Grammatical Contraction in Nyang’i: A Descriptive and Comparative Study

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GRAMMATICAL CONTRACTION IN NYANG’I
A DESCRIPTIVE AND COMPARATIVE STUDY

by

SAMUEL JAMES BEER

B.A., University of Oklahoma, 2009
M.A., University of Colorado, 2013

A thesis submitted to the
Faculty of the Graduate School of the
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This thesis entitled:
Grammatical Contraction in Nyang’i: A Descriptive and Comparative Study
written by Samuel J. Beer
has been approved for the Department of Linguistics

Professor Zygmunt Frajzyngier (Committee Chair)

Assistant Professor Rebecca Scarborough

Date: ___________

The final copy of this thesis has been examined by the signatories, and we find that both the content and the form meet acceptable presentation standards of scholarly work in the above mentioned discipline.

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This dissertation presents the first systematic description of the grammar of a variety of Nyang’i, a previously undescribed moribund Kuliak language once spoken in Karamoja Region, Uganda. Because Nyang’i is only remembered by a single semi-speaker, it has undergone considerable contraction; the description captures a moment in the death of a language and is an empirical study of the dissolution of a grammatical system. The description is based on a corpus of procedural and narrative texts recorded, transcribed, and translated over the course of seven months of fieldwork in Karamoja, Uganda. Topics covered include basic phonological patterns, the formal and functional criteria used to distinguish major lexical categories, the morphological structure of nouns and verbs, a selection of the grammatical functions encoded by the grammar, and the formal means used to encode them. Features of particular interest include a large system of noun number-marking suffixes, a poly-functional focus-marking clitic, and a diverse selection of petrified affixes. Basic constituent order is VAO/VS.

The description provides a benchmark study of the contracted grammar of a language in the final stage of gradual death. Comparison with related languages (Ik and Soo) reveals that a number of grammatical features, such as ATR harmony, case marking, a contrast between lexically singular and lexically plural noun roots, most derivational morphology, subject marking on the verb, and much of the free and possessive pronoun paradigms have been lost. Comparison with neighboring unrelated languages (Karimojong/Turkana and Acholi/Lango) reveals that these losses are not likely to have occurred as a result of external pressure, and are therefore best explained as structural consequences of language death proper.
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List of Abbreviations

1. First person
2. Second person
3. Third person
ATR. Advanced Tongue Root
DAT. Dative case
DM. Discourse Marker
EXCLM. Exclamation
EXIS. Existential
F. Feminine
FOC. Focus marker
FUT. Future
HORT. Hortative
IMM. Immediate
IMPS. Impersonal
IN. Inclusive
INCH. Inchoative
INST. Instrument
IT. Itive
LOC. Locative
LV. Linking vowel
M. Masculine
N. Neuter
NAR. Narrative
NEG. Negative
NOM. Nominative case
PL. Plural
POSS. Possessive
PST. Past
REAL. Realis
REL. Relativizer
RN. Relational noun
SEQ. Sequential
SG. Singular
STAT. Stative
SUB. Subordinator
TAM. Tense/Aspect/Mood
VEN. Venitive
Chapter 1: Introduction

1.1. Introduction

Nyang’i is an underdocumented and underdescribed moribund Kuliak language once spoken in northeastern Uganda. Prospects for documentation and description of Nyang’i have been limited by the sociolinguistic situation: only one healthy semi-speaker remains. This study provides a grammatical description of the surviving remnants of Nyang’i and represents one of the few case studies of a language as remembered only by its last semi-speaker. The objectives are two-fold. First, I describe the grammar of the last idiolect of Nyang’i synchronically. This idiolect has undergone drastic contraction. For example, categories such as morphological case and verbal valency changing operations, which are important features of related languages, are absent from the idiolect under study. Second, the formal grammatical means employed by this idiolect of Nyang’i, as well as the functions encoded by these means, are compared with the formal grammatical means (as well as the functions that they encode) employed both by Nyang’i’s closest relatives, Ik and Soo, and by a collection of contact languages, primarily representatives of Eastern Nilotic, like Turkana and Karimojong, and representatives of Western Nilotic, like Lango and Acooli. The end goal of this comparison is to provide a diachronic account of the grammar of this idiolect from three perspectives: 1) What aspects of the grammar of Nyang’i may be accounted for by inheritance from the mother language? 2) What aspects of the grammar of Nyang’i may be accounted for by borrowing from unrelated languages in the period after the breakup of proto-Kuliak? 3) What aspects of the grammar of Nyang’i may be accounted for as internally motivated structural consequences of language death?

1.2. The Nyang’i

1.2.1 The Nyang’i People
The Nyang’i are, along with the Ik and the Soo, one of three linguistically related ethnic groups associated with the mountains of northeastern Uganda. The neighboring Eastern Nilotic cultures have been reported as referring to these three groups collectively as ŋíkúlyâk or ŋítèúsó, both often translated as “the poor people” (Heine 1976:1, Schrock 2014:22). However, Lamphear (1976:64-73) identifies ŋíkúlyâk as the name of a Jie clan distinct from but with affinities to the Ik (Teuso), Soo (Tepes), and Nyang’i (Nyangea). Lamphear (1976:69) asserts that the name is derived from akilok, Jie for “to trap” (Lamphear 1976:69) Kuliak—derived from ŋíkúlyâk—is the name by which the Ik, Soo, and Nyang’i have most commonly been identified in academic literature since Heine (1976). The most prominent exception to this practice is later work by Ehret (e.g. 1981b, 2001, 2011), who refers to the language group as “Rub,” his reconstructed proto-Kuliak word for “people,” on account of the potentially derogatory sense associated with Kuliak. It is not clear from the literature that the Ik, Soo, or Nyang’i interpret anything about the term Kuliak as offensive. Schrock (p.c.) reports that a formally educated Ik man has told him that the Ik are not offended by being called ŋíkúlyâk; however, it is not clear whether or not the term has found acceptance among other, particularly less educated, Ik. None of the Kuliak cultures have a term referring to the Kuliak cultures as a coherent unit.

The oral traditions of the Nilotic cultures claim that the ŋíkúlyâk or ŋítèúsó were originally hunters who lived in the mountains (Heine 1976). This claim became the conventional account of the means of production of the Kuliak peoples. Colin Turnbull, who longed to work with another hunter-gathering group after his time with the Mbuti, chose Ikland as his next site for anthropological fieldwork under the assumption that the Ik were, in fact, primarily hunter-gatherers, and could thereby accommodate comparison with the hunter-gathering practices of the Mbuti (Turnbull 1972:17). Heine and König (1988:6) note that Soo was included in the sample
of the “Ethnobotanical Survey of the Semi-Arid and Arid Lands of East Africa” series because “the So constitute one of the very few East African peoples who up to now have maintained, to some extent, a hunter-gatherer economy.” However, while trapping is at least a component of their economies, each of the three remaining Kuliak cultures currently engages in subsistence agriculture as their primary means of production, and oral tradition within the Kuliak cultures suggests that they have never been pure hunter-gatherers for any extended period of time.

Dimmendaal (1989:20) asserts that, on the basis of lexical reconstructions of proto-Kuliak terms “relating to pastoralism and to agriculture,” the Kuliak cultures were more likely traditionally pastoralists who resorted to mixed hunting-gathering and agriculture to survive after some sort of culturally traumatic turn of events divested them of their cows. Heine (1985:6) claims, by way of lexical reconstructions of agricultural terms, that the Kuliak cultures must have been practicing cultivation since the time of Proto-Kuliak, which he calculates at over 3000 years ago. Wayland (1931:213-214) describes the Ik (under the name Dorobo) as primarily agriculturalists.

Agriculture is the main means of production for the contemporary ethnic Nyang’i, whose crops include /kàbír/ and /ŋam/ sorghum—in husk and removed from husk, respectively, /kàŋúm/ sesame, /mùsíd/ cowpeas, /lòmúràní/ maize, /kìr/ ‘millet,’ and /nímóògò/ cassava. The Nyang’i are largely integrated into the economy of the surrounding Napore (Karamojong; Eastern Nilotic) and Okuti (Acholi: Western Nilotic). Additionally, the contemporary Nyang’i engage in /kʷájásàk/ hunting as well as /gámáć/ trapping using /kúcòì/ pit traps. Current targets may include /òmá/ hartebeest or /kómé/ bushbuck, while big game such as /dòpík/ rhinoceroses, described in tales of hunting exploits, is no longer hunted. All Nyang’i speak the Napore variety of Karamojong as their first language.
1.2.2 The Nyang’i language

The Nyang’i term for the Nyang’i language is /dí ɲàŋí/ the speech/words/language of the Nyang’i. Nyang’i is one of three members of the Kuliak language group, joined by Soo (Tepes) and Ik (Heine 1976). The Kuliak languages have often been classified within the Nilo-Saharan language family (e.g. Greenberg 1963, Bender 1997, Ehret 1981a, 1983, 1989, Heine and Carlin 2010); however, this classification has not been demonstrated by means of regular sound correspondences between forms from Kuliak languages with consensus Kuliak etymologies and forms from Nilo-Saharan languages. As such, other scholars (e.g. Heine 1974/5, 1976, 1985, Carlin 1993, Schrock 2014) have chosen not to commit to any particular external genetic relationships for the Robic languages.

Driberg (1932), which includes a 106 item wordlist, and Heine (1974/5), which includes a 409 item wordlist and six pages of grammatical notes, are the only existing descriptive sources for the Nyang’i language. The data from Heine (1974/5) is used in Heine (1976) to assist in reconstructing Proto-Kuliak; otherwise, Nyang’i does not feature in secondary linguistic literature.

The grammatical notes in Heine (1974/5) are limited to the following basic typological overview of Nyang’i. Stop consonants contrast for voicing and nasalization across four places of articulation (bilabial, alveolar, palatal, and velar). There is a single representative of four additional manners of articulation: fricative /s/, lateral fricative /l/, lateral approximant /l/, and trill /r/, each of which has an alveolar place of articulation. There are seven vowels, with a three-way height contrast, a front/back contrast, and an ATR contrast (described as tense/lax) for the mid vowels. There are four phonetic pitches and notation for primary stress. Constituent order is V-A-O. Nouns inflect for number and are followed by their dependents (possessors,
demonstratives, numerals, and adjectives). Categories encoded on the verb include the person and number of the subject (A=S), reciprocal action, two tenses (past, present), habitual aspect, and two directions (ventive and andative). Finally, an auxiliary construction is used to encode future tense.

Nyang’i was formerly spoken throughout the Nyangea Mountains, a small range near the border between Acholiland and Karamoja. Varieties of Karamojong (Eastern Nilotic/Nilo-Saharan), including Napore and Dodoth, are dominant east of the Nyangea Mountains. Acholi (Western Nilotic/Nilo-Saharan) varieties such as Okuti may both be found west of the Nyangea Mountains, along with the Napore variety of Karamojong. Nyang’i has fallen out of everyday use—there are no longer any fluent speakers, and the Nyang’i community has almost completely shifted to the Napore variety of Karamojong. A few elders remember some words in Nyang’i (/dakʷ/ fire, /kʷe/ water, and /mɛs/ beer are the most commonly remembered words), and only a single man, Komol Isaach, is still able to produce sentences. Komol currently lives in Puda village on the western slopes of the Nyangea Mountains, and has migrated back and forth between the western slopes and eastern slopes throughout his life. Komol’s parents spoke Nyang’i at home when we was a young child, but transitioned to Karimojong while Komol still lived at home. He does not remember how old he was when this shift happened. Komol’s dominant language is Karimojong. He knows a few words in the Okuti dialect of Acholi, but claims not to speak the language. Similarly, he knows some Swahili, but claims not to speak the language. He does not speak any Ik or Soo, although he was once able to identify a word as coming from Ik (/bira/ ‘give’). Komol is the source of the database to be used in this dissertation.

1.2.3 Nyang’i: a case study in language death
Driberg’s (1932) survey of ostensible Lotuxo dialects includes the earliest ethnographic and linguistic notes on Nyang’i. Driberg notes that “the Nyangiya tribe…has dwindled now to a few hundred members only, who are rapidly forgetting their own language and prefer now to speak Dododh” (1932:608). 40 years later, Heine (1974/5:286) noted that Nyang’i was not spoken by more than 100 people, and that Karamojong was the first language for all Nyang’i under the age of 40. 40 more years have passed, and Nyang’i has fallen completely out of use, being replaced completely by Karamojong. Only fragments remain in the memories of the oldest members of the community. The most coherent remaining picture of the Nyang’i language resides in the memory of Komol Isaach.

Campbell and Muntzel (1989) offer four types of language death: sudden death, radical death, gradual death, and bottom-to-top death. Sudden death occurs when all speakers of the language die suddenly, meaning that the language is never in a contracted or obsolescent state. Radical death and gradual death are distinguished on the basis of the nature of language acquisition by the last speakers: did they fully acquire the language, and then suddenly stop using it (radical death), or did they only ever partially acquire the language as part of a protracted process of language shift (gradual death)? Bottom-to-top death occurs when a language is lost as a language of daily use, but persists in certain privileged domains. The canonical case of gradual death “is characterized by a proficiency continuum determined principally by age…younger generations have greater proficiency in the dominant language and learn the obsolescing language imperfectly, if at all” (Campbell and Muntzel 1989:185). Nyang’i does not truly present a gradual case as described by Campbell and Muntzel (1989): there is a nearly exceptionless binary between those with competence in the language and those with no knowledge of the language whatsoever (only one other man, who is older than Komol, has a
Nyang’i vocabulary larger than five or ten lexical items). However, the historical record of the Nyang’i (particularly Driberg 1932 and Heine 1974/5) paints a picture of gradual death. This is confirmed in the type of competency that presents in Komol’s idiolect. The grammatical system of Nyang’i is severely contracted, suggesting that Komol never fully acquired the language (Dorian 1982). Incomplete acquisition distinguishes this case from the radical death cases of, for example, Salvadoran Lenca (Campbell and Muntzel 1989:184) and Mesmes (Ahland 2010:32-33), in which relatively intact grammars suggest that the last speaker had once fully acquired the language. Therefore, Komol’s idiolect represents the last stage of a gradual death situation. Language death in Nyang’i was not so sudden as to produce a last speaker who had at one time had full proficiency in the language, but was sudden enough to result in a situation in which a single semi-speaker could produce coherent texts, but no other semi-speakers could even produce simple sentences.

Komol’s idiolect, characterized by lexical and grammatical gaps, is not representative of Nyang’i as it would have been spoken when it was still a vital language. The outcome of this project, then does not presume to be a reference grammar of the Nyang’i language. Instead, the research situation is that described by Crowley (2007:177-189) as “salvage fieldwork” and by Dixon (2009a:325-326) as “interview fieldwork”, and descriptive materials produced as a result of this study will represent a single contracted idiolect rather than a full language. The study of a contracted language form in the context of language shift follows in the research tradition of contributions to Dorian’s (1989) volume on obsolescent language varieties and Brenzinger’s (1992) volume on language death in East Africa.

1.3. The Database, Motivation, and Methodology
The database for this study consists of materials collected by the author during two fieldwork trips to Uganda. The first trip was from May to July 2012, and the second trip was January to May 2014. Materials include 20 single-speaker texts, totaling about 40 minutes in duration. Three of the texts deal with the history of the Nyang’i people, including such themes as the means of production, interactions with other tribes, and migration. One text provides a description of the condition of a road. Six texts are personal narratives discussing events that took place ranging from several decades ago to within 24 hours of the production of the narrative. Four texts are narratives describing factual events that Komol did not witness; all events in these texts took place several decades ago. Five texts describe cultural practices: courtship and marriage, herding cattle, building a hut, brewing beer, and initiating young men into adulthood. The final text is a biographical sketch of Komol’s father. The database additionally includes 1200 lexical items, elicited through Karamojong. Komol has provided sentences defining or using approximately 400 of these items. Example sentences were elicited by asking questions that were likely to include the target word in the answer, for example “What is /rògát/ ‘tamarind’ used for?” Example sentences, then, do not represent calques of Karamojong sentences provided by the researcher. Finally, the materials include a small collection of cultural materials, including but not limited to three Nyang’i songs and brief descriptions of the historical significance of certain toponyms. There are a number of gaps in the lexical database, including many in which Komol indicated that he remembered having heard words for particular concepts, but that he could not remember the words.

Originally, it was hoped that the synchronic description component of this study would be presented in the framework of Basic Linguistic Theory (BLT) proposed by Dixon (2009a, 2009b, 2012). However, hypothesis testing in BLT “involves generating predicted sentences on
the basis of putative structures and rules, and putting them to speakers (within a suitable context)” (Dixon 2009a:2). Komol was not comfortable providing grammaticality judgments. As such, the synchronic description relies almost entirely on distributional analysis of structures actually present in Komol’s speech. While the hypothesis-testing methodology of BLT is not feasible in this project, many of the philosophical commitments of BLT will remain foundational for the analysis—particularly in that analyses of grammatical structures in Nyang’i will be formulated on the basis of recurring form/meaning pairings rather than on the basis of a priori categories. All posited categories will be justified language-internally. These commitments, or at least intentions, align this work with the vision for descriptive linguistic research set forth in Frajzyngier & Shay (2003).

The ultimate purpose of the diachronic component of the study is to establish a case study in the structural consequences of language death. Terms from other studies of the structural consequences of language death that will be important in this component include *Abandoned Languages, Target Languages, decay, contraction, simplification, and reduction*. *Abandoned Languages*, hereafter *A*, are languages that are no longer vital. These languages are undergoing or have undergone language shift. In this study, Nyang’i is the *A* language. A *Target Language*, hereafter *T*, is a language that an *A* is shifting to. In this study, numerous languages will be treated as potential *T* languages—most notably Karimojong and Acholi. *Decay* and *contraction* are cover terms to refer to any loss of complexity in *A*, whether the complexity that has been lost is merely formal (as in the case of paradigm leveling) or is also functional (as in the loss of aspectual distinctions in Arvanitika (Trudgill 1977)). *Simplification* refers to losses in formal complexity in *A* without concomitant loss of functional complexity. *Reduction* refers to losses in functional complexity in *A* (which Trudgill (1977) takes to entail losses in formal complexity).
Of particular interest to a study of the structural consequences of language death in Nyang’i are those changes in Nyang’i that may be attributed to the fact that the language is, in fact, dying—changes that are different from normal processes of language change in a vital language. An important distinction in this respect is that between externally motivated changes and internally motivated changes. One of the main objectives of this project is to identify the structures that have undergone internally motivated contraction in Nyang’i. Externally motivated changes are “the result of influence from linguistic aspects of the dominant language” (Campbell and Muntzer 1989:190).

Externally motivated change will also be addressed. It is exemplified by the development of American Finnish agentive phrases. Whereas the Finnish impersonal verb construction “permits no overtly specified agent…American Finnish of non-first generation speakers now permits the agentive phrases” (Campbell and Muntzer 1989:190). This is attributed to “the impact of English on the structure of the [American Finnish] of imperfect speakers” (Campbell and Muntzer 1989:191).

The Finnish example is illustrative of Sasse (1992a, 1992b)’s and Dimmendaal (1998)’s observation that, while A languages often borrow heavily from their T language, resulting in a much different language variety than that which exist prior to the contact situation, the processes of borrowing and contraction are fundamentally distinct. Heavy borrowing does not entail contraction. The particular externally motivated change in the Finnish example results in arguably greater complexity—the impersonal verb construction allows more options in the obsolescent American Finnish variety than are available in the vital Standard Finnish variety. Externally motivated change that results in greater complexity in A is relatively easy to distinguish from autogenetic contraction: by definition, contraction cannot result in greater
complexity. It is less easy to distinguish—and perhaps should not be distinguished—from the processes of convergence in vital language situations.

However, externally motivated change may also result in reduced complexity. Sasse (1992a:16) notes that “the process of morphosyntactic borrowing connected with any situation of intensive language contact may involve ‘negative borrowing.’” Sasse (1992a:16) further contends that negative borrowing “is always compensated by functionally equivalent means of expression which imitate the morphosyntactic pattern of the model language.” This implies that negative borrowing is never an independent process; rather, it necessarily co-occurs with some sort of positive borrowing or grammatical restructuring that achieves at least the same level of functional complexity as the pre-borrowing state. Sasse (1992a) offers no justification for this claim, but goes on to discuss Arvanitika’s loss of the optative, and extension of the formal means encoding the conjunctive, which was a pre-existing function encoded by the grammar of Arvanitika, to cover optative meaning. Encoding both conjunctive and optative meaning with a single form is also a characteristic of the T language, Greek. By Sasse (1992a)’s claim, then, Arvanitika does not lose functional complexity by borrowing the lack of an independent formal means for encoding optative meaning. In this study, such a change would be treated as an instance of simplification of the formal domain, but not of the functional domain.

A more nuanced discussion of the relationship between contraction and negative borrowing accompanies Campbell and Muntzel (1989)’s observations about dorsal stops in Tuxtla Chico Mam, in which etymological uvular stops /q/ have merged with etymological velar stops /k/, “thus eliminating a contrast not found in dominant Spanish” (Campbell and Muntzel 1989:186-7). Campbell and Muntzel (1989:187) later use this same phenomenon as an illustration of the loss of marked features in contraction situations. What is the cause of the
neutralization of /k/ and /q/, then—is it negative borrowing, or is it simply the loss of a marked feature? Campbell and Muntzel (1989:188) take the middle road, appealing to multiple causation. Perhaps either cause would have been sufficient to bring about the attested contraction, but both causes undoubtedly contributed to it. This allows for the possibility that convergence to T—negative borrowing—could occur without concomitant positive borrowing. In other words, negative borrowing can be a motivating factor in true contraction.

Internally motivated changes (Campbell and Muntzer 1989:186-190) are the result of some fact about the structure of the language in question. Paradigm leveling and overgeneralization are frequently attested internally motivated changes. Trudgill (1977) describes the loss of aspectual contrasts in Arvanitika. This change cannot be externally motivated, as Greek (the T language) has a more elaborate aspectual system than pre-contraction Arvanitika. The loss of aspectual contrasts in Arvanitika, then, must be seen as a language-internal process of contraction.

It is hoped that this study will be useful for scholars investigating such questions as which features are lost in language death, which features are retained in language death, and why those features are lost or retained. Sasse (1992a) and Campbell and Muntzer (1989) offer differing methodologies for accounting for why a given feature has been lost in an A language. Sasse (1992a)’s discussion seems to treat true contraction situations that result in convergence toward T as no different from contraction situations that do not result in apparent convergence toward T—these cases seem to be treated simply as cases of internally motivated change. Because the change involves uncompensated functional loss, it cannot be treated as negative borrowing, and Sasse (1992a) offers no other mechanism to account for the change with reference to influence from T. Campbell and Muntzer (1989)’s discussion, however, leaves more
room for the possibility that externally motivated change can result in true contraction. This study will proceed from the belief that externally motivated change may—but will not necessarily—result in true contraction. Nyang’i has lost the entire proto-Kuliak concatenative case marking system. Nyang’i’s Nilotic T languages also lack concatenative case marking. The loss of concatenative case marking, then, could conceivably be attributed at least in part to negative borrowing, but is also a case of true contraction: while Nyang’i has compensated for the loss of the case system with more rigid word order to encode grammatical relations presumably once encoded (at least in part) by means of suffixed case markers, no compensatory changes have accommodated the range of functions in the domain of information structure that Proto-Kuliak presumably encoded by means of linear order.

Language contraction is necessarily a diachronic phenomenon. The study of linguistic contraction presumes that the scholar has in mind some conception of a “full” form of the language under study, to which the later contracted form may be compared (for discussion of what it means for a form of a language to be “full” see Menn (1989)). As described in Section 2.2, no comprehensive description of a full form of Nyang’i exists—the record is limited to the brief notes in Heine (1974/5). In some works, as in Mithun (1989)’s study of contraction in Cayuga polysynthesis, the full form is represented by closely related varieties (diverging within the past 200 years) of the language under study that have not undergone notable processes of language contraction. In Mithun (1989)’s case, the varieties in question are the moribund Oklahoma Cayuga and the more vital Ontario Cayuga. Because no other varieties of Nyang’i exist, this methodology cannot be used to establish a full form of Nyang’i. Other studies, such as Bavin (1989)’s study of lexical and morphological contraction in Warlpiri, represent the full form of the language with earlier grammatical descriptions of the language under study. While
Heine (1974/5) offers a small amount of grammatical description from a more vital time in Nyang’i’s life, the limited scope of the source precludes its being used as anything approaching a comprehensive account of a full form of Nyang’i. Finally, the full form may be represented by a theoretical construct, as in Taylor (1989)’s account of contracted forms in Gros Ventre. Taylor (1989:174) compared semi-speaker forms to “correct forms” that were determined on the basis of “the form of the Algonquian prototype,” “agreement on the form by more than one informant,” or forms that don’t include the “violation of a well-known rule.” There are no “well-known rules” to establish norms for Nyang’i forms, and there are not multiple informants to compare notes with. As such, the only method attested in the literature that can be used to establish a full form of Nyang’i by which to establish the effects of grammatical contraction in Nyang’i is reconstruction of the proto-language on the basis of forms present in related languages.

The formal grammatical means and their functions employed by Komol’s idiolect of Nyang’i will be compared with the formal grammatical means and their functions of two categories of languages: first, the genetic relatives of Nyang’i, and second, geographically proximate languages that are likely to be sources of contact-induced changes in Nyang’i. Comparison with the genetic relatives of Nyang’i will present a baseline for establishing which grammatical forms and/or functions have been lost in Nyang’i. Comparison with the geographically proximate unrelated languages will provide information about which changes are likely to be externally motivated. Changes that cannot be accounted for by external motivation may be assumed to be internally motivated.

For the purpose of this study, only the other Kuliak languages (Soo and Ik) will be treated as genetic relatives of Nyang’i. The primary sources of data on the grammar of Ik will be
Heine’s (1983) unpublished manuscript grammar and Schrock’s (2014) grammar. Schrock’s grammar represents a vital language: “Small children are still learning [Ik] as their mother tongue and typically remain monolingual for at least six years” (Schrock 2014:25). The surrounding Nilotic languages have “strongly influenced the Ik language” (Schrock 2014:25). Ik’s status as a vital language in this context allows it to serve as a sort of control in the task of distinguishing structural changes resulting from language death from those resulting from convergence toward Karimojong, the prestige language shared by both Nyang’i and Ik, in a natural language contact situation. This follows Campbell and Muntzel (1989:195)’s use of the parallel shift of relational nouns to true prepositions in vital varieties of Nahua and in moribund Pipil to caution against taking for granted that that shift in Pipil is a consequence of language death.

The primary source of data on the grammar of Soo will be Carlin’s (1993) grammar. Carlin (1993) does not represent a non-contracted form of Soo. Carlin reports that “what is to be found in the So community…are a few semi-speakers who are per definitionem imperfect speakers who speak a pathologically distorted form of the language which is being abandoned” (1993:6). However, the contracted form of Soo described by Carlin retains more features that can be reliably reconstructed as belonging to proto-Kuliak than does Komol’s idiolect of Nyang’i. For example, Soo retains three morphological cases (identified by Carlin (1993:90-93) as locative, goal, and circumstantial) compared to Ik’s eight (Schrock 2014:231-300), while Nyang’i has not retained any traces of morphological case. Similarly, Soo retains a full free and bound (as subject marking on verbs) pronoun paradigm with singular and plural contrasts for first, second, and third person, plus an inclusive/exclusive distinction for first person plural, while the Nyang’i pronominal system has collapsed in Komol’s idiolect, with Komol only using
first and second person singular personal pronouns consistently. Therefore, while Soo does not represent a vital, uncontracted language, it does represent a significantly less contracted form than Nyang’i, and therefore can provide additional insight into what forms and functions characterized proto-Kuliak grammar. Heine (1976), written before the publication of any reasonably comprehensive grammatical descriptions of any Kuliak language, is the only comprehensive attempt at reconstruction of proto-Kuliak grammar to date.

Wayland (1931) provides a list of 38 words from a language that he calls Dorobo which, if it were to prove to be a separate language, would be a fourth Kuliak language; Schrock (2015) has provided anthropological, sociolinguistic, and linguistic evidence that Dorobo was, at most, merely a dialect of Ik.

Two phyla have an attested history of close contact with the Kuliak languages: Nilo-Saharan and Afro-Asiatic. Within Nilo-Saharan, Kuliak languages have been in particularly close contact with languages from four branches of Eastern Sudanic: Eastern Nilotic, Western Nilotic, Southern Nilotic, and Surmic. The timeframe of interest for this study begins with the breakup of what has been termed Western Kuliak—the proto-language shared by both Soo and Nyang’i. Since the breakup of Western Kuliak, there is only significant evidence for contacts with Eastern Nilotic and Western Nilotic. Eastern Nilotic will be represented primarily by grammatical data from Turkana (Dimmendaal 1983). Turkana is mutually intelligible with Karimojong, and is much better described than Karimojong, and so will be used as a proxy for it. Vossen (1982)’s reconstructions of Eastern Nilotic will offer an additional valuable resource. Western Nilotic will be represented by grammatical data from Lango (Noonan 1992).

1.4. Organization of the dissertation
The dissertation consists of an introduction and ten body chapters. The contents of each section are briefly sketched below:

The introduction consists of a sketch of the sociolinguistic situation, a typological overview, a review of the literature dealing with Kuliak languages and with the structural consequences of language death, and a brief survey of the database to be employed in the study.

Chapter 2 provides a description of Nyang’i phonology. The chapter presents the consonant and vowel inventories, the phonotactics, the prosodic features (including tone, which is lexically specified but not contrastive, and a much-contracted system of ATR harmony), and alternational phenomena.

Chapter 3 provides a survey of the lexical categories found in Nyang’i. Two major open class lexical categories are proposed: noun and verb are distinct from each other in both form and function. Additionally, I propose six closed class categories, including a very small set of adjectives, pronouns, adverbs, adpositions, numerals, and subordinators.

Chapter 4 provides a description of Nyang’i nominal morphology. This chapter will begin with discussion of attested shapes of nouns. At least four distinct subclasses of nouns exist in Komol’s idiolect: common count nouns, common non-count nouns, relational nouns, and kinship terms. Morphological properties of each are discussed in turn. Finally, each suffix that may be affixed to Nyang’i nouns is treated. No noun prefixes exist in Nyang’i. Functions encoded by nominal suffixes include number (uninflected singular/inflected plural), demonstrative reference, focus and possession.

Chapter 5 provides a description of Nyang’i verbal morphology. This chapter begins with discussion of attested shapes of verbs. A series of apparently functionless verb formatives has been identified. These recurring /-VC/ forms, often following CVC roots, do not appear to
encode any function synchronically. All attempts by the researcher to recombine any particular formative with roots that that formative had not been attested on resulted in rejection of the new word by Komol. The verbal formatives will be discussed in turn. Four productive derivational affixes remain in Nyang’i. Two are directional: andative /-u(a)/ and ventive /-ac/. The third is the inchoative /-icik/. The fourth, /-(e)se/ resembles the Ik impersonal sequential; however, I present reasons suggesting that the sequential analysis is inadequate.

Chapter 6 provides a description of Nyang’i adverbs. The Nyangi’ adverbs are divided into two syntactically-defined sets. The first set occurs clause-finally. These adverbs, in turn, belong to two semantic sets: specific times and manner modifiers of verbs. The second set may occur between the verb and the core arguments (S/A/O). These primarily belong to a single semantic set: markers of TAM functions that do not identify precise timepoints.

Chapter 7 provides a description of Nyang’i closed class words. The formal properties of Nyang’i pronouns, adjectives, adpositions, numerals, and subordinators are briefly summarized. Detailed analysis of the functions of the closed class words will be reserved for later chapters.

Chapter 8 provides a sketch of the noun phrase. The noun phrase consists of words that can function together as an argument (whether core or oblique) of a verb or as an argument of a non-verbal sentence. A minimal noun phrase consists of either a noun or a pronoun. Modifiers within the noun phrase may include possessors, numerals, demonstratives, and relative clauses.

Chapter 9 provides a sketch of the grammar of the Nyang’i core clause, which consists of the main clause verb and its arguments that do not take explicit marking for their functions. In this chapter I define the core clause, describe grammatical role assignment in the core clause, and describe the role of non-active verbs in heading the core clause. Such core clause heads include adjectives and existential/locational verbs.
Chapter 10 provides an introduction to subordination strategies in Nyang’i, focusing particularly on relativization an clausal adjuncts.

Chapter 11 surveys the structural losses that have been identified in the preceding nine chapters. In it I distinguish externally-motivated from internally-motivated losses, and speculate as to which internally-motivated losses are specifically caused by language death as opposed to which internally-motivated losses can be accounted for by language drift.

1.5. Conclusion

Nyang’i is a de facto extinct language belonging to a language cluster with a poorly understood history that has been of some typological interest. Salvage fieldwork in Nyang’i has provided a database of grammatical and lexical data that will be of interest to a variety of disciplines. For the field of historical linguistics, this data will provide new insight into the internal structure of the Kuliak language family and into contact influences from other languages. For the field of language death, this data provides a rare case study of a language at the final stages of gradual language shift. The data will provide further insight into the question of what is lost and what is retained in the context of language shift. Using methodology from the field of comparative linguistics, the proposed dissertation will, in addition to providing as comprehensive a description of the last Nyang’i idiolect as possible, provide a benchmark study of a language death situation that, it is hoped, will be useful for historical linguists and scholars of language death alike.
CHAPTER 2  PHONOLOGY

2.1.  Introduction

Nyang’i consonants contrast at five places and for seven manners. Stops contrast for voicing. Simple velar stops contrast with labialized velar stops. The vowel system consists of nine vowels at three heights. Backness and ATR are contrastive for non-low vowels, and there is a single low vowel. ATR contrasts are subject to a high degree of intra-speaker inconsistency. High [-ATR] vowels have restricted distribution. Closed syllables occur only in two contexts: word-finally, and as a result of syncope. All onsets and codas are simple. Pitch is not lexically or grammatically contrastive, but pitch features must be part of a speaker’s lexical representation for each word, as they are unpredictable. Pitch features behave in systematic ways in morphological concatenation. Three surface tones are present: high, low, and falling. Falling tones are only found in the last syllable of a word, and are taken to be the result of both a high and a low tone associating to the same syllable. All word-level pitch processes in Nyang’i can be accounted for with reference to two tone levels: high and low.

2.2.  The consonantal system

The following consonant phonemes are attested in Nyang’i:

<table>
<thead>
<tr>
<th></th>
<th>Bilabial</th>
<th>Alveolar</th>
<th>Palatal</th>
<th>Velar</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop</td>
<td>p b</td>
<td>t d</td>
<td>c ɟ</td>
<td>k kʷ g gʷ</td>
<td></td>
</tr>
<tr>
<td>Nasal</td>
<td>m</td>
<td>n</td>
<td>n j</td>
<td></td>
<td>η</td>
</tr>
<tr>
<td>Fricative</td>
<td>s, zʲ</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trill</td>
<td>r</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lat Approx</td>
<td>l</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lat Fricative</td>
<td>i</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approximant</td>
<td>(w)</td>
<td></td>
<td>(j)</td>
<td></td>
<td>(h)</td>
</tr>
</tbody>
</table>

Due to the restricted nature of the lexicon (discussed in 1.3), few true minimal pairs are available. Contrastive distribution, then, will be demonstrated with near-minimal pairs. Nyang’i primarily employs four places of articulation for [+cons] segments (supplemented by a marginal
glottal fricative): bilabial, alveolar, palatal, and velar. Only stops contrast for place of articulation, and they additionally contrast for voicing and nasalization at each place. All other [+cons] segments (again excepting the glottal fricative) have alveolar place of articulation and do not, with the exception of the rare /z/, contrast for voicing. The final set of consonants, the approximants /w/, /j/, and /h/, occur in restricted distributions. /w/ and /j/ are in complementary distribution with the corresponding vowels /u/ and /i/, respectively, and /h/ may only occur word-initially.

2.2.1. Place contrasts:

Voiced, voiceless, and nasal stops each contrast at four places: bilabial, alveolar, palatal, and velar. Voiced stops are often produced as implosives; however, ingressive airstream is not contrastive. Particularly in the context of low vowels (/a/), /k/ is often produced as a uvular [q]. Place contrasts are not relevant for other manners of articulation.

<table>
<thead>
<tr>
<th>Initial</th>
<th>Inter-vocalic</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>p párák</td>
<td>pócik</td>
<td>‘east’</td>
</tr>
<tr>
<td>t tàcák</td>
<td>tóbók</td>
<td>‘load gun’</td>
</tr>
<tr>
<td>c càrát</td>
<td>cédók</td>
<td>‘plant sp.’</td>
</tr>
<tr>
<td>k kàrác</td>
<td>kóđók</td>
<td>‘stool’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Initial</th>
<th>Inter-vocalic</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>b básán</td>
<td>bùák</td>
<td>‘buffalo’</td>
</tr>
<tr>
<td>d dócán</td>
<td>dòón</td>
<td>‘gather’</td>
</tr>
<tr>
<td>j jòsák</td>
<td>jùék</td>
<td>‘lip plug’</td>
</tr>
<tr>
<td>g gúsét</td>
<td>góık</td>
<td>‘film on beer’</td>
</tr>
</tbody>
</table>
### Table 2.3: place contrasts for nasal stops

<table>
<thead>
<tr>
<th></th>
<th>Initial</th>
<th>Inter-vocalic</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>m</strong></td>
<td>màréŋ ‘fence’</td>
<td>tómín ‘ten’</td>
<td>làgám ‘collarbone’</td>
</tr>
<tr>
<td></td>
<td>môròk ‘throat’</td>
<td>ñâmik ‘sorghums’</td>
<td>kijómk ‘seed(s)’</td>
</tr>
<tr>
<td><strong>n</strong></td>
<td>nàric ‘eyebrow’</td>
<td>pònk (\text{‘}) ‘lips’</td>
<td>bàdán ‘side of body’</td>
</tr>
<tr>
<td></td>
<td>nősán ‘animals’</td>
<td>mànik ‘gardens’</td>
<td>dôpón ‘blink’</td>
</tr>
<tr>
<td><strong>ŋ</strong></td>
<td>nàcèl ‘thorn fence’</td>
<td>tujèn ‘grain waste’</td>
<td>bàsàŋ ‘buffalo’</td>
</tr>
<tr>
<td></td>
<td>ñonk ‘knead’</td>
<td>kàpûm ‘sesame’</td>
<td>bàkàŋ ‘chin’</td>
</tr>
<tr>
<td><strong>ŋ</strong></td>
<td>ñatac ‘run to here’</td>
<td>ñàgàt ‘enemy’</td>
<td>kút tâtàŋ ‘ant species’</td>
</tr>
<tr>
<td></td>
<td>ñôdò ‘wound’</td>
<td>ñàngî ‘Nyang’i’</td>
<td>tɔròŋ ‘back’</td>
</tr>
</tbody>
</table>

### 2.2.2 Voicing and nasal contrasts:

The previous sets showed that voiceless, voiced, and nasal stops each contrast with respect to place of articulation. The following sets show that voicing and nasal contrasts are found at each of the four places of articulation. Voiced, voiceless, and nasal bilabial stops may occur in word-initial, intervocalic, and word-final positions:

### Table 2.4 Voicing and nasal contrasts for bilabial stops

<table>
<thead>
<tr>
<th></th>
<th>Initial</th>
<th>Inter-vocalic</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>p</strong></td>
<td>pisák ‘spit to bless’</td>
<td>ñàpùà ‘dust’</td>
<td>dōp ‘rhino’</td>
</tr>
<tr>
<td></td>
<td>pòkés ‘shake’</td>
<td>rùpás ‘push’</td>
<td>nēp ‘person’</td>
</tr>
<tr>
<td><strong>b</strong></td>
<td>bìsèt ‘pole’</td>
<td>ñàbàò ‘trapdoor’</td>
<td>rùb ‘people’</td>
</tr>
<tr>
<td></td>
<td>bōkàŋ ‘chin’</td>
<td>tábás ‘wood shaving’</td>
<td>hab ‘hot’</td>
</tr>
<tr>
<td><strong>m</strong></td>
<td>mìpòŋ ‘sibling’</td>
<td>ñùmàk ‘after’</td>
<td>röm ‘leaf’</td>
</tr>
<tr>
<td></td>
<td>mûkûŋ ‘black ant’</td>
<td>rùmèn ‘spear handle’</td>
<td>sîm ‘fibers’</td>
</tr>
</tbody>
</table>

Voiced, voiceless, and nasal alveolar stops may occur in word-initial, intervocalic, and word-final positions:

### Table 2.5 Voicing and nasal contrasts for alveolar stops

<table>
<thead>
<tr>
<th></th>
<th>Initial</th>
<th>Inter-vocalic</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>t</strong></td>
<td>túd ‘five’</td>
<td>kótór ‘oriibi’</td>
<td>wàt ‘dry’</td>
</tr>
<tr>
<td></td>
<td>tábás ‘wood shaving’</td>
<td>pâtéʔ ‘tendon’</td>
<td>mûrût ‘neck’</td>
</tr>
<tr>
<td><strong>d</strong></td>
<td>dud ‘small gourd’</td>
<td>kòdik ‘cry’</td>
<td>hàd ‘tree’</td>
</tr>
<tr>
<td></td>
<td>dàpá ‘cockroach’</td>
<td>bàdàn ‘side of body’</td>
<td>mûsíd ‘cowpeas’</td>
</tr>
<tr>
<td><strong>n</strong></td>
<td>nēp ‘person’</td>
<td>pònk ‘lips’</td>
<td>ràn ‘sleep/fall’</td>
</tr>
<tr>
<td></td>
<td>nàpik ‘nose’</td>
<td>tânà ‘how many’</td>
<td>kûdòn ‘old’</td>
</tr>
</tbody>
</table>
Table 2.6 Voicing and nasal contrasts for palatal stops

<table>
<thead>
<tr>
<th>Initial</th>
<th>Inter-vocalic</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>c</td>
<td>‘daily’</td>
<td>‘wise’</td>
</tr>
<tr>
<td></td>
<td>‘plant sp.’</td>
<td>‘tree sp.’</td>
</tr>
<tr>
<td>j</td>
<td>‘broom’</td>
<td>‘long’</td>
</tr>
<tr>
<td></td>
<td>‘feces’</td>
<td>‘grindstone’</td>
</tr>
<tr>
<td>nj</td>
<td>‘Nyang’i’</td>
<td>‘whistle’</td>
</tr>
<tr>
<td></td>
<td>‘woman’</td>
<td>‘sesame’</td>
</tr>
</tbody>
</table>

Voiced, voiceless, labialized voiced, labialized voiceless, and nasal velar stops may occur in word-initial, intervocalic, and word-final positions:

Table 2.7 Voicing and nasal contrasts for velar stops

<table>
<thead>
<tr>
<th>Initial</th>
<th>Inter-vocalic</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>k</td>
<td>‘mortar’</td>
<td>‘black ant’</td>
</tr>
<tr>
<td></td>
<td>‘breast’</td>
<td>‘shoulder’</td>
</tr>
<tr>
<td>kw</td>
<td>‘water’</td>
<td>‘fire’</td>
</tr>
<tr>
<td></td>
<td>‘vagina’</td>
<td>‘eye’</td>
</tr>
<tr>
<td>g</td>
<td>‘ox/bull’</td>
<td>‘big, wide’</td>
</tr>
<tr>
<td></td>
<td>‘tree sp.’</td>
<td>‘stone’</td>
</tr>
<tr>
<td>gw</td>
<td>‘food’</td>
<td>‘flexible’</td>
</tr>
<tr>
<td></td>
<td>‘giraffe’</td>
<td>‘tooth’</td>
</tr>
<tr>
<td>nj</td>
<td>‘mingling stick’</td>
<td>‘Nyang’i’</td>
</tr>
<tr>
<td></td>
<td>‘wound’</td>
<td>‘enemy’</td>
</tr>
</tbody>
</table>

2.2.3 Manner contrasts for alveolars:

Six manners of articulation contrast at the alveolar place of articulation: stop, nasal, fricative, trill, lateral approximant, and lateral fricative. Of these manners, only stops also contrast for voicing, as was illustrated in Section 2.2.2. Additionally, there is a very infrequent palatalized alveolar fricative (appearing in only three words): 1

Table 2.8 Voicing and nasal contrasts for velar stops

<table>
<thead>
<tr>
<th>Initial</th>
<th>Inter-vocalic</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>d</td>
<td>‘lightweight’</td>
<td>‘cry’</td>
</tr>
<tr>
<td></td>
<td>‘gather’</td>
<td>‘bridge of nose’</td>
</tr>
<tr>
<td>n</td>
<td>‘people’</td>
<td>‘lips’</td>
</tr>
<tr>
<td></td>
<td>‘animals’</td>
<td>‘how many’</td>
</tr>
<tr>
<td>s</td>
<td>‘rock cliffs’</td>
<td>‘kidneys, alt.’</td>
</tr>
<tr>
<td></td>
<td>‘pit’</td>
<td>‘spit to bless’</td>
</tr>
</tbody>
</table>

1 Here and throughout, blacked out cells indicate unattested environments.
Each alveolar consonant may occur word-initially, inter-vocally, or word-finally, with the exception of /zʲ/, which does not occur word-finally. Two of the three words taking /zʲ/ are from core vocabulary. The third is a loan from Karimojong that has undergone phonological change independent from Karimojong. /zʲ/ appears to have a different etymological source in each of the three words. For more information on the development of /zʲ/, see Section 2.6.1.

### 2.2.4 The status of the coronal fricative:

Three coronal fricative allophones are attested: [s], [z], and [ð]. A significant degree of free variation obtains for these three forms, including intra-word variation from utterance to utterance: e.g. /esu/: [esu] (N1:89), [ezu], and [eðu]. Subjectively, variants taking [s] occur more frequently than the other variants in slow speech.

