicing of voiced obstruents*

Voiced stops are gradually devoiced before a discontinuity of speech. The voiced alveolar fricative /z/ is totally devoiced to [s]. Gradual devoicing is noted with a [ ̥ ] below the consonant symbol. In this context voiced stops are often unreleased, symbolised by the diacritic [ ̚ ]. Figure 2 shows two successive repetitions of the word *mbóg* ‘clan, lineage’ in isolation. In (a) the final [g̥] is released, in (b) it is not.

10. An alternative analysis could involve a rule that geminates the onset of prominent syllables, with a rule that blocks lenition of geminates. The latter rule appears to be universal (see e.g., Kirchner 2000). This alternative is unattractive for several reasons. It does not explain why consonants followed or preceded by a pause are as long as prominent intervocalic consonants. Moreover, there is no functional opposition between geminate consonant phonemes and non-geminates, so that geminates would have to be treated as successions of identical consonants. However, this would highly complicate syllable structure.

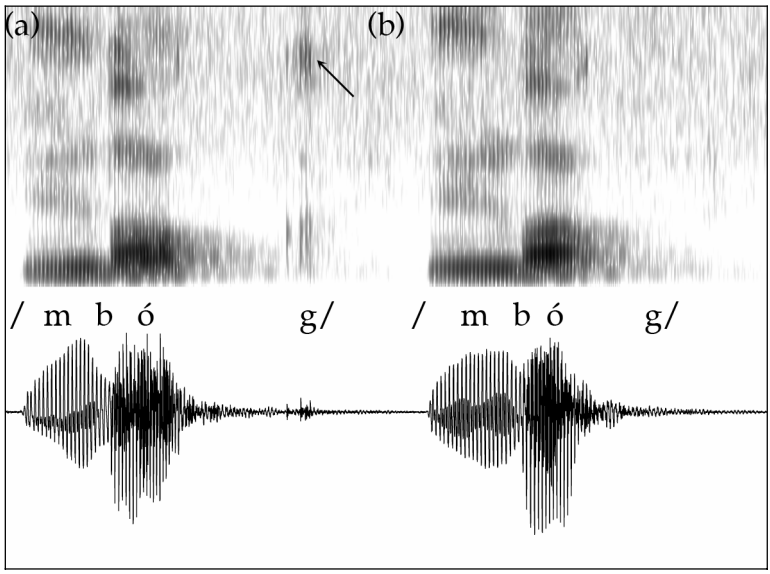


*Figure 2.* Released (a) and unreleased (b) final stop

The following examples show stems with a final obstruent before a pause and in another context. *NSP* means normal speech rate and *SSP* slow speech rate (see 4.1.2.).

(9) a. /á ˩bɛ́**b**/ ‘to be bad’ (citation form)
/__♦/ → [á˩bɛ́**b̚**] ‘to be bad’
/__C/ → [àbɛ̂**b̥**gì] ‘He has been bad.’

b. /mò**d**/ ‘man’
/__♦/ → [mò**d̚**] ‘man’
/__C/ → [bò**r**bɛ́˩tɛ́kù] (NSP)
→ [bò**d**bɛ́˩tɛ́kù] (SSP) ‘The men fall.’
/__V/ → [mò**r**àtɛ́kù] (NSP)
→ [mò**d**àtɛ́kù] (SSP) ‘The man falls.’

c. /á ˩bú**g**/ ‘to break’
/__♦/ → [á˩bú**g̚**] ‘to break’
/__V/C/ → [ìbúbú**g̥**à] ‘broken’

d. /á kù**z**/ ‘to buy’
/__♦/ → [ákù**s̚**] ‘to buy’
/__V/C/ → [àkú**n̥**ŋ̍˩káŋ] (NSP)
→ [àkú**z̥**ŋ̍˩káŋ] (SSP)
‘He has bought a guinea-fowl.’