Nearly all instances of coronal fricatives in word-initial position surface as [s]. [zɔ́t]/[sɔ́t] bee and [ziét]/[siéť] ‘elephant’ are exceptions, in that [z] sometimes occurs in word-initial position (although still in free variation with [s]). [ð] occurs in word-initial position only in [zuzɛ]/[ðuðɛ] ‘send or drive’ and [ðɛke] PAST. Intervocally, all three phones are attested, often with all three options available for a single word, as with /esu/ above (although a tendency for [s] to surface with above average frequency in slow speech suggests that this variation is not completely free). Coronal fricatives may occur as the first element of word-internal consonant clusters as a result of syncope (discussed in Section 2.4.3). In such cases, they tend to surface as
either [z] or [ð]: /kasit-an/ \(\rightarrow\) [kaztan] ‘anuses’, /mes-itin/ \(\rightarrow\) [með-tin] ‘beers.’\(^2\) There is only one attested instance of a coronal fricative occurring as the second element of a consonant cluster. In this case, [s] surfaces: /témísà/ \(\rightarrow\) [támsà] ‘estimate size or volume’. Word-finally, variation is completely free between the three phones. /s/ has been chosen as the phoneme because [s] is the only phone that is ever required in a particular context, i.e. word-initially and because [s] is produced more frequently than the other variants in slow speech, suggesting that it is perceived as more basic by the speaker.

2.2.5 The status of the lateral fricative:

The lateral fricative is one of two consonant phonemes found in Nyang’i that does not occur in Karamojong, Nyang’i’s Eastern Nilotic neighbor (the other being /z\^p/, the palatalized alveolar fricative). It is attested in very few words, and the pronunciation of these words varies drastically from token to token. Many such words may alternately be produced with an allophone shared by a different phoneme, usually a plain alveolar fricative or lateral (e.g. /hel/ \(\rightarrow\) [hɛl] \(\sim\) [hɛɬ] \(\sim\) [hɛð] \(\sim\) [hɛð] ‘thirst’). This sound is treated as a separate phoneme because, while it is true that most instances of /ɬ/ may alternately be produced as [l] or [ð], the inverse is not also true: /l/ and /s/ may not alternately be produced as [ɬ]. Similarly, /l/ may not be produced as [ð] and /s/ may not be produced as [l]. The phones that may be produced as [l] are in free variation with [ð] and [l], but are in contrastive distribution with phones that may only be produced as [l] or [ð].

An additional allophone of /ɬ/ is [ʃ]. Schrock (2014:38) notes that in the related language Ik, the voiceless lateral fricative [l] “is now only used by the eldest of speakers [having shifted to

\(^{2}\) The transcriptions here are narrow in the sense that they reflect the syncope of the second vowel, which I posit exists in the underlying representation. Other phonetic details that are not relevant to the point under discussion, such as the precise articulation of the coronal fricative, are not captured.
Any given speaker tends to use either (l) or /ʃ/ but not both.” This shift, manifested as chronolectal variation in Ik, has an analog in intra-speaker variation in Nyang’i.

### 2.2.6 [-consonantal] consonant phones: restricted distribution:

The final three consonant phones, /ʃ/, /w/, and /h/, are exceptional in two ways: they lack close supra-laryngeal constriction (i.e. they are [-consonantal]), and their distribution is restricted:

<table>
<thead>
<tr>
<th></th>
<th>Initial</th>
<th>Inter-vocalic</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>j</td>
<td>jèét</td>
<td>‘meat’</td>
<td>nàjá</td>
</tr>
<tr>
<td></td>
<td>jóg</td>
<td>‘people’</td>
<td>gùjèk</td>
</tr>
<tr>
<td>w</td>
<td>wélék</td>
<td>‘flapping’</td>
<td>lòwé</td>
</tr>
<tr>
<td></td>
<td>wàrát</td>
<td>‘red dirt’</td>
<td>kàràwát</td>
</tr>
<tr>
<td>h</td>
<td>hàd</td>
<td>‘tree’</td>
<td></td>
</tr>
<tr>
<td></td>
<td>hòd</td>
<td>‘road’</td>
<td></td>
</tr>
</tbody>
</table>

The glides [j] and [w] may occur word-initially or inter-vocally. They are not attested word-finally. There are many cases in which [j] and [w] may be best analyzed as vowels. They will be addressed in section 2.3.5.

Nyang’i’s glottal fricative [h] may only occur word-initially. Similar phones are found in many other languages of the area, and grammatical descriptions often treat them as epenthetic sounds without an independent status. Dimmendaal (1983:45) observes that “The (universal) tendency to avoid syllables without an onset is…observable in Turkana. Most informants insert either an approximant [h], or a glottal stop [ʔ] when uttering a word with an initial vowel in isolation.” Carlin (1993:15) notes that “[h] is a voiced fricative approximant and has no distinctive function. It may occur word-initially preceding a vowel.”

Vowel-initial words are attested in Nyang’i, as illustrated in Section 2.3.3. [h] is often optionally inserted in words with initial vowels—most VC words may optionally be produced as hVC. Optional insertion is less common for polysyllabic words beginning in a vowel. However,
for a small number of words, [h] is not optional. Examples of such words include /had/ ‘tree’ and /hod/ ‘road, trail’, as well as /hadik/ and /hodik/, their respective plurals. The prohibition against producing /had/ and /hod/ without the initial glottal is not predictable from the phonological context. The unpredictable categorical occurrence of [h] word-initially in words such as /had/, /hod/, /hadik/, and /hodik/ indicates that /h/ should be treated as a phoneme in Nyang’i.

An anomalous occurrence of /h/ is found in [hol] ‘donkey’, which is also frequently attested as [wol]. This free alternation between [h] and [w] is evocative of Schrock (2014:40)’s observation that Ik words such as /úd/ ‘grass sp.’ and /úg/ ‘dig’ frequently have surface pronunciations like [ʷúd] or [ʰúd] and [ʷúg] or [ʰug].

2.3. The vowel system

Nyang’i uses 9 contrastive vowels:

<table>
<thead>
<tr>
<th></th>
<th>Front</th>
<th>Central</th>
<th>Back</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>+ATR</td>
<td>-ATR</td>
<td>+ATR</td>
</tr>
<tr>
<td>High</td>
<td>i</td>
<td>(i)</td>
<td>u</td>
</tr>
<tr>
<td>Mid</td>
<td>e</td>
<td>(ɛ)</td>
<td>o</td>
</tr>
<tr>
<td>Low</td>
<td></td>
<td>a</td>
<td></td>
</tr>
</tbody>
</table>

2.3.1 ATR Contrasts

Non-low vowels are tentatively paired for ATR contrasts. Examples of near-minimal pairs for ATR contrasts follow in (2.1):

(2.1)
/i~ɪ/  pisák      ‘bless by spitting’  pisık     ‘lower part of limb’
/u~ʊ/  múgús     ‘knot in a log’      mómós     ‘hedgehog’
/e~ɛ/  gɛs       ‘warthog’          gɛs       ‘ox/bull’
/o~ɔ/  ɲɔdɔc      ‘wound’           ɲɔkɔc     ‘cover/close’

No such pairing obtains at the phonetic level for the low vowel. The ATR contrasts are tentative at best. The speaker indicated that he heard a difference between +ATR and –ATR vowels produced by the author, and further indicated that one vowel was right and the other wrong for a given word under investigation. However, the judgment as to which vowel was right
and which was wrong sometimes (but not always) changed from day to day. The examples presented here, then, should be treated with some suspicion.

The strongest evidence that an ATR contrast still exists is found in the perfect minimal pair for ‘warthog’ and ‘ox/bull’. The author was able to produce the distinction between the two words such that the speaker reliably identified the intended meaning (e.g. productions with the [-ATR] vowel [ɛ] were reliably identified as ‘ox/bull’, while productions with the [+ATR] vowel [e] were reliably identified as ‘warthog’). While no such perfect minimal pairs were found for any of the other three sets, the existence of the apparently perfect minimal pair for the mid-front vowel and the fact that the speaker was able to identify differences between the two sounds with only one identified as correct for a given word suggests that an ATR contrast persists.

[+hi–ATR] vowels are restricted in distribution with respect to the other seven vowels. They do not occur word-initially, and they do not contrast for length. Their status is to be considered even more suspect than that of the [-hi -ATR] vowels.

### 2.3.2 Vowel height

Height contrast between low and mid vowels is demonstrated in (2.2), which pairs /a/ with both [+ATR] and [-ATR] versions of the mid vowels to show that it is in contrast with both sets:

(2.2)
/a̯e̯̯̯/ ɲám ‘sorghum’ ɲém ‘rough’ ɲés ‘mingling stick’
/o̯o̯a̯/ bòkò ‘chin’ bòlòc ‘harvest sorghum’ bádán ‘side of body’

Height contrast between mid and high vowels is demonstrated in (2.3):

(2.3)
/i̯e̯/ ɲíṣík ‘lower part of limb’ bésìèk ‘ears’
/i̯e̯̯̯/ rídáán ‘be narrow, squint’ rékán ‘chew through’
/u̯a̯/ múmúp ‘hedgehog’ gómók ‘tree species’
/o̯u̯/ bòròk ‘aardvark, pig’ bùrúŋ ‘mucus’
2.3.3 Vowel distribution

Vowels may occur word-initially, between consonants, and word-finally. [h] may optionally occur before some vowel-initial words. For additional discussion of [h], see Section 2.2.6. The distribution of the Nyang’i vowels is illustrated in Table 2.10:

Table 2.10 Vowel distribution in Nyang’i

<table>
<thead>
<tr>
<th>Initial</th>
<th>Medial</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>ímén</td>
<td>tisít</td>
</tr>
<tr>
<td>i</td>
<td>ìsít</td>
<td>pisík</td>
</tr>
<tr>
<td>e</td>
<td>èdék</td>
<td>pèlék</td>
</tr>
<tr>
<td>e</td>
<td>ípìsí́</td>
<td>kòkæc</td>
</tr>
<tr>
<td>a</td>
<td>ābès</td>
<td>sèkòt</td>
</tr>
<tr>
<td>e</td>
<td>èdép</td>
<td>còpót</td>
</tr>
<tr>
<td>o</td>
<td>òkářl</td>
<td>ìnàpá lá</td>
</tr>
<tr>
<td>o</td>
<td>ðkářl</td>
<td>ñářáp</td>
</tr>
<tr>
<td>u</td>
<td>úrús</td>
<td>bùrúñ</td>
</tr>
</tbody>
</table>

[-ATR] high vowels are not attested word-initially. This could be the result of a restriction against [-ATR] high vowels word-initially, or simply because these sounds represent the confluence of two particularly infrequent phenomena: [-ATR] high vowels are the least frequent vowels in the database, and vowel-initial words are infrequent word-types. Additionally, only two instances of [ʊ] are attested word-finally: [àkɛ́pɔ́] vein and [ŋòrɔ́] ‘roan antelope’. In both cases, the [ɔ] is devoiced.

Additionally, consecutive vowels may occur word-initially, between consonants, and word-finally, as illustrated in Table 2.11:

Table 2.11: Vowel sequence distribution

<table>
<thead>
<tr>
<th>Initial</th>
<th>Medial</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>ia</td>
<td>jíánà</td>
<td>jézfìà</td>
</tr>
<tr>
<td>ie</td>
<td>siét</td>
<td>ñámìe</td>
</tr>
</tbody>
</table>

3 Also frequently given as [sèkèt]
| io | riök | ‘divert’ | njipulió | ‘ground nuts’ |
| iu | riù | ‘pull’ |
| ia | miát | ‘old woman’ | ápiá | ‘caterpillar’ |
| ie | nì ìe | ‘plant sp.’ |
| ea | éñáòs | ‘breathe’ | hèáp | ‘flood’ |
| ei | éité | ‘song’ | kórëfík | ‘hartebeests’ | éséréí | ‘return here’ |
| eo | pëòk | ‘visitor’ | déó | ‘snake’ |
| eu | mëúk | ‘lions’ | á jèù | ‘outside’ |
| ea | ékùás | ‘pregnant’ | òtùkát | ‘roof poles’ |
| eo | belè ck | ‘change’ |
| ai | àiwán | ‘be ready’ | àkàín | ‘hand’ | màmáí | ‘my uncle’ |
| ae | kumaes | ‘tortoises’ | dumae | ‘give’ |
| ao | nàbáò | ‘trapdoor’ |
| au | àò | ‘go’ | nàúríèn | ‘porridge’ | àò | ‘go’ |
| ìi | jò ìn | ‘vulture’ |
| òe | təŋò õ | ‘mingle food’ |
| òa | ìàán | ‘yawn’ |
| oi | lòín | ‘knife’ | kúcòì | ‘puddle’ |
| oii | lòít | ‘trap’ |
| oö | còék | ‘sunrise’ |
| oä | zoat | ‘bee’ |
| ou | lòúpàl | ‘cobra’ |
| öi | nìpúik | ‘rub’ | nàpùlùí | ‘horns’ |
| uuì | ūùik | ‘bellies’ |
| ue | ðùék | ‘intestine’ | pórúè | ‘jump, fly’ |
| ua | sùák | ‘waists’ | nàpùà | ‘dust’ |
| uo | ðùók | ‘smell’ |

With the exception of [úù-ik] ‘bellies’, all word-initial vowel sequences begin with [-back] and [-high] vowels. [uu-ik]’s [ui] sequence is broken by a morpheme boundary. Word-internally, vowel sequences seem unrestricted—what holes exist seem to be accounted for more easily by chance than by any sort of phonological constraint. Word-final vowel sequences are relatively free. However, with the exception of [au], which occurs in a VV word, and is therefore both word-initial and word-final, word-initial vowel sequences tend not to be attested word-finally except in morphologically complex cases.

2.3.4 Vowel length
Vowels in surface forms may be long or short. Because long vowels may be assigned two different tones, and because sequences of non-homophonous vowels are common, long vowels are treated as sequences of short vowels. Long vowels are distinguished from short vowels exclusively in terms of duration; there is only a single distinct sonority peak in long vowels. All vowel qualities are attested as long vowels except for [-ATR] high vowels. This is illustrated in Table 2.12:

<table>
<thead>
<tr>
<th>Quality</th>
<th>Form</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>síí</td>
<td>‘blood’</td>
</tr>
<tr>
<td>e</td>
<td>jèét</td>
<td>‘meat’</td>
</tr>
<tr>
<td>e</td>
<td>nèɛ́</td>
<td>‘two’</td>
</tr>
<tr>
<td>a</td>
<td>ààgò</td>
<td>‘home’</td>
</tr>
<tr>
<td>o</td>
<td>tàɔ́</td>
<td>‘west’</td>
</tr>
<tr>
<td>o</td>
<td>gòó</td>
<td>‘white film on milk or beer’</td>
</tr>
<tr>
<td>u</td>
<td>úù</td>
<td>‘belly’</td>
</tr>
</tbody>
</table>

Additionally, there is one near-minimal pair (differing only in tone) for vowel length: /lác/ ‘mountain’ and /lààc/ ‘wash’.

2.3.5 Glides and vowels.

In some instances, inter-vocalic glides clearly represent alternation between a vowel and a glide, such as in the case of singular nouns ending in VV[+round]# taking /-ik/ or /-ek/ plural markers, each illustrated in (2.4):

(2.4) déó ‘snake’  dèw-ék ‘snakes’
méù ‘lion’  mèw-fk ‘lions’

Similarly, other nouns have plurals in /-iek/. /-iek/ has an allomorph [-ujek], which surfaces when the root includes a high vowel. In [-ujek], the sequence [uie] gets resyllabified as [uje]. For further discussion of the /-iek/ plural marker, see Section 4.4.1.2. For now, it is exemplified in (2.5):
Good reasons exist to treat glides as allophones of underlying high vowels. In the table of VV sequences presented in Section 2.3.3, no word-initial VV sequence begins with a high vowel, although word-initial VV sequences beginning with mid and low vowels are attested. Words beginning with glides are attested, as illustrated in Section 2.2.6. In word-initial contexts, then, glides are in complementary distribution with their corresponding high vowels ([j] with [i], [w] with [u]).

Similar distributional phenomena may be noted in other contexts. Labialized velar stops, which are analyzed above as phonemic single segments, may be analyzed as stops followed by high vowels, with the caveat that in a few instances word-final /u/ is preceded by a velar stop, meaning that a desyllabification rule by which /u#/ following a velar stop reduces to labialization on the stop is not fully general, although this difference in behavior may ultimately prove to be explained in terms of sensitivity to morpheme boundaries.

Phonetically labialized non-velar consonants may be found when the final sound of a root is a consonant, and the first two sounds of the suffixes are /uV/. In all such cases the most straightforward analysis is that the labialized surface form is an instance of a desyllabified /u/ rather than a unitary phoneme.

(2.6) /ŋat-ue/ → [ŋatʷe] ‘run (away)’

Palatalized consonants (with the exception of /zʲ/) are found only in Eastern Nilotic loan words.

<table>
<thead>
<tr>
<th>Word</th>
<th>Gloss</th>
<th>Karamojong</th>
</tr>
</thead>
<tbody>
<tr>
<td>dômèjiò</td>
<td>‘small dove’</td>
<td>kidemelyo</td>
</tr>
<tr>
<td>épírịa</td>
<td>‘hippopotamus’</td>
<td>epirya</td>
</tr>
</tbody>
</table>
It is possible in almost all cases to predict the distribution of surface glides without positing underlying glides. The glides are nearly always in complementary distribution with their respective vowels. Positing that surface glides are underlyingly high vowels fills a gap in a system that otherwise allows free combinations of vowels.

### 2.4. The Syllable

Some phonological processes in Nyang’i involve syllable-counting. [h]-insertion, discussed in Section 2.6, is one such process: [h] may be optionally inserted before any monosyllabic word that otherwise begins with a vowel, but is only rarely inserted before polysyllabic words that otherwise begin with vowels. Additionally, syncope in Nyang’i systematically deletes the nucleus of the second syllable of some polysyllabic words (discussed in Section 2.4.3). These processes show that the *syllable* is a category with functions in Nyang’i phonology rather than simply a phonetic inevitability.

Only vowels may be the nucleus of a Nyang’i syllable. The nucleus may consist of a short vowel, a long vowel, or a diphthong. VV sequences (whether long vowels or diphthongs) may have either one or two sonority peaks, i.e. they may consist of one syllable or of two syllables. Optionally, syllables may have a single onset and/or a single coda. The onset or coda may be labialized. No syllables featuring both a labialized onset and a labialized coda are attested. Attested syllables in Nyang’i include the following:

\[
\begin{array}{ccc}
  \text{V} & \overset{\overline{\text{h}}}{'dék} & \text{‘name’} \\
  \text{VV} & \overset{\overline{\text{h}}}{'ùù} & \text{‘belly’} \\
  \text{CV} & \overset{\overline{\text{h}}}{'dú} & \text{‘red’} \\
  \text{CVV} & \overset{\overline{\text{h}}}{'kàíré} & \text{‘door (opening)’} \\
  \text{C*V} & \overset{\overline{\text{h}}}{'k*é} & \text{‘water’} \\
  \text{VC} & \overset{\overline{\text{h}}}{'ák} & \text{‘mouth’} \\
  \text{VC} & \overset{\overline{\text{h}}}{'ék*} & \text{‘eye’} \\
  \text{CVC} & \overset{\overline{\text{h}}}{'bíò} & \text{‘spear’}
\end{array}
\]
2.4.1 Syllable distribution constraints

The types of syllables that may occur in Nyang’i are restricted with respect to constitution of or position in the phonological word. Particularly, there is a minimal word constraint and a tendency for closed syllables to occur word-finally.

The minimal word in Nyang’i must contain two segmental units, at least one of which must be a vowel. VV (/úù/ ‘belly’), CV (/dú/ ‘red’), and VC (/ák/ ‘mouth’) words are attested. VV and VC words may alternately be pronounced with an initial [h], resulting in CVV and CVC surface forms ([húù] ‘belly’ and [hák] ‘mouth’) No independent word in Nyang’i consists merely of V.

Attempts to elicit syllable boundary judgments from the consultant were unsuccessful. Therefore, syllable boundaries are proposed on the basis of phonological criteria rather than on the basis of speaker intuitions.

An important overarching principle in Nyang’i syllabification is consonant-cluster avoidance. Word-initial consonant clusters are unattested; therefore, word-internal clusters cannot be syllabified as complex onsets. Similarly, word-final consonant clusters are unattested; therefore, word-internal clusters cannot be syllabified as complex codas. Word-internal consonant clusters are attested, but only in a single environment: in the context of syncopated vowels (described in greater length in Section 2.4.3). As illustrated above, consonants may occur in both word-initial and word-final positions, meaning that there is no absolute prohibition against codas. The best analysis of word-internal consonant clusters, then, is that the first consonant is a coda and the second consonant is an onset.
This leaves the question of intervocalic consonants. I treat these universally as onsets. I do this for two reasons. First, three phonemes (/j/, /w/, and /z/) occur in word-initial and intervocalic position, but never as the first consonant in a consonant cluster or word-finally. This shows that Nyang’i grammar treats word-initial and intervocalic position as a unity in contrast with coda positions. Second, Nyang’i shows a general preference for onsets that it does not show for codas. This can be seen in the tendency to epenthesize a glottal before vowel-initial words (ensuring a surface onset for these words); there is no corresponding epenthesis after vowel-final words.

Closed syllables may occur in two situations: word-finally, and immediately preceding a syncopated vowel (The factors conditioning syncope are dealt with in Section 2.4.3).

Word finally:

\[(2.8)\]

\[
\begin{align*}
\text{dòp} & \quad \text{‘rhino’} \\
\text{i.mén} & \quad \text{‘black’} \\
\text{jà.’ráp} & \quad \text{‘woman’} \\
\text{bì.sf.ék} & \quad \text{‘spears’} \\
\text{kà.rà.’wác} & \quad \text{‘plates’}
\end{align*}
\]

Pre-syncope:

\[(2.9)\]

\[
\begin{align*}
/kàsì’t-ín/ & \rightarrow \quad [kàs.t-ín] \quad \text{‘anuses’} \\
/kòsím-án/ & \rightarrow \quad [kòs.m-án] \quad \text{‘tails’} \\
/náròdôk/ & \rightarrow \quad [nár.dôk] \quad \text{‘one’}
\end{align*}
\]

Closed syllables in underlying forms, then, may only occur word-finally, and non-word-final closed syllables in surface forms may always be accounted for with reference to syncope.

No affixes in Nyang’i are underlyingly consonant-initial, so consonant clusters in underlying forms are never formed by affixation.

Labialized non-velar consonants only appear in surface forms as a result of desyllabification processes at morpheme boundaries. Because of this, syllables beginning with
labialized non-velar consonants do not occur word-initially. Labialized velar stops, being phonemic, do occur word-initially. This is illustrated in (2.10).

(2.10) \([k^\text{e}]\) ‘water’
\([\eta^\text{at}^\text{e}]\) ‘run (away)’
*[t^\text{e}] Not a possible word: only labialized velars occur word-initially
\([g^\text{e}\text{ê}k]\) ‘bird’

Syllables ending with labialized consonants of any kind must be word-final (i.e. labialized consonants are not attested as the first consonant of a word-internal consonant cluster).

2.4.2 Syllabification

Consonants immediately followed by a vowel belong to the same syllable as the vowel. Consonants immediately followed by a consonant or a word boundary belong to the syllable of the preceding vowel. Labialized consonants (whether phonemic velars or otherwise) function as single segments in terms of syllabification:

(2.11) ka.bi.ret ‘sorghum (in husk)’
\(\eta^\text{o}.\text{ros}\) ‘rabbit’
\(\eta^\text{a}.\text{t}^\text{e}\) ‘run (away)’
\(\text{p}^\text{is}.\text{k}^\text{o}.\text{m}\) ‘lower parts of limbs’

Table 2.11 showed that in word-initial VV sequences, the initial vowel must be [-back] and [-high]. Additionally, Table 2.9 showed that word-initial glides are attested. The fact that there is a gap in the distribution of VV sequences, and that GV sequences neatly fill that gap, suggests that GV sequences may be surface realizations of underlying V[+high]V forms, representing a case in which the output in, for instance, a word like [jóg] people, is a single syllable, whereas it is conceivable that its underlying representation may be the disyllable /i.óg/. This principle can be generalized to positions additional to word-initial: high vowels preceded by either a vowel or a word boundary and followed by any other vowel become glides. This was illustrated in Section 2.3.5: the plural marker /-iekr/, which affixes to monosyllabic roots ending
in consonants, takes the allomorph [-ujek] when following roots that include high vowels. In this context, the /i/ of the affix is no longer preceded by a consonant, but rather by /u/, and as such becomes consonantal.

2.4.3 Syncope

In certain contexts, the vowel of the second syllable of a word deletes, resulting in resyllabification of the expected second-syllable onset as the first-syllable coda, which is the first element of a consonant cluster followed by the second-syllable onset. This process takes place both as a result of the affixation of certain lexically specified suffixes and within synchronically morphologically simple polysyllabic roots.

2.4.3.1 Syncope as a result of affixation

A set of lexically specified plural suffixes co-occur with syncope. A selection of these suffixes is illustrated in (2.12).

(2.12) /mírı̞/ ~ [mír-kò] ‘night/sky/god’ ~ ‘some days from now’
/kòrít/ ~ [kòrt-án] ‘breast’ ~ ‘breasts’
ʔ/kàsít̠/ ~ [kàst-ín]4 ‘anus’ ~ ‘anuses’
ʔ/pìsìk/ ~ [pìsk-òn] ‘lower part of limb’ ~ ‘pl.’
/mès-itìn/ → [mès-tìn] ‘sorghum beer’ ~ ‘sorghum beers’

The above examples illustrate the morphologically conditioned contexts in which syncope occurs. The first example, /mírı̞/ ~ [mír-kò] ‘night/sky/god ~ some days from now, is part of a set of derivationally related words that have no parallels anywhere else in the Nyang’i lexicon: [mír̠ı̞] ‘night/sky/god’, [mírı̞r̠é] ‘the day after tomorrow’, and [mír̠kò] ‘some days from now’. The identity of the /kò/ affix is unclear. The second example, [kò’rit] ~ [kòrt-án] ‘breast’ ~ ‘breasts’, in which syncope is conditioned by the addition of the /-án/ plural marker, is the most typical case. All plurals in /-án/ of disyllabic roots result in syncope. The third and fourth examples are irregular. The suffix /-(o)ìn/ (allomorphy discussed in Section 4.4.1.5) does not

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4 For discussion of coronal fricative allophony and its representation in these examples, see Section 2.2.4.
typically condition syncope; however, the singular form [pì́ðík] is in free variation with the singular form [pì́zkó], discussed below—the syncopated form may be simply derived from the lexically syncopated [pì́zkó] by addition of the plural suffix /-(o)ín/. In the case of [kàzt-ín] ‘anus’ ~ ‘anuses’, two additional factors may be at play. First, the plural form [kàzt-ín] is in free variation with the plural form [kàzt-án], which features regular syncope, so an analogy explanation is close at hand. Second, the sequence /itin/ in the underlying form /kasitin/ parallels the sequence /itin/ of a plural marker for monosyllabic roots, for which syncope is invariant. /kasit-in/ may be reanalyzed as /kas-itin/, in which case syncope is regular. This analysis provides further evidence for the existence and quality of the first vowel in the underlying form of /-itin/, which never occurs in surface forms. This issue is taken up further in Section 4.4.1.4.

Finally, the plural suffix /-itín/ always surfaces as [-tín]. The underlying form /-itín/ is proposed for the following reasons. First, consonant clusters are otherwise unattested in forms for which evidence of syncope does not exist, but are common as a result of syncope. Second, when whistling tones for plurals in /-itín/, the speaker whistles three pitches rather than two. Third, the anomalous behavior of [kàzt-ín] ‘anuses’ suggests the presence of an analogical target. Finally, the Ik reflex of this affix is /-ì́tin/. There is a regular correspondence between /V#/ in Ik and /∅#/ in Nyang’i, accounting for the presence of the final vowel in Ik; however, no regular sound change accounts for the presence of the initial /l/ in Ik, which is lacking from Nyang’i. This provides evidence for the quality of the underlying vowel at least historically, and the case of [kàzt-ín] ‘anuses’ may provide evidence that this vowel remains salient to the speaker.

2.4.3.2 Syncope in morphologically simple roots:

(2.13) /ˈnáròdôk/ \(\rightarrow\) [nár.dôk] ‘one’

/ˈnàlûdô/ \(\rightarrow\) [nàl.dô] ‘type of gourd’

/ˈpì́sìˈkô/ \(\rightarrow\) [pì́zkó] ‘lower part of limb’

/ˈémûgèt/ \(\rightarrow\) [émgèt] ‘topi antelope’
/tùrùŋèt/ \(\rightarrow\) [tùrŋèt] ‘edible plant’

These forms are qualified specifically as synchronically morphologically simple because in each case there is good reason to believe that the word was recently morphologically complex. [ˈnár.dôk] ‘one’, for example, exists alongside a work [òdôk] ‘one’ with no obvious functional difference (see also /dɔ́k/ ‘sole, solitary’, Schrock in press:50). [nàl.dò] and [émgèt] are recent loans from Eastern Nilotic—/na-/ and /e-/ are reflexes of Eastern Nilotic gender prefixes, and /-et/ (as in /émúgèt/ and /tùrùŋèt/) is likely a reflex of a singulative suffix. [pìzkó] appears to be an anomalous singular root reanalyzed from the irregular plural, /pìsíkó́́́/ ~ [pìzkó́́́], replacing an older singular root [pìsík], with which, in fact, this singular form alternates freely in the speaker’s idiolect. Alternately, [pìzkó] could be modeled on analogy from [mír-kò], discussed above. None of these old affixes (with the possible exception of the first syllable of [nár.dôk]) is synchronically active.

As each word is morphologically simple, the presence and identity of the syncopated vowel is not obvious on the surface. However, different types of evidence for each word converge to provide the analysis offered above. First, as discussed in Section 4.1, closed syllables are very uncommon outside of word-final position, and can in all cases except for the few exceptions (and perhaps a few others) above be accounted for by a regular process of morphologically-conditioned syncope. In the case of morphologically-conditioned syncope, the syncopation process is more directly observable: a vowel that is present in a morphologically simple form is no longer present in a morphologically complex form. Given the observability of the process, attributing the presence of a closed syllable in the morphologically complex form requires little in the way of analytical gymnastics and establishes a precedent for syncope as an active process in Nyang’i phonology. Second, words such as [nàl.dò] ‘gourd’ and [ém.gèt] ‘topi
antelope’ are recent loan words from Eastern Nilotic. The Eastern Nilotic forms retain the vowel of the second syllable (/u/ in both cases). Third, when whistling tones for each of the above words, the speaker whistled three distinct units, rather than the two that are present on the surface. Fourth, words such as [nár.dôk] *one*, [pìzkó] ‘lower part of limb’ alternate synchronically with forms ([òdôk] and [pìsìk], respectively) that retain the second vowel. Finally, slow articulations of words such as [nâl.dô] ‘gourd’ and [tùrjnèt] ‘edible plant’ included the second vowel, although slow articulations of [nár.dôk] *one* and [pìzkó] ‘lower part of limb’ do not.

2.5. **Tone**

Duration and pitch are suprasegmental features that play a role in Nyang’i phonology. Vowel length differences (short vs. long) are contrastive for a small set of words. In Sections 2.3.3-2.3.4, I have analyzed long vowels as sequences of two short vowels of the same quality. No further analysis will be added in this section.

Additionally, the behavior of pitch in Nyang’i warrants description. I have not identified any two words in Nyang’i that differ in meaning solely on the basis of pitch. However, two factors suggest that pitch must be lexically specified for Nyang’i roots. First, the pitch features of a given root are not predictable on the basis of the phonological context (e.g. low pitch is not strictly conditioned by voiced consonants or by position in a given word). Second, the pitch features of a given word-form are consistent across utterances (e.g. the speaker consistently produces gàlíc with a low-pitch first syllable and a high-pitch second syllable.) Additionally, some affixes condition systematic pitch changes in the root. Pitch is a feature that has an active role in the lexicon and grammar, but is never the sole means of contrast. Acoustic correlates of stress additional to pitch (i.e. duration and amplitude) do not correlate systematically with pitch.
(i.e. syllables with high pitch are not systematically longer or louder than syllables with low pitch), suggesting that the prosodic system is not more meaningfully described as a stress system than as a tone system.

Is Nyang’i, then, a tone language? If Yip (2002:1)’s definition “A language is a ‘tone language’ if the pitch of the word can change the meaning of the word” is the standard by which a language is deemed a tone language, then Nyang’i is not a tone language. A few pages later, though, Yip (2002:4) adopts Hyman (2001)’s definition: “A language with tone is one in which an indication of pitch enters into the lexical realization of at least some morphemes.” This definition doesn’t appeal directly to contrast. Instead, it appeals to lexical specification, and seems to include present-day Nyang’i in its purview. Nyang’i lands between the two definitions of a “tone language” presented in the opening pages of Yip (2002).

I have found that pitch effects in Nyang’i are most easily described in terms of language and formalisms developed for studies of tone, particularly autosegmental theory, as developed by Goldsmith (1976). In the following sections, I will discuss the unpredictability and systematicity of word-level pitch in Nyang’i with reference to language and formalisms familiar from the study of tone. In Section 2.5.1, I will survey the different pitch patterns associated with Nyang’i roots. In Section 2.5.2, I will demonstrate that root and affix pitch features interact in systematic ways in the case of morphological concatenation. In doing so, I intend only to describe systematic phonological regularities in Nyang’i, and I leave the question of whether or not Nyang’i is “a tone language” to the reader.

2.5.1 Tone in roots

Three phonetic tones surface in Nyang’i: high, low, and falling. Only two underlying tones (high and low) are needed to account for the surface tones. High tone and low tone may
occur at any position in a word, whether the first syllable, the final syllable, or anywhere in between. Falling tone may only occur in a closed final syllable. In Section 2.5.2, within the framework of autosegmental phonology, I will provide evidence that the falling tone is the phonetic realization of a high tone and a low tone associated to the same tone-bearing unit, and that this dual association can only take place in the final syllable of a word due to Nyang’i’s tone-association rules.

The tones associated with a root are not predictable on the basis of segmental or prosodic context. While the tones do not contrast in identical environments, they do contrast in analogous environments, suggesting that pitch features must be lexically specified. However, roots with certain syllable structures often take the same tonal melodies: e.g. CV.CVC roots most often, but not always, take L.H tonal melodies. These tendencies are far from categorical, though: out of 102 CV.CVC roots, 59 took L.H tonal melodies, while the remaining 43 were distributed between L.L, H.F, H.H, and H.L melodies. The tonal melody out of that set with the most tokens was H.H, with 25 tokens. No L.F contours were found in the sample.

Each tone bearing unit (TBU) may be specified for either H or L in a root. There is no restriction on the number of H tones that may be specified in a word. Each of the four possible level tone melodies (L.L, L.H, H.L, and H.H) are attested for disyllabic words, as in Table 2.13:

<table>
<thead>
<tr>
<th></th>
<th>L.L</th>
<th>L.H</th>
<th>H.L</th>
<th>H.H</th>
</tr>
</thead>
<tbody>
<tr>
<td>bòròk</td>
<td>'pig'</td>
<td>bàsán</td>
<td>'buffalo'</td>
<td>cífàs</td>
</tr>
<tr>
<td>jòkòt</td>
<td>'feces'</td>
<td>còràt</td>
<td>'tree sp.'</td>
<td>cúrèś</td>
</tr>
<tr>
<td>kùtàn</td>
<td>'cough'</td>
<td>mùsíd</td>
<td>'cowpeas'</td>
<td>ìèì</td>
</tr>
</tbody>
</table>

Falling tones following low tones occur in three disyllabic roots in a 955 item database. Two of these three words are clear recent borrowings from Eastern Nilotic: Farina (1986) lists /edir/ ‘oryx’ and /etul/ ‘pelvis’ as the corresponding Karamojong forms, and /lò-/ commonly
occurs as a marker of singular loan words from Eastern Nilotic. Falling tones following high
tones are somewhat more frequent. Examples of each are provided in Table 2.14

<table>
<thead>
<tr>
<th>L.F</th>
<th>H.F</th>
</tr>
</thead>
<tbody>
<tr>
<td>lòdîr</td>
<td>'oryx'</td>
</tr>
<tr>
<td>lòtûl</td>
<td>‘pelvis’</td>
</tr>
<tr>
<td>negwâk</td>
<td>‘wrist/elbow’</td>
</tr>
<tr>
<td>ábûs</td>
<td>‘tumor’</td>
</tr>
<tr>
<td>kékôk</td>
<td>‘bone’</td>
</tr>
<tr>
<td>riŋûk</td>
<td>‘evening’</td>
</tr>
</tbody>
</table>

Each of the eight possible tonal melodies including H and L is attested in trisyllabic roots, as in Table 2.15:

<table>
<thead>
<tr>
<th>Tonal melody</th>
<th>Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>L.L.L</td>
<td>tûrûŋèt ‘plant species’</td>
</tr>
<tr>
<td>L.L.H</td>
<td>kàbîrèt ‘sorghum (in husk)’</td>
</tr>
<tr>
<td>L.H.L</td>
<td>lûîwâl ‘cobra’</td>
</tr>
<tr>
<td>L.H.H</td>
<td>kàbotòr ‘hyena’</td>
</tr>
<tr>
<td>H.H.H</td>
<td>árûkûm ‘phlegm’</td>
</tr>
<tr>
<td>H.H.L</td>
<td>ûmûûnûn ‘to meet’</td>
</tr>
<tr>
<td>H.L.L</td>
<td>bëjigèn ‘left hand’</td>
</tr>
<tr>
<td>H.L.H</td>
<td>kûtâtátûn ‘white ant species’</td>
</tr>
</tbody>
</table>

Trisyllabic roots ending in falling tones are rare. No trisyllabic roots with falling tone are attested in which the first tone is high, as illustrated in Table 2.16:

<table>
<thead>
<tr>
<th>Tonal melody</th>
<th>Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>L.L.F</td>
<td>tûkûlêl ‘type of tree with edible fruit’</td>
</tr>
<tr>
<td>L.H.F</td>
<td>tàpûjâk ‘type of tree with edible fruit’</td>
</tr>
<tr>
<td>H.L.F</td>
<td></td>
</tr>
<tr>
<td>H.H.F</td>
<td></td>
</tr>
</tbody>
</table>

Roots consisting of more than three syllables tend overwhelmingly to be recent loans from Eastern Nilotic. A selection of such roots is provided in Table 2.17:

<table>
<thead>
<tr>
<th>Tonal melody</th>
<th>Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>H.H.H.H</td>
<td>árârápât ‘spider’</td>
</tr>
<tr>
<td>H.H.H.L</td>
<td>nábûbûrá ‘posture: lying on stomach’</td>
</tr>
<tr>
<td>H.H.L.H</td>
<td>nápûsûrût ‘widow’</td>
</tr>
<tr>
<td>H.L.H.H</td>
<td>nûrûkûdû ‘main road’</td>
</tr>
<tr>
<td>H.L.L.H</td>
<td>ákûrûkèt ‘end of year ceremony’</td>
</tr>
<tr>
<td>H.L.L.L</td>
<td>nâmûkèkè ‘skin bag’</td>
</tr>
</tbody>
</table>

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### Roots consisting of over three syllables are sufficiently infrequent that it is not possible to distinguish between tonal melodies that are missing due to principled phonological considerations and tonal melodies that are missing simply due to chance.

### 2.5.2 Tone in morphology

Section 5.1 told a tale of disorder. It argued that the pitch features of each syllable of a lexical root are unpredictable, and must therefore be part of the lexical representation of that root. The lack of systematicity across lexical roots makes lexical specification an appealing analysis. This section tells a tale of order. In it, I present two systematic tonal patterns from the interface of tone and morphology. The tonal behavior of suffixes with non-replacive tone provide evidence that even though Nyang’i has three surface tones, (high, low, and falling), Nyang’i has only two underlying tones (high and low). Within the formalisms of autosegmental theory (expressed at greater length in Section 2.5.2.2), falling tones will be treated as a high tone and a low tone, in that order, that are only able to associate with the final syllable of a word after all other tones have been associated with syllables one-to-one, left-to-right. Examples are drawn from the system of noun number marking, which is dealt with at greater length in Section 4.4.1.

### 2.5.2.1 Suffixes with replacive tone

As described in Section 4.4.1, Nyang’i has retained 11 plural markers. One set of these plural markers takes high tone, and additionally systematically overlays low tones onto each syllable of the roots to which they attach, regardless of the underlying tonal values of the root.
Following Welmers (1973: 132-3), I refer to these suffix as having *replacive tone*. These suffixes all include segmental as well as tonal material, and so for these affixes tone is not the only source of contrast, but rather reinforces a contrast that is also encoded segmentally. Replacive tonal affixes are illustrated in Table 2.18:

<table>
<thead>
<tr>
<th>Root tonal melody</th>
<th>Singular</th>
<th>Plural</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>L.H</td>
<td>bàsãŋ</td>
<td>bàsãŋik</td>
<td>‘buffalo’</td>
</tr>
<tr>
<td>H.H</td>
<td>kükús</td>
<td>kükúsik</td>
<td>‘shade’</td>
</tr>
<tr>
<td>H.L</td>
<td>tìŋòl</td>
<td>tìŋòlik</td>
<td>‘stirring stick’</td>
</tr>
<tr>
<td>L.L</td>
<td>ñòrös</td>
<td>ñòrösik</td>
<td>‘rabbit’</td>
</tr>
</tbody>
</table>

In 2.18, the plural forms taking /-ík/ all have L.L.H tonal melodies, even though each of the roots has a different tonal pattern in isolation. Given the replacive pattern associated with the particular plural suffix that is attached to these roots, the surface tones in the plural forms are predictable. Surface tones in the singular forms are not predictable on the basis of surface tones in the plural forms. Six plural markers overlay a replacive low tone on the entire preceding root: /-ík/, /-ítín/, /-(o)ín/, /-én/, /-án/, and /-ít/, which are discussed at greater length in Section 4.4.1.

### 2.5.2.2 Suffixes with non-replacive tone

Other plural markers do not neutralize or replace the tone of the root. Instead, the tonal features of these affixes interact with the tonal features of the roots without replacing them. These interactions are described below in terms of autosegmental phonology, as pioneered by Goldsmith (1976). In autosegmental phonology, features and segments exist on separate representational tiers. Features are linked with segments according to language-specific principles. Nyang’i includes two tonal features: H and L. Each morpheme (rather than each syllable or mora nucleus!) includes an ordered list of tonal features (e.g. the lexical representation [còrát] *plant sp.* includes the ordered list LH, which are not associated with particular segments in the lexicon). Prior to output, the tonal features are associated with tone-
bearing units (TBUs). In Nyang’i, each tonal feature associates with a single TBU (i.e. association is \textit{one-to-one}), and the first tonal feature in the ordered list is the first tonal feature to associate to a TBU, and is then followed by the second tonal feature, which associates to the second TBU (i.e. association is \textit{left-to-right}). Tonal association proceeds across the domain of the entire word one-to-one and left-to-right. For some words, there are more tonal features than TBUs. The manner in which this situation is resolved will be discussed at greater length below.

Evidence for the one-to-one, left-to-right autosegmental association of two tonal features (H and L) is found in the interactions of the tonal features of suffixes with non-replacive tone with the tonal features of the roots to which they attach. One such suffix is the plural marker /-ís/, illustrated in Table 2.19:

\begin{table}[h!]
\centering
\begin{tabular}{|l|l|l|l|l|}
\hline
Singular & Plural & Gloss & Root Melody & Complex Melody \\
\hline
\hline
còrát & còrátís & ‘plant sp.’ & L.H & L.H.H \\
\hline
kúcòì & kúcòís & ‘pit trap’ & H.L & H.L.H \\
\hline
ríɲôk & ríɲókís & ‘wrinkle on skin’ & H.F & H.H.L \\
\hline
\end{tabular}
\end{table}

The plural marker /-ís/ takes high tone, but does not replace the tones of the preceding syllables. In the first two examples, the exact melody of the root remains intact in the morphologically complex word-form. In the first example, the plural is formed simply by affixing /-ís/ to the root, and suffix takes high tone. In the second example, the /oi-i/ vowel sequence in the plural is simplified by deleting the diphthong off-glide /i/ from the root, and /-ís/ keeps its high tone. This form provides evidence that /-ís/ takes its own tonal specification, rather than simply copying the tone of the previous syllable. The third example provides the most insight into the structure of the Nyang’i tonal system. This example deviates from previous examples in two ways. First, the plural marker takes low tone in its phonetic realization. Second, the pitch features of the second syllable of the root are different in the morphologically complex
(plural) form from in the morphologically simple (singular) form. In the morphologically simple (singular) form, the second syllable takes falling tone. In the morphologically complex (plural) form, the second syllable takes high tone. The hypothesis that the surface falling tone consists of a high tone followed by a low tone, both associated with the final syllable in the word, accounts for the limited distribution of falling tones, viz. word-final position. Additionally, this hypothesis accounts for the form attested in the third example: the addition of the suffix provides a new syllable for the low tone component of the falling tone in the second syllable to associate with. Because a L and a H cannot associate with the same syllable in that order (LH), the H is left to float. Not only does this analysis provide an account of the third example from the data set above, then, but it also accounts for the restricted distribution of the falling tone and reduces the number of tonal categories specified by the grammar from three to two.

Tones in Nyang’i are associated with tone-bearing units one-to-one from left to right. Falling tones are permitted in the output, but rising tones are prohibited. If there are more tones than tone-bearing units, and if the final two tones take the same value (H or L), then that value occurs in the surface form. Currently there is no evidence available to discriminate between the following three hypotheses about what happens in such a situation: 1) both tonal features associate with the final tone-bearing unit 2) the second tone deletes 3) the second tone floats, in which case it may exert influence in following words or affixes in more complex contexts. If the final two tones are H followed by L, then both tones associate with the tone-bearing unit, and the surface form takes a falling tone. If the final two tones are L followed by H, then the L associates with the tone-bearing unit and the H either deletes or floats. Again, there is no evidence available at the moment to discriminate between these last two options. This is illustrated for the words from the table above in the following visual:
For /còrátís/ and /kúcòís/, the associations between the tones and the segments are straightforward. There is one tone-bearing unit per tone, associations proceed from left to right, and each tone is associated with a tone-bearing unit. In the case of /ríɲôk/, there are more tones than tone-bearing units. Tone association proceeds from left to right, and two tones are left when association reaches the last tone-bearing unit. Because H precedes L, both tones may associate with the tone-bearing unit, and the output is a falling tone. In the case of /ríɲókìs/, tone association proceeds from left to right, and two tones are left when association reaches the last tone-bearing unit. In this case, L precedes H. Rising tones are not permitted, so the H has nothing to associate with, and is either deleted or left to float.

This analysis accounts for the peculiar distribution of surface tones for the plural-marking suffix /-ís/—namely, that it surfaces as a high tone except when the last syllable of the root to which it attaches takes falling tone in isolation, in which case the suffix takes low tone—while also reducing the number of posited underlying tone values from three to two.

### 2.6 Notes on inheritance, innovation, borrowing, and loss

Reconstructions of Proto-Kuliak remain in a seminal state. In terms of phonology, the two main sources are Heine (1976) and Ehret (1981a). Data from each of these sources will be cited throughout the following discussion. Findings are summarized in a table at the end of this section.

#### 2.6.1 Inheritance, innovation, and loss in the consonantal inventory
Heine (1976:32) proposes 25 consonant phonemes. Ehret (1981a:87) proposes 31 consonant phonemes. Heine (1976) prioritizes phonetic plausibility over systematic plausibility (i.e. prioritizes capturing plausible individual sound changes), while Ehret (1981a) prioritizes systematic plausibility over phonetic plausibility (i.e. prioritizes producing a plausible/coherent consonant system in the final reconstruction.) In the following discussion, I will leave aside the glides (/j/ and /w/) and the glottal fricative /h/, as they are treated identically in the two reconstructions, and, as discussed in Section 2.2.6, are treated as a separate category by Nyang’i, over against [+consonantal] sounds.

Heine (1976)’s system includes a full four-place system for voiceless, voiced, and nasal stops. It includes a three-place series of glottalized stops consisting of a bilabial implosive and an palatal and velar ejectives, as well as an aspirated velar stop. Five manners of articulation are proposed that only occur at an alveolar place of articulation: affricate (voiced), fricative (with a voicing contrast), lateral approximant, lateral fricative, and trill:

**Heine (1976)’s Proto-Kuliak consonant system (adapted by me)**

<table>
<thead>
<tr>
<th></th>
<th>bilabial</th>
<th>alveolar</th>
<th>palatal</th>
<th>velar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plain Stops</td>
<td>p, b</td>
<td>t, d</td>
<td>c, j</td>
<td>k, g</td>
</tr>
<tr>
<td>Glottalized Stops</td>
<td>ɓ</td>
<td>t’</td>
<td>c’</td>
<td>k’</td>
</tr>
<tr>
<td>Aspirated Stops</td>
<td>ɓ</td>
<td>c’</td>
<td>k’</td>
<td>kh</td>
</tr>
<tr>
<td>Nasal Stops</td>
<td>m</td>
<td>n</td>
<td>ny</td>
<td>η</td>
</tr>
<tr>
<td>Affricates</td>
<td>dz</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fricatives</td>
<td></td>
<td></td>
<td>s, z</td>
<td></td>
</tr>
<tr>
<td>Lateral Approx</td>
<td>ɬ</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lateral Fricatives</td>
<td>hl</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trills</td>
<td></td>
<td></td>
<td>r</td>
<td></td>
</tr>
</tbody>
</table>

Ehret (1981a) modifies this system in the following ways:

1) Ehret (1981a) supplements Heine (1976)’s glottalized stops by including implosive stops at every place of articulation, rather than merely at bilabial. The bilabial and velar implosives supplement rather than replace Heine (1976)’s ejectives.
2) Ehret (1981a) adds labialization as a phonemic feature for all velar stops (plain voiceless, plain voiced, implosive, ejective, and nasal).

3) Ehret (1981a) adds a retroflex fricative */ʂ/, and eliminates */z/ and */dz/.

4) Ehret (1981a) removes */kh/

These changes result in the following system:

**Ehret (1981a)’s Proto-Kuliak consonant system (adapted by me)**

<table>
<thead>
<tr>
<th></th>
<th>bilabial</th>
<th>alveolar</th>
<th>palatal</th>
<th>velar</th>
<th>Labialized Velar</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Plain Stops</strong></td>
<td>p, b</td>
<td>t, d</td>
<td>c, j</td>
<td>k, g</td>
<td>kw, gw</td>
</tr>
<tr>
<td><strong>Glottalized</strong></td>
<td>ɓ</td>
<td>ɗ</td>
<td>c’, ‘j’</td>
<td>‘k’, ‘g’</td>
<td>‘kw’, ‘gw’</td>
</tr>
<tr>
<td><strong>Nasal Stops</strong></td>
<td>m</td>
<td>n</td>
<td>ny</td>
<td>η</td>
<td>ηw</td>
</tr>
<tr>
<td><strong>Fricatives</strong></td>
<td></td>
<td></td>
<td>s, ʂ</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Lateral Approx</strong></td>
<td></td>
<td>l</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Lateral Fricatives</strong></td>
<td></td>
<td>ɬ</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Trills</strong></td>
<td></td>
<td></td>
<td>r</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The differences between Heine (1976) and Ehret (1981a) are simply different takes on a few systematic observations. Neither scholar questions whether or not glottalized phonemes existed in Proto-Kuliak; all that is in doubt is how many there were. Ehret’s addition of labialized velar phonemes simply analyze sequences that Heine treated as consonant clusters as actually being unitary phonemes on distributional grounds. The retroflex addition reflects data from the Kadam dialect of Soo, over against Heine’s Moroto dialect data. */z/ and */dz/ are demonstrated to be allophones of palatal stops, and */kh/ is hypothesized to be actually a remnant of a long-lost prefix taking the form */kV-/. As far as Nyang’i is concerned, the following observations hold:

1) The entire glottalized series has been lost.

2) The palatalized alveolar affricate is an innovation.
The retention of the lateral fricative in Nyang’i is particularly noteworthy because its West Kuliak co-member, Soo, has independently lost the lateral fricative. Soo has retained the glottalized phones (Carlin 1993:9), which have been lost in Nyang’i. The palatalized alveolar fricative is an apparent recent split from an inherited older Nyang’i */l/, supplemented by a loan word that has undergone spirantization. Alternation in the split form can be seen in Heine (1974/5:292)’s transcriptions of ‘river’:

<table>
<thead>
<tr>
<th></th>
<th>Beer 2014</th>
<th>Heine 1974/5</th>
<th>Kjong (Farina 1986)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cow</td>
<td>/z/o/</td>
<td>/ɔ/</td>
<td></td>
</tr>
<tr>
<td>River</td>
<td>/e-z/ɔ/</td>
<td>/leu/ or /siu/</td>
<td></td>
</tr>
<tr>
<td>Wild</td>
<td>/iz/æŋ/</td>
<td>/ityæŋ/</td>
<td></td>
</tr>
</tbody>
</table>

Both the lateral fricative and the palatalized alveolar fricative occur only rarely in the data.

The surrounding Eastern Nilotic languages do not contrast voiced stops with implosive stops; however, voiced stops are often realized as implosive in, for example, Karimojong. The distribution of voiced and implosive stops in Nyang’i, then, results in increased similarity between Nyang’i’s consonantal system and Karimojong’s consonantal system. It is not clear that this change is due exclusively to language death, then.

### 2.6.2 Inheritance and loss in the vowel inventory

Heine (1976:32) proposes an 11 vowel inventory for Proto-Kuliak, and Ehret (1981a) refuses to take up the issue. It seems unlikely that the 11 vowel inventory survived even to the East/West Kuliak split: each of the Kuliak languages synchronically has nine vowels, if ATR is treated as contrastive in Nyang’i. Therefore, the pre-contraction starting point for Nyang’i seems likely to be a nine vowel rather than an 11 vowel system. Even if Proto-Kuliak had 11 vowels, the existence of only nine in Soo and Ik suggests a strong tendency for drift to nine.
The Kuliak inventory universally consists of a single low vowel, plus a full matrix of eight vowels distinguished in terms of front/back, high/mid, and +/- ATR. Heine (1974/5:281) only posits an ATR contrast for mid vowels in Nyang’i, resulting in a seven vowel system. For further discussion of ATR in Nyang’i, see Section 2.3.1. Assuming that ATR remains phonemic in Nyang’i per Section 2.3.1, the full vowel inventory has been retained in Nyang’i. The functional load of ATR seems clearly reduced, though.

2.6.3 Inheritance and loss in tone

Tone functions in Ik to create lexical contrast, and certain grammatical morphemes carry identifiable lexically specified tones (e.g. plurative I {-ikó-} replaces L tone in preceding roots with H, Schrock 2014:115). Carlin (1993:16) claims that tone is not operative in Soo; however, data collected by the present author suggests that at the very least, a Nyang’i-like system of lexically specified non-contrastive tone may be present in Soo. Additionally, pairs such as the following suggest that tone (or at least stress) may be grammatically contrastive, if not lexically contrastive, in Soo:

(2.14) ɪ́ˈɪ́b síˈj̃
long (sg.) hair
‘a long hair’

Dimmendaal (1983:36-37) observes that tonal lexical minimal pairs are rare (but presumably existent) in Turkana. At the grammatical level, though, tone is often the sole means of contrast (e.g. between different noun cases or verb tenses). Nyang’i’s loss of all contrastive functions of tone, then, cannot easily be explained as change toward or due to pressure from Eastern Nilotic grammatical patterns.
2.6.4 Inheritance and loss in vowel harmony

While Nyang’i may retain ATR as a contrastive feature, no systematic harmony process was identified. This contrasts with Ik’s highly structured ATR harmony system (Schrock 2014:81-99), and Soo’s idiosyncratic/height harmony system (Carlin 1993:20-25). ATR harmony is well attested in Eastern Nilotic (Baković 2002a, Baković 2002b, Quinn-Riedt 2013, Noske 1990, Noske 1996). Therefore the loss of ATR harmony in Nyang’i cannot be explained as a change toward or due to pressure from Eastern Nilotic grammatical patterns.

2.6.5 Inheritance and loss in phonology summarized

<table>
<thead>
<tr>
<th>Retentions</th>
<th>Innovations</th>
<th>Losses</th>
<th>Borrowings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four places for [-cont]</td>
<td>Palatalized alveolar</td>
<td>Glottalized phones</td>
<td>Loss of glottalized phones(?) (Kjong)</td>
</tr>
<tr>
<td>One place for [+cont]</td>
<td></td>
<td>Functional load of ATR</td>
<td></td>
</tr>
<tr>
<td>Labialization of velars</td>
<td></td>
<td>Tonal Contrast</td>
<td></td>
</tr>
<tr>
<td>Voicing contrast for [-cont]</td>
<td></td>
<td>Vowel Harmony</td>
<td></td>
</tr>
<tr>
<td>Four manners for [+cont], including lateral fricative</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nine vowel system</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lexical specification of pitch features</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Replacive Tone</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Chapter 3 Lexical Categories

3.1 Introduction

On functional and distributional grounds, Nyang’i has two large open word classes: noun and verb. The closed class set that shares the most affinity with the open classes is a small set of adjectives, which are invariant particles that share formal properties both of nouns and of verbs. Two of the closed classes come in two sets. There are two sets of pronouns: free (absolute) personal pronouns and possessive personal pronouns, and there are two categories of adverbs, which are primarily invariant particles, and are separated on the basis of whether or not they can occur between the verb and the core arguments (for a definition of the core clause/core argument, see Section 9.2). Finally, there are close classes of adpositions, numerals, and subordinators. In this chapter, I briefly summarize the functional and distributional criteria by which the lexical categories are distinguished.

3.2 The Verb

The main syntactic function of the verb is to be the head of the clause. Verbs can take noun arguments and can be the only phonological material in a relative clause. Verbs are the only lexical category to which the directional extensions (/-u/ ITIVE and /-Vc/ VENTIVE, Section 5.4.1) or the sequential marker /-ese/ may attach. Verbs never take pronominal possessors (nor have any derivational means by which nouns can be derived from verbs, to then be possessed). Verbs are never the complement of a preposition, and may not be relativized on. There are no categorical phonological criteria distinguishing the verb from other lexical categories. About 60% of verb roots are monosyllabic, and about 27% of verb roots are disyllabic. Finally, many verbs take semantically null -VC endings, discussed at greater length in Section 5.4.3.

3.3 The Noun
The main syntactic function of the noun is to be an argument of a verb (or a dependent in a clause). Nouns are one of only two lexical categories to which plural markers (Section 4.4.1) can be attached. The other is numerals. Nouns are the only lexical category to which bound demonstratives (Section 4.4.2) can be attached. Nouns can take pronominal possessors, can be the complement of a preposition, and can be relativized on. There are no categorical phonological criteria distinguishing the noun from other lexical categories; however, the ratio of monosyllabic nouns (~30%) to disyllabic nouns (~60%) is almost exactly the inverse of the ratio of monosyllabic verbs (~60%) to disyllabic verbs (~27%) in Nyang’i, providing at least a tendency toward phonological distinction between the categories.

3.4 Adjectives

A small set of invariant particles share features of both nouns and of verbs. Because they satisfy important criteria in each category, it is not appropriate to treat them as a subclass of either category. Because they fall into a semantic cluster that is associated with attribution of nouns, I have chosen to call them adjectives. They are dealt with at greater length in Section 7.5. They share in common with nouns that, when immediately following an unmarked noun, they are interpreted to be a modifier of that noun (verbs in the same context are interpreted to be the first word in a following clause). They may occur within a noun phrase without a relative clause. Adjectives share in common with verbs that they cannot form a noun phrase constituent (e.g. function as an argument of a verb) with a following noun: when an adjective precedes a noun, it is the head of a clause.

3.5 Pronouns

Pronouns come in two sets which are in complementary distribution: free personal pronouns and possessive personal pronouns. Free pronouns can fill noun phrase slots. They can
function as subjects, as objects, or as oblique arguments. Free pronouns cannot be modified by
demonstratives or numerals, do not take plural markers, and cannot be relativized on. They
cannot be a dependent of a noun (e.g. as a possessor). Possessive personal pronouns similarly
cannot be modified by demonstratives or numerals, do not take plural markers, and cannot be
relativized on. Ordinarily, they do not fill argument NP slots (such as subject, object, or
location), but see the example in 7.2.2 that suggests that possessive personal pronouns may be
used for certain recipient or experiencer roles. Possessive pronouns must be a dependent of a
noun, and always occur immediately following a noun.

3.6 Adverbs

Adverbs come in two sets which are in contrastive distribution: adverbs occurring
exclusively clause-finally, which designate specific times or manners of verbs, and adverbs that
can occur clause-finally or between the verb and the core arguments, which mark TAM functions
that do not identify precise time points. Adverbs belonging to either set cannot function as
arguments of verbs, and do not take NP arguments.

3.7 Adpositions

The main function of adpositions is to encode oblique NP functions. These functions are
all spatial or directional with the exception of /ka/, which can be comitative or instrumental. A
number of terms that I describe with the adpositions in Section 7.3 share apparent etymologies
with nouns. In Section 4.3.3 I have labeled them relational nouns. I treat them as
grammaticalized forms no longer functioning as nouns for the following reasons:

1) They take a different linking vowel in their function as prepositions (e.g. /ik-i/ ‘head’ vs.
/ik-a/ ‘top’). For more on linking vowels, see Section 8.2.
2) Their semantics shift from describing objects to describing relations in their function as prepositions (e.g. /koriti/ ‘rib’ vs. /koriti/ ‘beside’). This shift is conventional and regular.

3) Sequences of three consecutive nouns are very uncommon. When they do occur, the second noun is from the closed set of relational nouns. This is illustrated in (3.1):

(3.1) loin Ḋim amuk
knife earth shoe

*The knife is under the shoe.*

### 3.8 Numerals

Besides falling into a closely defined semantic class (viz. numerals are all numerals), numerals also form a distinctive class in terms of distribution. Like adjectives, they can follow their head noun with or without a relativizer. Unlike adjectives, they often (but don’t always) inflect for plural number.

### 3.9 Subordinators

Subordinators are invariant particles that immediately precede subordinate clauses. Subordinators along with adpositions are exceptional among Nyang’i lexical categories in being the only two categories whose distribution is defined by what they must succeed rather than by what they must follow. Subordinators differ from adpositions in that the complements of subordinators must be clauses, whereas the complements of adpositions must be nouns.
Table 3.1: Summary of criteria for determining lexical categories

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Can take N Arguments</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Can be only word in Rel clause</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Can take directionals and sequential</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Can take pron. possessors</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Can be complement of adposition</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Can be relativized on</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Can be argument of verb</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Can take plural marker</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Can take bound demonst.</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Can form NP constituent with following N</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Can form NP constituent with preceding N</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Only occur clause-finally</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Can occur between V and core argument</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Take clausal complement</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Chapter 4: The Noun

4.1 Introduction

This chapter presents the morphological properties of the noun in Nyang’i. Section 4.2 describes the noun root, including its segmental structure and a selection of recurring borrowed affix-like elements that generally do not function as meaningful units in Nyang’i, and so may be treated as fully integrated parts of the root synchronically. Section 4.3 describes the morphosyntactic properties of four noun subclasses: common count nouns, common non-count nouns, relational nouns, and kinship terms. Section 4.4 describes noun affixes, including number-marking suffixes, demonstratives, and a focus marker. The noun’s function in Nyang’i syntax will be presented in Chapter 8.

Nouns take suffixes, but not prefixes (with the exception of petrified or nearly-petrified Eastern Nilotic prefixes discussed in Section 4.2). Suffixes encode three categories: plural number, pronominal possession, and demonstrative reference. The focus marker may occur on nouns; however, I argue that (at least in some contexts) it is better treated as a phrase-level clitic. It often attaches to lexical categories other than noun. Nouns may take up to three affixes at a time. Two of the four categories that may be encoded by means of suffixes, pronominal possession and demonstrative reference, never co-occur. A position-class diagram for the Nyang’i noun is presented in (4.1).

(4.1) Nyang’i noun position class diagram

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Noun Root</td>
<td>Number</td>
<td>Possessive Demonstrative</td>
</tr>
</tbody>
</table>

The database for this chapter consists of 320 basic noun roots (roots that can only be analyzed as monomorphemic both synchronically and diachronically), 246 noun roots that
include borrowed morphology, 13 fully reduplicated roots, and 12 partially reduplicated roots. This database is a compilation of all nouns occurring in one hour of narrative texts supplemented with a number of nouns elicited by means of Karimojong.

4.2 The Noun Root

Most nouns in connected speech in Nyang’i surface most commonly as bare roots—they are not morphologically analyzable. Most Nyang’i noun roots are two syllables long, but may range from one to four syllables long. As mentioned in Section 2.4.1, the minimal word in Nyang’i must include at least two segments, one of which must be a vowel (VV, CV, or VC). In keeping with this stipulation, all noun roots include at least two segments, at least one of which is a vowel.

A small set of nouns include partially or fully reduplicated roots. Partially reduplicated roots are treated separately from bare roots (i.e. the identity relationship between the proposed reduplicant and the proposed base is presented as the result of a distinct word formation process) on distributional grounds: the reduplicant always precedes the base.

Much of the Nyang’i lexicon consists of words recently borrowed from Eastern Nilotic (e.g. from a Karimojong variety or a recent ancestor of Karimojong). Many borrowed nouns are borrowed with morphology from the donor language. In almost all cases, the affixes carry no functional load and are not associated with any agreement phenomena: the forms are borrowed with no analysis of their content or function. For example, whereas gender is marked in Ateker languages both on gender/number prefixes and on relativizers (as in (2) below, with Karimojong data taken from Novelli 1985:57), gender markers borrowed into Nyang’i on Ateker roots correlate with no other morphosyntactic phenomena in Nyang’i. This is illustrated in (4.2).

(4.2) No gender agreement in Nyang’i
Three different types of borrowing are illustrated in the Nyang’i examples in (4.2). In (4.2d), Karimojong /ekisiŋi/ ‘hip’ is borrowed without the /e-/ masculine prefix. When it is used in the cleft construction, it takes the relativizer /ní/, which does not inflect for gender or number.

In (4.2e), Karimojong /etul/ ‘pelvis’ is borrowed with the masculine marker /lo-/ (associated by Novelli (1985:42) with kinship terms, and additionally described by Dimmendaal (1982:215) as a locative) rather than /e-/ . Again, it co-occurs with the relativizer /ní/. Finally, in (4.2f) /amotoka/ ‘vehicle’ is borrowed with feminine /ña-/ , which is the correspondent in a number of dialects to Novelli (1982) and Farina (1986)’s /a-/ , as discussed further in Section 4.2.3.1.2. The form taking /ña-/ again surfaces with the relativizer /ní-/ . This data set shows that the Nyang’i relativizer does not inflect for gender, as it is invariant regardless of whether the head noun corresponds with a masculine or a feminine noun in Karimojong, the donor language.
In some cases, borrowed affixes occur invariably on a given lexeme. In other cases, borrowed gender prefixes are dropped from plural forms. They are not replaced with the corresponding plural gender prefix from the donor language. Borrowed affixes—both petrified and synchronically active—will be dealt with in Section 4.2.4.

My choice to distinguish between basic roots, reduplicated roots, and historically morphologically complex roots follows the categorization used by Schrock for Ik (2014:134-152). The reason for this is two-fold. First, many of the historical factors that shaped Ik have also shaped Nyang’i, with the consequence that many of the descriptive tools that are useful for describing Ik are also useful for describing Nyang’i. Second, using the same descriptive categories as Schrock (2014) (where such descriptive categories are appropriate for Nyang’i) may facilitate comparison in future research.

4.2.1 Basic Roots

Basic roots, in Nyang’i as in Ik, are “those whose morphological composition, if there ever was one, is not currently recoverable” (Schrock 2014:134). The syllable structures of basic Nyang’i noun roots are presented below.

A wide variety of syllable structures are attested; however, the majority (particularly among roots over two syllables in length) are attested only in one or two roots, many of which appear to be recent loans. My database includes 320 basic (unreduplicated, and without petrified morphology) noun roots. 75 out of 320 (~23%) of these basic roots are monosyllabic (under an analysis in which VV sequences are all two syllables). An additional 180 (~57%) are disyllabic.

4.2.1.1 Monosyllabic noun roots

The majority (65: ~82%) of the 79 monosyllabic noun roots in the collected database are CVC. Four are CV, and the remaining ten are VC. Most of the roots with either VC or CV
shapes are from basic vocabulary—the only items that do not occur in the 200 item Swadesh list, for example, are words for concepts such as milk, house, dried feces, and word/language.

<table>
<thead>
<tr>
<th>Word</th>
<th>Gloss</th>
<th>Tone</th>
</tr>
</thead>
<tbody>
<tr>
<td>ḡí</td>
<td>‘sun’</td>
<td>H</td>
</tr>
<tr>
<td>Ṽó</td>
<td>‘cow’</td>
<td>H</td>
</tr>
<tr>
<td>ḣák</td>
<td>‘mouth’</td>
<td>H</td>
</tr>
<tr>
<td>ḳíd</td>
<td>‘milk’</td>
<td>H</td>
</tr>
<tr>
<td>ṳám</td>
<td>‘sorghum’</td>
<td>H</td>
</tr>
<tr>
<td>ḳóp</td>
<td>‘rhinoceros’</td>
<td>L</td>
</tr>
</tbody>
</table>

4.2.1.2 Disyllabic noun roots

The majority (107: ~63%) of the 171 disyllabic noun roots are CVCVC. 15 are CVVC, 23 are CVCV, and 17 are VCVC. The remaining nine roots are distributed between VV, CVV, VCV.

<table>
<thead>
<tr>
<th>Word</th>
<th>Gloss</th>
<th>Shape</th>
<th>Tone</th>
</tr>
</thead>
<tbody>
<tr>
<td>úúu</td>
<td>‘grass’</td>
<td>VV</td>
<td>HH</td>
</tr>
<tr>
<td>méù</td>
<td>‘lion’</td>
<td>CV.V</td>
<td>HL</td>
</tr>
<tr>
<td>déó</td>
<td>‘snake’</td>
<td>CV.V</td>
<td>HH</td>
</tr>
<tr>
<td>gòó</td>
<td>‘surface yeast product’</td>
<td>CV.V</td>
<td>LH</td>
</tr>
<tr>
<td>ézù</td>
<td>‘river’</td>
<td>V.CV</td>
<td>HL</td>
</tr>
<tr>
<td>òmá</td>
<td>‘hartebeest’</td>
<td>V.CV</td>
<td>LH</td>
</tr>
<tr>
<td>ŋín</td>
<td>‘knife’</td>
<td>CV.VC</td>
<td>LL</td>
</tr>
<tr>
<td>kòòd</td>
<td>‘sack’</td>
<td>V.CV</td>
<td>HH</td>
</tr>
<tr>
<td>rééc</td>
<td>‘tree sp.’</td>
<td>CV.VC</td>
<td>HH</td>
</tr>
<tr>
<td>tüké</td>
<td>‘upper arm’</td>
<td>CV.CV</td>
<td>HH</td>
</tr>
<tr>
<td>pòcè</td>
<td>‘corn kernel husk’</td>
<td>CV.CV</td>
<td>HL</td>
</tr>
<tr>
<td>sòré</td>
<td>‘children’</td>
<td>CV.CV</td>
<td>LH</td>
</tr>
<tr>
<td>tòrò</td>
<td>‘bat-eared fox’</td>
<td>CV.CV</td>
<td>LL</td>
</tr>
<tr>
<td>ácés</td>
<td>‘white ant’</td>
<td>VC.VC</td>
<td>HH</td>
</tr>
<tr>
<td>ídòk</td>
<td>‘bridge of nose’</td>
<td>VC.VC</td>
<td>HL</td>
</tr>
<tr>
<td>òmás</td>
<td>‘corn fungus’</td>
<td>VC.VC</td>
<td>LH</td>
</tr>
<tr>
<td>ríŋòk</td>
<td>‘wrinkle on skin’</td>
<td>CV.CVC</td>
<td>HF</td>
</tr>
<tr>
<td>pàjàn</td>
<td>‘buttocks’</td>
<td>CV.CVC</td>
<td>HH</td>
</tr>
<tr>
<td>rùmén</td>
<td>‘spear handle’</td>
<td>CV.CVC</td>
<td>HL</td>
</tr>
<tr>
<td>bàsáñ</td>
<td>‘buffalo’</td>
<td>CV.CVC</td>
<td>LH</td>
</tr>
<tr>
<td>bòrók</td>
<td>‘pig, aardvark’</td>
<td>CV.CVC</td>
<td>LL</td>
</tr>
</tbody>
</table>
A wide variety of tonal patterns for each syllable shape are attested at least once; however, some qualifications bear noting. First, LH is by far the most frequently attested tonal pattern (92/171 words: 54%). It is the most frequently attested tonal pattern not only for the aggregate, but also for each of the individual syllable shapes. The only other tonal pattern constituting more than 10% of the aggregate is HH: (38/171 words: 22%). HL, HF, and LL together combine for 32 words (19%). My transcriptions for the remaining 9 words (5%) do not include tone indications, and they do not appear in recordings.

LH is the only tonal pattern attested with CV₁V₂C roots. While HH and LL patterns are also attested in CVVC roots, they are only found in roots with long vowels.

4.2.1.3 Polysyllabic noun roots

59 out of 309 basic noun roots have three or more syllables. The most common such roots are CVCVCVC (14/59), CVCVVC (7/59), and CVCVCV (6/59), but a total of 17 different shapes are attested.

4.2.2 Reduplicated roots

Two types of reduplicated roots are found in the data: reduplicated roots in which the entire root is repeated (full reduplication), and reduplicated roots in which only part of a root is repeated (partial reduplication). Most commonly for either type of reduplication, the base is C₁VC₂, although two fully reduplicated forms have a C₁VC₂V base. For fully reduplicated roots, the reduplicant is the entire C₁VC₂ base (or C₁VC₂V, in the two aforementioned cases). For partially reduplicated roots, the reduplicant is C₁V. Most reduplicated forms lack an attested unreduplicated form.

4.2.2.1 Fully reduplicated roots
Many, but not all, fully reduplicated forms take petrified affixes (e.g. /a-/ /e-/ /aki-/ or /lo-/ that are borrowed from other languages. The main source of petrified affixes is Eastern Nilotic. Not all words in the set with apparent Eastern Nilotic prefixes have confirmed Eastern Nilotic etymologies. Full reduplications with a CVC base add an epenthetic vowel, which prevents the creation of a consonant cluster. If the vowel of the base is high and back (/u/ or /ʊ/), the epenthetic vowel is /u/. If the vowel of the base is any other vowel, the epenthetic vowel is high and front (/i/ or /ɪ/). This generalization is illustrated in Table 4.3 below, along with the one exception:

<table>
<thead>
<tr>
<th>Word</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>álɔ̀ŋɪ́lɔ́ŋ</td>
<td>‘hydrocele’</td>
</tr>
<tr>
<td>kájèrjèr</td>
<td>‘plant sp.’</td>
</tr>
<tr>
<td>lòsíslíl</td>
<td>‘nape of neck’</td>
</tr>
<tr>
<td>lòpúkúpúk</td>
<td>‘bat (animal)’</td>
</tr>
<tr>
<td>ákʷɛɲɔ̀kʷɛɲ</td>
<td>‘second ruminant chamber’</td>
</tr>
</tbody>
</table>

Each base in the first four examples takes a different vowel, none of which is high and back. In each case, the epenthetic vowel is high and front (/i/ or /ɪ/). In the fifth example, the base takes a high back vowel. In this case, the epenthetic vowel is a high back vowel. The final example is the one word for which this generalization does not hold. The base takes /ɛ/, but the epenthetic vowel is /ɔ/. The fully reduplicated forms do not fit a clear semantic profile.

4.2.2.2 Partially reduplicated roots

There is additionally a set of 13 possible partially reduplicated forms, in which only the vowel and one consonant of the base are reduplicated. Of the 13 forms, in only one is the reduplicant suffixed (in which case the vowel and the second consonant of the base are repeated following the base). In each of the other 12 forms, the reduplicant is prefixed. This skewed distribution, in which \( C_1V_1C_1V_1C_2 \) forms are relatively frequent, while \( C_1V_1C_2V_1C_2 \) forms are
almost unattested, provides evidence that the forms that I have identified as reduplicated are not likely to be lexical accidents, but instead reflect a no-longer-productive systematic feature of Nyang’i grammar, as Schrock (2014:18-19) also claims for Ik. No unreduplicated forms corresponding to partially reduplicated roots are still attested. Partially reduplicated roots are illustrated in Table 4.4.

Table 4.4 Partially reduplicated roots

<table>
<thead>
<tr>
<th>Word</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>kútús</td>
<td>‘shade’</td>
</tr>
<tr>
<td>lálá́m</td>
<td>‘tree sp. with edible fruit’</td>
</tr>
<tr>
<td>kútút</td>
<td>‘knee, termite mound’</td>
</tr>
</tbody>
</table>

The first two examples show a prefixed partially reduplicated root. The third example shows the one suffixed partially reduplicated root. It seems more likely to me that /kútút/ is a lexical accident than that it is the sole surviving remnant of a long-forgotten productive process of suffixing reduplication.

4.2.3 Roots with borrowed or petrified morphology

Nyang’i is somewhat exceptional among its immediately neighboring languages in that Nyang’i roots are free morphemes, whereas roots in its neighboring languages (closely related or otherwise) are bound morphemes. Borrowing bare roots, then, requires analysis, as bare roots in the neighboring languages have a frequency count approaching 0 in natural data. Borrowed forms in the idiolect of the last semi-speaker of Nyang’i employ three separate strategies to deal with the problem of borrowed word analysis:

1) Abstract away from licit word forms in the donor language to the root, and use what is in the donor language a bound morpheme as a free morpheme. These forms were treated above as bare roots: they are not morphologically analyzable in their current form. Schrock (p.c.) notes
that this may be characteristic of an earlier period of borrowing than the forms that take petrified affixes.

2) Borrow a licit word form from the donor language, and treat it as monomorphemic. In this case, affixes preserved from the donor language are considered petrified.

3) Borrow a licit word form from the donor language, and maintain an alternation for the function encoded in the donor language by means of the obligatory affixes. The main functional domain for which Nyang’i nouns alternate is noun number. Therefore primarily only borrowed affixes sensitive to noun number (such as prefixes encoding a fusion of gender and number) demonstrably alternate in Nyang’i.

One of the most prominent functional systems represented among the borrowed or fossilized forms is Eastern Nilotic gender-marking. Schrock (2014:143-52) describes an apparently productive system in Ik in which Eastern Nilotic /ɲV-/ prefixes are used systematically to mark loan words from Karimojong or Turkana. Prefixes taking this particular form are today found in Northern Turkana (but not in other Turkana dialects) and Toposa, but are not attested in the literature for any of the Karimojong dialects. In the rest of Turkana and in the described Karimojong dialects, the initial palatal nasal has been lost; however, all loans in Ik take the version with the nasal.

This contrasts with the situation in Nyang’i in that borrowed forms taking /ɲV-/ prefixes are attested alongside borrowed forms taking /V-/ . Neither the forms taking /ɲV-/ nor the forms taking /V-/ are unambiguously petrified: forms taking /ɲV-/ do not inflect for plural at all, and forms taking /V-/ prefixes either do not inflect for plural, or drop the /V-/ prefix in the plural. The existence of the parallel sets provides evidence that (at least) the forms taking /V-/ in Nyang’i were borrowed after Nyang’i and Ik separated. It also suggests that the two sets (those
taking /ŋV-/ prefixes and those taking /V-/ prefixes) in Nyang’i were borrowed either from different languages or at different times.

While /ŋV-/ and /V-/ prefixes cannot be properly described as petrified, there are some other affixes that can be. These include /ŋa-/, which is a reflex of the Eastern Nilotic feminine plural gender prefix, /lo-/ , which is a reflex of an old Eastern Nilotic masculine gender marker (and which lives on as a locative case marker in, for example, Turkana and Karimojong), and /ka-/ , which appears to be a reflex of an old Eastern Nilotic form described by Vossen as a prefix-like element (Vossen 1982: 203-204). /-at/, which is an inherited proto-Kuliak singulative marker rather than a borrowing, has become petrified as part of the noun root in most of the instances in which it occurs in Nyang’i as part of the simplification of the number-marking system.

Affixes treated as truly petrified are invariant. Roots containing these affixes are treated as monomorphemic in Nyang’i for two reasons. First, the forms that are reflexes of the affixes are invariant, not alternating for number as in the donor languages even though number is a category that is still marked on Nyang’i nouns. Second, the other main function encoded on them in Eastern Nilotic languages, gender, is not operational in the grammar of Nyang’i, as will be demonstrated in the following section. Because these forms neither alternate paradigmatically as the number of a given lexeme changes nor condition syntagmatic alternations on the feature gender in other words in a phrase, no evidence exists that the etymological gender prefixes have any sort of status as independent morphemes in Nyang’i.

4.2.3.1 Eastern Nilotic Gender Prefixes

Except in specially marked contexts (e.g. locative case), nouns in currently described Karimojong dialects take gender marking prefixes with the form /V-/ in the singular. The vowel
height of the prefix is determined by the grammatical gender of the noun: low for feminine nouns, mid for masculine nouns, and high for neuter nouns. Plural forms are preceded by a velar nasal, and masculine and neuter plural are neutralized. The gender of the head noun is additionally encoded on modifiers such as relativizers and demonstratives by choice of the appropriate form from a paradigm. In Nyang’i, many forms that can be traced to gender/number prefixes have been borrowed, whether as petrified affixes or as prefixes that synchronically alternate. The category gender, however, retains no functional load in Kuliak in the domain of reference, as was illustrated in Section 4.2.

The gender-marking prefix system for most dialects of Turkana and Karimojong is presented in Table 4.5 (the Northern Dialect of Turkana, which will be referenced below at greater length, is an exception). This table could equally have been adapted from Dimmendaal (1983:210)’s description of Turkana, Novelli (1985:41)’s description of Karimojong, or Vossen (1980:209)’s reconstruction of the gender prefix system for Ateso, Turkana, and Karimojong. The substance of the data is identical in each case.

Table 4.5: Ateso/Karimojong/Turkana gender prefixes (Vossen 1980: 209)\(^5\)

<table>
<thead>
<tr>
<th></th>
<th>singular</th>
<th>plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>feminine</td>
<td>a-</td>
<td>(ŋ)a-</td>
</tr>
<tr>
<td>masculine</td>
<td>e-</td>
<td>(ŋ)i-</td>
</tr>
<tr>
<td>neuter</td>
<td>i-</td>
<td>(ŋ)i-</td>
</tr>
</tbody>
</table>

With one possible exception /émùt/ story, all borrowed forms taking a reflex of the masculine and feminine singular /V-/ gender prefix from Karimojong either do not inflect for number, or drop the gender prefix for plural number. Because there is never a clear case in which a /V-/ gender prefix is borrowed as a fossilized form in both the singular and plural form of a

\(^5\) /ŋ/ appears in Vossen (1980)’s Turkana and Karimojong forms, but not his Teso forms.
lexeme, I treat all instances of roots taking /V-/ as morphology restricted to borrowed forms rather than as truly petrified monomorphemic roots.

The Eastern Nilotic gender-marking prefix paradigm in /V-/ is represented in incomplete form in Nyang’i in two ways. First, no reflexes of the neuter prefix /i-/ are found in the database, and second, even when forms taking /V-/ prefixes in Nyang’i do alternate for number, the alternation is between /V-/ and 0 rather than between /V-/ and /ŋV-/.

Examples of the Karimojong masculine (/e-/) and feminine (/a-/) /V-/ gender prefixes borrowed into Nyang’i are presented below. One form, /émūt/ ‘story’, breaks from the previously described generalization, in that its plural, /ēmūtık/ ‘stories’, maintains an initial vowel. A likely explanation for this is that the Karimojong source /eemut/ ‘story’ begins with a long vowel, suggesting that the root itself may be vowel-initial, with the gender prefix accounting for the vowel length. Some Nyang’i forms add a word-initial palatal glide /j/ to words from the /e-/ class, but not to words from the /a-/ class. Finally, the /e-/ prefix assimilates to a root /o/ in the case of /jokori/ ‘giraffe’. /e-/ and /a-/ forms that do not inflect for number are illustrated in Table 4.6, alongside their Karimojong reflexes.

<table>
<thead>
<tr>
<th></th>
<th>singular</th>
<th>plural</th>
<th>Karimojong</th>
<th>gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>e-</td>
<td>émūt</td>
<td>ēmūtık</td>
<td>eemut</td>
<td>‘story’</td>
</tr>
<tr>
<td></td>
<td>écūmà</td>
<td>N/A</td>
<td>ecuma</td>
<td>‘colobus monkey’</td>
</tr>
<tr>
<td></td>
<td>ekʷàákʷáá</td>
<td>N/A</td>
<td>ekʷaakʷaa</td>
<td>‘plant sp.’</td>
</tr>
<tr>
<td></td>
<td>jokori</td>
<td>N/A</td>
<td>ekori</td>
<td>‘giraffe’</td>
</tr>
<tr>
<td>a-</td>
<td>ābûs</td>
<td>N/A</td>
<td>abun (swelling)</td>
<td>‘tumor’</td>
</tr>
<tr>
<td></td>
<td>āpûŋà</td>
<td>N/A</td>
<td>apunyas</td>
<td>‘funeral’</td>
</tr>
<tr>
<td></td>
<td>ākàìnán</td>
<td>N/A</td>
<td>akainok</td>
<td>‘co-wife’</td>
</tr>
</tbody>
</table>

The Nyang’i reflex of Eastern Nilotic gender markers is not always predictable from the Karimojong form. Anomalous data belongs to two sets: 1) Nyang’i roots that begin with /e-/ but which correspond to Karimojong reflexes taking /a-. The opposite phenomenon is not attested.
2) Nyang’i roots that begin with the palatal glide /j/ rather than a vowel, but which have obvious Karimojong reflexes taking the gender prefix associated with the vowel following the Nyang’i glide. None of the forms from either of these sets are predictable on phonological or semantic grounds. Some such anomalous roots are illustrated below in Table 4.7. For this table, Karimojong forms were provided by the consultant, and are representative of the Napore dialect that he speaks.

<table>
<thead>
<tr>
<th>singular</th>
<th>gloss</th>
<th>Karimojong</th>
</tr>
</thead>
<tbody>
<tr>
<td>epolit</td>
<td>‘adult’</td>
<td>apoloit</td>
</tr>
<tr>
<td>elɔkít</td>
<td>‘rainbow’</td>
<td>alokakinet</td>
</tr>
<tr>
<td>jokori</td>
<td>‘giraffe’</td>
<td>ekori</td>
</tr>
<tr>
<td>jécòtò</td>
<td>‘mud’</td>
<td>ecoto</td>
</tr>
</tbody>
</table>

/epolit/ and /elɔkít/ take mid vowels rather than the low vowels that are attested in Karimojong. They also take different endings than the Karimojong forms—most notably for /elɔkít/, which lacks the /-akin/ dative extension present in the Karimojong form. /jokori/ and /jécòtò/ differ from their Karimojong forms only in terms of their reflexes of the gender-marking prefix element. Both begin with a glide, and the initial vowel in /jokori/ ‘giraffe’ has assimilated to the mid back vowel of the root (an assimilation that is also attested for borrowed gender markers in Ik, as in Schrock 2014:145). /jokori/ ‘giraffe’ is used by the speaker alongside /g̥ɛ̀c/, the Kuliak root for ‘giraffe’.

Other borrowed forms in Nyang’i retain the characteristic Eastern Nilotic /V-/ gender marking in the singular and inflect for plural number, but lack any prefix whatsoever in the plural. These forms have lost the gender-related functions that are associated with them in Eastern Nilotic languages, but cannot be treated as part of the noun root proper since they are not invariant. They are never the sole means of marking noun number.
As is the case with roots that do not inflect for plural number, the forms that do inflect for plural number consist of reflexes of both masculine and feminine gender-marking prefixes from the /V-/ gender-marking prefix set. Synchronically active /V-/ gender-marking prefix prefixes are illustrated in Table 4.8.

Table 4.8: Synchronically active V- gender markers

<table>
<thead>
<tr>
<th></th>
<th>Nyang’i Sg.</th>
<th>Nyang’i Pl.</th>
<th>Kjong Sg.</th>
<th>Kjong Pl.</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>a-</td>
<td>à-rók</td>
<td>rúk-in</td>
<td>a-ruk</td>
<td>ŋa-ruk-in</td>
<td>‘hump of oxen’</td>
</tr>
<tr>
<td></td>
<td>à-sàsák</td>
<td>sàsàk-ík</td>
<td>a-sasak</td>
<td>ŋa-sasak-a</td>
<td>‘small swamp’</td>
</tr>
<tr>
<td>e-</td>
<td>é-dùkán-ít</td>
<td>dùkán-ís</td>
<td>e-dukan-it</td>
<td>ŋi-dukan</td>
<td>‘borassus palm’</td>
</tr>
<tr>
<td></td>
<td>é-dep</td>
<td>dép-ík</td>
<td>a-ŋajep</td>
<td>ŋa-ŋajep-a</td>
<td>‘tongue’</td>
</tr>
</tbody>
</table>

Northern Turkana (Dimmendaal 1983:222-223) and Toposa (Novelli 1985:44), have identical gender-marking systems to those described for Karimojong and for other dialects of Turkana, with the exception that the singular forms begin with a palatal nasal. Novelli (1985:44) notes that “…in songs [there is] the remembrance of the ancient singular prefixes, still in common use among the Toposa and, in part, the Dodos,” and then presents the set with palatal nasals. These forms are illustrated in Table 4.9.

Table 4.9: Northern Turkana gender prefixes (Dimmendaal 1983:222-223)

<table>
<thead>
<tr>
<th></th>
<th>singular</th>
<th>plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>feminine</td>
<td>ŋa-</td>
<td>ŋa-</td>
</tr>
<tr>
<td>masculine</td>
<td>ŋe-</td>
<td>ŋi-</td>
</tr>
<tr>
<td>neuter</td>
<td>ŋi-</td>
<td>ŋi-</td>
</tr>
</tbody>
</table>

As with gender prefixes in /V-/ only reflexes of feminine and masculine singular gender prefixes in /ŋV-/ are attested in Nyang’i. Only one root in /ŋV-/ (/ŋá-nàm/ lake) takes plural inflection in Nyang’i. In that case, the /ŋV-/ prefix is dropped in the plural. Petrified ŋV- gender markers are illustrated in Table 4.10.

Table 4.10: Petrified ŋV- gender markers

<table>
<thead>
<tr>
<th>Feminine (/ŋa-)</th>
<th>Nyang’i</th>
<th>Gloss</th>
<th>Karimojong</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ŋá-pàr</td>
<td>‘scar’</td>
<td>aporesit</td>
</tr>
<tr>
<td></td>
<td>ŋámòtòká</td>
<td>‘car’</td>
<td>amotoka</td>
</tr>
<tr>
<td></td>
<td>ŋá-nàm</td>
<td>‘lake’</td>
<td>a-nam</td>
</tr>
</tbody>
</table>
A few Nyang’i forms (five feminine, three masculine/neuter) take petrified prefixes apparently cognate with the plural forms. Whereas borrowings taking petrified singular marking could be divided into two groups corresponding with two Ateker dialects (those taking the palatal nasal, corresponding with North Turkana/Toposa, and those lacking the palatal nasal, corresponding with Karimojong and the rest of Turkana), no analogous division is possible for borrowings taking the plural marking, as all of the dialects take the same forms for the plural. These forms are illustrated in Table 4.11.

<table>
<thead>
<tr>
<th>Masculine (/pe-/)</th>
<th>‘lakes’</th>
<th>‘cane rat’</th>
<th>‘shrub sp.’</th>
</tr>
</thead>
<tbody>
<tr>
<td>näm-ık</td>
<td>nam-iko</td>
<td>nøgpirrud</td>
<td>nøgkered</td>
</tr>
</tbody>
</table>

Table 4.11: Petrified plural gender prefixes

<table>
<thead>
<tr>
<th>singular</th>
<th>plural</th>
<th>gloss</th>
<th>Kjong Sg.</th>
<th>Kjong Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>nøgkuku</td>
<td>nøgkuku</td>
<td>‘charcoal’</td>
<td>akukut</td>
<td>nøgkuku</td>
</tr>
<tr>
<td>nøgturdu</td>
<td>nøgturdu</td>
<td>‘flower’</td>
<td>aturot</td>
<td>nøgturdu</td>
</tr>
<tr>
<td>nøgpepet</td>
<td>nøgpepet</td>
<td>‘needle type’</td>
<td>???</td>
<td>???</td>
</tr>
<tr>
<td>nøgok</td>
<td>nøgok</td>
<td>‘seed pods’</td>
<td>ecokit</td>
<td>nøgok</td>
</tr>
<tr>
<td>nøgtjoroi</td>
<td>nøgtjoroi</td>
<td>‘bells for dancing’</td>
<td>???</td>
<td>???</td>
</tr>
</tbody>
</table>

The feminine /ŋa-/ forms provide evidence that the prefix is, in fact, petrified. First, for /ŋa-/ forms that inflect for plural number, the plural form is associated with single entities as well as with plural entities, neutralizing the semantic distinction encoded in Karimojong. Other /ŋa-/ forms do not inflect for plural. For all forms belonging to this set, the Karimojong reflexes are basic plurals with derived singulatives. In the Nyang’i forms, the basic form is taken as singular, and plurals are formed by means of suffixes. For ‘flower’, this is accomplished by inverting the function of the Karimojong singulative suffix /-ot/. For ‘charcoal’, this is accomplished by means of a separate plural marker.
None of the fossilized masculine/neuter forms inflected for number in Nyang’i. While no Eastern Nilotic etymology has been identified for /ŋítjóróí/ ‘bells for dancing’, it has been treated as a borrowed form on account of the /tj/ cluster, which is otherwise attested only in loan words.

### 4.2.3.2 Eastern Nilotic locative case prefixes

The largest set of unequivocally Karimojong gender-marking prefixes in Nyang’i belongs to the set attested without functional analysis for Karimojong by Novelli (1985:42), and described for Turkana by Dimmendaal (1983:215) as the locative case. The locative case system from Turkana is presented in Table 4.12.

| Table 4.12: Turkana locative case (1) gender prefixes (Dimmendaal 1983:215) |
|----------------------------------|--------------------|--------------------|
| feminine                        | singular           | plural             |
| nà-                              | nà-                | na-                |
| masculine                       | lò-                | lo-                |

The number of borrowed forms taking fossilized masculine locative case gender prefixes drastically exceeds the number of borrowed forms taking feminine locative case gender prefixes. There are 17 noun roots taking a fossilized /na-/ prefix, of which nine are toponyms. Only one of the eight common nouns potentially taking such a prefix occurs with plural inflection, and its status in this set is questionable. This form, as well as some other examples of stems taking the /na-/ prefix, is illustrated in Table 4.13.

| Table 4.13: Petrified feminine locative case (1) gender prefixes |
|----------------------------------|--------------------|--------------------|
| singular                        | plural             | gloss              |
| nàsép                           | nàsèpòín           | ‘womb/placenta’    |
| nàpák                           | N/A                | ‘ridge/pass’       |
| nàmùkèkè                        | N/A                | ‘skin bag’          |
| nàpúnòká                        | N/A                | ‘first ruminant chamber’ |

I have treated /nàsép/ as taking a locative prefix because the word-initial /n/ does not conform to the regular sound correspondence of velar nasals in borrowed forms in Nyang’i with velar nasals in the Karimojong source. An explanation for this irregularity is that the first syllable
of the Karimojong root was reanalyzed as a locative case prefix. An alternative explanation could be that this form has simply undergone an irregular sound change, in which case /nàsép/ would simply be a borrowed basic root. Karimojong reflexes of all /na-/ forms that are not toponyms are feminine.

Forms taking a fossilized /lo-/ (masculine locative) prefix are much more common: there are 81 in total. Of these, 19 are toponyms, ethnonyms, or personal names. Of the remaining 62, 55 either begin with /lo-/ in both the singular and the plural or do not inflect for plural. The Karimojong reflexes of Nyang’i /lo-/ forms may be masculine or feminine, but not neuter. Some /lo-/ forms are illustrated in Table 4.14:

Table 4.14: Petrified masculine locative case (1) gender prefixes

<table>
<thead>
<tr>
<th>singular</th>
<th>plural</th>
<th>gloss</th>
<th>Karimojong</th>
</tr>
</thead>
<tbody>
<tr>
<td>lòlékèk</td>
<td>lòlékèkèn</td>
<td>‘gourd type’</td>
<td>lòlekek⁶</td>
</tr>
<tr>
<td>lòtibáé</td>
<td>lòtibàs</td>
<td>‘net (for animals)’</td>
<td>atibae</td>
</tr>
<tr>
<td>lòkfàl</td>
<td>lòkìàlìk</td>
<td>‘cooking stones’</td>
<td>ekeala</td>
</tr>
<tr>
<td>lòdir</td>
<td>N/A</td>
<td>‘orix’</td>
<td>edir</td>
</tr>
<tr>
<td>lòkitèl</td>
<td>N/A</td>
<td>‘the bush (wilderness)’</td>
<td>ekitela</td>
</tr>
<tr>
<td>lɔ̀ŋát</td>
<td>lɔ̀ŋàtìk</td>
<td>‘enemy’</td>
<td>a-ŋat⁷</td>
</tr>
</tbody>
</table>

Schrock (2014:145-6) attributes borrowed words taking a fossilized /lo-/ or /na-/ prefixes in Ik to a stratum of borrowing predating the /ɲV-/ strata. The prevalence of borrowings in /lo-/ or /na-/ relative to borrowings in /ɲV-/ suggests that a different hypothesis may be necessary to account for Nyang’i, as does the fact that Karimojong forms were often given taking /lo-/ prefixes when I elicited them from speakers of the Napore dialect.

Seven roots in Nyang’i take /lo-/ in the singular, but drop it in the plural. In all such cases, the plural also takes suffixed plural inflection. No such forms are found for the

⁶ From my own data.
⁷ /a-ŋat/ (Farina 1986:199) is a verb defined as “to parade, to drill (of soldiers)” No derived noun appears in Farina that is an exact semantic match, but the semantic shift needed to arrive at the Nyang’i sense of /lɔŋát/ is small.
corresponding feminine locative /na-/.

Roots taking /lo-/ markers in the singular but lacking them in the plural are illustrated in Table 4.15.

<table>
<thead>
<tr>
<th>Nyang’i Sg.</th>
<th>Nyang’i Pl.</th>
<th>Kjong Sg.</th>
<th>Kjong Pl.</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>lò-tác</td>
<td>tác-ásík</td>
<td>atacít</td>
<td>ñatacia</td>
<td>‘type of trap’</td>
</tr>
<tr>
<td>lò-mòrótót</td>
<td>mòrótótík</td>
<td>e-morotot</td>
<td>ñi-morotot-oíní</td>
<td>‘python’</td>
</tr>
</tbody>
</table>

Table 4.15: Synchronously active masculine locative case (1) prefixes

4.2.3.3 ka-

/ka-/ initial words are clearly borrowed within two semantic domains: toponyms and ethnonyms. Karimojong also uses /ka-/ in both domains (Schrock 2009) Additional to these semantic domains, a number of polysyllabic forms begin with /ka-/, which may be a reflex of Vossen (1982:203-4)’s prefix-like element from Proto Eastern Nilotic. There is no clear etymology for many of these forms, and it is therefore difficult to determine the source language (if any) for these words. /ka-/ forms are illustrated in Table 4.16.

<table>
<thead>
<tr>
<th>Karimojong</th>
<th>Singular</th>
<th>Plural</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnonyms</td>
<td>kàtáp</td>
<td>N/A</td>
<td>‘Luo’</td>
</tr>
<tr>
<td></td>
<td>kàcól</td>
<td>N/A</td>
<td>‘Acholi’</td>
</tr>
<tr>
<td>Toponyms</td>
<td>karuŋgu</td>
<td>N/A</td>
<td>‘river basin’</td>
</tr>
<tr>
<td></td>
<td>kàmàrìɲàŋ</td>
<td>N/A</td>
<td>‘mountain name’</td>
</tr>
<tr>
<td>Common nouns</td>
<td>kàbótor</td>
<td>kàbótorík</td>
<td>‘hyena’</td>
</tr>
<tr>
<td></td>
<td>kàbòkí</td>
<td>kàbòkík</td>
<td>‘plant sp.’</td>
</tr>
</tbody>
</table>

Table 4.16: Petrified /ka-/ prefixes

4.2.3.4 –at

A final petrified affix occurring on noun roots in Nyang’i is /-at/, which is etymologically a singulative marker in West Kuliak, and was presumably borrowed from an Eastern Nilotic language before the Nyang’i/Soo split. Proto-West Kuliak */-at/ has split in two directions in Nyang’i. In the first case, it has become petrified to the noun root that it originally occurred with. This case will be treated here. In the second case, it has become a synchronically active marker
of plural number. This case will be treated in Section 4.4.1.10. Petrified /-at/ forms are illustrated in Table 4.17.

<table>
<thead>
<tr>
<th></th>
<th>Nyang’i Sg.</th>
<th>Nyang’i Pl.</th>
<th>Soo Sg.</th>
<th>Soo Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘Thorn’</td>
<td>ésát</td>
<td>ésát-ík</td>
<td>asat</td>
<td>as</td>
</tr>
<tr>
<td>‘Candelabra Tree’</td>
<td>mūsát</td>
<td>mūsát-ínik</td>
<td>mosat</td>
<td>mos</td>
</tr>
<tr>
<td>‘Worm’</td>
<td>kūját</td>
<td>kūját-ík</td>
<td>kdat</td>
<td>kíd</td>
</tr>
<tr>
<td>‘Tamarind Tree’</td>
<td>rògát</td>
<td>rògát-ín</td>
<td>roğát</td>
<td>roğa</td>
</tr>
</tbody>
</table>

Whereas the /-at/ forms in Soo are derived singulars, their cognates in Nyang’i are morphologically simple. Evidence of this is that plural forms of /-at/ singulars in Nyang’i are formed by adding plural suffixes without removing the etymological singulatives.

4.2.3.5 Borrowed and petrified morphology conclusions

The affixes most commonly borrowed with roots into Nyang’i come from the domain of reference in Nyang’i’s Eastern Nilotic neighbors: they are prefixes encoding gender and, in some cases, number. Gender is involved in a number of morphosyntactic structures in the Eastern Nilotic languages (e.g. relativizers are marked with the gender of their head), but the only formal realization of gender in Nyang’i is the otherwise unpredictable alternation of prefix vowels in some words borrowed from Karimojong.

While Karimojong marks three genders—feminine, masculine, and neuter—reflexes of only masculine and feminine are borrowed into Nyang’i. One possible explanation for this is that “the number of basic nouns with neuter gender in Turkana [and presumably, by extension, in Karimojong –SB] is very small” (Dimmendaal 1983:218). Since there were fewer words that could possibly be borrowed, the lack of borrowings is perhaps unsurprising. Additionally, while there is no reliable semantic basis for classification as feminine or masculine in Eastern Nilotic (Dimmendaal 1983:210, Heine 1980:46), neuter nouns uniformly either “have a diminutive connotation” or designate “an instance of a greater group” (Dimmendaal 1983:218). The lack of
a semantic grounding for masculine and feminine, over and against the presence of a semantic grounding for neuter, suggests that neuter gender is a relatively recent innovation in Eastern Nilotic. This may be evidence that many of the forms borrowed into Nyang’i predate the emergence of the neuter in Eastern Nilotic.

Relevant properties of the borrowed morphemes discussed above are presented in Table 4.18. The root takes pl? column indicates whether or not roots co-occurring with the given borrowed affix ever take plural inflection. The affix in pl? column indicates if the given borrowed affix is retained when the root is inflected for plural number. This column distinguishes between affixes that never occur with plural inflection, affixes that sometimes occur with plural inflection, and affixes occur whenever plural inflection is present:

<table>
<thead>
<tr>
<th>Set</th>
<th>Form</th>
<th>Source L function</th>
<th>Root takes pl?</th>
<th>Affix in pl?</th>
</tr>
</thead>
<tbody>
<tr>
<td>/V/- gender</td>
<td>/a-/</td>
<td>Fem Sing</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>/e-/</td>
<td>Masc Sing</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>/ɲV/- gender</td>
<td>/na-/</td>
<td>Fem Sing</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>/pe-/</td>
<td>Masc Sing</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>/ŋV/- gender</td>
<td>/ŋa-/</td>
<td>Fem Pl</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Locative</td>
<td>/ŋi-/</td>
<td>Masc/Neut Pl</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>/na-/</td>
<td>Fem Loc</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>/lo-/</td>
<td>Masc Loc</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>/ka-/</td>
<td>Unclear</td>
<td>Yes</td>
<td>Always</td>
</tr>
<tr>
<td></td>
<td>/-at/</td>
<td>Singulative</td>
<td>Yes</td>
<td>Always</td>
</tr>
</tbody>
</table>

4.3 Noun subclasses

On morphosyntactic criteria, at least the following noun subclasses may be identified: common count nouns, common non-count nouns, relational nouns, and kinship terms. Their properties are summarized in Table 4.19. Due to the impossibility of securing grammaticality judgments for most forms, I have chosen to label cells as “UA” Unattested when my only source of evidence that a given form cannot co-occur with a given function is simply that it never co-occurs with that function in my data.
4.3.1 Common Count Nouns

The defining property of the subclass of nouns that I have labeled count nouns is that they morphologically inflect for noun number. I was not able to collect data indicating whether the syntactic behavior of count nouns is fundamentally different from that of non-count nouns. For count nouns, bare roots are singular in number, and inflected forms (most often inflected by means of suffixation) are plural in number.

Most nouns belong to this subclass. The particular inflections for encoding plural number may be found in Section 4.4.1.

4.3.2 Common Non-count Nouns

Other nouns do not inflect for number. While the other Kuliak languages (as well as Nilotic languages in the area) also have a class of non-inflecting nouns, the Nyang’i non-count nouns are noteworthy in that the set of non-count nouns is much larger than in these languages.

The nouns belonging to the non-count subclass are generally not semantically predictable. Abstract concepts and substances that are not naturally divided into discrete units (e.g. liquids, soil) tend not to inflect for number, however, non-count nouns referring to plants, animals, artifacts, and humans are common. Non-count nouns are exemplified in Table 4.20:

<table>
<thead>
<tr>
<th>Form</th>
<th>Gloss</th>
<th>Semantic Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>kérép</td>
<td>‘knowledge’</td>
<td>abstract concept</td>
</tr>
<tr>
<td>kwé</td>
<td>‘water’</td>
<td>substance</td>
</tr>
<tr>
<td>kúlúrù</td>
<td>‘plant sp.’</td>
<td>plant</td>
</tr>
<tr>
<td>lúk</td>
<td>‘squirrel’</td>
<td>animal</td>
</tr>
</tbody>
</table>

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When referring to entities that are naturally divided into discrete units (e.g. animals, artifacts, and humans), the invariant form provided in Table 4.20 is used for both notionally singular and notionally plural instances of a given concept.

### 4.3.3 Relational Nouns

Location is encoded in Nyang’i primarily in two ways: as pure prepositions, which are largely borrowed from Karimojong, and by means of relational nouns.

The main defining characteristic of relational nouns in Nyang’i is that when they immediately precede another noun, the main function that they encode is spatial rather than possessive. Relational nouns do not inflect for number. In Nyang’i, relational nouns are all homophonous with body part terms. These nouns are used to predicate spatial relations between objects. When used as relational nouns rather than as common/referential nouns, these forms either appear as bare roots, or take an affix /-a/. The affix /-a/ is not attested outside of the context of relational nouns, and is glossed RN for *relational noun*:

\[(4.3)\]
\[
\begin{align*}
\text{(a) } & \text{ lòín kòrít ámük} \\
& \text{knife breast shoe} \\
& \text{‘The knife is beside the shoe.’}
\end{align*}
\]
\[
\begin{align*}
\text{(b) } & \text{ lòín tòróŋ bí} \\
& \text{knife back you} \\
& \text{‘The knife is behind you.’}
\end{align*}
\]
\[
\begin{align*}
\text{(c) } & \text{ gaan nane tosipose ne kwe hod uu-a} \ \text{hod} \ \text{bad this stagnant REL water road belly-RN road} \\
& \text{‘Water that’s stagnant in/on the road is bad.’}
\end{align*}
\]
\[
\begin{align*}
\text{(d) } & \text{ nane seke ni eeke nane bor nane ik-a} \ \text{lac} \\
& \text{this PST REL LOC.EXIS this corral this head-RN mountain} \\
& \text{‘In the past there was a corral that was there, at the head of the mountain.’}
\end{align*}
\]
(4.3a) and (4.3b) were elicited (via a constructed scenario rather than via direct translation from a metalanguage). (4.3c) and (4.3d) were from textual data. The nouns in Table 4.21 occur as relational nouns:

<table>
<thead>
<tr>
<th>Form</th>
<th>Non-Relational Meaning</th>
<th>Spatial Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>kòrít</td>
<td>breast/ribs</td>
<td>‘beside’</td>
</tr>
<tr>
<td>tòróŋ</td>
<td>back</td>
<td>‘behind’</td>
</tr>
<tr>
<td>uu</td>
<td>belly</td>
<td>‘in/on’</td>
</tr>
<tr>
<td>ik</td>
<td>head</td>
<td>‘on top’</td>
</tr>
</tbody>
</table>

### 4.3.4 Kinship terms

Kinship terms in Nyang’i are inherently possessed in the sense that in all attested examples, they are associated with a pronominal possessor. The database does not include any references to non-human kinship (e.g. a calf’s mother), so it is impossible to distinguish between the following two analyses: 1) inherent possession is a property of kinship relations between humans, and 2) inherent possession is a property of all kinship relations. I did not attempt to elicit data that could answer this question; it is likely that such data could still be accessible.

As will be discussed at greater length in Section 6.2, the entire pronominal system of the last semi-speaker of Nyang’i is in a state of flux. Only first and second person singular pronouns are used consistently, with third person singular being reasonably consistently employed in the possessive paradigm, but not in the absolutive paradigm.

Biological sex is only lexicalized in the system of kinship terms in Nyang’i for kin belonging to generations preceding the reference point. This is manifested in three pairs that contrast for sex: there are separate lexical items for father and mother, for grandmother and grandfather, and for father’s siblings and for mother’s siblings. Relations such as son/daughter, male cousin/female cousin, grandson/granddaughter, and aunt/uncle are each conflated in single lexical items that are not specified for the sex of the individual, with the exception that abusive
Possession, described in the next paragraph, may be used to refer to a father’s sister (but not to a mother’s sister).

Possession, which will be dealt with at greater length in Section 8.2, is marked for kinship terms using the same formal means used to encode ownership senses of possession with pronominal possessors with one exception. For two lexical items specifically designating female relatives (/tata-/ ‘grandmother’ and /ijo-/ ‘mother’), as well as when /naja/ ‘father’s sibling’ is used with reference specifically to a female relative of the father, an otherwise unattested form can be used for second person singular possessors. This form is the suffix /-bo/. I was told that this form was used abusively—presumably evoking female relatives of the addressee is intended to shame or offend the addressee; however, no interactional data is available to determine what function the form had in discourse when Nyang’i was still used by a speech community. Because this form has abusive connotations, I have called it abusive possession.

These words form a separate lexical subclass because possessive marking is obligatory for them. This is illustrated in (4.4).

(4.4)
(a) ësèrè náí àgó níào
return then home 1.SG.POSS
‘Then (I) return to my home.’

(b) sòzéssé sóàt-ànè rùbù àgó
send bee-this people home
‘These bees drove the people home.’

(c) bàbà níào è ìké màn
father 1.SG.POSS EXIS garden
‘My father was in the garden.’

(d) *bàbà è ìké màn
father EXIS garden
‘*The father was in the garden.’
(4.4a) shows that possession is indicated for a possessed home /àgó/ with the relativizer /nì/ followed by the possessive pronoun /áò/. (4.4b) shows that /àgó/ ‘home’ can appear without a pronominal possessor. (4.4c) shows that possession is indicated for /bàbà/ ‘father’ using the same formal means as for /àgó/ ‘home’. (4.4d) shows that /bàbà/ ‘father’ cannot be used without a pronominal possessor.

4.4 Functional categories encoded on the noun

Nyang’i noun roots are, with the exception of kinship terms, free forms. They may always occur without any sort of affixation. Additionally, however, three functional categories are encoded in the noun phrase: noun number, spatial deixis, and possession by a pronoun. Additionally, phrasal categories including nouns may be encoded for focus. Suffixation is the formal means used to encode the first three of these operations. Possession by a pronominal argument is also encoded by means of suffixation. Possession by a lexical noun is encoded by means of linear order, and will be discussed in Section 8.2.

4.4.1 Noun number

As indicated in Section 4.3.1.2, Nyang’i nouns can be divided into two categories with respect to number: count nouns and non-count nouns. All Nyang’i count noun roots are singular in number, and inflect for plural number by means of a suffix. A total of 18 plural suffixes are attested in elicited data.

As seen throughout Section 4.2, a considerable portion of the Nyang’i lexicon is recently borrowed from Eastern Nilotic languages. While no conversational data exists for Nyang’i, as there is only one speaker available, Myers-Scotton (1992) argues that lexical borrowing and language shift situations are characterized by frequent codeswitching, in which conversation in the Abandoned Language incorporates forms from the Target Language. I take for granted, then,
that many responses to elicitation prompts may be better analyzed as code-mixing than as integrated Nyang’i forms. Where it is possible to make a distinction, I do not treat Target Language forms embedded in the matrix of Abandoned Language discourse as representative of Abandoned Language competence. Because this dissertation is focused on Nyang’i competence, it is necessary to identify forms that only occur in codeswitching situations, which I take to represent Target Language competence rather than to represent Abandoned Language competence, and to omit them from the analysis of Nyang’i. On the other hand, truly borrowed forms from the Target Language are treated as representing Abandoned Language competence, and should be included. My criterion for determining whether a number-marking suffix is borrowed or codeswitched is generalization to roots that are not Eastern Nilotic borrowings. If a number-marking suffix occurs on at least one noun root that is not a recent borrowing from an Eastern Nilotic language, then I treat it as part of Nyang’i competence.

By this criterion, 11 of the 18 plural suffixes attested in elicited data have been integrated into the Nyang’i number marking system. These suffixes are often also affixed to roots with Eastern Nilotic etymologies; however, their co-occurrence with non-Eastern Nilotic roots is sufficient grounds for me to treat them as Nyang’i forms. Often, singular forms borrowed from Eastern Nilotic retain an Eastern Nilotic gender marker (usually /lo-/ or /a-/). As described above, when these forms take plural marking, the gender marker from the singular is frequently dropped, and no corresponding plural gender marker is added. These forms will be taken up again in Section 4.4.1.13.

The plural suffixes attested from elicited data are listed in Table 4.22:

Table 4.22 Plural suffixes from elicited data, with attachment co-occurrence restrictions

<table>
<thead>
<tr>
<th>May occur with Kuliak roots</th>
<th>Only occur with Eastern Nilotic roots</th>
</tr>
</thead>
<tbody>
<tr>
<td>-ik</td>
<td>-on</td>
</tr>
<tr>
<td>-(u)jek</td>
<td>-es</td>
</tr>
<tr>
<td>Plural marker</td>
<td>Description</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------</td>
</tr>
<tr>
<td>-ak</td>
<td>-as</td>
</tr>
<tr>
<td>-itín</td>
<td>-et</td>
</tr>
<tr>
<td>-ín</td>
<td>-i</td>
</tr>
<tr>
<td>-én</td>
<td>-a</td>
</tr>
<tr>
<td>-án</td>
<td>-ó</td>
</tr>
<tr>
<td>-ís</td>
<td></td>
</tr>
<tr>
<td>-ít</td>
<td></td>
</tr>
<tr>
<td>-at</td>
<td></td>
</tr>
<tr>
<td>-ot</td>
<td></td>
</tr>
</tbody>
</table>

In a one-hour corpus of textual data (including traditional narratives, personal narratives, and procedural texts), however, a total of only ten lexemes take number inflection of any kind.

Eight of these ten lexemes take the /-ík/ plural marker, one takes /-erek/ (an idiosyncratic allomorph of /-ík/ discussed in Beer (in preparation)), and one takes /-itín/.

Which plural suffix a given noun root will take is not predictable on phonological or semantic grounds. Some suffixes are subject to syllable-counting constraints, such that the form of the stem may be predictable from the choice of the suffix (e.g. /-(u)jek/ only affixes to monosyllabic roots). However, it is impossible to predict the choice of the suffix from the form of the stem (e.g. /gét/, a monosyllabic root, takes /-ík/ rather than /-(u)jek/).

The roots can be classified with respect to whether or not they are associated with two prosodic features. One set of roots triggers syncope, described in Section 2.4.3, while others do not. Additionally, one set of roots triggers replacement of root syllable tones with low tone, described in Section 2.5.2.1, while others do not. These features are not isomorphic.

Discussion of the formal properties of each affix and of the etymology of each affix follows.

4.4.1.1 /-ík/: /-ík/ always takes high tone with low tone stem replacement. The tone of all stem syllables is replaced with low tone when /-ík/ is present. /-ík/ is by far the most common plural marker in both the elicited and the textual data. It is illustrated in (4.5).
(4.5) /-ik/ plurals in Contracted Nyang’i

<table>
<thead>
<tr>
<th>Sg.</th>
<th>Pl.</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>bàsán</td>
<td>bàsàn’ik</td>
</tr>
<tr>
<td>(b)</td>
<td>gèt</td>
<td>gèt’ik</td>
</tr>
<tr>
<td>(c)</td>
<td>èdèk</td>
<td>èdèk’ik</td>
</tr>
</tbody>
</table>

4.4.1.2 -(u)iek:

/-ik/ primarily affixes to monosyllabic stems. The allomorph [-ujek] occurs when the root includes a high vowel. The allomorph [-iek] occurs when the root does not include a high vowel. The alternation between [j] and [i] is conditioned by the /ViV/ context. The allomorph /-u)iek/ is illustrated in (4.6)

(4.6) /-(u)iek/ plurals in Contracted Nyang’i

<table>
<thead>
<tr>
<th>Sg.</th>
<th>Pl.</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>bɛ́s</td>
<td>bɛ́s’ìk</td>
</tr>
<tr>
<td>(b)</td>
<td>kíš</td>
<td>kíš’újék</td>
</tr>
<tr>
<td>(c)</td>
<td>ɲëš</td>
<td>ɲëšèìk</td>
</tr>
</tbody>
</table>

4.4.1.3 -ak:

/-ak/ is only attested for five Nyang’i roots. It has no obvious reflexes in Ik or Soo. It is difficult to draw conclusions about its co-occurrence restrictions from the small data set; however, the roots to which it affixes may be analyzed as recently having been monosyllabic, even though two of these roots are currently disyllabic. These roots are /ˈkékôk/ ‘bone’ and /dɔ́dɔ́k/ ‘frog’. Cognates of /ˈkékôk/ ‘bone’ in Ik and Soo correspond only with respect to the final syllable: /ɔ́ká/ in Ik (Schrock 2014:670) and /ɔ́k/ in Soo (Heine and Carlin 2010:21). /dɔ́dɔ́k/ is a reduplication (possibly onomatopoetic?). /-ak/ is illustrated in (4.7).

(4.7) /-ak/ plurals in Contracted Nyang’i

<table>
<thead>
<tr>
<th>Sg.</th>
<th>Pl.</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>wòl</td>
<td>wòlìàk</td>
</tr>
<tr>
<td>(b)</td>
<td>suí</td>
<td>sùák</td>
</tr>
<tr>
<td>(c)</td>
<td>kékôk</td>
<td>kékôkìàk</td>
</tr>
</tbody>
</table>
(d)  ᴅɪɗɔk  ᴅɪɗɔkæk  ‘frog’

The plural markers in /wɔliàk/ ‘donkeys’ and /kɛkɔk*àk/ ‘bones’ begin with glides, which do not appear to be predictable.

4.4.1.4 -itín:

A series of plural suffixes includes the element /-ín/. These suffixes take the forms [-itín], [-ín], and [-oín]. [-ín] and [-oín] will be treated as allomorphs of a single suffix in Section 4.4.1.5, as their distribution with respect to each other is mostly predictable. [-itín] will be treated here as a separate suffix. Its distribution with respect to [-ín] and/or [-oín] is unpredictable. [-itín] always takes high tone with low tone stem replacement. The tone of all stem syllables is replaced with low tone when [-itín] is affixed. The /-itín/ suffix most prominently occurs with two monosyllabic roots, illustrated in (4.8).

(4.8) /-itín/ plurals in Contracted Nyang’i

\[
\begin{array}{ccc}
\text{Sg.} & \text{Pl.} & \\
\text{(a)} & /bɛl/ & [bɛltín] & ‘walking stick’ \\
\text{(b)} & /mɛs/ & [mɛstín] & ‘sorghum beer’ \\
\end{array}
\]

In both of these cases, the /-itín/ suffix results in a surface consonant cluster—an otherwise unusual phenomenon in Nyang’i, as described in Section 2.4. Reference to Ik and Soo, plus an anomalous form in Nyang’i, help account for this marked phonological output.

Ik uses the suffix /-itín/ to make monosyllabic noun roots plural. There is a regular correspondence between /V#/ in Ik and /∅#/ in Contracted Nyang’i, accounting for the presence of the final vowel in Ik; however, no regular sound change accounts for the presence of the initial /l/ in Ik, which is lacking from the Nyang’i surface forms for these two words. Additionally, Carlin (1993:76-78) notes that a number of plural suffixes in Soo are associated with syncope of the second vowel—a process attested in Nyang’i in some other plurals such as /-an/ (discussed
further in Section 4.4.1.7). The consonant cluster phenomenon is explained by positing that the Contracted Nyang’i suffix [-tín] is underlyingly /-itín/ and that the syncope process deletes the initial /i/. Evidence that the syncope process is sensitive to the presence of the /-itín/ plural marker will follow below in discussion of /kàsít/ ‘anus’.

4.4.1.5 –(o)ín

[-ín] and [-oín] always take high tone with low tone stem replacement. All preceding syllables take low tone, regardless of what tone was found in the singular form. [-ín] and [-oín] plurals are illustrated in (4.9).

(4.9) -(o)ín plurals in Contracted Nyang’i

<table>
<thead>
<tr>
<th>Sg.</th>
<th>Pl.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) gápèt</td>
<td>gápètín</td>
<td>‘eland’</td>
</tr>
<tr>
<td>(b) kóòkát</td>
<td>kóòkátín</td>
<td>‘fingernail’</td>
</tr>
<tr>
<td>(c) gómóc</td>
<td>gómócín</td>
<td>‘tree with edible seeds’</td>
</tr>
<tr>
<td>(d) gálíc</td>
<td>gálícóín</td>
<td>‘jaw’</td>
</tr>
<tr>
<td>(e) pàràc</td>
<td>pàràcóín</td>
<td>‘gun’</td>
</tr>
<tr>
<td>(f) pèlék</td>
<td>pèlékóín</td>
<td>‘shoulder blade’</td>
</tr>
</tbody>
</table>

Nearly half of the roots that take /-ín/ end in /at/ in the singular, and several more end in /et/ in the singular. /at/ and /et/ seem likely to be instances of fossilized singulatives. Words ending in /t/ may have been analyzed as taking the /-ín/ plural on analogy with the /-itín/ forms; however, they do not trigger syncope. The one exception to this is /kàsít/ ‘anus’. /kàsít/ was alternately attested with either /-an/ or /-ín/ as its suffix, and in both cases the root /í/ syncopates. The fact that the only root that undergoes syncope upon the addition of /-ín/ is also the only root ending in /-it/ provides language-internal evidence for the proposed underlying /i/ at the beginning of /-itín/: the morphophonologically constrained syncope process is not activated by strings like /at-in/ or /et-in/, but is activated specifically by /it-ín/, which is the regular reflex of
the cognate plural marker in both Ik and Soo. Finally, the fact that /-ín/ does not trigger syncope in any other contexts suggests that /-ín/ is a lexically separate affix from /-itín/.

A total of 26 roots take either [-oín] or [-ín] as their plural suffix. 18 take [-ín] and eight take [-oín]. Six out of the eight roots that take [-oín] end in a velar or a palatal stop, whereas only two out of the 18 roots taking [-ín] end in a velar or a palatal stop. While the correct allomorph of /-ín/ is not strictly predictable from phonological context, then, there is at least a strong tendency for the allomorph to be predictable on the basis of the final consonant of the root. /sós/ ‘kidney’ is one attested root that does not end in /k/ or /c/, but which is attested with [-oin] as its plural marker. However, its plural was sometimes offered as /sòsóín/ ‘kidneys’ and sometimes as /sòsík/ ‘kidneys’, meaning that its membership in the [-oín] class is marginal. No explanation is available for the other phonological exception, /sèkèt/~/sèkètóín/ ‘shoulder~shoulders’.

Additionally, all words taking [-oín] except for one (/pàrác~/pàràcóín/ ‘gun~guns’) refer to body parts. The etymology of ‘gun’ is unknown; since it refers to a recently introduced item, it may prove ultimately to also have its origin as a body part term. None of the words taking [-ín] refer to body parts. The fact that [-oín] and [-ín] are nearly in complementary distribution both phonologically and semantically suggests, but does not prove, that they are (or were very recently) allomorphs of a single affix.

4.4.1.6 -én:

/-én/ always takes high tone with low tone stem replacement. It is attested for three noun roots. All preceding syllables take low tone. It takes the allomorph /-jén/ in the case of /kòròjén/ ‘he-goat’. Each of the three tokens for which /-én/ is attested includes only mid-vowels. Carlin (1993:77) notes that in Soo, /-en/ is an allomorph of /-in/ after mid vowels; however, in
Contracted Nyang’i, /-ín/ may surface as [-ín] after mid vowels. As such, /-ín/ and /-én/ are in contrastive distribution, and have been treated as separate suffixes. /-én/ is illustrated in (4.10).

(4.10) /-én/ plurals in Contracted Nyang’i

<table>
<thead>
<tr>
<th>Sg.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) kòrò</td>
<td>kòròjén ‘he-goat’</td>
</tr>
<tr>
<td>(b) lòlékék</td>
<td>lòlékèkén ‘gourd type’</td>
</tr>
<tr>
<td>(c) sòròk</td>
<td>sòròkén ‘youth’</td>
</tr>
</tbody>
</table>

### 4.4.1.7 /-án:

/-án/ always takes high tone with low tone stem replacement. All root syllables take low tone when /-án/ is affixed. /-án/ may be affixed to monosyllabic or to polysyllabic roots. The second vowel of polysyllabic roots is usually syncopated, although see /mùkùnán/ below for a counterexample. In particularly careful utterances of all words, the second vowel was retained. /-án/ is illustrated in (4.11).

(4.11) /-án/ plurals in Contracted Nyang’i

<table>
<thead>
<tr>
<th>Sg.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) kòrít</td>
<td>kòrtán ‘breast, ribs’</td>
</tr>
<tr>
<td>(b) kòsmím</td>
<td>kòsmán ‘tail’</td>
</tr>
<tr>
<td>(c) pèr</td>
<td>pèrán ‘axe’</td>
</tr>
<tr>
<td>(d) mùkúɲ</td>
<td>mùkùɲán ‘black ant’</td>
</tr>
</tbody>
</table>

### 4.4.1.8 /-is:

/-is/ only occurs with polysyllabic roots. For some words with obvious Karamojong etymologies, /-is/ replaces the last syllable of the Karamojong singular, even when that syllable is an integrated part of the Karamojong root. This is illustrated in /pùrúkîs/ ‘kneecap’ (the Karamojong form of which is /ŋa-pùrûkuc-o/) (Farina 1985:138). /-is/ is illustrated in (4.12).

(4.12) /-is/ plurals in Contracted Nyang’i

<table>
<thead>
<tr>
<th>Sg.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) còrát</td>
<td>còrátís ‘tree sp.’</td>
</tr>
<tr>
<td>(b) ríŋôk</td>
<td>ríŋôkís ‘wrinkle on skin’</td>
</tr>
</tbody>
</table>
4.4.1.9 -ít:

Only three forms take /-ít/. /-ít/ takes high tone with low tone stem replacement. All preceding syllables take low tone. The three forms taking /-ít/ are illustrated in (4.13).

(4.13) /-ít/ plurals in Contracted Nyang’í

<table>
<thead>
<tr>
<th>Sg.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>árárápát</td>
<td>rarápít</td>
</tr>
<tr>
<td>kősök</td>
<td>kősökít</td>
</tr>
<tr>
<td>káçér</td>
<td>káçèrít</td>
</tr>
</tbody>
</table>

/rarápít/ ‘spiders’ is one of the few instances in which an /-at/ singulative is dropped from the plural.

4.4.1.10 -at:

/-at/ may affix to monosyllabic or polysyllabic roots. Roots taking /-at/ as a plural marker are in contrastive distribution with a series of roots ending in /at/, which historically took /-at/ as a singulative. These roots were described in Section 4.2.3.1.5. Roots ending with /at/ take other plural markers (often /-in/, as discussed in Section 4.5), and never occur without /at/. Roots taking /-at/ as a plural marker take no additional inflection, and occur without /at/ in their singular form. /-at/ is illustrated in (4.14).

(4.14) /-at/ plurals in Contracted Nyang’í

<table>
<thead>
<tr>
<th>Sg.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ñáráp</td>
<td>ñárápát</td>
</tr>
<tr>
<td>tüküpánąŋ</td>
<td>tüküpánąŋat</td>
</tr>
<tr>
<td>süm</td>
<td>sümát</td>
</tr>
</tbody>
</table>

4.4.1.11 -ot:

Only three lexemes take /-ot/ as a plural marker. Of these three, two end in a vowel. The vowel is dropped when /-ot/ is affixed. /-ot/ is illustrated in (4.15).
(4.15) /-ot/ plurals in Contracted Nyang’i

<table>
<thead>
<tr>
<th>Sg.</th>
<th>Pl.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>dûrè</td>
<td>dûrót</td>
</tr>
<tr>
<td></td>
<td>nàpík</td>
<td>nàpíkót</td>
</tr>
<tr>
<td>(c)</td>
<td>nàturù</td>
<td>nàtúrôt</td>
</tr>
</tbody>
</table>

4.4.1.12 Other strategies:

Assorted other strategies are attested in isolated examples, as illustrated in (4.16):

(4:16) Marginal plural marking strategies in Contracted Nyang’i

<table>
<thead>
<tr>
<th>Sg.</th>
<th>Pl.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>kàràwát</td>
<td>kàràwác</td>
</tr>
<tr>
<td>(b)</td>
<td>gobak</td>
<td>góbiák</td>
</tr>
<tr>
<td>(c)</td>
<td>nàtèık</td>
<td>tèákát</td>
</tr>
<tr>
<td>(d)</td>
<td>ekolja</td>
<td>nìkolja</td>
</tr>
<tr>
<td>(e)</td>
<td>mòmòz</td>
<td>nìmòmòz</td>
</tr>
</tbody>
</table>

These strategies tend to be of two types. One strategy involves some sort of change to root-internal segments—often the addition of an on-glide to the last syllable of the singular root. The other strategy involves using an Eastern Nilotic prefix as the only means of distinguishing the singular from the plural.

4.4.1.13 Singulative morphology:

Some plural forms are not formed simply by adding a plural suffix to a (basic) singular root. In most such cases, as discussed in Section 4.2.3.1, Eastern Nilotic gender prefixes are borrowed in the singular forms, but the prefixes are often neither retained for the plural forms nor replaced with the corresponding plural gender prefixes, as illustrated in (4.17):

(4.17) Residual Eastern Nilotic gender/number prefixes in the singular

<table>
<thead>
<tr>
<th>Sg.</th>
<th>Pl.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>lokacer</td>
<td>kacerik</td>
</tr>
<tr>
<td>(b)</td>
<td>nàkòkò</td>
<td>kòkòsik</td>
</tr>
<tr>
<td>(c)</td>
<td>nàric</td>
<td>nìcòím</td>
</tr>
</tbody>
</table>

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In certain cases, elements that appear to be reflexes of the etymological singular gender prefix are retained in the plural, as in (4.18):

(4.18) Residual Eastern Nilotic gender/number prefixes in both the singular and the plural

<table>
<thead>
<tr>
<th>Sg.</th>
<th>Pl.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) lólékék</td>
<td>lólékèkén</td>
<td>‘coke bottle-shaped gourd’</td>
</tr>
<tr>
<td>(b) lókàlèpér</td>
<td>lókàlèpérá</td>
<td>‘vervet monkey’</td>
</tr>
</tbody>
</table>

Unlike in Eastern Nilotic languages (such as Karamojong, in which relativizers agree with their heads in gender and number), the gender prefixes do not correspond to any other component of the grammar in Nyang’i, as illustrated in 4.2.

Some singular forms include final elements lacking from the corresponding plurals. These final elements generally (but not always) correspond with singulative suffixes borrowed from Karamojong. These forms are limited to words recently borrowed from Eastern Nilotic. The process may be better taken as a marker of loan-word status than as an indicator of productive singulative morphology in Nyang’i. They are illustrated in (4.19):

(4.19) Final syllable or segment loss from singulatives

<table>
<thead>
<tr>
<th>Sg.</th>
<th>Pl.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) lòkòlóɲ</td>
<td>kòlòɲín</td>
<td>‘beetle’</td>
</tr>
<tr>
<td>(b) lòpúrúkúc</td>
<td>pùrúkíz</td>
<td>‘kneecap’</td>
</tr>
<tr>
<td>(c) kàràwát</td>
<td>kàràwác</td>
<td>‘plate’</td>
</tr>
</tbody>
</table>

4.4.2 Demonstratives

Demonstrative reference is encoded in Nyang’i by means of either free or bound forms. Free demonstrative forms may function either as modifiers or as pronominal heads of the noun phrase. Bound demonstrative forms may only function as modifiers.

Three categories of demonstratives are distinguished, and they are divided along two parameters: distance from the deictic center, and number of the head noun. Demonstratives encode proximal and distal distance from the deictic center. Singular (one) and plural (more than
one) number are distinguished for proximal but not for distal demonstratives. The three categories, then, are singular proximal, plural proximal, and distal. The free forms of the demonstratives are illustrated in Table 4.23:

<table>
<thead>
<tr>
<th></th>
<th>[-far]</th>
<th>[+far]</th>
</tr>
</thead>
<tbody>
<tr>
<td>free</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sg.</td>
<td>nane</td>
<td></td>
</tr>
<tr>
<td>pl.</td>
<td>nene</td>
<td>nare</td>
</tr>
</tbody>
</table>

The distinction between singular and plural is a statistical generalization rather than categorical contrast. A number of instances may be found in which the ostensibly plural form /nene/ modifies what appears to be a singular head noun. Instances in which /nane/ modifies what appears to be a plural head noun are less common; however, plural head nouns in general are relatively uncommon. Because of this non-categorical distribution, I have left the line between the singular and the plural cell in the table above dashed.

The location of the deictic center, and the process by which the deictic center is constructed, is unclear. Proximal forms encode either physical/spatial proximity or expectation that the addressee will be able to identify the referent of the noun. Distal forms only encode physical/spatial distance.

Proximal demonstratives may be encoded by means of a bound form, and bound plural demonstratives only occur affixed to one particular suppletive lexeme: /jog/ ‘people’. Because of this, I have used the following labels for the cells for the category number in the bound demonstratives section of the expanded table below: general, which encompasses both singular and plural number, and human plural, which accounts for /jog/ (but which implies a wider distribution of forms that this form can occur with than actually obtains). The Nyang’i demonstrative system is illustrated in Table 4.24.

Table 4.24: Nyang’i demonstratives
These forms are evocative of Heine (1974/5)’s demonstrative categories from an earlier form of Nyang’i. Heine (1974/5:283) identifies two demonstrative categories, each of which inflects for number. They are illustrated in Table 4.25:

<table>
<thead>
<tr>
<th></th>
<th>[-far]</th>
<th>[+far]</th>
</tr>
</thead>
<tbody>
<tr>
<td>free</td>
<td>sg. nane</td>
<td>nare</td>
</tr>
<tr>
<td></td>
<td>pl. nene</td>
<td></td>
</tr>
<tr>
<td>bound</td>
<td>general -ane</td>
<td></td>
</tr>
<tr>
<td></td>
<td>human pl. (-ene)</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.25: Nyang’i demonstratives (Adapted from Heine 1974/5:283)

Examples in Heine (1974/5:283)’s account of demonstratives in Nyang’i are limited to postnominal modifiers, which are written as separate words. I have analyzed demonstrative forms lacking the initial nasal as bound rather than free forms primarily because the demonstrative forms lacking the initial nasal also lack the prosodic prominence of the forms beginning with nasals. They are prosodically dependent upon the nouns that they modify.

Two systematic alternations may be observed in Heine (1974/5)’s forms. The first is between initial /a/ which is associated with singular number, and initial /e/, which is associated with plural number. The second is between /n/, which is associated with near distance, and /r/, which is associated with far distance. In Komol’s Nyang’i, the distinction between singular and plural number in demonstrative forms has been lost for the distal demonstratives, but not for the proximal. The distinction between near /n/ and far /r/ has been retained. Free demonstratives associated with a variety of numbers are illustrated below.

The free demonstrative /nane/ ‘this’ can be used with an unambiguously singular subject. In (4.20), /nane/ modifies /ŋèr/ ‘girl’, which is singular. /ŋèr/ is recently mentioned, and is not
physically near the speaker. The proximity encoded by the demonstrative is discourse proximity rather than physical/spatial proximity.

(4.20) tācāísá bābā-ník-ia [ŋèr nànè] (9:20)  
get father-3.POSS-LV girl this  
‘(They) get this girl’s father.’

In (4.21), /nene/ modifies /lò/ ‘cow’, which does not inflect for number. This particular usage is taken from a text in which many cows are being driven from the corral to the river, and so the usage is plural. This shows that /nene/ is not conditioned by the presence of a grammatically marked plural noun, but rather by the presence of a notionally plural noun. Again, the demonstrative is encoding discourse proximity. Both (4.20) and (4.21) show sensitivity to number for demonstratives in modifying function (i.e. the demonstrative inflects for the number the head noun).

(4.21) àúṣé [lò nènè]  
go cow these  
‘these cows would go’

In (4.22) /nane/ is in pronominal function, and its referent is singular. (4.23) provides evidence that the form in (4.22) is in pronominal function: (4.23) was a sentence provided by the researcher while analyzing (4.22), and was accepted and repeated by the speaker as an equivalent sentence. /nane/ ‘this one’ is replaced with /mèrís/ ‘leopard’, which is the referent of /nane/ from (4.22) in the context of the discourse from which the sentence was taken.

(4.22) rúcè-sékè nànè mútù nàbáó-ánè dúákárè  
enter-PST this.one be trap-this there  
‘This one has entered this trap there.’

(4.23) rúcè-sékè mèrís mútù nàbáó-ánè dúákárè  
enter-PST leopard be trap-this there  
‘The leopard has entered the trap there.’
In (4.24), /nene/ is in pronominal function. Its referent (/sore/ ‘children’) is plural, and appears as the following noun. /nene/ cannot be a prenominal modifier of /sore/ ‘children’ because /sore/ ‘children’ is already modified by a bound demonstrative form. Therefore, /nene/ is in pronominal function.

(4.24) düm-áé nénè sòré-áñè ní gêmè-sìkì dènè
give-VEN these.ones child-this REL sit-PST here
‘(They’d) give (it) to them, these children that were sitting here.’

In (4.25), the head noun is a recently mentioned singular entity. Even though the head noun is singular, it is modified by the ostensibly plural demonstrative form, showing that the contrast between singular and plural is not always observed.

(4.25) [námòtòká nénè] ikédí ní gààn
car these 3.SG REL bad
‘It is this car that is spoiled.’

In (4.26), the referent of the demonstrative pronoun is a recently mentioned plural entity. Even though the referent is plural, it is replaced by the ostensibly singular demonstrative form, showing that the contrast between singular and plural is not always observed.

(4.26) rúcè-ðéké nànë mút bôr-ù lò
enter-PST this.one be corral-LV cow
‘They [the children] have entered the corral.’

Bound demonstratives occur only in modifying function. /-ane/ in its bound form may modify either singular or plural nouns. /-ene/ only occurs with the suppletive plural form /jog/ ‘people’.

(4.27) gêmè=se’ke’ nànjí làc-ánè
stay=PST Nyang’i mountain-this
‘The Nyang’i stayed on this mountain.’

(4.28) i’záŋ-á sò’át-ánè
wild-LV bee-this
‘These bees were wild.’
(4.29) au jog-ene esu (2014Feb21ProlongedWalk: 2:11)
go people-these where
‘Where are these people going?’

In (4.27), /-ane/ is affixed to a singular noun. This is the first mention of the mountain referred to, and the text was produced at the foot of the mountain. In this case, the demonstrative is encoding physical/spatial deixis rather than discourse deixis. In (4.28), /-ane/ is affixed to a noun with a plural referent—a swarm of bees—which was prominent in the immediate discourse. It is encoding discourse proximity, and illustrates the normal case of plural nouns taking /-ane/ as a bound demonstrative. In (4.29), /-ene/ is affixed to /jog/, the one form with which /-ene/ occurs in the database. It was uttered as the speaker walked past a group of women walking in the other direction.

4.4.3 Focus marker /-io/

Suffixes with the form /-io/ are affixed to words from a variety of lexical categories, most prominently nouns. The first part of this section will address the distribution of this suffix within the context of noun morphology. The second part of this section will describe the allomorphy associated with /-io/. The final part of the section will address the functions associated with /-io/.

/-io/ is always the final affix attached to whatever word it attaches to. When affixed to nouns, /-io/ occurs as the final suffix, following plural suffixes, demonstrative suffixes, and possessive morphosyntax. /-io/ follows both free and bound demonstratives. The ordering of /-io/ on nouns with respect to other affixes is illustrated in (4.30):

(4.30) The ordering of /-io/ on nouns

(a) bàs mûtú-nânêè tódøj-wà mès-tín-íó
   well be-this.one cook-IT beer-PL-FOC
   ‘Well, this is how you brew beer.’ (14:1)

(b) nànê rûbû nàè mú lôŋât ní cânà-ôékè nânê lâc-ânê-ó
   these people then be enemy REL disturb-ASP this mountain-this-FOC

98
'These people, then, were enemies who disturbed us on this mountain.'

(18:26)

Well, the spear was visible here, here, in this leopard.

(4.30a) shows that /-io/ follows the plural marker. (4.30b) shows that /-io/ follows bound demonstratives. (4.30c) shows that /-io/ follows free demonstratives in post-nominal modifier function. (4.30d) shows that /-io/ follows possessive markers.

/-io/ takes six phonologically conditioned allomorphs at the phonetic level: [-o], [-jo], [-io], [-eo], [-wio], and [-jo]. Two parameters determine which allomorph will surface for a given word: 1) whether the word to which the suffix is attached ends with a consonant or a vowel, and 2) the quality of the preceding vowel. Phonological processes associated with this allomorphy include elision, glide-formation, lowering, and labialization.

If /-io/ is attached to a stem ending in a front vowel, the initial vowel elides, and the form surfaces as [-o]. If /-io/ is attached to a stem ending in a back vowel, the high vowel resyllabifies as a glide, and the form surfaces as [-jo]. Two words in the data set end in /a/. One of these words surfaces as [-o], and the other surfaces as [-jo]. If /-io/ is attached to a consonant-final stem in which the final vowel is [+front], then no change happens to the underlying representation, and the form surfaces as [-io]. If /-io/ is attached to a consonant-final stem in which the final vowel of is [+front -high] (including /a/), the initial vowel lowers, and the form surfaces as [-eo]. In the one case in which /-io/ affixes to a consonant-final stem with a [+high +back] final vowel, /-io/ is labialized and surfaces as [-wio]. /nardok/ ‘one’ idiosyncratically takes [-oj]. The focus marker allomorphs are illustrated graphically in (4.31).
These phonological generalizations obtain for /-io/ suffixes across lexical categories, but are not all true outside of this specific morphological context. Because of this, the phonological processes suggested by these forms are morphologically indexed. There is no language-general phonological rule requiring the lowering of [i] in the environment V[-front -high]C_o, for example—the rule is conditioned morphologically. The morphophonological idiosyncrasies shared across these forms suggest that some sort of semantic commonality should also obtain for the form across lexical categories. The details of this semantic similarity are not yet clear to me; however, the following observations may be made:

1) /-io/ always attaches to a word in clause-final position. This may be a pre-core adverbial clause, a main clause, or a post-core adverbial clause.

2) In the case of adverbial clauses, /-io/ is optional. No morphosyntactic environment has been identified to condition its presence or absence.

3) When nouns are fronted to preverbal position for focus, they obligatorily take /-io/.

Many non-fronted nouns taking /-io/ function as locations (possibly with a destination sense, although that is not certain in these examples):

(4.32) nànè rúbú nàè mú lọ́nàt ní cànà-sekè nànè làc-àñè-ó
these people then be enemy REL disturb-PST this mountain-this-FOC
‘These people, then, were enemies who disturbed us on this mountain.’ (2:3)
No locative reading is obvious for other instances of /-io/ affixed to noun roots. These instances are sufficiently infrequent that it is difficult to determine an independent function for them:

(4.36) bàs mûtú=nânèè tódøj=“à mès-tín-îô
well be=his.one cook-IT beer-PL-FOC
‘Well, this is how you brew beer.’

(4.37) àsò nàá bâbá-nìáú-îô àûg-ësë nàbô wôdê’kì rûb
DM DM father-1.SG.POSS-FOC go-SUBS again call people
‘So, my father went again and called the people.’

One hypothesis is that /-io/ can be used to mark focus on both subjects and objects, that focused subjects are obligatorily fronted, and that focused objects obligatorily remain in situ.

In (4.36), /mestin/ ‘beer(s)’, which takes the focus marker, is a patient. In (4.37), /babaniau/ ‘my father’, which takes the focus, is a fronted agent.

4.5 Notes on inheritance, innovation, borrowing, and loss

Ik and Soo encode the following functional categories on nouns: number, case, and demonstrative reference. As demonstrated in Beer (forthcoming), Nyang’i has retained comparable ornamental complexity in its number marking system to that found in Ik and Soo; however, Nyang’i has lost systemic complexity in its number marking system by losing the singulative/plurative lexical contrast. Kuliac languages have previously been described as having
between six (Ik, Schrock 2014:156) and twelve (Soo, Carlin 1993:74-78) number marking suffixes for nouns. Count noun roots in previously described Kuliak languages are inherently either singular or plural (or, in some cases, bound, taking overt inflection for both singular and plural), and number marking suffixes may be either singulative or plurative, depending on the lexical specification of the root. Heine’s (1974/5) notes, as well as comparative evidence, indicate that pre-contraction Nyang’i had such a system. In Nyang’i, however, roots are all singular, and affixes are all plural. The total number of number values encoded in noun roots has decreased, and the total number of number values encoded in number-marking suffixes has decreased, but the number of forms remains about the same.

While Soo case has contracted relative to Ik, with only three remaining cases compared to Ik’s eight, the existence of any cases at all provides evidence that case survived into Proto-West Kuliak. No clear case marking survives into Nyang’i. Two candidates for remnants of case marking include the optional /-a/ suffix that appears on some relational nouns (discussed in Section 4.3.3) and the /-io/ focus marker, which is often used on locations. Carlin (1993:122) reports a suffix with allophones [-o] and [-a] as the locative case in Soo, providing a possible source for Nyang’i /-io/ or /-a/.

Soo and Ik both include demonstrative paradigms distinguishing between singular and plural and at least proximal and distal (Ik includes an additional medial distance for singular, but not for plural). Nyang’i retains the basic architecture of this system, but has neutralized the proximal and distal plural values. Additionally, the Nyang’i speaker does not reliably differentiate between singular and plural (often using the etymological singular for plural referents and the etymological plural for singular referents.)
Chapter 5: The Verb

5.1 Introduction

This chapter presents the morphological properties of the Nyang’i verb. Section 5.2 describes the verb root, including its segmental structure. Section 5.3 describes a selection of recurring borrowed and inherited affix-like elements that generally do not function as meaningful units in Nyang’i, and so may be treated as fully integrated parts of the root synchronically. Section 5.4 describes verb affixes, including a set of directionals, a suffix /-(e)se/ used in narrative organization, and a series of endings with no apparent synchronic function that take the form VC. I argue that the VC endings are suffixes in the sense that they have a different psychological status for the speaker than the roots to which they attach, in spite of not taking any synchronic function.

Verbs take suffixes, but not prefixes (with the exception of petrified or nearly-petrified Eastern Nilotic prefixes discussed in Section 5.3). Functional categories encoded on the verb are limited to direction (likely grammaticalized to include aspectual functions) and the discourse structuring suffix dealt with in Section 5.4.2.

Each of the affix types (directional, VC endings, and /-(e)se/) can co-occur. A position-class diagram for the Nyang’i verb is presented in Table 5.1:

<table>
<thead>
<tr>
<th>0</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verb Root</td>
<td>Directional</td>
<td>VC Ending</td>
<td>-(e)se</td>
</tr>
</tbody>
</table>

The database for this chapter consists of 328 basic verb roots (roots that can only be analyzed as monomorphemic both synchronically and diachronically), 40 noun roots that include borrowed morphology, and 35 reduplicated roots, for a total of 403 roots. This database is a
compilation of all verbs occurring in one hour of narrative texts supplemented with a number of verbs elicited by means of Karimojong.

5.2 The Verb Root

While no more functional categories are encoded on verbs than on nouns, verbs in Nyang’i more frequently take affixes than nouns. Particularly in the case of the VC endings on verbs, it can be difficult to determine whether a given sound sequence is an affix, or just part of the root. Many, but not all, verb roots are bound, never occurring without some sort of suffix. Many bound verb roots must take a directional extension (discussed in Section 5.4.1).

Under a strict definition of morpheme as a sound-meaning correspondence, it is difficult to classify the identified set of VC endings properly as morphemes, as it is not obvious that they encode any particular meaning synchronically; however, a number of factors taken up in Section 5.4.2 show that they function as separate units from roots in the mind of the speaker. VC affix-like formatives, then, are not considered part of the verb root in the following sections, but rather as separate affixes, with the consequence that verb roots described as “basic” (i.e. unitary, not composed of an etymological root with a fossilized affix) may take VC endings, which are treated as not belonging to the verb root.

Between roots with petrified morphology and bound roots, very rarely is a verb root synchronically and diachronically unanalyzable. Many roots only surface with a particular function-less affix (as the suffix in /tac-asa/ ‘find, get’ or the prefix in /tɔ-bɔk/ ‘dig, cultivate’ in the table below), or by roots that always occur with at least one option out of a set, resulting in word-forms in a paradigmatic relationship to each other (as in /dum-u/ ‘pick, take’ and /dum-ae/ ‘give’ in the table below). A much smaller set of verb roots can occur as free forms, and examples from this set are provided in the first column in the table below. Verb roots that can
occur as free forms can also surface with affixes. There is no semantic coherence to either the free set of verb roots or to the ostensibly bound set of verb roots. A representative sample of free and bound verb roots is presented in Table 5.2:

**Table 5.2: Free and bound verb roots in Nyang’i**

<table>
<thead>
<tr>
<th></th>
<th>Free</th>
<th></th>
<th>Bound</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>English</td>
<td>Nyang’i</td>
<td>English</td>
<td>Ny Wordform</td>
</tr>
<tr>
<td>‘enter’</td>
<td>‘pick, take’</td>
<td>ruc</td>
<td>dum-u</td>
<td>dum</td>
</tr>
<tr>
<td>‘give’</td>
<td>‘give’</td>
<td></td>
<td>dum-ae</td>
<td></td>
</tr>
<tr>
<td>‘drink’</td>
<td>‘find, get’</td>
<td>we</td>
<td>tac-asa</td>
<td>tac</td>
</tr>
<tr>
<td>‘stand up’</td>
<td>‘dig, cultivate’</td>
<td>riɲ</td>
<td>tɔ-bɔk</td>
<td>bɔk</td>
</tr>
</tbody>
</table>

Examples from the free set occur at least once in the corpus without any sort of obvious affixation. /ruc/ ‘enter’ and /we/ ‘drink’ both also occur with affixation. Examples from the bound set always occur with at least some form of affixation. /dum/ ‘transfer’, for instance, always takes a directional extension, but this extension can either be /-u(a)/ITIVE or /-ae/VENTIVE. /tac/ ‘find, get’ always occurs with /-asa/ (see Section 5.3.1.5), and /bɔk/ ‘dig, cultivate’ always occurs with the Eastern Nilotic subsecutive prefix /tɔ-/.

Verb roots, like noun roots, may be divided into three categories: basic roots, reduplicated roots, and historically morphologically complex roots. As in Chapter 4, this follows the categorization used by Schrock for Ik (2014:306-319). The reason for this is two-fold. First, many of the historical factors that shaped Ik have also shaped Nyang’i, with the consequence that many of the descriptive tools that are useful for describing Ik are also useful for describing Nyang’i. Second, using the same descriptive categories as Schrock (2014) (where such descriptive categories are appropriate for Nyang’i) may facilitate comparison in future research, as in Section 4.2.

**5.2.1 Basic Roots**
Basic verb roots, in Nyang’i as in Ik, are “those whose morphological composition, if there ever was one, is not currently recoverable” (Schrock 2014:134), or “those considered morphologically unanalyzable” (Schrock 2014:306). By this standard, 328 out of 403 verb roots in the database are basic roots. The most common form for basic roots is CVC: 166 of the 328 basic verb roots are CVC. The syllable structures of basic Nyang’i verb roots are presented below.

5.2.1.1 Monosyllabic Verb Roots

Over 60% (198 out of 328) of the basic verb roots attested in the database are monosyllabic. In addition to 166 CVC roots, there are 18 VC roots and 14 VC roots. Monosyllabic verb roots are illustrated in Table 5.3. Bound roots are written with a hyphen (ROOT-) to distinguish them from free roots.

Table 5.3: Monosyllabic verb roots

<table>
<thead>
<tr>
<th>Root</th>
<th>Shape</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>jò</td>
<td>CV</td>
<td>‘strike (e.g. with a spear)’</td>
</tr>
<tr>
<td>lɔ-</td>
<td>CV</td>
<td>‘yawn’</td>
</tr>
<tr>
<td>éś-</td>
<td>VC</td>
<td>‘leave’</td>
</tr>
<tr>
<td>èd-</td>
<td>VC</td>
<td>‘be first’</td>
</tr>
<tr>
<td>ṇaña-</td>
<td>CVC</td>
<td>‘open’</td>
</tr>
<tr>
<td>kút-</td>
<td>CVC</td>
<td>‘cough’</td>
</tr>
</tbody>
</table>

5.2.1.2 Disyllabic Verb Roots

About 30% (100/328) of the basic verb roots attested in the database are disyllabic. These roots take a wide variety of shapes, without a single predominant pattern. Six of these roots are VCV, three are VV, Five are VVC, 10 are VCVC, 21 are CVCV, 24 are CVCVC, one is VCCV, three are CVV, 27 are CVVC, and one is VCCV. A selection of disyllabic verb roots is presented in Table 5.4:

Table 5.4: Disyllabic verb roots
No tonal melody prevails among the disyllabic roots. Out of 65 disyllabic roots for which tonal transcriptions are available, 24 take H.H, 11 take H.L, 19 take L.H, and 11 take L.L. The trend found among nouns for L.H tonal melodies to be much more frequent than any other tonal melody in disyllabic roots, then, does not obtain for verbs.

One disyllabic root, /ɛ́stá/ ‘rest’, was exceptional in that it includes a word-medial consonant cluster (/st/) for which no synchronically accessible process of syncope (see Section 2.4.3) is identifiable.

5.2.1.3 Polysyllabic Verb Roots

The remaining 30 out of the 328 basic verb roots have polysyllabic roots. From this set, only VVCV (attested four times) and CVVC (attested three times) are attested more than twice. A total of 15 different polysyllabic verb root shapes are attested.

5.3 Borrowed and petrified affixes
Nyang’i and Ik contrast with Soo within the Kuliak languages in that prefixation is not a productive process for verbs. However, many borrowed verbs in Nyang’i retain prefixes from the donor language. In Ik, prefix-retention appears to be, at least of late, a productive process involving the regular retention of a small set of prefixes on all recently borrowed verbs. The prefix retained for a particular verb in Ik is conditioned by the inflectional class to which that verb belongs in the donor language (Schrock 2014:144-145). In Nyang’i, however, prefix retention is sporadic, and involves a wider range of donor language forms. Therefore, while Schrock (2014:144) can claim for Ik that these petrified prefixes may have something of a synchronic function as loan-word markers (with the caveat that they only apply to affix to relatively recent borrowings), no such claim may be made for Nyang’i.

The main sources for petrified prefixes in Nyang’i are the subsecutive/imperative markers and the third person number markers, which are discussed below.

5.3.1 Petrified subsecutive/imperative markers

Karimojong verbs are divided into two main lexically conditioned inflectional classes. One of the most distinctive characteristics of these classes is the prefix used to mark imperative or subsecutive mood. Schrock has described a function in Ik that is analogous to the subsecutive mood, but which he calls sequential, as encoding “that a state or event follows in sequence after one or more previous states or events” (2014:363). Subsecutives also sometimes encode same-subject reference across clauses. Using the labels proposed by Tucker and Bryan (1966:450), Class 1 verbs have CVC roots in Eastern Nilotic languages nearby to Nyang’i (e.g. Turkana (Dimmendaal 1983:98) and Karimojong (Novelli 1986:200-201). These forms use /-to-/ to mark the subsecutive mood (/a-to/ for first person subjects) and the imperative mood in Turkana (Dimmendaal 1983:174-8). Class 2 verbs have iCVC roots, in which the initial /i/ is a reflex of
an old causative marker that no longer functions synchronically. These verbs use /ki-/ to mark the subsecutive mood (/a-/ for first person subjects) and the imperative mood (Dimmendaal 1983:174-8). While the Eastern Nilotic inflectional classes once were distinguished by the transitivity of the verb (Class 2 verbs consistently transitive as a result of their derivation by means of the causative prefix), transitivity is no longer sufficient to divide one class from the other, (Dimmendaal 1983:100).

In Ik, borrowed words with etymologies from the Eastern Nilotic Class 1 invariantly take /to-/ as part of their root. Words with etymologies from the Eastern Nilotic Class 2 invariantly take /i-/ as part of their root. Schrock (2014:315) notes that the subsecutive mood is highly frequent in Teso-Turkana, and suggests that the frequency of the form was a factor in the borrowed form including a reflex of the subsecutive prefix. In Nyang’i, however, no such overarching tendency may be found. Reflexes of /to-/ among borrowed Class 1 verbs are reasonably common, being found on perhaps 25 verbs (although it is not clear in every case that the root-initial /to-/ is a reflex of an Eastern Nilotic form). However, at least as great a number of borrowed verbs that belong to Class 1 in Karimojong surface either with a different petrified prefix, or without a petrified prefix. Reflexes of /ki-/ are not found: Class 2 verbs are usually borrowed without petrified morphology. I remain agnostic as to whether the absence of Class 2 verb morphology is because morphology that did exist has eroded off, or because the borrowing took place before the development of the Class 2 markers. A sample of Class 1 verbs with reflexes of the /to-/ subsecutive marker and a sample of Class 2 verbs lacking any reflex of the /ki-/ subsecutive marker or the Class 2 /i-/ are presented in Table 5.5.

Table 5.5: Petrified prefixes on Class 1 verbs only

<table>
<thead>
<tr>
<th>Class</th>
<th>Karimojong</th>
<th>Kjong Gloss</th>
<th>Nyang’i</th>
<th>Ny Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>a-sal-un</td>
<td>‘end, finish’</td>
<td>ta-sal-ac-ik</td>
<td>‘become finished’</td>
</tr>
</tbody>
</table>
5.3.2 Petrified infinitive markers

The infinitive marker in Eastern Nilotic takes the surface form of either /a-/ or /aki-/. /aki-/- is used for all Class 2 infinitives and for Class 1 infinitives with more than one mora, while /a-/ is used for Class 1 infinitives with a single mora (Dimmendaal 1983:99-100). The environments in which each allomorph presents are illustrated in Table 5.6:

Table 5.6: Eastern Nilotic infinitive marking

<table>
<thead>
<tr>
<th>Number of moras in root</th>
<th>Class 1 marker</th>
<th>Class 2 marker</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>a-</td>
<td>aki-</td>
</tr>
<tr>
<td>&gt;1</td>
<td>aki-</td>
<td></td>
</tr>
</tbody>
</table>

A few examples of each infinitive allomorph as a petrified prefix are attested in the database. A representative sample is presented in Table 5.7:

Table 5.7: Petrified infinitive prefixes

<table>
<thead>
<tr>
<th>Class</th>
<th>Karimojong</th>
<th>Kjong Gloss</th>
<th>Nyang’i</th>
<th>Ny Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>a-beny-o</td>
<td>‘insult, provoke’</td>
<td>à-béŋó</td>
<td>‘instigate fight’</td>
</tr>
<tr>
<td>1</td>
<td>a-git-ar</td>
<td>‘choke’</td>
<td>à-gítàr</td>
<td>‘choke’</td>
</tr>
<tr>
<td>2</td>
<td>aki-juru</td>
<td>‘hang head’</td>
<td>áki-júrú</td>
<td>‘hang head’</td>
</tr>
</tbody>
</table>

5.3.3 Petrified person-marking prefixes

Eastern Nilotic languages mark the person of the subject with a series of prefixes. The surface forms of the person-markers are also different between Class 1 and Class 2 verbs, as the initial /i/ of Class 2 verbs contracts with the person-marking prefixes, raising non-high vowels. (Dimmendaal 1983:120). Eastern Nilotic person-marking prefixes are illustrated using Turkana data in Table 5.8.
Table 5.8: Eastern Nilotic person-marking prefixes (from Dimmendaal 1983:120)

<table>
<thead>
<tr>
<th>Person</th>
<th>Class 1</th>
<th>Class 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>a-</td>
<td>e-</td>
</tr>
<tr>
<td>2</td>
<td>i-</td>
<td>i-</td>
</tr>
<tr>
<td>3</td>
<td>e’-</td>
<td>i’-</td>
</tr>
</tbody>
</table>

Only one form, /e-pir/ ‘stir by spinning’ appears to include a petrified Eastern Nilotic person-marking prefix. Western Nilotic languages neighboring Nyang’i, however, also mark the person of the subject with prefixes. A small number of Nyang’i words begin with /o-/, for which no etymological source has yet been identified. Two of the four aspects in Lango, closely related to Nyang’i’s neighbor Okuti, mark third person singular subjects with /o-/ (Noonan 1992:91). Etymologies for the Nyang’i verbs taking /o-/ prefixes are not clear, but Western Nilotic is a possible source for the prefix:

Table 5.9: borrowed/petrified /o-/

<table>
<thead>
<tr>
<th>Form</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>ò-kác</td>
<td>‘mount in order to mate’</td>
</tr>
<tr>
<td>kác-òs-fk</td>
<td>‘ejaculate’</td>
</tr>
<tr>
<td>ò-géc</td>
<td>‘set down’</td>
</tr>
</tbody>
</table>

The /o-/ prefix does not appear to be petrified, as indicated by the form /kác-òs-fk/ ‘ejaculate’, which appears to be at least derivationally related to /ò-kác/, but which lacks the /o-/.

5.3.4 Borrowed roots without petrified prefixes

The above sections perhaps give the impression that verbs borrowed into Nyang’i all have some sort of borrowed or petrified prefix. However, a significant proportion of borrowed verbs lack any sort of borrowed or petrified prefix whatsoever. A selection of borrowed verbs that do not take a borrowed or petrified prefix is presented in Table 5.10:

Table 5.10: Borrowed verbs without borrowed morphology

<table>
<thead>
<tr>
<th>Class</th>
<th>Karimojong</th>
<th>Kjong Gloss</th>
<th>Nyang’i</th>
<th>Ny Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>a-gyel-ar</td>
<td>‘sell’</td>
<td>g^ésé</td>
<td>‘sell’</td>
</tr>
<tr>
<td>1</td>
<td>aki-dod</td>
<td>‘point with finger’</td>
<td>dód-wé</td>
<td>‘point with finger’</td>
</tr>
<tr>
<td>2</td>
<td>aki-doun</td>
<td>‘give birth’</td>
<td>dób-ás</td>
<td>‘give birth’</td>
</tr>
<tr>
<td>2</td>
<td>aki-rig</td>
<td>‘rub, file’</td>
<td>rig-án</td>
<td>‘scratch against’</td>
</tr>
</tbody>
</table>
5.3.5 -(V)sa: a fossilized Kuliak affix

Heine (1974/5:284-5) describes Nyang’i’s pronominal system as consisting of three persons and two numbers, plus an inclusive/exclusive distinction for first person plural. The pronominal system in present-day Nyang’i will be taken up at greater length in Section 7.2; however, for the present it is sufficient to note that Heine (1974/5:284)’s marker of first person singular subject is /-sa/. A small set of verb roots systematically occurs with what appears to be a reflex of this marker, which typically manifests as the sequence /-asa/.

There does not appear to be any sort of functional factor unifying the roots that take /-asa/. The most prominent instances of these forms are presented in (5.1):

<table>
<thead>
<tr>
<th>(5.1)</th>
<th>Nyang’i</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>hárásà</td>
<td>‘butcher’</td>
</tr>
<tr>
<td>(b)</td>
<td>kʷájasà</td>
<td>‘hunt, search’</td>
</tr>
<tr>
<td>(c)</td>
<td>tácà(ì)sá</td>
<td>‘get, find’</td>
</tr>
<tr>
<td>(d)</td>
<td>tóliásà</td>
<td>‘crawl’</td>
</tr>
</tbody>
</table>

Marking the person and number of the verb by means of a suffix is currently a very marginal strategy at best. Many instances of the above verbs in the text have notional first person singular subjects:

(5.2)

tácàisá áè dì nànè ágò
get 1.SG news this home
‘I got news at home.’

(5.3)
káá tácàisá mètán-éó èdèrè áè dènè
if get not.there-FOC return 1.SG here
‘If (I) get nothing, I return here.’

However, when these forms do occur without a notional first person subject, they retain the /-asa/ ending.

(5.4)
hàrásá  gèt-ìkì-ànè
skin  goat-PL-this
‘(They) skin these goats.’

(5.5)
áúg-ésé  k'ájáda hàd màbón mòkídènè
go-SEQ  search  tree  big  have.size
‘He would go to search for a tree of a large size.’

Further evidence that the /-asa/ ending does not encode first person singular agent is a sentence in which a root taking /-asa/ appears also to take the first person singular agent-marking suffix. This is one of only two instances in the >50 minute corpus in which a suffix is best analyzed as an agent-marking suffix:

(5.6)
tácásá-sá  bí  nènè  násárin  lòskúl
get-1.SG  2.SG  there  Nazarene  school
‘I got/found you there in Nazarene, the school.’

5.4 Verb Suffixes

Nyang’i verbs take suffixes but not prefixes. I address three categories of suffixes in this section. First, I describe the directional extensions (/-u(a) ITIVE and /-Vc/ VENTIVE). Second, I briefly introduce a subsecutive or narrative voice marker /-(e)se/. The functions of this marker are not clear from the data: some hypotheses on the basis of similar phenomena in related and nearby languages will be proposed and challenged. Finally, there is a series of ending that takes the form VC, but which encode no functions synchronically. I argue that insofar as they may be classified as separate units from the root, they should be treated as suffixes in spite of their lack of functional load.

5.4.1 Directional Extensions: /-u(a)/ and /-Vc/

The Nyang’i system of verbal direction includes two terms: /-u(a)/ and /-Vc/.
Historically, and as described in Heine (1974/5:286), the functions of these terms were ITIVE, or
motion away from the deictic center, and VENTIVE, or motion toward the deictic center. This analysis is supported both by comparison with Soo (which includes a ventive /-ac/ and an itive /ua/ (Carlin 1993:51-52)) and by the likely grammaticalizations of /-u(a)/ from /au(g)/ ‘go’ and /-Vc/ from /aco/ ‘come’.

In contemporary Nyang’i, the system seems to have begun to deteriorate. If the etymological directional extensions are presumed to still encode directional information, then certain attested forms suggest that the speaker was confused about which directional extension to use with a given root—perhaps suggesting that the directional sense of the extensions is no longer easily accessible to the speaker. Certain pairs seem to have undergone an inversion in function (e.g. /-u(a)/ seems to encode motion toward the deictic center in a word like /dum-u/ ‘pick’, and /-Vc/ seems to encode motion away from the deictic center in a word like /dum-ae/ ‘give’). Schrock (p.c.) proposes the alternative hypothesis that the directional have grammaticalized into aspectual constructions as in Ik, in which itive marks completive aspect and ventive marks inchoative aspect. Roots taking no extension, the ventive, the itive, and some combinations of the three are illustrated in Table 5.10:

<table>
<thead>
<tr>
<th>Ventive</th>
<th>Vent gloss</th>
<th>Itive</th>
<th>It gloss</th>
<th>No direction</th>
<th>ND gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>eser-ec</td>
<td>‘return (here)’</td>
<td>eser-ua</td>
<td>‘return (there)’</td>
<td>eser</td>
<td>‘return’</td>
</tr>
<tr>
<td>dum-ai</td>
<td>‘give’</td>
<td>dum-u</td>
<td>‘pick, pull out’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ŋat-ac</td>
<td>‘run (here)’</td>
<td>ŋat-ue</td>
<td>‘run (there)’</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>cid-u-ak</td>
<td>‘milk livestock’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>di-ec</td>
<td>‘bring’</td>
<td>pen-u-ak</td>
<td>‘fart’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>gem-ec</td>
<td>‘stay’</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5.4.1.1 -u(a) itive
The main functions of /-u(a)/ is to encode motion away from the deictic center and completive aspect. It occurs obligatorily with some roots, is in contrastive distribution with zero on some roots, is in contrastive distribution with /-Vc/ on some roots, and is in contrastive distribution with both the ventive and with zero on other roots. /-u(a)/ is a suffix that affixes directly to the root, i.e. no other suffixes may occur between /-u(a)/ and the root. The directional sense is more evident for some roots than for others. For each of the three examples provided below, a completive reading could fit the data naturally:

(5.11) kén-w-ák nàí nós
       kill-IT-IMPS then animal
       ‘Then they kill(ed) animals’

(5.12) bás ésèr-ùà-sè ágó
well return-IT-SEQ home
       ‘Well, (they) return back home’

(5.13) nàt-wè bàbá níáù
       run-IT father 1.SG.POSS
       ‘My father ran there.’

/-u(a)/ takes three allomorphs: /-w/, /-ua/, and /-ue/. When /-u(a)/ precedes a VC ending (described in 5.4.2), the /a/ is elided or assimilated into the vowel of the ending, and the /u/ desyllabifies, becoming labialization on the preceding consonant. This accounts for the /-w/ allomorph. I cannot account for when the /-ua/ and /-ue/ allomorphs will surface.

5.4.1.2 -Vc ventive

The main function of /-Vc/ is to encode motion toward the deictic center. As with /-u(a)/, it is obligatory with some roots, is in contrastive distribution with zero on some roots, is in contrastive distribution with /-u(a)/ on some roots, and is in contrastive distribution with both the ventive and with zero on other roots. /-Vc/ is a suffix that in nearly all instances immediately
follows the verb root. At least one example seems to include the /-Vc/ ventive more remote from the root than another affix:

\[(5.14)\]
\[\text{gèm-ès-éc-ó} \quad \text{'dàänè mán tàrè mān} \]
\[\text{stay-???-VENT-FOC there now until now} \]
\[\text{‘They stay there now, until now.’} \]

In Soo, coda-position voiceless palatal stops /c/ alternate with the high front vowel /i/ (Carlin 1993:11, McKinney 2010). This alternation seems also to occur in at least some contexts in Nyang’i, perhaps most noticeably with certain instances of the ventive marker, which often surfaces as /-Vi/ rather than as /-Vc/. Evidence that /-Vi/ forms are allomorphs of /-Vc/ forms comes from such pairs as /dum-ai/ ‘give’ and /dum-u/ ‘pick, pull out’. The semantic contrast between this pair is primarily directional: in one, an item is being caused to move closer to the subject, in the other, an item is being caused to move away from the subject. The directional nature of the contrast suggests that the extension in the form /dum-ai/ ‘give’ should be treated with the otherwise phonologically similar /-Vc/ forms even though it lacks the /c/, and the /i/ is in the context in which /c/ alternates with /i/ in Nyang’i’s closest relative. Due to the semantic similarities between /-Vi/ forms such as /dum-ai/, and due to the comparative precedent for the otherwise unlikely alternation between /c/ and [i], I treat /-Vi/ forms as allomorphs of /-Vc/.

The vowel in /-Vc/ may be /a/, /e/, or /i/. I have not been able to determine what factor or factors condition the choice of vowel in the suffix. /-Vc/ is illustrated in (5.15)-(5.17). Again, while word-level glosses may have directional senses (particularly with motion verbs) as in Table 5.10 in Section 5.4.1, the ventive in texts often does not have a clearly directional sense. Schrock (p.c.)’s observation that an aspectual reading may account for these uses seems apt.

\[(5.15)\]
\[\text{dúm-àì nàf rúb} \]
\[\text{give-VENT then people} \]
\[\text{‘Then give (it) to the people.’} \]
(5.16) gém-éc-íð dú-àk-ànè
stay-VENT-3.PL place-at-this
‘They stay at this place.’

(5.17) gám-ác cò tègʷ-ík
trap-VENT IMM foot-PL
‘Its feet are trapped.’

(5.16) is noteworthy not only for including the ventive, but also for including what appears to be a marker of the person and number of the subject. Such markers are exceedingly rare in the speaker’s idiolect of Nyang’i, and were not provided when directly eliciting paradigmatic data.

While an aspectual reading is tempting for many extensions of the ventive extension, the exact value of an aspectual function that could be encoded by the ventive is not clear. Schrock (2014:372) indicates that the same form encodes both ventive and inchoative in Ik. The ventive is involved, together with the suffix /-ik/, in an inchoative construction in Nyang’i. While ventive/inchoative homophony indicate a similarity with Ik, there are also clear differences in the constructions: in Nyang’i, the ventive does not stand alone as an inchoative marker, but rather in all clear inchoative constructions, occurs combined with another suffix /-ik/, which is described at greater length in 5.4.2.1.2. Because additional means additional to the ventive are needed to encode inchoative aspect in Nyang’i, inchoative aspect is not a likely function to be encoded by the bare ventive. Two clear inchoative constructions found in the database are presented in

(5.18):

(5.18): Inchoative aspect

(a) èmèn-èc-ík
black-VENT-INC
‘become black (used of dusk)’
(b) tásàl-àc-ík
finish-VEN-INCH
‘finish up’

Currently, the Ik ventive/inchoative marker /-ét-/ cannot be demonstrated to be cognate with its analog in Nyang’i, as Ik /t/ is not the regular correspondent of Nyang’i /c/ (the regular correspondent of Nyang’i /c/ is Ik /ts/, which is similar enough that the possibility of irregular sound change must be considered). Ik and Nyang’i both share in common the use of directional markers (/̀ʊŋ/ VENTIVE and {̀àr̥} ITIVE in Turkana (Dimmendaal 1983:168-172)) to encode inchoative aspect. Turkana’s use of directionals for this purpose differs from that of the Kuliak languages in that the choice of which directional is used to encode inchoative aspect is phonologically conditioned in Turkana (Dimmendaal 1983:168), while it is semantically conditioned in Kuliak (with ventive but not itive encoding inchoative).

5.4.2 /-(e)se/: a sequential, narrative, or subsecutive?

Throughout East Africa, morphological means are employed in complex structures to indicate “that a state or event follows in sequence after one or more previous states or events” (Schrock 2014:363), and sometimes to encode same-subject reference across clauses. Such forms or constructions are described as sequential in Ik (Schrock 2014:362-366), narrative in Soo (Carlin 1993:60-62), subsecutive in Turkana (Dimmendaal 1983:174-177), or asyndetic parataxis in Lango (Noonan 1992:194-210). Throughout these languages, one strategy for organizing discourse involves encoding certain types of information (e.g. TAM) only in the first clause, and following that clause with a series of clauses dependent on the first for that information.

One common suffix in Nyang’i textual data takes the form /-(e)se/, which I have provisionally glossed as SEQ, for ‘sequential’. Attempts by the researcher to test the meaning and grammaticality of textual passages that had been manipulated by adding or removing /-(e)se/ from the attested form were unsuccessful. The speaker was unable to identify any change in
meaning or grammaticality under such circumstances. The pervasive nature of /-ese/ in narratives and the fact that it takes nearly exactly the same phonological form as the Ik sequential impersonal passive (Schrock 2014:394) suggest that /-ese/ could be Nyang’i’s iteration of this form. An instance of /-ese/ bearing similarity to a sequential/narrative/subsecutive is presented in (5.19)\(^8\):

\[
\begin{align*}
(5.19) & \quad \text{di}\text{ece}\text{seke} \quad \text{di} \quad \text{nene} \quad \text{mutu} \quad \text{seke} \quad \text{na}\text{i} \quad \text{n-ake} \quad \text{ate} \\
& \quad \text{di}\text{ece}=\text{seke} \quad \text{di} \quad \text{nene} \quad \text{mutu} \quad =\text{seke} \quad \text{na}\text{i} \quad \text{n-ake} \quad \text{ate} \\
& \quad \text{say}=\text{PST} \quad \text{matter} \quad \text{these} \quad \text{be} \quad \text{PST} \quad \text{Nyang’i} \quad \text{REL-EXIS} \quad \text{EXCLM} \\
& \quad \text{‘These things I said were Nyang’i,’} \\
& \quad \text{diese} \quad \text{amane} \quad \text{ka} \quad \text{amane} \\
& \quad \text{die-se} \quad \text{amane} \quad \text{ka} \quad \text{amane} \\
& \quad \text{bring-SEQ} \quad \text{like.this} \quad \text{and} \quad \text{like.this} \\
& \quad \text{‘I talked like this and like this,’} \\
& \quad \text{diese} \quad \text{ka} \quad \text{amane} \\
& \quad \text{die-se} \quad \text{ka} \quad \text{amane} \\
& \quad \text{bring-SEQ} \quad \text{and} \quad \text{like.this} \\
& \quad \text{‘I talked like this.’}
\end{align*}
\]

In the first clause, the TAM information is encoded: /seke/ PAST occurs twice. The second clause, however, has no TAM information besides the /-(e)se/ marker. The context suggests that the same TAM information present in the first clause is in effect in the /-(e)se/-marked clauses. This would be a reasonably typical use of clause-chaining in this area, and /-(e)se/ has a likely etymon in Ik /-ese/. However, certain uses of /-(e)se/ suggest that at the very least the function of /-(e)se/ is significantly different from Ik /-ese/ (or, for that matter, from Ik /-kɔ/, the non-passive sequential aspect marker), even if the sequential hypothesis for the Nyang’i form proves justified.

In Ik, “main clauses with the sequential are always subordinate or “co-subordinate” (medial or chained) to a previous controlling clause” (Schrock 2014:364). The semantic and

\[^8\] Events of talking are encoded in Nyang’i with verbs of bringing.
syntactic requirements on sequential and narrative TAM markers in Ik and other nearby languages prevent these markers from occurring in the first clause in a discourse: since one of their main functions seems to be to point back to TAM information from earlier clauses, earlier clauses are a prerequisite for their occurrence. In Nyang’i, however, /-(e)se/ may occur discourse-initially:

(5.20) suzi-ese ọkọọ [kasukʷete]ₐ [sore]ₒ [nana kʷajasa…]
send-SEQ long.ago old.man children SUB search…

‘Long ago, an elder sent out children in order to search…’

In (5.20), /suzi/ ‘send’ takes the /-(e)se/ suffix in spite of being the first word in a new text. There is no previously occurring TAM information to refer back to; in fact, the form is immediately followed by a temporal adverb. This means that even if /-(e)se/ is at times functioning as a sequential/narrative marker, it must also have some other function that it is encoding in (5.20).

A second observation may be made with reference to (5.20). The proposed Ik etymon of /-(e)se/ is not simply the sequential, but rather then sequential impersonal passive. The Ik sequential impersonal passive “eliminates any subject (A/S) (from a clause with sequential aspect, SB) and promotes any object (O) to subject (S)” (Schrock 2014:394). (5.20) shows that /-(e)se/ does not have an impersonal/passive function in Nyang’i: the agent of /suzi/ ‘send’ is realized in the surface form as an A, and the object is realized as an O. There is no deletion or promotion.

The functions of /-(e)se/, then, remain an open question.

5.4.3 VC endings

A series of word-final VC sequences on verbs pose a problem of analysis at the interface of form and function for Nyang’i verbs. In a database of 477 citation-form verb roots (where
citation-form is the form produced in isolation), 357 end with consonants. The consonants of Nyang’i are not nearly equally represented among these 357 words. The final consonant is one of /k/, /n/, or /s/ for 256 out of the words: 121 end in /k/, 61 end in /n/, and 63 end in /s/. The remaining 112 consonant-final citation-form verb roots end in one of the 17 other consonant phonemes (only 12 of which may occur word-finally, for an average of fewer than ten tokens per phoneme). The rate at which /k/, /n/, and /s/ occur is sufficiently higher than the rate at which any other consonant occurs that some account needs to be made of these forms.

Because I was unable to elicit the verbs taking these sequences in a broad range of syntactic contexts, and because the textual database did not naturally yield these verbs in such contexts, it was impossible to determine what functions these sequences encode in Nyang’i, if any at all. Because of this, it is difficult to determine the psychological status of the recurrent affix-like VC sequences. Three competing hypotheses for the status of these sequences are as follows:

1) They are synchronically relevant suffixes.
2) They are petrified suffixes—no longer synchronically relevant, but once so.
3) They are simply coincidental.

Even though they have no recoverable function, I have analyzed these VC sequences as suffixes because they seem to function as separate units from roots in the speaker’s mind. Five properties of the VC sequences suggest that the VC sequences should be viewed as separate morphemes from verb roots:

1) A given VC sequence will occur on a disproportionately wide range of verbs.
2) When struggling to remember a given form, the speaker often produced the root first with one established VC sequence, and then corrected himself by replacing the VC sequence with a different established VC sequence.

3) The speaker often produced certain roots with different VC sequences from one day to another.

4) Many of the VC sequences occur after established suffixes with recoverable functions, such as the directional suffixes.

5) Many of the VC sequences occur with roots that are evidently recent borrowings from Eastern Nilotic languages, but do not obviously correspond to affixes used with frequent forms in the Eastern Nilotic donor languages.

By analyzing the VC sequences as synchronically relevant suffixes I do not mean to assert that the sequences have a synchronic function—except perhaps to form arbitrary, non-exhaustive inflectional classes among the verb roots. Instead, I mean to assert that the VC sequences are stored as a separate class from verb roots in the mental lexicon of the speaker, and that the speaker combines forms from the verb root class with forms from the VC sequence class to produce a number of attested verb word forms. Whether or not fully fluent speakers would produce verb word forms in such an explicitly processual/combinatory manner, the evidence from self-correction indicates that the remaining Nyang’i speaker often is producing verb word forms in this way.

Prospective etymologies for /k/, /n/, and /s/ forms are abundant both in the other Kuliak languages and in nearby Nilo-Saharan languages. However, as no functions are apparent for the Nyang’i forms, it is difficult to demonstrate conclusively whether any of these forms actually is historically related to any of the Nyang’i VC sequences. Citation form verbs and highly frequent
verbs in Soo and Ik frequently take affixes in which the final consonant is a velar stop, /n/, or /s/ (note that final vowels in Ik are omitted from their Nyang’i reflexes). Affixes used with citation forms in particular have been sought in neighboring languages because that is the main domain in which these forms are attested in Nyang’i. Another likely etymological source for these forms could be in highly frequent forms. There is in Soo a frequent impersonal suffix that ends in /k/, and Heine (1974/5) describes a reflex of one of the Ik affixes and one of the Nyang’i affixes as infinitive markers in Nyang’i. Prospective etymons for Nyang’i VC sequences are summarized in Table 5.11:

<table>
<thead>
<tr>
<th>Function</th>
<th>Form</th>
<th>Possible cognate with Ny forms ending in…</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ik Substantive (Schrock 2014:329)</td>
<td>-VƙV-</td>
<td>k</td>
</tr>
<tr>
<td>Ik Andative (Schrock 2014:331-334)</td>
<td>-ʊƙʊt̠i</td>
<td></td>
</tr>
<tr>
<td>Ik Present Perfect (Schrock 2014:378)</td>
<td>-ka</td>
<td></td>
</tr>
<tr>
<td>Ik Simultaneous (Schrock 2014:367)</td>
<td>-(ɨ)kɛ</td>
<td></td>
</tr>
<tr>
<td>Soo Stative (Carlin 1993:41)</td>
<td>-og</td>
<td></td>
</tr>
<tr>
<td>Soo Impersonal (personal notes)</td>
<td>-ak</td>
<td></td>
</tr>
<tr>
<td>Nyang’i Infinitive (Heine 1974/5:285)</td>
<td>-ug</td>
<td></td>
</tr>
<tr>
<td>Ik Intransitive Nominalizer (Schrock 2014:302)</td>
<td>-ɔn-</td>
<td>n</td>
</tr>
<tr>
<td>Ik Impersonal Passive (Schrock 2014:391)</td>
<td>-an-</td>
<td></td>
</tr>
<tr>
<td>Ik Stative (Schrock 2014:412)</td>
<td>-án-</td>
<td></td>
</tr>
<tr>
<td>Turkana Stative Habitual (Dimmelendaal 1983:107)</td>
<td>-aan</td>
<td></td>
</tr>
<tr>
<td>Turkana Dynamic Habitual (Dimmelendaal 1983:107)</td>
<td>-een</td>
<td></td>
</tr>
<tr>
<td>Ik Transitive Nominalizer (Schrock 2014:302)</td>
<td>-ɛsí-</td>
<td>s</td>
</tr>
<tr>
<td>Ik Abstractive (Schrock 2014:325)</td>
<td>-ási</td>
<td></td>
</tr>
<tr>
<td>Ik Abstractive (Schrock 2014: 325)</td>
<td>-ɛsí-</td>
<td></td>
</tr>
<tr>
<td>Turkana Abstract Nominalizer (Dimmendaal 1983:270)</td>
<td>-sɨ</td>
<td></td>
</tr>
<tr>
<td>Didinga Nominalizer</td>
<td>-t躲</td>
<td></td>
</tr>
<tr>
<td>Nyang’i infinitive (Heine 1974/5:285)</td>
<td>-es</td>
<td></td>
</tr>
</tbody>
</table>

5.4.3.1 Suffixes ending in /k/

A set of suffix-like sequences in Nyang’i ends in /-k/. These suffixes are /-ak/, /-ek/, /-ik/, and /-ok/. An apparent suffix /-uk/ is attested for only one root: /bɛlɛ ɛk/ change, turn over. The /k/-suffixes share the following properties: 1) Each of them always occurs word-finally. 2) Each
of them encodes no obvious function. 3) Each of them occurs following roots containing a wide
range of vowels, ruling out vowel harmony as a synchronic means of describing them as
allomorphs of a single morpheme. 4) Using the above criteria, each of them may be described
synchronously as forming a separate morphological unit from the root. Comparative evidence
tentatively suggests that /k/ suffixes once functioned on the interface of lexical category
membership. Possible cognate forms in the other Kuliak languages include an Ik substantive /-
VƙV-/ , an Ik andative marker /-okɔt/, an Ik present perfect marker /-’ka/, a Soo infinitive /-ug/, a
Soo impersonal /-ak/, and a Nyang’i infinitive /-ug/. Schrock (p.c.) has also noted that Ik has
grammaticalized a number of case markers, and that it is possible that Nyang’i /k/-endings could
have the Ik dative or accusative (/ke/ and /ka/, respectively) as an etymological source.

5.4.3.1.1 –ak

51 verb roots take /-ak/ in their citation form. About half of the roots (25/51) taking /-ak/
have meanings associated with bodily processes or sensations. There are no obvious
phonological factors conditioning the forms. About a quarter of the roots (13/51) taking /-ak/
also take /-u(a)/, the itive directional extension. One of these, /pi-u-ak/ scratch, is also given
(with no apparent difference in meaning) as /pi-u-an/. By criteria 3) and 4) above, then,
(unprincipled alternation within a root and surfacing more remotely from a root than an
established suffix), /-ak/ is a synchronically relevant suffix.

5.4.3.1.2 -ek

14 verb roots take /-ek/ in their citation form. There are neither phonological nor
semantic factors conditioning the forms. One of the verb forms that occurs taking /-ek/, /kad-ek/
‘not enough’, is also given (with no apparent difference in meaning) as /kad-u-an/ ‘not enough’.
Another verb form, /ŋar-u-ek/ ‘help’, takes /-ek/ following /-u(a)/, the itive directional extension.
As with /-ak/, these instances satisfy criteria 3) and 4), and provide some evidence that /-ek/ is a synchronically relevant suffix.

**5.4.3.1.3 –ik**

26 verb roots take /-ik/ in their citation form. Some of these roots may occur without /-ik/ in certain contexts:

(5.21) ftèn-ík
    ‘straight’

(5.22) ftèn pounded-dí
    straight words
    ‘honest’

(5.23) ìmèn-èc-ík
    black-VEN-INCH
    ‘become black (used of dusk)’

(5.24) ímèn
    ‘black’

(5.25) sèt-ík
    ‘to spit, saliva’

(5.26) sèt
    ‘to spit, saliva’

(5.27) tásàl-àc-ík
    finish-VEN-INCH
    ‘finish up’

By criteria 1), 3), and 4), then, /-ík/ is a synchronically relevant suffix. a)-d) illustrate instances in which the occurrence or omission of /-ík/ is predictable on syntactic or semantic grounds, satisfying criterion 1). e)-f) illustrate a pair in which the occurrence or omission of /-ík/ seems to be random, satisfying criterion 3). c) provides an instance in which /-ík/ occurs more remotely from the root than an established suffix, the /-ac/ ventive directional extension, satisfying criterion 4). /-ík/ is used in the two examples of verbs with an inchoative sense that
occur in the database, presented here as c) and g). In both instances, the /-ac/ ventive directional extension follows the root and precedes /-ik/.

5.4.3.1.4 –ok

26 verb roots take /-ok/ in their citation form. For some of these, /-ok/ was treated as interchangeable with another structure:

(5.28) tíŋ-òk
   ‘put (sth.) on a fire’

(5.29) tíŋ-òn-fk
   ‘put (sth.) on a fire’

(5.30) gúr-òk
   ‘do’

(5.31) gúr-u-èsè
   ‘do’

Both (5.30) and (5.31) were translated into Karimojong as the same word, <akitia>.

There are no instances in which /-ok/ appears more remotely from the root than some other established suffix. By criterion 3, /-ok/ is a synchronically relevant suffix. In seven of 25 examples, /-ok/ is affixed to loan words taken from Karimojong, which do not take /-ok/ in Karimojong.

5.4.3.2 Suffixes ending in /n/

The most frequent suffix-like element ending in /n/ is, by far, /an/. It occurs with 44 roots, compared to seven roots with /en/, three roots with /in/ (two of which are direct borrowings of Karimojong forms taking the Karimojong /-akin/ dative extension), five roots with /on/, and no roots with /-un/. /n/ forms may share an etymological history with Eastern Nilotic habitual suffixes: the Turkana stative habitual suffix, for instance, is {-aan-}, sharing the vowel quality
with the most frequent /h/-suffix in Nyang’i. Additionally, the Ik intransitive nominalizer is {-/ɔnī-}.

### 5.4.3.2.1 –an

44 verb roots take /-an/ in their citation form. 10 of these roots are borrowed from Karimojong. Two color terms (/pusian/ ‘blue’ and /oŋorian/ ‘gray/neutral-colored’ take /-an/.

Another color term (/imen/ ‘black’) ends in /en/, and another two (/libaan-et/ ‘green’ and /mugean-et/ ‘brown’) either take /-an/ as a suffix, or simply include /an/ root-finally. It is possible that the last three examples link color terms to the /-an/ verbal suffix for the purposes of analogy.

(5.31) **Color terms taking /-an/**

<table>
<thead>
<tr>
<th>nyang’i</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>pūsi-an</td>
<td>‘blue’</td>
</tr>
<tr>
<td>oŋori-an</td>
<td>‘gray/neutral-colored’</td>
</tr>
<tr>
<td>imen</td>
<td>‘black’</td>
</tr>
<tr>
<td>libaan-et</td>
<td>‘green’</td>
</tr>
<tr>
<td>mugean-et</td>
<td>‘brown’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>nyang’i</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>mupaŋŋ</td>
<td>‘yellow’</td>
</tr>
<tr>
<td>du</td>
<td>‘red’</td>
</tr>
<tr>
<td>bej</td>
<td>‘white’</td>
</tr>
</tbody>
</table>

Some roots that take /-an/ are also attested with other sequences in place of /-an/, usually with no apparent change in meaning:

(5.32) **Color terms lacking /-an/**

<table>
<thead>
<tr>
<th>nyang’i</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>bap-an</td>
<td>‘clap’</td>
</tr>
<tr>
<td>cuŋ-an</td>
<td>‘burn (or slice/spear?)’</td>
</tr>
<tr>
<td>toŋ-an</td>
<td>‘cry out in birth pains’</td>
</tr>
<tr>
<td>rig-an</td>
<td>‘scratch against something’</td>
</tr>
</tbody>
</table>

While one promising potential etymon for /-an/ is Ik /-ɔnǐ/- **INTRANSITIVE NOMINALIZER**, Nyang’i /-an/ does not currently seem to encode information about the transitivity of the verb to which it attaches, as it attaches both to verbs with notionally transitive senses and to verbs with notionally intransitive senses:

(5.33) **transitive**

<table>
<thead>
<tr>
<th>nyang’i</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>bap-an</td>
<td>‘clap’</td>
</tr>
<tr>
<td>turi-an</td>
<td>‘strike with fist’</td>
</tr>
<tr>
<td>ṭoŋ-u-an</td>
<td>‘lick/wipe’</td>
</tr>
</tbody>
</table>

**intransitive**

<table>
<thead>
<tr>
<th>nyang’i</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>op-an</td>
<td>‘tired’</td>
</tr>
<tr>
<td>ṭoŋ-an</td>
<td>‘yawn’</td>
</tr>
<tr>
<td>paraj-an</td>
<td>‘be seated’</td>
</tr>
</tbody>
</table>
Perhaps a more likely etymology, then is from the Eastern Nilotic stative habitual (which Schrock (2014:412-413) most directly traces to Eastern Nilotic in Ik as well). About half of the Nyang’i roots that take /-an/ have stative senses. However, the Turkana dynamic habitual is { -een-}, and as will be seen in the following section, about half of the Nyang’i roots that take /-en/ also have stative senses, which is not congruous with the Turkana system.

/-an/ may occur following the /-u(a)/ itive directional extension:

(5.34)  nga-u-an  ‘lick/wipe’
       ped-u-an  ‘bewitch’
       pad-u-an  ‘bitter’
       rid-u-an  ‘over-consume’
       ket-u-an  ‘break’
       pi-u-an  ‘scratch an itch’

By each of the above criteria, then, /-an/ is a separate morpheme from the verb root.

5.4.3.2.2 –en

Seven verb roots end in /en/ in their citation form. One of these roots, /ken/ ‘kill’ is monosyllabic, and on a comparative basis is likely to be monomorphemic as well. Two of the remaining six roots taking /-en/ are borrowed from Karimojong. Both roots are names of animal color patterns. Neither of the Karimojong forms take /-en/:

(5.35)  Nyang’i        Karimojong        English
       kapul-en       kapili       ‘be spotted’
       kori-en       ɲakori       ‘be giraffe-patterned’

5.4.3.2.3 –on

Five verbs end with /on/ in their citation forms. One of these roots is borrowed from Karimojong; it does not take /-on/ in Karimojong. As illustrated in (5.36), each of the five verbs are attested as taking /-on/ is notionally intransitive.: 

(5.36)  Nyang’i        Karimojong        English
       dikon       akidik       ‘coagulate, clot’
       dopon       ‘blink’
       kudon       ‘old’
       piricon       ‘full’
       gecon       ‘die, dead’
5.4.3.3 Suffixes ending in /s/

/as/ is by far the most frequent suffix in /s/. It occurs with 35 roots, compared to nine for /es/, six for /is/, and nine for /os/. /us/ is not attested. Prospective etymological sources for the /s/ forms include the Ik transitive nominalizer {ɛ́-sɪ́-} (Schrock 2014:302), the Ik abstractives {-ásí-} and {ö-sí-} (Schrock 2014:325), the (older) Nyang’i infinitive /-es/ (Heine 1974/5:285), the Turkana abstract nominalizer /-sɪ/, and the Didinga nominalizer /-ið/ (de Jong 2004:151).

5.4.3.3.1 –as

/-as/ may share an etymological history with the Ik abstractive {-ásí-}. Forms taking /-as/ in citation form also very frequently occur with /-as/ replaced by another of the suffix-like elements. These forms particularly frequently alternate with /-an/, as was seen in 5.2.2.1:

(5.37) bap-an ‘clap’ bap-as ‘clap’
toj-an ‘cry out in birth pains’ toj-as ‘cry out in birth pains’
rig-an ‘scratch against something’ rig-as ‘scratch against something’

Schrock (2014:325) shows that for derived forms in Ik taking the abstractive {-ásí-}, the abstractive marker takes the place of the intransitive infinitive marker {-oni-}.

Other alternants may also be found:

(5.38) bal-as ‘spoil’ bal-ac ‘spoil’
puk-u-as ‘fan/wave something’ puk-es ‘fan/wave something’

10 of the 35 roots taking /-as/ are borrowed from Karimojong. In only one of these roots (/bil-as/ ‘fracture’) does the Karimojong form (abilasit) provided by the speaker take /as/. The Karimojong form taking /as/ does not appear in Farina (1986); rather, aki-bil appears as ‘to break (a stick), cut off’. /-as/ can occur after the /-u(a)/ ITIVE directional extension.

5.4.3.3.2 –es

Nine polysyllabic citation form verbs end in /-es/. Those borrowed from Karimojong do not take /-es/ in Karimojong. They include:
5.39 Nyang’i  Karimojong  English

duleles  akicun  ‘to raise buttocks’
tocunes  akitulekin  ‘to blow (a horn or a fire)’
lodes  akiyel  ‘lick’
pokes  akitulekin  ‘to blow (a horn or a fire)’
tules  akitulekin  ‘to blow (a horn or a fire)’
kelwes  akiyel  ‘lick’
dieles  akiyel  ‘lick’
pukes  akitulekin  ‘to blow (a horn or a fire)’
rupes  akiyel  ‘lick’

5.4.3.3.3 –is

/is/ is likely a reflex of a Nilo-Saharan nominalizer. It is found with six roots, four of which are borrowed from Karimojong. A similar reflex may be found in Ik /-ísi/ (Schrock 2014:325). As presented in Schrock (2014:324-5), it surfaces in Nilo-Saharan languages such as Turkana (as /-sí/, Dimmendaal 1983:270)) and Didinga (as /-ið/ (De Jong 2004:151)). The /-is/ verbs are listed in (5.40):

5.4.3.3.4 –os

Nine Nyang’i roots occur with /-os/. The most compelling evidence that /-os/ is a separate morpheme from the root in these cases is found in the following set, for which I was unable to find any semantic differences:

5.5 Notes on inheritance, innovation, borrowing, and loss
Nyang’i retains the following functional domains in its verb morphology:

1) Direction, consisting of two terms: itive and ventive.

2) Aspect, provisionally consisting of inchoative and completive. Formal means for aspect and direction marking are shared.

3) A discourse-structuring function encoded by /-(e)se/ that resembles that encoded by the narrative or sequential of nearby languages.

Each of these functional domains is retained from Proto-Kuliak. Each is represented with at least as many terms in both Ik and Soo. There is no evidence of any innovation of new features in the Nyang’i verbal system. Similarly, there is no strong evidence of productive borrowing of functional categories from Eastern or Western Nilotic languages in the Nyang’i verbal system (beyond borrowing into Proto-Kuliak from Nilotic, suggested by the similarity in functional categories shared by Kuliak and Nilotic languages discussed throughout this chapter).

The Nyang’i verbal system has primarily been characterized by loss. An extensive derivational system has been reduced to two directionals. Carlin (1993:36-52) describes two other functional subdomains within verb derivation: Mood/Aspect derivation, consisting of optative, hortative, habitual, durative, ingressive, stative, and completive extensions, and Valency-changing derivation, consisting of three intransitive state extensions, a reciprocal extension, and a causative extension. Schrock (2014) identifies seven terms in a system of modal derivation, eight terms in a system of aspectual derivation, and six terms in a system of valency-changing derivation in Ik.

Two tantalizing tokens suggest the recent retention of agent-marking morphology on the verb in Nyang’i; however, the preponderance of the data suggests that this marking has been lost for all practical purposes. Both Soo (Carlin 1993:79) and Ik (Schrock 2014:207), in contrast,
have seven-term systems (three persons and two numbers, plus an inclusive/exclusive distinction for 1.PL) for agent-marking on the verb. These results are summarized in Table 5.12.

Table 5.12: Retentions and losses in verbal morphology

<table>
<thead>
<tr>
<th>Retentions</th>
<th>Losses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two-term directional system</td>
<td>Non-directional aspectual derivational forms</td>
</tr>
<tr>
<td>Aspectual functions derived from directional</td>
<td>Modal derivational forms</td>
</tr>
<tr>
<td>Narrative/sequential marker</td>
<td>Valency-changing derivational forms</td>
</tr>
<tr>
<td>A range of function-less forms</td>
<td>Agent-marking suffixes</td>
</tr>
</tbody>
</table>
Chapter 6 Adverbs

6.1 Introduction

Many temporal and manner concepts are encoded lexically. Forms used to encode these concepts are often monomorphemic; however, a few forms show evidence of internal structure. The adverbs in Table 6.1 designate temporal concepts. Eastern Nilotic loans are italicized:

<table>
<thead>
<tr>
<th>Category</th>
<th>Word</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time Points</td>
<td>riŋok</td>
<td>‘evening’</td>
</tr>
<tr>
<td></td>
<td>kɔlɔŋ</td>
<td>‘long ago’</td>
</tr>
<tr>
<td></td>
<td>metenok</td>
<td>‘morning, tomorrow’</td>
</tr>
<tr>
<td></td>
<td>lɔŋɔrokɛt</td>
<td>‘long ago’</td>
</tr>
<tr>
<td></td>
<td>coɛk</td>
<td>‘dawn’</td>
</tr>
<tr>
<td></td>
<td>tokʷa</td>
<td>‘twilight’</td>
</tr>
<tr>
<td></td>
<td>man</td>
<td>‘now’</td>
</tr>
<tr>
<td></td>
<td>mir</td>
<td>‘night’</td>
</tr>
<tr>
<td></td>
<td>mir-ko</td>
<td>‘next night?’</td>
</tr>
<tr>
<td></td>
<td>mir-iore</td>
<td>‘some nights later?’</td>
</tr>
<tr>
<td></td>
<td>babaac</td>
<td>‘just now’</td>
</tr>
<tr>
<td></td>
<td>ɔi-ana</td>
<td>‘yesterday’</td>
</tr>
<tr>
<td></td>
<td>moi</td>
<td>‘later on’</td>
</tr>
<tr>
<td>Time Reference</td>
<td>seke</td>
<td>‘past?’</td>
</tr>
<tr>
<td></td>
<td>co</td>
<td>‘future?’</td>
</tr>
<tr>
<td>Sequence</td>
<td>nai</td>
<td>‘then’</td>
</tr>
<tr>
<td>Frequency</td>
<td>nabo</td>
<td>‘again’</td>
</tr>
<tr>
<td></td>
<td>coicoik</td>
<td>‘always’</td>
</tr>
<tr>
<td>Time Lengths</td>
<td>kein-ana</td>
<td>‘year’</td>
</tr>
<tr>
<td></td>
<td>esan</td>
<td>‘month’</td>
</tr>
<tr>
<td></td>
<td>ji</td>
<td>‘day’</td>
</tr>
</tbody>
</table>

The most obviously recently polymorphemic forms in this chart are the night terms, which are built on the root /mir/ ‘night’. They include /mir-ko/ ‘next night’ and /mir-iore/ ‘some nights later’. /-ko/ and /-iore/ are not attested with any other roots in Nyang’i. /-ko/ may be cognate with Ik /-ke/, which is used with temporal nouns to designate a remoteness of a certain number of days from the present (Schrock 2014:464).
An additional set suggesting remnants of internal morphological structure is /keinan(a)/ ‘year’, /ɟi/ ‘sun, day’, and /ɟiana/ ‘yesterday’. The formal and semantic relationship between /ɟi/ ‘day’ and /ɟiana/ ‘yesterday’ is clear; however, /keinan(a)/ ‘year’, which seems to correspond formally with /ɟiana/ ‘yesterday’, lacks the notion of past-ness found with /ɟiana/. I have nevertheless identified it as sharing a possible petrified affix with /ɟiana/ on the grounds of the forms of the root meaning ‘year’ in the other Kuliak languages: /kāɨnɪ/-/ in Ik (Schrock 2014:649) and /keny/ (presumably IPA /keɲ/) in Soo (Heine & Carlin 2010:23). In both cases, there is only a single nasal, suggesting that /-an(a)/ in the Nyang’i form is fossilized morphology—likely related to the singular demonstrative forms resembling /na/ that are pervasive in the area.

The adverbs in Table 6.2 express manner. Again, Eastern Nilotic loans are italicized:

<table>
<thead>
<tr>
<th>Word</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>ede</td>
<td>‘alone’</td>
</tr>
<tr>
<td>lep</td>
<td>‘slowly’</td>
</tr>
<tr>
<td>suk</td>
<td>‘intensely’</td>
</tr>
<tr>
<td>amane</td>
<td>‘like this’</td>
</tr>
<tr>
<td>mono</td>
<td>Speaker’s impatience</td>
</tr>
<tr>
<td>kare</td>
<td>‘amazement’</td>
</tr>
<tr>
<td>awojin</td>
<td>‘disgust, shock’</td>
</tr>
</tbody>
</table>

/amanə/ ‘like this’ is likely a calque of Eastern Nilotic (e.g. Karimojong /kwa ɲima/ ‘like this’). /-ane/ is the Nyang’i proximal demonstrative suffix. No positive etymology of /am/ is forthcoming. One possibility is that it is cognate with Ik /ƙám-óni/ ‘to be like’. Pending further comparative research establishing sound correspondences for Ik /ƙ/, it is impossible to say for sure if these forms are cognate. For some possible cognates, Ik /ƙ/ corresponds with Nyang’i Ø, (e.g. Ik /ƙɪdz-ɛsi/ ‘to bite’ with Ny /aŋəs/ ‘to bite’). For other possible cognates, Ik /ƙ/ corresponds with Nyang’i /k/ (e.g. Ik /kɔts’á-/ ‘worm’ with Ny /kuc(at)/ ‘worm’) or /g/ (e.g. Ik /kålits’i-/ ‘jaw’ with Ny /galic/ ‘jaw’).

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6.2 The Syntax of Adverbs

The Nyangi’ adverbs are divided into two syntactically-defined sets. The first set occurs clause-finally. These adverbs, in turn, belong to two semantic sets: specific times and manner modifiers of verbs. The second set may occur between the verb and the core arguments (S/A/O). These primarily belong to a single semantic set: markers of TAM functions that do not identify precise timepoints.

6.2.1 Clause-final Particles

A set of particles occurs clause-finally. This means that they can occur as the final word of a main clause (i.e. sentence finally: for more on the interaction of clause-final particles with sentence-final subordinate clauses see Section 9) or as the final word of a subordinate clause marking time. In the latter case, clause-final particles immediately precede the verb, as time adjuncts occur on the left edge of the sentence. Clause-final particles are not mutually exclusive; therefore, one clause-final particle may be followed by another, and not be clause-final strictly speaking. No other elements, however, may occur after a clause-final particle.

6.2.1.1 babaac

/babaac/ ‘just now’ occurs clause-finally.

(6.1) acoe ae dene babaac
ac-o-e ae dene babaac
come-LV 1.SG here Just now
‘I came here just now.’

6.2.1.2 coek

/coek/ ‘dawn’ occurs clause-finally in a temporal adjunct clause in its one attestation in the database:

(6.2) [nai miri coekio] ṇapʷak mu lpɛdiŋ
   nai miri coek-i o ṇapʷ-ag mu lpɛdiŋ
   DM night dawn-FOC open-IT-IMPS be gate
‘Then, when the sky begins to shine (at sunrise)’

6.2.1.3 loŋoroketi

/loŋoroketi/ ‘long ago’ generally occurs clause-finally. It sometimes is followed by other modifiers, but not by noun arguments. When it is followed by an adverb (i.e. not in clause-final position), it takes the final vowel /i/. In clause-final position, the /i/ is deleted. This is true if /loŋoroketi/ is in final position in a main clause or in a subordinate clause. Since clause-final /i/ deletes even when its clause is a pre-verbal temporal adjunct (and therefore preverbal rather than prepausal), the /i/ deletion signals a syntactic boundary rather than a pause boundary. /loŋoroketi/ is illustrated below:

(6.3) [loŋoroketi] ede] kesi jecisa ae
loŋoroketi ede kesi jecisa ae
long.ago alone 3.SG know 1.SG

‘It’s only the old ones that I know.’

(6.4) [aco aco koloŋ loŋoroketi] suzi/e get-iki…
come come long.ago long.ago graze goat-PL1

‘Long ago, goats grazed…’

(6.5) gecon=seko koloŋ loŋoroketi awojìn
gecon=seke-o koloŋ loŋoroketi awojìn
die=PST-FOC long.ago long.ago you.people!

‘It already died a long time ago, you people!’

In (6.3), /loŋoroketi/ ‘long ago’ occurs in a temporal clause, and so occurs preverbally. Because it is followed by the modifier /ede/ ‘alone’, the final vowel /i/ does not delete. (6.4) shows /loŋoroketi/ as the final word in a temporal clause. Again, as it is in a temporal clause, it occurs preverbally. However, because it is at the end of its clause in this case, it does not take /i/.

Finally, (6.5) shows /loŋoroketi/ as a modifier in the matrix clause. As it is followed by the expletive /awojìn/ ‘you people!’, it takes /i/. When they co-occur, /loŋoroketi/ precedes at least /ede/ ‘alone’, /awojìn/ ‘you people!’ and /sek/ ‘past’. It follows /koloŋ/ ‘long ago.’ The speaker
could not identify any difference in meaning between /koloŋ/ ‘long ago’ and /loŋoroketi/ ‘long ago’.

6.2.1.4 miri

/miri/ ‘night’ occurs clause-finally and can be followed by other adverbs, including /co/ ‘future’, /nabo/ ‘again’, and /coek/ ‘dawn’. Each of these adverbs, in turn, can be followed by the /io/ focus marker (Section 4.4.3).

(6.6) [bas naço mirio] aug*esë nai diecëco nai bolo
      bas naço miri-io aug-*-esë nai diec-ëc-o nai bolo
    DM during night-FOC go-IT-SEQ then bring-VEN-FOC then gourd
   ‘Well, during the night, they went there, then they brought back the gourd’

(6.7) [nai miri coëkio] ñañ*ak mu lopëdin
      nai miri coëk-io ñañ*'-ak mu lopëdin
then night dawn-FOC open-IT-IMPS be gate
‘Then, when the sky begins to shine (at sunrise)’

6.2.1.5 riŋok

/riŋok/ ‘evening, dusk’ occurs clause-finally.

(6.8) da napena riŋokeo augëse nabo lo nane ez/u
     da napena riŋok-eo aug-esë nabo lo nane ez/u
    DM equals evening-FOC go-SEQ again cow this river
‘When it becomes evening, the cows go to the river’

In the above example, /riŋok/ ‘evening’ occurs in a time adjunct. It immediately precedes the verb. As with many other constituents immediately preceding the verb, it takes the /io/ focus marker.

6.2.1.6 metenok ‘tomorrow’

/metenok/ ‘tomorrow’ occurs clause-finally. It is most frequently found in preverbal temporal clauses.

(6.9) [moe nabo moe metenuk]TEMP aogëse nabo man pei
      moe nabo moe metenuk aog-esë nabo man pei
    next.day again next.day next.day go-SEQ again garden DM
Again the next day, they go to the garden again.

(6.10) [da metenok]_{TEMP} tacasa co məsi neene weesa
da metenok tacasa co məsi neene weesa
DM next.day get IMM sorghum.beer these drink
‘When it is the next day, they’ll get this beer to drink.’

In (6.10), /metenok/ ‘next day’ constitutes a temporal clause with no other content besides /da/ ‘when’.

6.2.1.7 suuk

/suuk/ is an intensifier belonging to the manner set of clause-final adverbs.

(6.11) təbəki ɲəmanı suuk
təbəki ɲəman-1 suuk
dig garden-LV lots
‘They dig the garden a lot.’

6.2.1.8 amane

/amane/ ‘like this’ may only occur sentence-finally. The /ane/ component is likely etymologically related to the singular near demonstrative /(n)ane/.

(6.12) tɔɔdese =mot ɲacel amane
tɔɔd-esə mot ɲacel amane
penetrate-SEQ be thorn.fence like this
‘It broke through the thorn fence like this.’

6.2 Second-position modifiers

A set of modifiers occurs in the second syntactic position in the core clause. This position is either following the verb but preceding its arguments, or following the first NP in a nonverbal clause. Multiple second-position modifiers may occur in a single clause.

6.2.2.1 seke

/seke/ is a temporal adverb indicating past time that most frequently immediately follows the verb. Verbs taking /seke/ overwhelmingly include a stem-final vowel /e/ before /seke/ attaches.
(6.13) aog̱esekə  [kʷajasak  mutu  nasan]  duakare
aoge=sekə  kʷajasak  mutu  nas-an  duakare
go=PST  search  be  animal-PL7  there
‘People went looking for animals there.’

(6.14) diecesekɪ ni aago
diece=sekə ni aago
bring=PST REL home
‘And brought it home.’

In (6.13) and (6.14), /seke/ takes high tone as part of an apparent melody beginning on the second vowel of the root. It attaches directly to an /e/-final stem. It has no prosodic prominence of its own, suggesting that it is phonologically dependent on the verb. In both cases, it is clearly in the second position in the sentence. In (6.13), /seke/ is immediately followed by a purpose clause. In (6.14), /seke/ is immediately followed by a location/destination. The first part of the long /a/ in /aago/ ‘home’ could be interpreted as the /a/ marker that commonly follows /ni/ and is used to encode locations in many Eastern Nilotic languages.

/seke/ can be used to encode the temporal setting of a subordinate clause independently of a matrix clause. This is illustrated in (6.15):

(6.15) ka sore nane ni ɛeke ni suẕeseḵesə ɬo nare
ka sore nane ni ɛeke ni suẕe=seke-se ɬo nare
if children this REL LOC.EXIS REL drive=PST-SEQ cow that
‘...And if these children are there who (previously) drove those cattle.’

In (6.15), /seke/ marks past time in a subordinate clause independently of the matrix clause, which in this case is in narrative present. Again, /seke/ attaches directly to an /e/-final stem. It is immediately followed by an O argument. The /se/ immediately following /seke/ occurs nowhere else in the database.

(6.16) ruceseke aago nanɛ borua ɬo [gemeci duakaane]
ruce=seke aago nanɛ boru-a ɬo gemeci duakaane
enter=PST home this corral-LV cow stay there
‘They enter the home which is the cattle's corral and stay there.’
(6.16) follows the previous patterns: /seke/ attaches directly to an /e/-final stem, and the whole verb complex takes a LHHH tone melody. It is also followed by a location/destination; however, it differs from (6.14) in that it lacks the /ni-a/ linkage that might be characteristic of Eastern Nilotic. One hypothesis for this difference is that /ruc/ ‘enter’ and /diec/ ‘bring’ have different argument structures, with /ruc/ ‘enter’ not needing auxiliary marking for destination arguments.

Verbs taking the past tense marker /seke/ may, unlike in previous examples, take an overt subject, as in (6.17):

(6.17) deusa rucesekì naboo sore nané ruceseke nané mot boru ū
     deusa ruce=sekì naboo sore nané ruce=seke nané mot bor-u ū
     see enter=PST again chldrn this enter=PST this be corral cow
     ‘You see the children have entered this again; they have entered the cattles' corral.’

In (6.17), /seke/ attaches directly to an /e/-final stem, takes the LHHH tone melody, and is immediately followed by the adverb /nabo/ ‘again’, which is in turn followed by the A argument of the verb to which /seke/ is attached.

(6.18) nané ŋi pokasakì nene id
     nané ŋi poka=sakì nene id
     this REL shake=PST these milk
     ‘The thing that was shaken is this milk’

(6.18) differs from other instances in the following ways: 1) Its vowels are not /e/. 2) The verb root takes a high tone first, and then all remaining tones are low. 3) The final vowel of the root is /a/.

/seke/ may follow nouns in addition to verbs. In non-verbal sentences, they occur after the first core constituent. There are no instances of /seke/ occurring sentence-initially. Sentences taking /seke/ have a temporal setting prior to the utterance, i.e. a past tense reference. In one
potentially non-verbal sentence, /seke/ seems to function as a past-tense version of the locative existential /eke/: 

(6.19) 

\[ \text{ee} \; \text{ɲaŋi} \; \text{seke} \; \text{lacane} \\
\text{ee} \; \text{ɲaŋi} \; \text{seke} \; \text{lac-ane} \\
\text{yes} \; \text{Nyang'i} \; \text{PST} \; \text{mountain-this} \\
\text{‘Yes, the Nyang’i were on this mountain.’} \]

(6.20) 

\[ \text{geme=seke} \; [\text{ɲaŋi}]_{\text{s}} \; [\text{lacane}]_{\text{LOC}} \\
\text{geme=seke} \; \text{ɲaŋi} \; \text{lac-ane} \\
\text{stay/sit=PST} \; \text{Nyang’i} \; \text{mountain-this} \\
\text{‘The Nyang’i stayed on this mountain.’} \]

When /seke/ occurs in a verbal sentence, it immediately follows the verb. In many instances, /seke/ is phonologically dependent upon the verb. No phonological environment nor semantic function predicting phonological dependency vs. freedom has been identified. From the textual corpus, 43 out of 57 tokens of /seke/ occur in verbal sentences.

/seke/ may occur with other temporal adverbs. In (6.21), it co-occurs with /loŋoroket/ ‘long ago’:

(6.21) 

\[ \text{keinana} \; \text{seke} \; \text{nane} \; \text{loŋoroket} \\
\text{keinana} \; =\text{seke} \; \text{nane} \; \text{loŋoroket} \\
\text{year} \; \text{PST} \; \text{this} \; \text{long.ago} \\
\text{‘There was a year that was long ago.’} \]

In this case, its first syllable is phonologically prominent.

6.2.2.2 co

/co/ indicates event immediacy. Clauses taking /co/ describe events that are to take place imminently from the temporal reference point established in the discourse context.

(6.22) 

\[ \text{bas} \; \text{hause} \; \text{nai} \; \text{co} \; \text{ago} \\
\text{bas} \; \text{hau-se} \; \text{nai} \; \text{co} \; \text{ago} \\
\text{DM} \; \text{go-SEQ} \; \text{then} \; \text{IMM} \; \text{home} \\
\text{‘Well, then they will go home.’} \]

(6.23) 

\[ \text{nai} \; \text{mut} \; \text{co} \; \text{merisì} \; \text{nene} \; \text{acojo} \\
\text{nai} \; \text{mut} \; \text{co} \; \text{merisì} \; \text{nene} \; \text{aco-jo} \]
then be IMM leopard these come-FOC
‘Then it will be this leopard that comes.’

(6.24) esere co bi nabo
esere co bi nabo
return IMM 2.SG again
‘… you will come again.’

(6.25) ikedi co nareo lobalanFIT
ikedi co nare-o lobalanFIT
3.SG IMM that one-FOC place name
‘…which place is Lobalangit’.

In (6.22), /co/ follows a verb (and the adverb /nai/ ‘then’), and immediately precedes a locative argument of the verb. In (6.23), /co/ follows /mut/ and immediately precedes the subject. In (6.24), /co/ immediately follows a verb and precedes the A of the verb. Finally, in (6.25), /co/ immediately follows the cleft construction marker, and immediately precedes a location. When /co/ is in a string of adverbs, it can follow /miri/ ‘night’ and /nai/ ‘then’. There is also an instance of it preceding /nai/, the semantics of this order inversion are unclear.

6.2.2.3 koloŋ

/koloŋ/ ‘long ago’ takes three grammatically conditioned allomorphs. When it follows a verb complex (/seke/, and perhaps other adverbs, may be included in this complex) and it precedes another time adverb (/loŋorokeet/ ‘long ago’ in both tokens in the database), it takes the form /koloŋ/. When it follows /iked/ ‘3.sg./cleft’ in a cleft construction (in which case it immediately precedes /ni/ ‘REL’), it takes the form /kolo/. When it occurs between a verb complex and an A or S argument it takes the form /skoloɔ/. The three forms are illustrated in the following examples:

(6.26) geconeseko koloŋ loŋoroketi awojin
die=PST-FOC long.ago long.ago you.people!
‘It already died a long time ago, you people!’
(6.27) ka mua na lobɛ ikɛdi kolo ɲi canasɛkɛ nanɛ agoɔ ɲanŋi ka mu-a na lobɛ ikɛdi kolo ɲi cana=sekɛ nanɛ agoɔ ɲanŋi and be-LV SUB Dodos 3.SG long… REL disturb-PST this home Nyangi ‘And also the Dodos, they were the ones who were disturbing the home of the Nyangi.’

(6.28) auge ɔkɔlɔɔ sore no nardok nane ni kʷəjasakɛ getik auge ɔkɔlɔɔ sore no nardok nane ni kʷəjasakɛ get-ik go long.ago childn REL one this REL search goat-PL1 ‘Long ago, one child went searching for goats.’


(6.26) illustrates /koloŋ/, which occurs between a verb complex and /loŋorokɛt/ ‘long ago’, another time adverb. (6.27) illustrates /kolo/, which occurs between /ikɛdi/ ‘3.sg/cleft’ and /ɲi/ ‘REL’. (6.28) illustrates /ɔkɔlɔɔ/ between a verb and an S. (6.29) illustrates /ɔkɔlɔɔ/ between a verb and an A.

6.2.2.4 nai

/nai/ ‘then’ indicates event sequence. It can occur include in more environments than other second position modifiers; however, since it also may occur in the second position, I have grouped it with the second position modifiers:

1) Immediately after the verb:

(6.30) bas hause nai co ago bas hau-se nai co ago DM go-SEQ DM IMM HOME ‘Well, then they will go home.’

2) Sentence-initially:

(6.31) nai mut co merisi nene acojo nai mut co merisi nene aco-jo DM be IMM leopard these come-FOC ‘Then it will be the leopard that comes.’

3) Immediately after content question words:
(6.32) hed nai losan awojin nini æése getiki niau ame
hed nai losan awojin nini æése get-iki niau ame
what DM stuff you.people! REL eat goat-PL1 my exclamation
‘What of this one, you people, that ate my goat, ah!’

4) Between core arguments and locations:

(6.33) æseru ae nai boru ło
æser-u ae nai bor-u ło
return-IT 1.SG DM corral-LV cow
‘Then I returned there to the cattle corral.’

(6.34) aogɛsɛ ae nai boru ło
aog-ɛsɛ ae nai bor-u ло
go-SEQ 1.SG DM corral-LV cow
‘Then I go to the cattle's corral.’

This environment for /nai/ ‘then’ provides evidence that location arguments of motion verbs are treated differently from O arguments. As described in Section 9.2, no adverbs may occur between A and O arguments. /nai/ ‘then’, however, occurs between the first argument and the location argument of motion verbs.

Particles that frequently occur in the vicinity of /nai/ include: /da/ (precedes /nai/), /mut/ (precedes or follows), /co/ (precedes or follows), /ena/ (precedes),

6.2.2.5 nabo

/nabo/ ‘again, next’ can occur:

1) Immediately after the verb:

(6.35) kenʷakı nabo dakʷ
ekʷakı nabo dakʷ
c Agr be fire
‘Again, it killed the fire.’

2) Immediately after temporal expressions.

6:36 namur nabo keinana mutu εzan nabo edenio
namur nabo keinana mutu εzan nabo eden-IO
*** again year be moon again another-FOC
‘Well, and again, That's how it was yearly and monthly, again and again.’
3) In an idiomatic expression, in which the /o/ is deleted due to a no-longer-productive hiatus simplification rule:

(6.37) metanabesin
    metan nabo esin
    not.there again problem
    ‘There is no problem.’

4) Clause-finally:

(6.38) [ɪbu naane nabojo]ₐ kʷɔtok [nare]ₐ nabo
    ɪbu naane nabo-jo kʷɔtok nare nabo
    hyena this again-FOC bark that.one again
    ‘Again, this hyena, that one barked again.’

The discourse particle /ani/ frequently precedes /nabo/. The function of this collocation is not clear.
Chapter 7: Nyang’i closed word classes

7.1 Introduction

Nyang’i closed word classes include pronouns, adverbs, adpositions, numerals, adjectives, and subordinators. This chapter briefly introduces the members of each closed class. Their functional properties, where appropriate, will be discussed in Chapters 7 and 8.

7.2 Personal Pronouns

The last surviving idiolect of Nyang’i includes two sets of personal pronouns: free (or absolute) personal pronouns and possessive personal pronouns. Both sets have been subject to a high degree of contraction. The data present interpretive challenges regarding what the speaker’s mental state is with respect to the attested forms (e.g. which forms can the speaker be said to “know”) and what role data collected from this project could play in comparative reconstruction.

7.2.1 Free Personal Pronouns

The last idiolect of Nyang’i only has forms for singular personal pronouns. Lexical nouns are recruited when plural pronominal forms are elicited directly. First and second person singular personal pronouns are stable: the speaker reliably provides the forms presented below in first and second persons singular contexts. /ked/, which is a general third person singular form corresponding to the form attested by Heine (1974/5:285), occurs infrequently in textual data. A known referent/unknown referent set competes with this form. The personal pronouns in Komol’s idiolect are illustrated in Table 7.1. Entries in bold in Table 7.1 correspond to pronouns from Heine (1974/5:285). Items in parentheses do not occur in any context in directly elicited data.

<table>
<thead>
<tr>
<th></th>
<th>sg.</th>
<th>pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ae</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>bi</td>
<td></td>
</tr>
</tbody>
</table>
The first and second person singular forms occur in textual data as the subjects of intransitive sentences:

(7.1) ɛser-ɛi kama nabo [ae]; [agojo]DEST
ɛser-ɛi kama nabo ae ago-jo
return-VEN there again 1.SG home-FOC
‘I return there again, to home.’

(7.2) ɛserua [bi]; [ka ɲɛk bi]COM
ɛser-ua bi ka ɲɛk bi
return-IT 2.SG with hunger 2.SG
‘Go back [there] with your hunger.’

And as the subjects or objects of transitive sentences:

(7.3) mɛɛcisa [ae]; [bi]; nabo ɛdɛn
mɛɛ-cisa ae bi nabo ɛdɛn
NEG-know 1.SG 2.SG again another
‘I don’t know you anymore!’

(7.4) hɛdiseki ɲi [bi]; ɛsʷa [ae]; ede
hɛd=seki ɲi bi ɛsʷa ae ede
what=PST REL 2.SG leave-IT 1.SG alone
‘What happened that you left me alone?’

(7.5) mut ɲokʷomí ɲɛɛ ni ɲɛk keki [ae]
mut ɲokʷomí ɲɛɛ ni ɲɛk keki ae
be root these REL trip 1.SG
‘It was these roots that tripped me!’

The third person singular personal pronoun was a more difficult case. A reflex of Heine (1974/5:285)’s /ikiet/ was preserved systematically in a cleft construction (apparently an instance of pattern borrowing (per the typology proposed in Sakel (2007)) from Western Nilotic via Acholi):

(7.6) war ede ikɛd ɲi gaan
rain alone 3.SG REL bad
‘It is only rain that is bad.’
A very small number of instances of /i(−)ked/ 3.SG outside of the context of the cleft construction also occur in texts:

\[(7.7)\]  ikedi  ba  ṭo  neene
    ikedi  ba  ṭo  neene
    3.SG  DM  ???  these
    ‘She is this one.’

However, /ikəd/ never appeared in forms elicited directly from Karimojong. When asked directly for a translation of <iŋes>, Karimojong’s third person singular pronoun, Komol would use lexical nouns:

\[(7.8)\]  we  [nep-ene]ₐ  [kʷi]ₒ
      drink  person-this  water
      ‘He is drinking water.’

More frequently than the etymological 3.sg personal pronoun, Komol would use /nane/ or /nare/, the proximal and distal demonstrative, respectively, as the non-lexical noun head of an NP:

\[(7.9)\]  epre  [nane]ₒ  [ka  ŋes]ₐINST  [duaane]ₐLOC
      epre  nane  ka  ŋes  duaane
      spin.to.stir  this  with  stirring.stick  there
      ‘Stir it with a stirring stick there.’

\[(7.10)\]  kʷətok  [nare]ₘ  nabo
      kʷətok  nare  nabo
      shout, bark  that.one  again
      ‘It barked again.’

Additionally, /ati/ so-and-so is used for unknown/unspecified entities:

\[(7.11)\]  hime  hime  ati
      hime  hime  ati
      child  child  so-and-so
      ‘The girl is the child of so-and-so.’
Komol was not able to remember any plural personal pronouns. As with the third person singular pronoun, when Komol was asked directly for translations of Karimojong’s plural pronouns, he would use circumlocutions:

(7.12) jog-ene-o camit kʷi
people-these-FOC want water
‘These people want water.’

At least once, Komol used a conjunction of 1.sg and 2.sg pronouns to express first person inclusive plural meaning:

(7.13) dieceseke [bi ka ai]o
diece=seke bi ka ai
bring-PST 2.SG with 1.SG
‘You and I were brought.’

Komol’s defective personal pronoun paradigm was echoed in at least one other recent speaker: a semi-speaker (who died before my fieldwork) who was interviewed by Schrock (p.c.) in 2010 could not produce a third person plural free pronoun, but instead provided /rub/ ‘people’ as a translation for Karimojong /ikes/ ‘3.PL’.

### 7.2.2 Possessive pronouns

Heine (1974/5:285) describes a seven-category system of possessive pronouns. Heine (1974/5)’s system is reproduced in Table 7.2 below:

<table>
<thead>
<tr>
<th></th>
<th>Sg</th>
<th>Pl</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong></td>
<td>-ˈ áo</td>
<td>excl</td>
</tr>
<tr>
<td></td>
<td></td>
<td>incl</td>
</tr>
<tr>
<td><strong>2</strong></td>
<td>-bˈ õ</td>
<td></td>
</tr>
<tr>
<td><strong>3</strong></td>
<td>-nˈ ik</td>
<td></td>
</tr>
</tbody>
</table>

The forms from Heine’s (1974/5) paradigm can be contrasted with the forms that are found in Komol’s idiolect. Komol’s possessive pronoun paradigm is presented in Table 7.3, which is relatively fluid for non-first person singular possessors. Table 7.3 includes all forms that
were used as pronominal possessive markers, organized by the person and number to which they are attested as referring. Each form in the table below occurs at least once in elicited data. Forms corresponding with Heine (1974/5:285)’s possessive pronouns are bolded. Forms that occur in textual data are in italics:

<table>
<thead>
<tr>
<th></th>
<th>sg</th>
<th>pl</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>niao</td>
<td>nigino, nija, niginik, nik</td>
</tr>
<tr>
<td>2</td>
<td>bo, nibo, nigino, bi, gin</td>
<td>bito, niginik, nik, nigino, gino, ginik</td>
</tr>
<tr>
<td>3</td>
<td>nik, gin, nigino</td>
<td>nigino, gin, nigin, niginik, nik</td>
</tr>
</tbody>
</table>

The above paradigm reproduces without evaluation forms produced at least once by the speaker. The paradigm represents neither the coherent system that was characteristic of Nyang’i when Nyang’i was used as a language of daily communication nor even a collection of forms that the speaker would accept if they were read back to him. Instead, the paradigm is a snapshot of production within a broken-down system.

A first glance at the paradigm suggests pure disorder. /nigino/, for instance, occurs in every cell except for 1.SG. /gin/ occurs in 2.SG, 3.SG, and 3.PL. /niginik/ occurs for each of the plurals. Within a given elicitation session, however, there would be a modicum of consistency. The disorder of the system as a whole stems from the speaker’s struggle to remember all seven of the etymological pronominal possessive forms at a given moment. This struggle was particularly persistent in the case of Heine’s (1974/5:285) 1.PL.EXCL. and 3.PL forms, which he ultimately never produced. When prompted to provide a 3.PL possessive form, he would frequently provide a form corresponding to some other person/number value from Heine (1974/5:285). At this point, if I were to elicit the form that he had used in the 3.PL context (e.g. 1.PL, if he had used /nigino/ for 3.PL), he would use a form with yet another person/number value in Heine. This would create an ad hoc chain shift of sorts, and the particular chain employed
varied from day to day. Textual instances of possessive pronouns correlate much more regularly to the etymological senses of the forms than did elicited instances. Only /nigino/ occurs in multiple cells in textual data, and only /gin/ and /nigino/ occur in the wrong cell.

Elicited data and textual data provide complementary insights into the status of possessive pronouns in Komol’s idiolect. It appears that Komol can remember a set of forms that belong to the category possessive pronouns, but that his associations between the forms and their meanings within the category are weak at best. Elicited data provides pointed, thorough access to the set of forms Komol remembers as belonging to the category of possessive pronouns. The data does little to provide insight into the functions of any particular form; the forced-choice nature of direct elicitation prompted Komol to commit hesitantly to forms that he seemed not to be confident in, and session-internal pressure to differentiate between forms encoding different functions ensured that a single response that did not correspond to the etymological form would result in a sequence of such responses in other positions. Several iterations of this process resulted in most forms filling most cells in the paradigm in the course of one elicitation session or another.

In the context of text production, Komol was able to employ avoidance strategies to sidestep the problem of forms that he had a hard time remembering. This allows the data to more accurately reflect Komol’s beliefs about the functions of the forms that he was using. That these forms somewhat consistently aligned with the etymological forms suggests that Komol does have at least some level of competence in the domain of possessive pronouns. However, certain forms (most notably the etymological 2.SG possessive marker) do not appear in the textual data. In the case of the 2.SG possessive marker, Komol used either the absolute 2.SG personal pronoun /bi/ or /gin/, an adaptation of the 1.PL possessive marker. Elicited data, then, does not provide an
accurate picture of what Komol believes about the functions of the possessive pronominal forms. Textual data, on the other hand, does not provide an accurate picture of exactly how many forms he remembers. An uncertainty principle obtains: the more that elicitation methods ensure exhaustive coverage toward the margins of a semi-speaker’s memory, the less reliable the coverage will be. The more that elicitation methods ensure reliable data toward the margins of a semi-speaker’s memory, the less exhaustive the coverage will be. Just as one cannot know both the exact position and the exact velocity of a particle, so also one cannot know both the exact form and the exact meaning of a marginally remembered word.

Many of the forms etymologically consist of three components. The first component is the relativizer /ni/. The second component is the absolute pronoun. The final component is a suffix /o/, which appears not to have any function anywhere else in Nyang’i grammar. The only component of the three that appears in every possessive pronoun is the absolute pronoun. /ni/ is omitted from the second person plural marker /bito/, as well as from the abusive second person singular possessive marker described in Section 4.3.4. The /o/ is omitted from the third person singular marker /nik/. For many forms, the sequence pronoun-o results in a hiatus across a morpheme boundary. This hiatus is resolved by deleting the vowel preceding the morpheme boundary:

```
Input       ni ae-o       ni gin-o     bit-o       bi-o
Hiatus Resolution   ni a-o       ni gin-o     bit-o       b-o
Output          ni ao       ni gino      bito       bo
```

Possessive pronouns in sentences are presented below:

(7.14) \[\text{esere \quad nai \quad [ago \quad niao]}^\text{\textbackslash return-LV \quad then \quad home \quad 1.SG.POSS}\]

‘Then I returned to my house.’

(7.15) \[\text{nané \quad mot \quad tokol \quad [lɔsi\textperp\textperp pan \quad nigino]}\]
This one is the Tokoz clan. It's their clan.'

(7.16) au [ago bito]_{DEST} [dʷakane]_{LOC}
au ago bito dʷakane
go home yours here
'Go there, to your home.'

The pronominal possessive system is characterized by a range of variation. I have chosen to gloss the forms etymologically, with reference to Heine’s (1974/5:285) full paradigm, and will allow my interpretation (coinciding with Komol’s translations into Karimojong) of the reference of a given pronominal possession marker to be restricted to the free translation.

Second person possessors may also be marked simply with /bi/: 

(7.17) ēserua [bi]_{S} [ka nēk bi]_{COM}
ēser-ua bi ka nēk bi
return-IT 2.SG with hunger 2.SG
'You go back there with your hunger!'

One token, in which a father tells his son that the sale of a goat is what will provide the cash needed to pay school fees for the son, uses /gin/ 1.PL without the /o/ suffix. This is not only anomalous in lacking the /o/ suffix, but also in that the possessor (in the associative sense) in the sentence seems, in the context of the story, to be a second person entity:

(7.18) ee mot ni esukoło gın nēñe
ee mot ni esukoło gın nēñe
yes be REL school 1.PL these
'Yes, that's school for you.'

In addition to their function as head-marking particles cross-referencing the person and number of the dependent in encoding possession, possessive pronouns also appear, albeit infrequently, to encode malefactive arguments:

(7.19) kenʷakɨ [soatɨ]_{A} [niao]_{O}
kenʷakɨ soati niao
kill bee 1.SG.POSS
‘The bees are killing me!’

In (7.19), the affected entity is encoded with the first person singular possessive pronoun, even though it is not in a possessive or associative relationship to the preceding noun.

7.3 Adpositions

Oblique relations including relative location and direction are marked with adpositions. Nyang’i adpositions are listed in Table 7.4. Again, Eastern Nilotic loans are italicized. Relational nouns with a lexical meaning additional to the relational meaning include the lexical meaning in parentheses:

<table>
<thead>
<tr>
<th>Source</th>
<th>Word</th>
<th>Relation Marked/Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>texts</td>
<td>tar or tan</td>
<td>DESTINATION</td>
</tr>
<tr>
<td>texts</td>
<td>na</td>
<td>SOURCE</td>
</tr>
<tr>
<td>texts</td>
<td>ka</td>
<td>INSTRUMENTAL, COMITATIVE</td>
</tr>
<tr>
<td>texts</td>
<td>paka</td>
<td>DESTINATION: ‘until, reaching’</td>
</tr>
<tr>
<td>texts</td>
<td>ribu</td>
<td>‘on’</td>
</tr>
<tr>
<td>texts</td>
<td>ika</td>
<td>‘on top (head)’</td>
</tr>
<tr>
<td>texts</td>
<td>parak</td>
<td>‘east’</td>
</tr>
<tr>
<td>texts</td>
<td>ajeu</td>
<td>‘outside’</td>
</tr>
<tr>
<td>elicited data</td>
<td>uu</td>
<td>‘under (belly)’</td>
</tr>
<tr>
<td>elicited data</td>
<td>torọŋ</td>
<td>‘behind (back)’</td>
</tr>
<tr>
<td>elicited data</td>
<td>jím</td>
<td>‘under (dirt)’</td>
</tr>
<tr>
<td>elicited data</td>
<td>jìsu</td>
<td>‘in front of’</td>
</tr>
<tr>
<td>elicited data</td>
<td>koriti</td>
<td>‘next to (ribs)’</td>
</tr>
<tr>
<td>elicited data</td>
<td>ɲomak</td>
<td>‘behind?’</td>
</tr>
</tbody>
</table>

Destination /tan, tar/ and source /na/ are illustrated in (7.20) and (7.21):

(7.20) camka [perukude]ₐ oogese [perukude]ₘ mut naa au [na
         camka perukude aog-ese perukude mut naa au na
         want main.road go-SEQ main.road be SUB go SUB
         lōbalanŋt] SRC [tan dₐrɛ kaiceri] DEST
         lōbalanŋt tan dₐrɛ kaiceri
         place name to there Kaiceri
‘They need/want a main road, a main road that goes from Lobalangit to Kaiceri.’

(7.21) nane nieɛ dokête dene augɛse nai [tar kaiceri] DEST
       nane ni-eɛ dokête dene aug-ɛse nai tar kaiceri
this steep.place here go-SEQ then to Kaiceri (town) ‘This one which is the steep place here goes up to Kaiceri then.’

In (7.20), the source, /lobalana/, is preceded by /na/, and the destination, /kaiceri/ (an appositive first represented as /d’re/ ‘there’) is preceded by /tan/. In (7.21), the destination, again /kaiceri/, is preceded by /tar/. No systematic differences between /tar/ and /tan/ are evident in the data, and the speaker claimed that they were the same as each other.

The two identified senses of /ka/, INSTRUMENTAL and COMITATIVE, are presented in (7.22) and (7.23):

(7.22) epre [nane]₀ [ka Ṉes]INST duaane
epire nane ka Ḉes duaane
stir this INST stirring.stick there
‘Stir it with a stirring stick at that point. (Instrumental)’

aso nardok-ojo toliasa nɛɛɛ ka bɛs-iek
DM one-FOC crawl these with spear-PL2
Well, one of them, he crawled with spears. (Comitative)

In (7.22), /ka/ marks an instrument. In (7.23), /ka/ marks a comitative.

(7.24) illustrates /paka/ ‘reaching’. /paka/, which is also found in Ik (Schrock 2014:457) does not appear in Dimmendaal (1983); however, it seems to be borrowed from Swahili /mpaka/.

(7.24) iked nane [paka mutu domiki tudiki] da
iked nane paka mutu dom-iki tud-iki da
3.SG this reach be pot-PL1 five-PL1 DM
Which ones are exactly five pots

/ribu/ and /ika/ both encode spatial relationships dealing with superimposition, such as “on” or “on top.” /ribu/ appears to be a true preposition. No clear lexical etymon for /ribu/ is apparent, and Heine and Carlin (2010:39) list /riɓ/ as a preposition meaning ‘up, above’ with no nominal sense. /ika/ is a relational noun derived from /ik/ ‘head’. /ribu/ and /ika/ are illustrated below, along with an instance of /ik/ used as a lexical noun.
‘Well, long ago, three men went here, here, here, to the top of Kakwanga, here to the east of Kakwanga.’

‘It is there at the top of the mountain.’

‘My head thinks things slowly.’

There is no evident systematic semantic distinction between /ribu/ and /ika/. When /ik/ is used lexically, it does not take a word-final /a/. When /ik/ is used metaphorically in its function as a relational noun, it always takes /a/, which is possibly a reflex of the Eastern Nilotic linker /à/ Dimmendaal (1983:336).

/parak/ also appears in (7.25) above, in which it is followed by a toponym. That /parak/ can encode the relationship of a following noun with the rest of the sentence distinguishes it from adverbial locatives such as /duane/ or /duakare/. Its cardinal direction counterpoint /tɔɔ/ ‘west’ does not ever occur as a preposition (immediately followed by a noun that is related to the rest of the sentence by /tɔɔ/) in the database. Both /parak/ and /tɔɔ/ may occur without nominal complements:
nabo-jo rubu-jo aug-ɛsɛ duakare ne-o tɔɔ
again-FOC people-FOC go-SEQ there these-FOC west
‘And again, the people, they went there, to the west.’

No lexical means uniquely encode the remaining cardinal directions, ‘north’ and ‘south’. Instead, these concepts are communicated using Nyang’i roots to refer to a river that runs from north to south a short distance west of the last Nyang’i settlements near Lobalangit. The full set of Nyang’i cardinal directions is found in Table 7.4.

Table 7.4: Nyang’i Cardinal Directions

<table>
<thead>
<tr>
<th>Word</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>parak</td>
<td>‘east’</td>
</tr>
<tr>
<td>tɔɔ</td>
<td>‘west’</td>
</tr>
<tr>
<td>ika-z'u</td>
<td>‘north (up-river)’</td>
</tr>
<tr>
<td>koti-z'u</td>
<td>‘south (not yet-river)’</td>
</tr>
</tbody>
</table>

The final form, /aʃeu/ outside of occurs as a postposition once:

(7.28) suzɛsɛ [agɔ aʃeu]
suzɛ-ɛsɛ agɔ aʃeu
graze-SEQ home outside
‘They graze outside of the home.’

Prepositions do not always take overt objects.

(7.29) aso getan munu ne ribu tan duare ribu
aso getan munu ne ribu tan duare ribu
DM pass.upwards first SUB up to there on, above
Well, first pass this upwards, to there, up.

The above examples all occur in textual data, with no particular prompts for spatial relations. With the exception of the relational noun /ika/, these are all invariant particles with no nominal sense. An additional set of spatial relation terms was elicited directly. To do this elicitation, I constructed a physical scene using objects such as a knife and shoes, and asked the speaker to identify the location of one of the objects. The prompt would be a phrase such as /eke
łoin esu/ ‘Where is the knife?’ Four of the six terms that were only obtained in such an elicitation context were relational nouns. The other two terms are invariant particles.

(7.30) gemeciloin uu kus
knife belly clothes
‘The knife is under the clothes.’

(7.31) ɬoin jimi amuk
knife earth shoe
‘The knife is under the shoe.’

(7.32) ɬoin koriti amuk
knife rib shoe
‘The knife is next to the shoe.’

(7.33) ɬoin toroŋ bi
knife back you
‘The knife is behind you.’

(7.34) ɬoin jisu bi
knife in.front you
‘The knife is in front of you.’

(7.35) ɬoin jisu ɲokopo
knife in.front cup
‘The knife is in front of the cup.’

(7.36) ɬoin ɲomak ɲokopo
knife before? cup
‘The knife is before the cup.’

The last three terms, /toroŋ/, /jisu/, and /ɲomak/, bear further elaboration. In these expressions, the location of an entity, the FIGURE, is predicated with respect to a reference point, the GROUND. The choice of which of the three terms to use often depends on whether or not the GROUND canonically has a front. Humans, for instance, are canonically fronted, and relations of objects with respect to humans have been used to derive the basic glosses of /jisu/ as ‘in front of’ and of /toroŋ/ as ‘behind’. /jisu/ would be used of an item in front of the speaker, and /toroŋ/ of an item behind the speaker. Similarly, /jisu/ would be used of an item in front of a different
human and /toron/ of an item behind a different human, regardless of the orientation of the knife with respect to the speaker. When the GROUND is not canonically fronted, though, the spatial relations are conceptualized differently in Nyang’i than in English. With an un-fronted GROUND such as a cup, if the GROUND is between the speaker and the FIGURE, /jis/ ‘in front’ is used, contrary to English intuitions that the FIGURE is behind the ground in that case. If the FIGURE is between the speaker and the GROUND, neither /jis/ nor /toron/ is used. Instead, /jomak/ is used. This form only occurs in a small number of elicited contexts in Nyang’i. I have chosen to gloss it as ‘before’ in part due to comparative evidence: in Soo, /nɔ-mak/ means ‘before’ (Heine & Carlin 2010:35). Per my own unpublished field notes from Soo, /nɔ-mak/ may be used for temporal senses of ‘before’; I have no evidence one way or the other regarding if /nɔ-mak/ may be used for spatial senses of ‘before’ in Soo.

7.4 Numerals

Nyang’i has a base-5 counting system. The only etymological Nyang’i base numerals are 1-5. A lexical 10 /tomon/ or /tomin/, 100 /(tutu)miat/, and 1000 /aliput/ are borrowed from Eastern Nilotic:

<table>
<thead>
<tr>
<th>Numeral</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>nardok/narodok/odok</td>
</tr>
<tr>
<td>2</td>
<td>neec</td>
</tr>
<tr>
<td>3</td>
<td>jon</td>
</tr>
<tr>
<td>4</td>
<td>lowe</td>
</tr>
<tr>
<td>5</td>
<td>tud</td>
</tr>
<tr>
<td>6</td>
<td>tud napina nardok</td>
</tr>
<tr>
<td>7</td>
<td>tud napina neec</td>
</tr>
<tr>
<td>8</td>
<td>tud napina jon</td>
</tr>
<tr>
<td>9</td>
<td>tud napina lowe</td>
</tr>
<tr>
<td>10</td>
<td>tomin</td>
</tr>
<tr>
<td>11</td>
<td>tomin napinodok</td>
</tr>
<tr>
<td>12</td>
<td>tomin napina neec</td>
</tr>
<tr>
<td>13</td>
<td>tomin ka tud</td>
</tr>
<tr>
<td>14</td>
<td>tomin napina tudik nardok</td>
</tr>
<tr>
<td>15</td>
<td>neec njatomon</td>
</tr>
<tr>
<td>16</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>
The use of /napina/ as a linker is inconsistent. For numerals 6-9 and 11-14, it is used to indicate the addition of numerals 1-4 to the base, whether the base is 5 or 10. In 16-19, it is used to indicate the addition of the complex numerals 6-9 to a lexical 10. In this context, the 6-9 are derived without linkers, but with the plural marker /-ik/ affixed to /tud/ 5. Numerals were collected on multiple occasions, with nearly two years intervening between the earliest and latest collection. The use of /napina/ is generally consistent below 20 between elicitations. Above 20, the exact linkers used become much more inconsistent. The distinction between /tomin/ as 10 in numbers from 10-19 and /ŋatomon/ as 10 in numbers over 19 is uniform. For observations regarding alternate forms of the numeral 1, see Sections 2.4.3 and 8.4.

7.5 Predication of property concepts

Property concepts may be predicated by a special invariant subclass of intransitive verb (quality verbs), or by a set of invariant particles that sometimes behave like intransitive verbs and sometimes behave like possessor nouns (size terms). The first type of property predicates always precedes their subject, and main clauses taking them as their heads are simply verbal core clauses. I include discussion of these forms here because of their formal (morphologically invariant) and semantic similarities with the adjectives: the adjectives are most clearly defined in contrast with the quality verbs. The more verbal set (i.e. the set that may only occur before their subjects) consists of quality terms (/de/ ‘good’ and /gaan/ ‘bad’). The second type of property predicates may precede or follow the nouns that they are properties of. Size terms (/mabup/ ‘big’,

160
/gutiid/ ‘small’, and /seɲ/ ‘thin’) plus /iz/aŋ/ ‘wild’ make up this second set. When preceding their nouns, they are indistinguishable from intransitive verbs, including quality terms. When following their nouns, the noun predicated on is the head of the core clause.

7.5.1 Quality terms

Quality terms resemble verbs in terms of three main structural features. First, quality terms must precede their subjects. Second, second-position adverbs (see Section 6.2 for further discussion) can intervene between quality terms and their subjects. Finally, a quality term can be the sole content of a relative clause. Quality terms are different from (other) verbs in that they are never attested as taking verb-specific morphology (such as the /-(e)se/ sequential marker), and their subjects are never focused (i.e. never occur in preverbal position with the /-io/ focus marker). Quality terms are invariant in form. Because the distribution of quality terms coincides in many ways with that of verbs, and because nouns and their pre-subject property predicates never clearly fill an argument slot of an active verb, I do not treat quality attribution as taking place inside the noun phrase; rather, it is a predicative function in Nyang’i.

/de/ ‘good’ may occur in two contexts. It may either be the head of a main clause, in which case it takes an argument, or it may occur in a relative clause. This distribution parallels that of intransitive verbs. /de/ is illustrated below, first as the head of a main clause, and then in a relative clause.

(7.37)  
\[
\begin{array}{ll}
\text{de} & \text{ji} \\
\text{good} & \text{sun} \\
\end{array}
\]
‘The sun is good!’

(7.38)  
\[
\begin{array}{llllllll}
\text{ji} & \text{ni} & \text{ikɛɗi} & \text{ni} & \text{de} \\
3.\text{SG-LV} & \text{REL} & \text{REL} & \text{good} \\
\text{sun} & \text{REL} & \text{REL} & \text{REL} & \text{REL} \\
\end{array}
\]
‘The sun is what's good.’
In (7.37), the property is functioning as the head of the clause. Accordingly, it precedes the noun. In (7.38), the property is predicated in a relative clause by means of a cleft construction, described in greater detail in Section 10.5.

/gaan/ 'bad' may also either be the head of a main clause, in which case it takes an argument, or in a relative clause. /gaan/ is illustrated below, first as the head of a main clause, and then in a relative clause.

(7.39) akʷe gaan ɬi
Well bad sun
‘Well, the dry season is bad!’

(7.40) akʷe gaan ro neene war neene
well bad bad! these rain these
‘Well, that's baaaad bad! That rain!’

(7.41) [nep]s rimu=sek abolja/ gaan=co [ik]s/ matʷan [jim]dest
person spin=PST around/ bad=IMM head/ fall ground
‘A person spins around; the head will be bad; he will fall to the ground.’

(7.42) war nane ikedɪ ɬi gan
war nane iked-ɪ ɬi gan
rain this 3.SG-LV REL bad
‘This rain is what's bad!’

7.5.2 Size terms

Size terms differ from quality terms in that they may either precede or follow the noun that they describe. When they precede the noun, they behave rather like quality terms or intransitive verbs. The size is predicated of the noun, as in (7.43)-(7.45):

(7.43) iz'ana soatane
iz'ana soat-ane
wild bee-this
‘These bees are wild!’

(7.44) gutiid ɬo
small cow
‘The cow is small’
When size terms follow the nouns that they describe, though, they can modify nouns that are arguments of a main clause verb without being put into a relative clause. In both ordering (post-nominal) and syntactic distribution (can be contained within an NP), size terms resemble demonstratives or possessors more than intransitive verbs. Where quality terms predicate, size terms modify.

/mabuŋ/ ‘big’ (sometimes produced as [maguɲ]) provides an example of a post-nominal size term in the following example:

(7.46)  kʷaŋaLa [had mabuŋ]o mokidene search tree big like.this
‘[My father would] search for big trees like this.’

/mabuŋ/ can also fill a relative clause:

(7.47)  dud nene ni mabuŋ gourd these REL big
‘…this gourd which is big.’

Finally, in an elicited phrase in isolation, /mabuŋ/ precedes its noun, suggesting that

/mabuŋ/ can act as a predicatior as well as as a modifier:

(7.48)  mabuŋ kokoroi big chicken
‘The chicken is big.’

Given the distributions discussed above, verbs can be described as [+verb -noun]. Nouns can be described as [-verb +noun]. Under this schema, quality terms pattern with verbs: [+verb -noun]. Size terms occupy an intermediate state—they can function as both [+verb] and [+noun]. These terms provide the clearest candidate class of lexical items to serve as a category adjective.
The only instances of a numeral and a property term modifying the same noun occur with size property in direct elicitation. One token took a size term in predicative position (pre-nominal), and the other token took the size term in modifier position (post-nominal). In both cases, the numeral preceded the noun:

(7.49) mabuŋ-i [neec ɬo]
big-Lv two cow
'Two cows are big'

(7.50) [jon ɬo] gutiritid
three cow small
'three small cows.'

In the first of these examples, the size term acts as a predicator, and precedes both the noun and the numeral. In the second of these examples, the size term is a modifier. The numeral precedes the noun, and the size term follows the noun. Additionally, on this particular day, the speaker provided me with a form of /gutiid/ ‘small’ that was not attested again: /gutiritid/. It also occurred without an overt numeral. In this case, /gutiritid/ was in predicative position:

(7.51) gutiritid ɬo
small cow
'two small cows'\(^9\)

Note that, as discussed in Section 8.4, numerals almost always follow the noun in narratives. Consequently, the pre-nominal numerals in the elicited data presented here should be treated with particular caution, as they are more likely to show unnatural priming effects from the contact languages than the textual data are.

7.6 Subordinators

\(^9\) I elicited “two small cows” via English, which was then translated into Karimojong by an English-Karimojong translator during my first session with the speaker. I did not write down the Karimojong that was translated at the time; however, subsequent research has made clear that the numeral is not present in the Nyang’i form. It is possible that the otherwise unattested form /gutiritid/ idiosyncratically encodes plurality of the subject, or that the numeral was simply lost from the Nyang’i version.
Nyang’i has two relativizers, /ni/ and /nane/, as well as four other subordinators, which are used to introduce temporal adjunct clauses: /na/, /da/, /ka/, /(n)apena/. There is no clear functional distinction between the relativizers or between the temporal adjunct clause subordinators.

7.7 Notes on inheritance, innovation, borrowing, and loss

Few innovations can be identified within the closed word classes. The trend is toward category loss, and many of the lost categories are categories that exist not only in Kuliak, but also in Eastern Nilotic. This suggests that much of the loss of the categories in question does not result from assimilation to structures found in Eastern Nilotic, but rather most likely results primarily from language death proper.

Nyang’i free personal pronouns have deteriorated more rapidly than Nyang’i possessive personal pronouns. Free personal pronouns have lost the entire plural category, while possessive personal pronouns have lost 3.PL and the inclusive/exclusive distinction on 1.PL. The susceptibility of the 3.PL pronoun to loss in Kuliak, seen here in the possessive personal pronoun paradigm, is independently attested by at least one more data point: a semi-speaker (who died before my fieldwork) who was interviewed by Schrock (p.c.) in 2010 could not produce a third person plural free pronoun, but instead provided /rub/ ‘people’ as a translation for Karimojong /ikes/ 3.PL. Additionally, the third person possessive pronouns attested by Heine (1974/5) were the only forms in the paradigm that lacked a morph-final /-o/ element. A separate attestation of a similar phenomenon comes from Soo. In Soo, the full set of free pronouns was retained in Carlin (1993:79)’s description; however, the bound pronouns (subject-marking on the verb) in Carlin (1993) take null forms for both 3.SG and 3.PL, perhaps signaling the beginning of loss among third person pronouns in a broader sense.
Losses in the domains of adverbs, adjectives, adpositions, and numerals are primarily at the level of the loss of lexical items. They are summarized in Table 7.5 below:

Table 7.5: Retentions, innovations, and losses in closed word classes

<table>
<thead>
<tr>
<th>Retentions</th>
<th>Innovations</th>
<th>Losses</th>
</tr>
</thead>
<tbody>
<tr>
<td>singular free pronouns</td>
<td>Use of demonstratives as pronouns, without clear demonstrative reference</td>
<td>Plural free pronouns</td>
</tr>
<tr>
<td>singular, 1.pl, 2.pl possessive pronouns</td>
<td></td>
<td>incl/excl distinction for 1.pl possessive pronouns</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.pl possessive pronoun</td>
</tr>
</tbody>
</table>
Chapter 8: The Noun Phrase

8.1 Introduction:

The noun phrase consists of words that can function together as an argument (whether core or oblique) of a verb or as an argument of a non-verbal sentence. A minimal noun phrase consists of either a noun or a pronoun. Modifiers within the noun phrase may include possessors, numerals, demonstratives, and relative clauses. Relative clauses are described at greater length in Chapter 9. The relationship of noun phrases to the verb will be discussed at greater length in Chapter 8.

8.2 Possessive Noun Phrases:

Noun phrases in adjacent positions in a single noun phrase may have either an ownership, a kinship, or an association relationship. The possessum precedes the possessor. In many cases, the possessum takes a suffix vowel. The quality of this vowel is unpredictable, appearing to be lexically specified. I have glossed these vowels with LV for ‘linking vowel’. The linking vowel follows the possessive pronoun of an inherently possessed noun.

All possessums in the textual database used in this study are unmodified nouns (aside from being modified by a possessor). The possessor may be a noun phrase: the maximally expanded possessor noun phrase in the database is modified by a single demonstrative. This is illustrated in (8.1):

(8.1)  tacaisaa [babanikia [ŋer naane]]
tacaisaa baba-nik-ia ŋer naane
get father-3.POSS-LV girl this
‘I got this girl's father.’

In (8.1), the possessum is an inherently possessed noun (as discussed in Chapter 4.3.4). Because of this, it takes a pronominal possessive marker indicating the person and number of the
possessor. It then takes a linking vowel. The possessor NP consists of the possessor noun followed by a proximal demonstrative.

If the possessor noun phrase is a pronoun, it assumes a special form; possessive pronouns are discussed at greater length in Section 7.2.2. In all cases (whether the possessor is a noun or a pronoun), the possessum precedes the possessor. Possessive noun phrases are illustrated below:

(8.2) ran nene kukus [kukusu had]loc
ran nene kukus kukus-u had
sleep these shadow shadow-LV tree
‘It was sleeping in the shadow, the shadow of the tree.’

(8.3) nane mu [kusɪ clan]
nane mu kus-ɪ clan
this be skin-LV baboon
‘There was a baboon skin.’

(8.4) bas duesɛ kus nene seke ni ᵇɛke [itona na sore]
bas du-esɛ kus nene seke ni ᵇɛke iton-a na sore
DM take-SEQ skin these PST REL EXIS body-LV … chldrn
‘Well, they removed the clothes that were on the bodies of the children.’

(8.5) id lo
milk cow
‘cows’ milk’

(8.6) ee due=seke nane ni [hɪmɪ get] dʷakaane
ee due=seke nane ni hɪm-ɪ get dʷakaane
yes take=PST this rel child-LV goat there
‘Yes, a goat's kid is taken there.’

No explanation for the /na/ in (8.4) is forthcoming. It could conceivably be either stuttering or an as-yet otherwise unidentified linker for body-part possession.

The following sentence includes the particle /mu/ between two nouns that seem to be in a similar semantic relationship to other nouns in this sequence:

(8.7) ajo nanɛ lacane mu ᵇanji
ajo nanɛ lac-anɛ mu ᵇanji
spear this mountain-this be Nyang’i
‘They raided this place, this mountain of the Nyang’i.’

An alternative analysis of (8.7) that does not treat /lacane mu ɲanŋi/ as a possessive NP, but rather treats /mu/ as marking /ɲanŋi/ as a recipient (or indirectly affected argument) of the verb is presented in Section 9.4.2.

For alienably possessed nouns, neither the head nor the dependent is consistently marked in a possessive noun phrase construction in which the possessor is a lexical noun. The exception to this is the intermittent linking vowels that are sometimes attached to the possessum. However, inalienably possessed nouns (discussed in 4.3.4) always take pronominal inflection on the head, as in (8.8):

(8.8) tacaisaa [babanik-ia [ŋer naane]]
       tacaisaa baba-nik-ia ŋer naane
       get father-POSS-LV girl this
‘I got this girl's father.’

(8.8) also provides an unambiguous instance of a demonstrative modifying the possessor. In (8.8), naane must modify /ŋer/ ‘girl’ as /babanik/ ‘her father’ is already marked with a pronominal possessive marker, and pronominal possessive markers and demonstratives are mutually exclusive. Nouns marked with a pronominal possessive marker are never modified by demonstratives elsewhere in Nyang’i. This stands in contrast with (8.9):

(8.9) kəkəce=sek [boru ɬo nɛɛnɛ]o
    kəkəce=sek boru ɬo nɛɛnɛ
    close=PST corral cow these
‘They have closed these cattles' corral.’

In (8.9), the demonstrative /nɛɛnɛ/ ‘these’ could modify either /ɬo/ ‘cow’ or the entire NP /boru ɬo/ ‘corral’. I have not identified any criteria by which to distinguish between these analyses.

8.3 Demonstrative Modification:
Nouns may be modified by demonstratives, as in Chapter 4.4.2. A fuller sketch of the forms of demonstratives may be seen there. Free demonstratives follow the head noun:

(8.10) au-se [lo neene]  
go-SEQ cow these  
‘These cows go.’

When demonstratives modify a noun that is also modified by a relative clause, the demonstrative precedes the relative clause:

(8.11) [war nane] iked ḥi gan  
war nane iked ḥi gan  
rain this 3.SG REL bad  
‘This rain is what’s bad!’

No data exists regarding the relative ordering of demonstratives with numerals or property modifiers.

8.4 Numeral and Quantity Modification:

Many nouns are morphologically marked for number along the dimension of singular/plural. Such marking is discussed in 4.4.1. This section deals with modification by numerals. The counting system is discussed in Section 7.4.

Numerals usually follow the head noun:

(8.12) iked nane paka mutu [domiki tudiki] da  
iked nane paka mutu dom-iki tud-iki da  
3.SG this reach be pot-PL1 five-PL1 DM  
‘…which ones are exactly five pots.’

(8.13) aogeseke ọkọọ [ɲetat ɲonik] dene ribu kakwanga  
aog-e-seke ọ-kọọ ɲetat ɲon-ik dene ribu kakwanga  
go=PST long.ago man three-PL1 here on Kakwanga  
‘Well, long ago, three men went here, here, here, to the top of Kakwanga…”

(8.14) da [sore lowe] [lowei sore]  
da sore lowe lowe-i sore  
DM children four four- LV children  
‘The children were four, four children.’
Neither /nardok/ ‘one’ nor /lowe/ ‘four’ is ever attested with PL1. Head nouns may or may not take plural marking, depending on the idiosyncrasies of the particular lexical item in question. In (8.12), the head noun takes the /-iki/ plural marker. In (8.13), the head noun is unmarked for number. (8.14) is an instance of a numeral in natural speech not taking the PL1 marker. (8.14) is also different in that it includes a modifier-head order for numeral modification. In this case, the numeral takes a linking vowel.

There is also one non-numeral quantifier, /ede/ ‘only, alone,’ which mainly occurs in two contexts: in second position, or in final position. In second position, it is attested as following a noun or a temporal (/loŋoroket/ ‘long ago’). In final position, it is attested as following a personal pronoun (/ae/ ‘1.SG’) and a verb (/augese/ ‘go’). /ede/ ‘only, alone’ is illustrated below.

ede/ ‘only’ occurs after its head. The head can be a noun or a verb. If the head is a verb, /ede/ ‘only’ indicates a manner: alone.

(8.15) duma [tegʷ nardok]
duma tegʷ nardok
transfer leg one
‘They give a leg.’

(8.16) auge okolo [sore no nardok]nane ni kʷajasake getik
auge okolo sore no nardok nane ni kʷajasake get-ik
go long.ago children REL one this REL search goat-PL
‘Long ago, one child went searching for goats.’

In natural speech, numerals usually take the PL1 plural marker, as in (8.12) and (8.13).
8.5 Notes on inheritance, innovation, borrowing, and loss

The structures described above represent retentions from Proto-Kuliak. Compulsory marking of person and number of the possessor on kinship terms is a distinctive characteristic of Ik, for example (Schrock 2014:188-191). Ik retains evidence of a separate set of possessive markers on kinship terms (which takes the form today of highly idiosyncratic kinship term paradigms). Carlin (1993) provides no account of kinship terms in Soo. Because of this, it is impossible to know if these idiosyncratic paradigms survived to Proto-Western Kuliak, but they certainly have not survived to the present in Nyang’i.

Nyang’i differs from its Kuliak relatives in that there is no existential construction used to encode possession. Soo and Ik existential possessive constructions are presented below:

(8.19) nɛkɛ-sa  ka  ir
      be-1.SG  with house
     ‘I have a house.’  (Soo; Carlin 1993:69)

(8.20) nɛkɛ  in-eo-a  gi-at
      be  1.PL.IN.POSS-home-LOC  honey-SG
     ‘We have honey.’  (Soo; Carlin 1993:69)

(8.21) i-a  ɲákalám-a  ɲci-kɛ
      be-REAL  pen-NOM  1-DAT
     ‘I have a pen (lit. ‘There is a pen to me)’  (Ik; Schrock 2014:477)

No such construction has been found in the Nyang’i data. Neither Carlin (1993) nor Schrock (2014) indicates any distinctive function associated with the existential possessive construction as opposed to the NP juxtaposition possessive construction. If there truly is no functional difference between NP juxtaposition possessive constructions and existential possessive constructions in Ik or Soo, then the loss of the existential possessive construction in Nyang’i would represent a loss of redundant complexity rather than the loss of a function.
Nyang’i may also have lost verbal inflectional categories on numerals: categories such as subject-agreement, mode, and aspect may be marked on numerals in Ik (Schrock 2014:427). It is not clear if this is an innovation in Ik or a loss in in Nyang’i. Additionally, both Ik (Schrock 2014:428) and Soo (1993:109) require post-nominal numerals to occur in a relative clause, but the relative clause construction for numerals has been lost from Nyang’i.

Table 8.1: Retentions and losses in the Nyang’i noun phrase

<table>
<thead>
<tr>
<th>Retentions</th>
<th>Losses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obligatory kinship possession</td>
<td>Special kinship possessive pronouns(?)</td>
</tr>
<tr>
<td>NP juxtaposition possessive</td>
<td>Existential possessive</td>
</tr>
<tr>
<td></td>
<td>Verbal inflection on numerals(?)</td>
</tr>
<tr>
<td></td>
<td>Relative clause construction for numerals</td>
</tr>
</tbody>
</table>
Chapter 9: The Core Clause

9.1 Introduction

This chapter introduces a constituent that plays a key role in organizing Nyang’i syntax: the core clause. The main criteria setting the core clause apart from other syntactic structures in Nyang’i are the distribution of adverbs and the lack of overt marking of the grammatical/semantic roles of core clause words. These are taken up in Section 9.2. Because core clause arguments are not overtly marked, word order is VAO/VS, and subjects are frequently omitted, grammatical/semantic role ambiguities often occur. Grammatical/semantic role assignment is taken up in Section 9.3. Another subset of verbs, those encoding existence and/or location, is described in Section 9.4. Section 9.5 provides a summary of which structures in the Nyang’i core clause are retentions, which structures are losses, which structures are innovations, and which structures are borrowings.

9.2 Defining the core clause

The core clause is composed of a head and its arguments. In a verbal clause, the head is a verb, and its unmarked arguments can fulfill S, A, or O functions. None of the words in the core clause in Nyang’i take marking for their function.

A (the argument with the most agentivity in an unmarked transitive clause) and S (the single argument of an intransitive clause) pattern together in that only A and S may be fronted to pre-verbal focus position, which takes the focus marker /-io/. O cannot be fronted to pre-verbal position. This provides evidence for the existence of a category subject in Nyang’i.

If the subject of a main clause is not overtly pragmatically marked (e.g. with /-io/ in A/S-fronting), the verb occurs clause-initially. In such pragmatically unmarked transitive main
clauses, A precedes O. The basic constituent order of the main clause is VAO / VS. A transitive
and an intransitive sentence are illustrated below:

(9.1) ąjisa  [mersti]_A  [getik]_O
eat      leopard     goat-PL1
‘A leopard is eating the goats!’

(9.2) ŋatʷe  [babai]  niau]s
ŋatʷe  babai  niau
run-IT  father  1.SG.POSS
‘My father ran [there].’

Nominal arguments (S, A, and O) take no special marking (e.g. case inflection or
prepositions), and their semantic role in the sentence is determined by their relationship to the
semantics of the verb rather than to anything inherent in their meaning. The relative order of A
and O encodes the difference between these two roles. The following pair provides evidence that
linear order serves as a coding means for A and O:

(9.3) deu  ae  bi
see  1.SG  2.SG
‘I see you.’

(9.4) deu  bi  ae
see  2.SG  1.SG
‘You see me.’

In one sentence taken from textual data, the possessive rather than the free form is used to
express a 1.SG object:

(9.5) kænʷakı  soatı  niao
kenʷakı  soat-ı  niao
kill  bee-LV  1.SG.POSS
‘The bees are killing me!’

This does not appear to be a systematic way of encoding, for example, speech act
participants acted on by non-speech act participants. The free pronominal form is used in other
such utterances:
VAO/VS order is basic in the sense that when a clause takes overt constituents with the
least overt marking possible, this is the order that the constituents occur in. Subjects (A/S) may
additionally precede the verb. When they do so, they always take the /-io/ focus marker, first
introduced in Section 4.4.3. O arguments never precede the verb.

Well, my father, he went back to call the people again.’

The marking of focused subjects with /-io/ suggests that they are no longer part of the
core clause. /-io/ marking is the same construction used for unambiguously non-core temporal
clause adjuncts.

As many as two adverbs may intervene between the verb and the post-verbal first
argument, in the case that the first argument is overtly mentioned. These belong to the set of
adverbs referred to in Section 6.2.2 as second-position modifiers. The fact that adverbs may
intervene between the verb and the first argument indicates that the position immediately
following the verb does not encode the syntactic role of the first argument. However, the fact that
the range of adverbs that may intervene between the verb and the first argument is tightly
constrained keeps open the possibility that the post-verbal adverbs form a constituent with the
verb, and the position following that constituent encodes the syntactic role of the first argument:
Long ago, an elder sent out children in order to search…

Well, the leopard pounced on the goat.

Well, long ago, three men went here, here, here, to the top of Kakwanga, here to the east of Kakwanga.

Then they bring water here again.

In (9.9), the adverb /ɔkɔlɔ/ ‘long ago’ immediately follows the verb. In (9.10), the adverb /seke/ PAST immediately follows the verb. (9.11) and (9.12) provide cases in which two temporal adverbs intervene between the verb and the first argument. In (9.11), /seke/ PAST occurs before /ɔkɔlɔ/ ‘long ago’. In (9.12), /nai/ ‘then’ occurs before /nabo/ ‘again’.

Adverbs may additionally occur following the core arguments of the matrix clause. Post-core adverbs precede location arguments or clausal adjuncts. Clausal adjuncts are discussed at greater length in Chapter 9. Post-core adverbs are illustrated in (9.13):

The children would go again to spear goats.

Frequently in textual data, the first argument is not overtly realized:
In (9.14), the first argument (the Nyang’i people) is not overtly realized, nor has any overt instantiation of this entity occurred in the preceding 15 lines. The noun phrase /boru lo nəɛẹnɛ/ ‘these cattle’s corral’ that follows the V=ADV complex is instead a patient. The first NP after the V=ADV complex may also be a location or destination:

(9.15) eʃɛree nai [ago]DEST
     eʃɛ-ee nai ago
     return-VEN DM home
     ‘Then he returns home.’

In (9.15), /ago/ ‘home’, which immediately follows the V=ADV core, is a destination. It does not take any special marking, suggesting that perhaps it is part of the core clause. However, /ago/ is a member of a noun subclass, together with /man/ ‘garden’ and /lokitel/ ‘the bush’ that does not take any special marking for locative roles. Evidence for this can be found in that it does not take any locative marking in contexts in which other nouns do require locative marking. This is illustrated in (9.16) and (9.17).

(9.16) aog-ɛse tan lobalaŋit
       go-SEQ to Lobalangit
       ‘It goes to Lobalangit’

(9.17) au ago bito dʷakane
       go home yours there
       ‘Go to your home, there.’

In (9.16), the destination argument is Lobalangit, a place name. It is marked as a destination with /tan/ ‘to’. In (9.17), the destination argument is /ago bito/ ‘your home’. Because home is an inherently locative noun, it does not take any special marking for its role in the clause.
Having lost inflectional formal coding means (e.g. case marking, subject cross-reference on the verb) in the course of language death, and having failed to replace them with compensatory changes, significant syntactic ambiguities have emerged in Nyang’i. For example, linear order is the only formal coding means that has been identified for semantic roles of noun phrase arguments (A and O) of the verb. Presumably, then, NP-NP sequences following the verb could reliably be interpreted as A and O, respectively. This is what is seen in the following example:

\[(9.18)\]

\[
\begin{array}{ll}
\text{we} & \text{ɪ} \\
\text{sa} & \text{ca} \\
\text{lo} & \text{[kʷe]}_o \\
\end{array}
\]

\[
\begin{array}{ll}
\text{wesa} & \text{co} \\
\text{lo} & \text{kʷe} \\
\text{drink} & \text{IMM} \\
\text{cow} & \text{water} \\
\end{array}
\]

‘Then the cows drank water.’

In \[(9.18)\], the NP-NP sequence following the verb complex consists of an A argument and an O argument. However, the linear order NP-NP is also a coding means for nominal possession, as seen in Section 8.2. Therefore, there is ambiguity between a sentence in which a verb is followed by an A and O argument that each consist of a single noun and a sentence in which a verb is followed by an S argument (or an O argument, in the case that the A has been dropped for pragmatic reasons.) Under this analysis, then, it should be impossible to distinguish the following sentences (which I have constructed for the purpose of this exercise) from each other:

\[(9.19)\]

\[
\begin{array}{ll}
\text{a} & \text{ɟ} \\
\text{ese=sek} & \text{[sak(i)]_a} \\
\text{eat=PST} & \text{dog man} \\
\end{array}
\]

‘The man’s dog ate.’

\[(9.20)\]

\[
\begin{array}{ll}
\text{a} & \text{ɟ} \\
\text{ese=sek} & \text{[sak(i)]_a} \\
\text{eat=PST} & \text{dog man} \\
\end{array}
\]

‘The dog ate/bit the man.’

No formal means in Nyang’i has been identified by which the above two sentences would be expected to be distinguished. However, in most cases of potential ambiguity, the matter can
be resolved with reference to the differing slopes of possessives and A/O arguments along an animacy hierarchy. In Nyang’i, the possessum (likely to be less animate) precedes the possessor, while the A argument (tending to be more animate) precedes the O argument. Therefore, the semantically most likely situation is that if the first in a sequence of two noun phrases is more animate than the second, it is an A and the second is an O, and if the first in a sequence of two noun phrases is less animate than the second, it is a possessum and the second is a possessor. This semantically constrained account suggests that either it is impossible to express events or situations in Nyang’i that do not conform to animacy expectations, or that some special coding means that by chance was not found in the database would be used for that purpose. While it is often taken as axiomatic that all natural languages are capable of expressing all ideas, the contracted state of Nyang’i warrants consideration of its exclusion from this set.

A related problem is that for a particular verb, noun phrases in any number of semantic roles may occur in the position immediately following the verb, precluding the possibility that the exact semantic role of the NP immediately following the verb is lexically specified by the verb, and is at least consistent for each particular verb, if not also across verbs. This is illustrated in the following examples.

chase-SEQbee-thispeople-LVhome
‘These bees chased the people home.’

(9.22) suzgetitem[getiki]S/O[nare]LOC
drivegoat-PL1that.one
‘The goats were grazing there…’

(9.23) suzgetitem[logeti]S/O ni d“akaane
graze-SEQcown Goat-LVRELthere
‘The cows… goats that were there were grazing.’
(9.24) \( soz^\varepsilon e \)  
\[ \text{drive/graze/send-SEQ} \quad \text{home} \quad \text{outside} \]
‘They graze outside of the home.’

In (9.21) the noun phrase immediately following the verb is an agent. In (9.22) and (9.23), the noun phrase immediately following the verb is a patient/experiencer. (9.22) most cleanly illustrates a non-agent of a driving event in the position immediately following the verb; however, the verb takes a different form from the other verbs in the set (the sequential /-(e)se/ is missing from its end.) (9.23) includes a disfluency: the speaker began by saying “cows”, and then self-corrected to say “goats”. However, it also includes a non-agent of a driving event, and has the form of the verb with the sequential /-(e)se/. Finally, in (9.24), the noun phrase immediately following the verb is a location.

One possible analysis for semantic role assignment for a verb such as /su\(z^\varepsilon e(se)\)/ is that the verb is ambitransitive (S=O). Under this analysis, the intransitive verb would mean ‘graze’ and the transitive verb would mean ‘drive/chase/send.’ The position after the verb in (9.21), (9.22), and (9.23) would, in each case, be the first argument of the verb (A for transitive, S for intransitive), perhaps offering further evidence for a grammatical category Subject. Finally, the Location noun phrase in (9.24) would be identified lexically: /ago/ ‘home’ belongs to a special class of nouns that is lexically locative, i.e. is interpreted as locative without special prepositional marking in environments in which other nouns require such marking.

**9.4 Existence and identity**

Nyang’i has two (sets of) particles that encode functions related to existence and identity: /eke/ and /mu ~ mui ~ mut ~ mutu/.

**9.4.1 /eke/ Locative Existential**
Nyang’i has a verb /eeke/ which encodes existence and location. It takes either one argument (its Subject) or two arguments (a Subject and a Location). When occurring with one argument, /eeke/ encodes the existence of its argument. This is illustrated in (9.25).

(9.25)  
deu nana ɬo duakare ka [sore nane] ni eeke  
deu nana ɬo duakare ka sore nane ni eeke  
see SUB cow there if children this REL LOC.EXIS  
‘To see the cattle there and these children that are there (exist).’

In (9.25), /eeke/ is in a subordinate clause. There is a subject, but no location. The relative pronoun /ni/ occupies the position of the CS, and is coreferential with the preceding NP /sore nane/ these children. When occurring with two arguments, /eeke/ encodes a location relation. The functions Subject and Location are encoded by linear order. The Subject of /eeke/ occurs in the position before the verb. The Location occurs in the position following the verb. This is illustrated in (9.26) and (9.27):

(9.26)  
[samwel]s eeke [denɛ]loc ni kʷaçõesak bi  
samwel eeke denɛ ni kʷaçõesak bi  
Samuel EXIS here REL search you  
‘Samuel, who is looking for you, is here.’

(9.27)  
nane seke [ni]s [eke [nene bor]LOC] [nane [ika lac]]  
nane =seke ni eke nene bor nane ik-a lac  
this =PST REL EXIS these corral this top-LV mountain  
‘This was the one which was at a corral that was on top of the mountain.’

In addition to illustrating S- /eeke/ - LOC order, (9.26) provides a case of a relativized pre-verbal noun phrase. In this example, the relative clause is dislocated from its head. Relativization is dealt with at greater length in Section 10.2. In (9.27), /eeke/ is in a subordinate clause. The relativizer /ni/ is the subject, and is coreferential with /nane/ ‘this’.

If the subject is easily recovered from context, it may be omitted, as in the following passage:

(9.28)  
aco eeke [esu]LOC
come EXIS where
‘Tell me, where is it? (of a gourd filled with honey, previously prominent in the text)’

(9.29) \(\varepsilon\varepsilon k\) \([d\text{wakare ika lac}]_{\text{LOC}}\)
\(\varepsilon\varepsilon k\) \(d\text{wakare ik-a lac}\)
EXIS there top-RN mountain
‘It is there at the top of the mountain.’

In (9.28) and (9.29), the highly topical subject is not phonologically realized.

Further instances of \(\varepsilon\varepsilon k\) are provided below:

(9.30) du\(\varepsilon\varepsilon\) \([kus nene=\varepsilon ke]_{S,0} ni \varepsilon\varepsilon k\) \([\text{itona na sore}]_{\text{LOC}}\)
du-\(\varepsilon\varepsilon\) kus nene=\(\varepsilon\varepsilon k\) ni \(\varepsilon\varepsilon k\) iton-a na sore
take-SEQ skin these=PST REL EXIS body-LV *** children
‘Well, they removed the clothes that were on the bodies of the children.’

(9.31) aso na \([\text{baba niau joo}]_{S} \varepsilon\varepsilon k\) \([\text{man}]_{\text{LOC}}\)
aso na baba niau-joo \(\varepsilon\varepsilon k\) man
DM *** father 1.SG.POSS-FOC EXIS garden
‘Well, my father is in the garden.’

(9.32) \([\text{ae}]_{S} \text{nabo} \text{ daa } \varepsilon\varepsilon k\) \([\text{nenee}]_{\text{LOC}}\)
1.SG again DM EXIS these
‘Also me, I am there.’

In (9.30), \(\varepsilon\varepsilon k\) is in a relative clause. Its subject is filled by the relativizer, which is
coreferential with /kus nene/ ‘these clothes’, which is also the object of the matrix clause verb.

Its location argument follows it. In (9.31), the CS takes the /-io/ focus marker. In the context of
other verbs (e.g. with active verbs), preverbal NPs systematically take /-io/. However, the subject
systematically precedes /\(\varepsilon\varepsilon k\)/ without /-io/ in other contexts, as seen in the following sentence,
(9.32). The function of the focus marker in (9.31) is unclear. In all of the above examples, the
location immediately follows the verb. In (9.32), two modifiers (/nabo/ and /daa/) intervene
between the subject and the verb.

9.4.2 /\(\text{mu/}, /\text{mut/}, and /\text{mutu/}: Identity and Aspect
A series of particles (/mu ~ mut ~ mutu/, as well as the more marginal /mui ~ mua/) seem phonologically and semantically related, but on distributional grounds do not seem to have identical functions. /mutu/, in particular, appears in a different set of contexts than the others.

I have not been able to identify precisely what function or functions they encode. I was not able to successfully elicit grammaticality judgments on constructed sentences containing /mu/, /mut/, or /mutu/, nor to elicit a more controlled range of contexts with /mu/ forms than appear in the texts. When pursuing word-level glosses of texts, I usually was given the Karimojong form /nai/ ‘then’ as the translation of all instances of each of these three forms.

The main functional domain in which the particles operate seems to be in encoding identity relationships between entities. These relationships include coreference and set-member. The functional scope of these particles is broad: in addition to identity relationships, it is attested as encoding relations such as Source and perhaps even a dative. The following section first aggregates what is known about the distribution of /mu ~ mut ~ mutu/, second summarizes some possible functional explanations of /mu ~ mut ~ mutu/, and finally summarizes what remains unknown.

First, there is evidence that there is overlap in the functional domains of /mutu/ and /mu/, but that they are not phonologically conditioned allomorphs of a single morpheme. In (9.33), presented below, these two terms are used interchangeably. The repetition of the final phrase was not treated by the speaker as a correction, but rather as emphasis:


(9.33) dumu nane mutu nɛrum nane mu nɛrum
dum-u nane mutu nɛrum nane mu nɛrum
give-IT this be beehive this be beehive

‘Well, they picked, picked, picked, picked this (from) the beehive, this (from) the beehive.’
/mutu/ occurs in the first iteration of the phrase, and /mu/ occurs in the second iteration of the phrase. This suggests that /mutu/ and /mu/ encode similar functions. Additionally, because /mutu/ and /mu/ occur in identical phonological contexts, (9.33) demonstrates that they cannot be phonologically conditioned allomorphs of a single morpheme.

Second, there is evidence that /mu/ and /mut/ encode functions that /mutu/ does not encode. Both /mu/ and /mut/, but not /mutu/, are used to encode restrictions of the referent of a preceding noun. This is illustrated in (9.34)-(9.36):

(9.34) nane rubu nai mu lọŋat ni canasekẹ nane lacaneo
nane rubu nai mu lọŋat ni cana=sekẹ nane lac-anẹ-o
this people then be enemy REL disturb=PST this mountain-this-FOC
'These are the people, then, who were enemies that disturbed this mountain.'

(9.35) guria na lősiriane mut ɲaurieŋane
guria na lősiri-ane mut ɲaurieŋ-ane
stir *** stuff-this be porridge-this
'Stir that thing, which is porridge'

(9.36) nane mut ɲariaŋ diecesekio mɛɛcisa ae nɛɛnɛ
nane mut ɲariaŋ dieçɛ=seki-o mɛɛɛcisa ae nɛɛnɛ
this be government bring=PST-FOC NEG-know 1.SG these
'The ones having been brought by the government, I don't know these ones.'

In (9.34), the NP preceding /mu/ (/rubu/ ‘people’) is general. The NP following /mu/ provides specific information about the identity of the previously mentioned people: they are enemies that disturbed this mountain. In (9.35), /mut/ is used as part of a strategy for buying time to facilitate lexical recall. The speaker can’t come up with the word for ‘porridge’, and so uses a generic placeholder noun /lősiriane/ ‘this stuff’, and then introduces the more precise term with /mut/. Finally, in (9.36), /mut/ occurs between /nane/, a pronoun that has not been linked to a specific referent yet, and the clause that provides the listener with a means by which to identify the pronoun’s referent. In contrast to /mu/ and /mut/ above, /mutu/ is not attested in the sample as restricting the referent of a noun by introducing another noun after it.
In one of the few times that a Karimojong translation included a form aligned with an
instance of /mu/, /mu/ surfaces between two NPs. This token provides some insight into the
function of /mu/. The Karimojong translation is provided in Italics below the English gloss, and
includes a word-level (but not morpheme-level) gloss:

(9.37) nane rubu nai mu lŋat ni canasekɛ nane lacaneo
       nane rubu nai mu lŋat ni cana=seki nane lac-ane-o
this people then be enemy REL disturb-PST this mountain-this-FOC
‘These people, then, were enemies that disturbed this mountain.’
ŋituŋa ŋulu erai iŋomo icanete nimirulua
people these be enemies disturb on.this.mountain

In (9.37), /mu/ is both preceded and followed by a NP. The preceding NP, /rubu/
‘people,’ is separated from /mu/ by a modifier /nai/. The following NP, /lŋat/ ‘enemy’,
immediately follows /mu/. The two NPs are in an equational relationship, and the second NP
restricts the meaning of the first. The position of /mu/ between two nouns in an equational
relationship, plus the fact that the translation of the sentence used the Karimojong copula <erai>
in a similar position, indicates that /mu/ may have (at least) an equational function. /mu(t)/ also
has a copular function in Soo (Heine and Carlin 2010:32).

Third, there is evidence that /mut/ and /mutu/ encode functions that /mu/ does not encode.
Both /mut/ and /mutu/, but not /mu/, are attested immediately following a verb. The function
encoded by /mut/ and/or /mutu/ in this context is not yet clear. Post-verbal /mut/ and /mutu/ are
illustrated in (9.38) and (9.39):

(9.38) topɛdese mot ŋacel amane
       topɛd-ɛse mot ŋacel amane
penetrate-SEQ be thorn.fence like.this
‘It broke through the thorn fence like this.’

(9.39) acosek todukɛse mutu lɔsir
       aco=sek toduk-ɛse mutu lɔsir
come=PST build-SEQ be stuff
‘Come, let’s build some stuff. Alt: They came and built stuff.’
In both sentences, the verb is transitive, takes the sequential marker, and has no overt subject. The /mut ~ mutu/ form occurs between the verb and the object. /mu/ does not ever occur in this context. /mut ~ mutu/ is not, however, a marker of the object (or, at least, an obligatory marker of the object), as other transitive verbs taking the sequential marker and no overt subject do not require a /mut ~ mutu/ form to mark the object. It may function in the domain of tense or aspect. Perfective readings are possible for both of the above sentences, and /mo(t)/ is used in Soo as both a past tense marker and a past tense copula (Heine and Carlin 2010:32), suggesting a possible link between the form and TAM functions. No difference in temporal setting has been found between /seke/ and /mut(u)/. Further support for the idea that /mut(u)/ has functions in the domain of TAM in this context comes from the fact that this syntactic slot (immediately following active verbs, preceding core arguments) is otherwise filled by such temporal markers as /seke/ PAST and /co/ IMMEDIATE. I was not able to test the hypothesis that /mut(u)/ encodes perfective aspect.

Fourth, all three forms, plus the more marginal /mui/, may occur sentence-initially.

(9.40) mu  nare  niginu naane
    mu  nare  niginu naane
    be  that.one  ours  this
    ‘Those ones are ours.’

(9.41) mut  ṇapua  ede  mutu  nene  nene  de
    mut  ṇapua  ede  mutu  nene  nene  de
    be  dust  alone  be  these  these  good
    ‘There is only this dust, this is good.’

(9.42) mutu  amane  ṇunjiseke  dene
    mutu  amane  ṇunjis=seke  dene
    be  like.this  cut=PST  here
    ‘It is like this, it was cut here.’

(9.43) mui  [nani  neneo],  die=seke  nene  [simat]o
    mui  nani  nene-o  die=seke  nene  simat
    be  Nyang’i  these-FOC  bring=PST  these  wood
‘These Nyang’i people, they would bring wood.’

(9.44) mui ɟi mɔkidene-ene ɛserue aago
mui ɟi mɔkidene-ene ɛser-ue aago
be sun have.location-this return-IT home

‘When the sun reaches here, they return home.’

The function of the sentence-initial /mu/-forms is not clear.

Finally, a few tokens of /mu/-forms in other contexts may be found in the database. There are often only one or two tokens per context, so only one type from the set of /mu ~ mut ~ mutu/ is represented for each of the less common contexts. A selection of these contexts is presented below:

1) /mu/, between a locative existential and a following noun that is not a location:

(9.45) metan nabo ni ɛɛke mu ḋañi
metan nabo ni ɛɛke mu ḋañi
NEG.EXIS again REL EXIS be Nyang’i
‘There is no problem with the Nyang’i.’

2) /mut/, sentence-finally:

(9.46) auge lokitel amaan ka mot
go the.bush like.this with/and be
‘They go to the bush like this.’

3) /mutu/, between the core arguments and post-core adjuncts (e.g. locative arguments)

(9.47) ruceske nane mutu ṃaba-an ake d=aakare
ruce=seke nane mutu ṃaba-ane ake d=aakare
enter=PST this be board-this there
‘This one has entered this trap there…’

4) /mutu/, between a preposition and its NP complement:

(9.48) iked nane paka mutu domiki tudiki da
iked nane paka mutu dom-iki tud-iki da
3.SG this reach be pot-PL.1 five-PL.1 DM
‘…which ones are exactly five pots.’
In all environments, /mu/, /mut/, and /mutu/ are immediately followed either by an NP or by a temporal adverb. Table 9.1 summarizes the above observations about the environments in which /mu/, /mut/, and /mutu/ may be found, and speculates as to the function encoded in each environment, where such speculations are forthcoming:

Table 9.1: /mu/, /mut/, and /mutu/ observations

<table>
<thead>
<tr>
<th></th>
<th>mu</th>
<th>mut</th>
<th>mutu</th>
<th>Function?</th>
</tr>
</thead>
<tbody>
<tr>
<td>NP __ NP</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
<td>Restrict referent of NP₁</td>
</tr>
<tr>
<td>Post-Verbal</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
<td>Perfective?</td>
</tr>
<tr>
<td>Sentence-Initial</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Post Loc. Exis.</td>
<td>Yes</td>
<td></td>
<td></td>
<td>Dative?</td>
</tr>
<tr>
<td>Sentence-Final</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-Core</td>
<td></td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prep __ NP</td>
<td></td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

/mu ~ mut ~ mutu/ have interrelated functions and distributions among themselves, but also interact with other Nyang’i lexical and grammatical items. One such item is the locative existential /eeke/. In general, /mu/ differs from /eke/ in that for /mu/ there is no locative meaning associated with the particle. One exception to the observation that /mu/ does not encode location is found in (9.49):

(9.49) metan  da  kʷe nane mu ɲerukude  
      NEG.EXIS  DM  water  this be main road 
      ‘This water is not there in the road at all.’

In (9.49), the NP preceding /mu/ is /kʷe nane/ this water, an entity which is asserted as not existing. The NP following /mu/ is the location of the non-existent water.

In one instance, /mu/ co-occurs with /eke/:

(9.50) metan  nabo ni  eeke  mu ɲaŋi  
      metan  nabo ni  eeke  mu ɲaŋi  
      NEG.EXIS  again  REL  EXIS  be Nyang’i
      ‘There is no problem with the Nyang’i.’

This instance of /mu/ may lend itself to a dative reading.
For a number of other sentences, a dative reading is tempting:

(9.51) metan nabo ni eeke mu nați
metan nabo ni eeke mu nați
NEG.EXIS again REL LOC.EXIS be Nyang’i
‘There is no problem with the Nyang’i.’
mameete ŋaice ɲĳnaɲa

(9.52) ajo nané lacane mu nați
ajo nané lac-anε mu nați
spear this mountain-this be Nyang’i
‘They raided this place, this mountain of the Nyang’i.’

(9.53) dumae nai rub ka mua sore ka mua ɲarap
dum-ae nai rub ka mua sore ka mua ɲarap
give-VEN then people and be children with be woman
‘They’d give it to the people, and to the children, and to the women.’

In (9.51), the locative existential /eeke/ is used; however, its Location is not a location per se, but rather a recipient. /mu/ may be marking this special relationship. In (9.52), one possible hypothesis is that the two NPs that /mu/ occurs with are in a possession or association relationship. In this case, /mu/ could again be indicating that Nyang’i is a recipient or possessor of the mountain. An alternative hypothesis is that /mu/ marks /nați/ as a recipient of the action of raiding, in which case /mu/ could be encoding more canonical recipient semantics. Finally, in (9.53), a series of recipients is listed for the verb /dumae/ ‘give’. The first doesn’t take special marking, as it occurs with the verb, which lexically licenses a recipient. The second and third recipients do take special marking, as they are in separate syntactic units from the verb (indicated by a prosodic break).

/mu/ forms are optionally used in a discourse strategy commonly employed by the speaker to hold the floor. The strategy involves repeating a placeholder while trying to access specific lexical items. The most common placeholders are /nane/ ‘this’, /lɔsir/ ‘thing’, and /ati/ ‘so-and-so’. Often, the two forms (the generic placeholder and the specific referent) are
connected by means of /mut/. (9.54) illustrates the use of /lɔsir/ ‘thing’ as a placeholder while the speaker searches of the the noun /ɲaurieŋ/ ‘porridge’.

(9.54) guria na [lɔsiriane mut ɲaurieŋane]
guria na lɔsiri-ane mut ɲaurieŋ-ane
stir SUB stuff-this be porridge-this
‘Stir that thing, which is porridge.’

In (9.55), a similar discourse strategy involving repair takes place. The speaker has said that the cows have been led home and enter therein, and intends to say that the cows stay there, but clarifies that “home” is more specifically the cows’ corral:

(9.55) ruceseke aago [nɑnɛ́ borua ɭo] [gemeci duakaane]
ruce=seke aago nanɛ́ boru-a ɭo gemeci duakaane
enter=PST home this corral-LV cow stay there
‘They enter the home which is the cattle's corral and stay there.’

9.5 Notes on inheritance, innovation, borrowing, and loss

Kuliak languages differ in how redundantly they encode core relations. Soo and Ik both generally avoid ambiguity between S, A, and O by marking the person and number of the subject (S/A) on the verb. Additionally, Ik includes nominative and accusative case marking. Nyang’i lacks either coding means, leaving only linear order to encode core grammatical relations.

Table 9.2: Retentions and losses in the core clause

<table>
<thead>
<tr>
<th>Retentions</th>
<th>Losses</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAO/VS constituent order</td>
<td>Agreement marking for subject</td>
</tr>
<tr>
<td>Special property term set</td>
<td>Case marking</td>
</tr>
</tbody>
</table>
Chapter 10: The complex sentence

10.1 Introduction

This chapter briefly summarizes a set of strategies for subordinating one clause to another in Nyang’i. These strategies include relative constructions, in which the subordinated clause shares an NP argument with the main clause, and clausal adjuncts, which provide background information about the time or purpose of the event in the main clause. Section 10.2 provides a survey of the basic structure of the relative constructions. Section 10.3 provides a survey of the basic structure of temporal adjunct clauses. Section 10.4 provides a survey of the basic structure of purposive adjunct clauses. Section 10.5 summarizes the functions that have been retained and lost in the domain of subordination strategies in Nyang’i.

10.2 Relative Constructions

A group of constructions used to modify or predicate on nouns has the internal structure of clauses. I treat these constructions here as relative constructions. The clauses in these constructions may be either verbal or non-verbal. Verbal clauses can take intransitive active, transitive active, copulative/equational, or locative existential verbs:

**intransitive**
(10:1) nane mut ɲerukude [aọgẹsẹ d^are meris]_{REL}
this be main.road go there Meris (toponym)
‘That is the main road that goes there to Meris.’

**transitive**
(10:2) samwẹl ẹẹkẹ ɗẹnẹ [ni k^aṭasak bi]_{REL}
Samuel EXIS here REL search 2.SG
‘Samuel, who is looking for you, is here.’

**copulative/equational**
(10:3) akwe dumae kare ọsir [nane mu jamal]_{REL}
Well give truly stuff this be arrow
‘Well, truly, they give the thing, which is an arrow.’

**locative existential**
(10:4) bas duesɛ kus nenɛ seke [ni ɛeke itona na sore]\text{REL}
DM take skin these PST REL EXIS body of children
‘Well, they removed the clothes that were on the bodies of the children.’

One type of relative construction takes a particle indicating the relationship between the subordinate clause and the matrix clause. This particle is referred to here as a relativizer. Two relativizers are attested in the Nyang’i data: /ni/ and the polyfunctional /nane/. When /nane/ is used as a relativizer, it usually takes high tone on the second syllable. This is in contrast with /nane/ as a demonstrative or pronoun, which usually takes high tone on the first syllable. In some instances, /ni/ and /nane/ co-occur. Relativizers do not inflect for number. In a second type of relative construction, no such particle is found. A relative clause taking a /ni/ relativizer, a relative clause taking a /nane/ relativizer, and a relative clause taking no relativizer are illustrated below:

(10:5) samwel ɛeke dene [ni k’ağasak bi]\text{REL}
Samuel EXIS here REL search 2.SG
‘Samuel, who is looking for you, is here.’

(10:6) ena naï nêtata nabo [nané nodoki nojo]\text{REL} toliasa ena-jo
I say! DM man again REL one ??? crawl I say!-FOC
‘I say! Again, the man who was the very one crawled, I say!’

(10:7) nane mut ñerukude [aogëse d’are meris]\text{REL}
this be main.road go there Meris (toponym)
‘That is the main road that goes there to Meris.’

In general, relative clauses with active verbs or locative existentials take /ni/ and relative clauses with copulative/equational verbs or property predicators take /nane/. However, this is only a general trend:

(10:8) dud [nane ni mabuŋ]\text{REL}
gourd REL REL big
‘A gourd that is big’
In (10:8), the property predicator /mabup/ is in a relative clause taking both /nane/ and /ni/ as relativizers. No factors conditioning the presence versus the absence of a relativizer have been discovered.

The relativizer immediately follows the relativized noun in almost all instances. In one instance, a locative existential predication intervenes between the relativized noun and the relative construction, and in another instance the adverb /nabo/ ‘again’ intervenes. Relative clauses immediately follow the relativizer, and take verb-initial order (with the relativized NP realized as a gap). This is the same constituent order found in main clauses in Nyang’i, with the exception that no unambiguous data exists illustrating the relative order of A and O in relative clauses. Unlike in main clauses, neither A nor S arguments are ever attested preceding the verb within a relative clause. The following examples illustrate relative clause constituent ordering:

V[AO]
(10:9) samwɛlɛŋɛ dɛŋɛ [ni kwaŋasak 0i bi]REL
Samuel EXIS here REL search 2.SG
‘Samuel, who is looking for you, is here.’

In (10:9), the relative clause takes V[AO] order. A, being the relativized NP, surfaces outside of the relative clause, and is realized in the relative clause as a gap.

VA[O]
(10:10) nanei [ni poka-sakt nene 0i]REL id
this REL shake-PST these milk
‘The thing that they were shaking is milk’

In (10:10), the relative clause takes VA[O] order. O, being the relativized NP, surfaces outside of the relative clause, and is realized in the relative clause as a gap. Non-core nouns in verbal sentences are never relativized on in the available data. Because of this, there is never an instance in which both A and O are realized together in a relative clause. Therefore, the relative ordering of A and O in relative clauses is never clearly illustrated.
V[S]
(10:11) dumae nenee sore-anei₅ ni gi me=seke ₀i₅ dene REL
give these children-this REL sit=PST here
‘They give it to these children that are sitting here.’

In (10:11), the relative clause takes V[S] order. S, being the relativized NP, surfaces outside of the relative clause, and is realized in the relative clause as a gap.

Relative clauses taking an active verb can maximally include the verb, the core arguments (A, S, and/or O), a locative adjunct, and the temporal adverb /sek/ ‘in the past’.

Relative clauses can take a different time reference from the matrix clause in the event that the relative clause is [+past] and the matrix clause is [-past]. A relative clause with an O argument, a locative adjunct (source), and /sek/ ‘in the past’ is illustrated below:

(10:12) de nene [ni diece=sek lotaba nene moroto]REL
good these REL bring=PST tobacco these Moroto (town)
‘It’s good that this tobacco was brought from Moroto.’

The NP modified by the relative construction fills a role both in the matrix clause and in the relative construction. The role filled in the relative construction may be A, S, or O, as illustrated in the following examples:

A
(10:13) samwel eel kɛ dene [ni kʷašak bi]REL
Samuel EXIS here REL search 2.SG
‘Samuel, who is looking for you, is here.’

In (10:13), the A is relativized on. The relativizer is /ni/. The role of the NP in the matrix clause is CS of /eeke/. (10:13) is the single instance in which the relativizer does not immediately follow the noun that the relative clause modifies. In this instance, the noun modified by the relative clause is the first argument of the locative existential /eeke/. The first argument of /eeke/ precedes the verb; the verb and the location predicated by the verb both intervene between the modified noun and the relative clause.
In this sentence, taking the relativizer /ni/, the S is relativized on. /nane/ ‘this one’, which is both the S of the relative clause and the S of the matrix clause, precedes the relative clause. It is not resumed in the relative clause in any form.

In this sentence, again taking the relativizer /ni/, the O (of a verb that only exceedingly rarely takes an A) is relativized on. /dopu neene/ ‘this rhino’, which is both the O of the relative clause and the S of the matrix clause, precedes the relative clause. It is not resumed in the relative clause in any form. The /-io/ suffix (taking the allomorph [-o]) that identifies the entire (relativized) NP as a topicalized first argument occurs at the end of the relative clause, as that is the last position in the NP.

### 10.3 Preverbal Temporal Adjuncts

A set of temporal adjuncts precede the verb. This syntactic position distinguishes them from temporal adverbs such as /ɔkɔlɔ/, /sek/, and /co/.

The last word of temporal adjuncts frequently takes the /-io/ focus marker. As described in Section 4.4.3, /-io/ attaches to actors that have been fronted to the pre-verbal position. The use of /-io/ in the context of temporal adjuncts is similar in that temporal adjuncts are pre-verbal constituents. This suggests that /-io/, in addition to marking location, is an optional marker of the boundary between preverbal constituents and the verb. Out of 33 sentences taking preverbal temporal adjuncts, 20 are marked with /-io/.
The final word in a temporal adjunct may come from a number of lexical categories; /-io/ attaches to them indiscriminately:

(10:16)[da nai da napene [namotoka]s acojo] TEMP
da nai da napene namotoka aco-jo
DM DM DM exactly car come-FOC
ruceseke [duakaane] LOC gamaco [tegʷ]ik
rucẹ=seke duakaane gam-ac-o tegʷ-ik
enter=PST there trap-VEN-? leg-PL.1
‘And then, when the car comes, it enters here, and its foot is caught.’

(10:17)[na mua jio] TEMP ji ni ikedi ni de
na mua ji-o ji ni ikedi ni de
when be sun-FOC sun REL 3.SG REL good
‘When the sun is out, it’s the sun that’s good!’

kaa tacaisa metan- eo esere ae dene
if get NEG.EXIS-FOC return 1.SG here
‘When I didn’t find anything, I came back here.’

(10:19)[daa miriko nabojo] TEMP augese nai [dʷakaane] DEST
da miri-ko nabo-jo aug-ese nai dʷakaane
DM two.nights. later again-FOC go-SEQ DM there
‘Then two nights later, [I] went to that place.’

In (10:16), the verb /aco/ ‘come’ takes /-io/. In (10:17), the noun /ji/ ‘sun’ takes /-io/. In (10:18), the negative existential particle /metan/ takes /-io/. In (10:19), the adverb /nabo/ ‘again’ takes /-io/. Each of these words has in common that it is the last word in a temporal clause, and by extension, the last word before the verb in the matrix clause.

These phrases are being treated as subordinate rather than as independent clauses (i.e. their relationship with the following clause is being treated as subordinate rather than coordinate or paratactic). There are three criteria that account for this decision:

1) Over half (17/33) of the temporal clauses identified in the sample include particles that do not occur before incontrovertible independent clauses (/na/, /da/, /ka/, or /(n)apena/). These
particles serve a subordinating function. No functional difference between them has been identified yet.

2) Clauses that provide the temporal context of the following clause take the /-io/ marker at a disproportionately high rate.

3) The above two factors converge on a single semantic locus. Clauses of which the above two factors are true are semantically restricted: they must provide information about the temporal setting of the following clause.

Preverbal temporal adjuncts may consist of verbal clauses or of sequences of adverbs. Verbal preverbal temporal adjunct constructions encode cotemporality or posteriority between the main clause and the event described in the subordinate clause. These clauses differ structurally from verbal main clauses in that the verb occurs clause-finally. This is illustrated in the following examples:

(10:20)[da nai da napenɛ [namotoka]s acojo]TEMPO
  da nai da napenɛ namotoka acojo
  DM DM DM exactly car come-FOC

  ruceseke [duakaane]LOC gamaco [teg*-ik]O
  ruce=seke duakaane gam-ac-o teg*-ik
  enter=PST there trap-VEN-? leg-PL.1

  ‘And then, when the car comes, it enters here, and its foot is caught.’

(10:21)[nai mut co [merisi nene]s acojo]TEMPO
  nai mut co merisi nene acojo
  DM be IMM leopard these come-FOC

  ruceseke nane mutu nabaoane da*akare nare tar nare
  ruce=seke nane mutu nabao-anen da*akare nare tar nare
  enter=PST this be board-this there that to that

  ‘Then it will be that when this leopard comes, it has entered this, this trap there, that one, to that one.’

The only temporal adjunct clauses that include both an active verb and at least one argument have the verb /aco-jo/ ‘come’. Therefore, there is no data indicating how A and O
would be ordered with respect to the verb. Verbs that can take both A and O in other contexts are attested in these clauses; however, they do not take overt arguments in these attestations:

(10:22)[ani nabo kʷašakeo] ee gecon geconekoe koloŋ loŋoroketi awojin
ani nabo kʷašak-eo ee gecon geconeq=sek-eokoloŋ loŋoroketi awojin
when again search-FOC yes die die=PST-FOC in.pst long.ago damn
‘Again, when they searched, yes, dead! It already died a long time ago, dammit!’

In (10:22), the verb in the temporal adjunct clause is /kʷašak/ ‘search’, which is attested in other contexts with both an A and an O argument. However, this particular instance of /kʷašak/ ‘search’ takes no overt arguments. In this sentence, as in other verbal temporal adjunct clauses, the verb is the final element in the temporal clause.

Other preverbal temporal constructions use temporal adverbs to establish the time reference of the main clause. I treat the verbal temporal clauses and the nonverbal temporal clauses together for the following reasons:

1) They are introduced by the same series of particles, primarily /da/ and /ena/ (for which no semantic contrast is evident).

2) They each almost uniformly take /-io/ in the position immediately preceding the verb.

3) They each encode the temporal setting of the main clause.

Temporal adverbs that can be the final word in preverbal temporal constructions include /riŋok/ ‘evening’, /mir/ ‘night’, /coek/ ‘dawn’, and /metenuk/ ‘morning.’ These forms are discussed at greater length in Section 6.2.1.

10.4 Purposive Clause Adjuncts

Purposive clauses always follow the matrix clause.

20 out of 21 purpose clauses in the corpus modify verbs with semantics in the domain of motion, direction, or location. In many of these cases, the extent to which the motion sense of the apparent matrix verb is operative is unclear: it may be the case that these forms represent an
early step toward grammaticalization of motion verbs as a means of enconding an intenive TAM function. The seven roots presented in Table 10.1 are represented as the matrix verbs:

Table 10.1: Verb roots serving as matrix verbs taking purposive clauses

<table>
<thead>
<tr>
<th>Root</th>
<th>Gloss</th>
<th>Tokens</th>
</tr>
</thead>
<tbody>
<tr>
<td>auge</td>
<td>‘go’</td>
<td>14</td>
</tr>
<tr>
<td>die</td>
<td>‘bring’</td>
<td>1</td>
</tr>
<tr>
<td>dum</td>
<td>‘give’</td>
<td>1</td>
</tr>
<tr>
<td>eser</td>
<td>‘return’</td>
<td>1</td>
</tr>
<tr>
<td>geme</td>
<td>‘stay’</td>
<td>1</td>
</tr>
<tr>
<td>suzj</td>
<td>‘send’</td>
<td>2</td>
</tr>
<tr>
<td>wosiek</td>
<td>‘call, summon’</td>
<td>1</td>
</tr>
</tbody>
</table>

A wider array of verbs (11 different roots) occur as the heads of purposive clauses. Ten of these 11 verbs are transitive. They are presented in Table 10.2:

Table 10.2: Verb roots serving as heads of purposive clauses

<table>
<thead>
<tr>
<th>Root</th>
<th>Gloss</th>
<th>Tokens</th>
</tr>
</thead>
<tbody>
<tr>
<td>ɟo</td>
<td>‘spear’</td>
<td>2</td>
</tr>
<tr>
<td>deu</td>
<td>‘see’</td>
<td>1</td>
</tr>
<tr>
<td>die</td>
<td>‘bring’</td>
<td>2</td>
</tr>
<tr>
<td>kʷaɭ</td>
<td>‘seek’</td>
<td>7</td>
</tr>
<tr>
<td>ran</td>
<td>‘sleep’</td>
<td>1</td>
</tr>
<tr>
<td>suzj</td>
<td>‘send’</td>
<td>1</td>
</tr>
<tr>
<td>tac</td>
<td>‘get, find’</td>
<td>2</td>
</tr>
<tr>
<td>tɔbɔt</td>
<td>‘beat’</td>
<td>1</td>
</tr>
<tr>
<td>todoi</td>
<td>‘cook’</td>
<td>1</td>
</tr>
<tr>
<td>wacac</td>
<td>‘scoop’</td>
<td>1</td>
</tr>
<tr>
<td>wosiek</td>
<td>‘call’</td>
<td>2</td>
</tr>
</tbody>
</table>

Purposive clauses differ formally from main clauses in that the first argument (A/S) of the verb in the purposive clause is left as a gap within the purposive clause. In all cases, the entity fulfilling the agent/experiencer semantic role of the verb is coreferential with the first argument (A/S) of the matrix clause. This is true whether the argument is overtly realized in the matrix clause:

(10:23) ee ɛsere ae, [tacasa 0i bi dene]  
ee ɛsere ae [tacasa bi dene]  
yes return 1.SG get 2.SG here  
‘Yes, I came back to get you here.’

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whether the argument is overtly realized, but fronted:

(10:24)aso da [baba niaujoo]A augesε nabo [wosieki 0i rub]PRP
aso da baba niau-joo aug-esε nabo wosieki rub
well DM father ISG.POSS-FOC go-SEQ again call people
‘Well, my father, he went back to call the people again.’

or whether the argument is not overtly realized in the matrix clause:

(10:25)gemeśε [ranʷik] nai nanė agoo miri
geme-sε ran*-ik nai nane agoo miri
stay/sit-SEQ sleep-? DM this home night
‘They [the Nyang’i] stayed at home then to sleep at night.’

This was true with one exception, in which the first argument of the verb in the purposive
clause is coreferential with the second argument (O) of the matrix clause rather than the first
argument:

(10:26)suzēse ɔkɔlɔ kasuk*ete sorei
suzi-ese ɔkɔlɔ kasuk*ete sore
send-SEQ long.ago old.man children

[nana kʷajasa 0i soat nane ɲameto]
nana kʷajasa soat nane ɲameto
SUB search honey this initiation ceremony
‘Long ago, an elder sent out children in order to look for this honey for the initiation
ceremony.’

This sentence differs formally from other sentences with purposive clauses in that it is
initiated with /nana/. In the one other purposive clauses occurring after a transitive sentence in
which both A and O are overtly realized, the first argument of the subordinated verb presents as a
gap and is coreferential with the first argument of the matrix verb, and the second argument of
the subordinated verb presents as a gap and is coreferential with the second argument of the
matrix verb:

(10:27)nanee dumae ɲarapo0i sij neene [todoi 0i 0j]
nanē dum-ae ɲarapo si neene todoi
this give-VEN woman blood these cook
‘These women were given this blood to cook.’

On only two occasions did an adverb intervene between the verb heading the purposive clause and an overt patient. In both cases, the adverb was /nabo/ again:

(10.28) aug-eše nabo...[nåa kʷąjasak nabo eędən]
   aug-eše nabo...nåa kʷąjasak nabo eędən
   go-SEQ again SUB search again another
   ‘They go again… in order to search another time.’

(10.29) sozę-ese nabo [kʷąjasa nabo nene uu]
   sozę-ese nabo kʷąjasa nabo nene uu
   drive-SEQ again search again these grass
   ‘Again, they are led to look for grass again.’

Destination noun phrases (usually associated with the matrix verb, which is frequently a motion verb) precede the purposive clause:

   hauge nabo ae-o tan nare ez/u-jo wac-aci kʷi-o
   go again 1 SG-FOC to that river-FOC scoop-VEN water-FOC
   ‘I went there to the river again to scoop water.’

In (10.30), the destination (marked with the preposition /tan/ to) immediately precedes the purposive clause. An additional adverb-accommodating position occurs between the core arguments and the destination argument:

(10.30) aug-eše [ae]s nai [boru]UM [lo]ER DEST
   aug-eše ae nai boru lo
   go-SEQ 1 SG DM corral cow
   ‘Then I go to the cattle's corral.’

In (10.3), the adverb /nai/ follows the actor, but precedes the destination argument, which in this case is not marked by /tan/. Location noun phrases (usually associated with the subordinated verb) follow the purposive clause:

   auge sore-ane this tacatsaa nane perat duakare
   go children-this get this girl there
‘This child goes to get a girl there.’

In (10.31), the locative adverb /duakare/ ‘there’ occurs sentence–finally. Presently, no criteria for assessing the dependencies of /duakare/ are available.

Destination noun phrases that are dependent exclusively on the subordinated verb may occur within the purposive clause. In such cases, they follow the A and O of the purposive clause:

(10.32)akʷe augɛ okɔɔɔ [ae]$_{SA}$ [suzɛɛɛɛ [lo nane]o [munu eːz'u]$_{DEST}$]$_{PURP}$

Well go long ago 1.SG drive-SEQ cow this first river
‘Well, long ago, I went to drive the cattle first to the river.’

The function of /munu/ in this sentence is unknown at the present.

10.5 Cleft Construction

Nyang’i has a complex structure that functions to foreground an NP. Because I was not able to elicit grammaticality judgments or metalinguistic evaluations, I was not able to test if negating the ostensibly clefted NP results in a sentence that “mean[s] that there is something or someone satisfying the sentence other than the clefted (or focused) NP” (Noonan 1992:233, adapting a definition from Keenan and Hull 1973). Nevertheless, because the construction is a calque of a Western Nilotic cleft construction, I have chosen to call this structure a cleft construction.

The cleft construction in Nyang’i employs two particles together: /iked/, which is a relic of the Nyang’i 3.pl pronoun listed in Heine (1974/5:285), and /ni/, the relativizer. The particles precede the verb, in this order. The fronted NP, in turn, precedes the particles. Put another way, the NP is in initial (head) position in the clause, and its predicate is rendered a dependent by means of a special subordination strategy encoded by means of two particles together: /iked ni/.

The cleft construction is illustrated in (10.33):
(10.33) [war ede]top iked ni gaan
  rain only 3.SG REL bad

  ‘It’s only rain that’s bad.’

The clefted NP occurs initially. Even though it is a sentence-initial NP, it does not take the /-io/ focus marker. It is followed by the (fossil of the) third person singular pronoun /iked/, which is then followed by a relative clause. This is a precise calque of a Western Nilotic cleft construction (exemplified with Lango data from Noonan 1992:234):

(10.34) òkèlò ɛ̀nn àmè òpìò òjwàtò
  O. it REL+PART O. 3S-hit-PERF

  ‘it’s Okelo that Opio hit’

10.6 Notes on inheritance, innovation, borrowing, and loss

Nyang’i has retained relativization as a formal means. It has lost, however, much of the information that has historically been encoded on relativizers in Kuliak. In Soo, relativizers encode at least the number (singular and plural) of the noun relativized on. For each number value, there are two forms. Carlin (1993:132) does not describe what context, if any, conditions the choice between the two forms; therefore, it is possible that an additional function may be encoded on relativizers in Soo. Ik, like Soo, encodes the number (singular or plural) of the noun relativized on, but also encodes four tenses (non-past, and three degrees of past) on the relativizer (Schrock 2014:500). All of these contrasts have been lost in Nyang’i.

In Ik, constituent order in relative clauses (AVO/SV) differs from constituent order in main clauses (VAO/VS). This is more likely a retention of an old word order than an innovation in Ik. Nyang’i does not have this constituent order difference, using VAO/VS in both environments. Carlin (1993:132-3) is not clear as to word order in relative clauses in Soo. Sentences such as the following (from Carlin 1993:133) suggest that Soo might use VAO/VS in both main clauses and relative clauses:
(10.35) e nan imɔs yɔg yon ac nao-o
what REL.SG do people when come raider-PL
‘What do people do when the raiders come?’

(10.35) shows that Soo subjects follow the verb in relative clauses. If Soo also lacks a special order for relative clauses, then it is likely that the AVO/SV relative clause order was lost before the breakup of Proto-Western Kuliak, and doesn’t represent loss due to language death. Alternative hypotheses in this instance could be that the loss of the special relative clause word order is the result of parallel drift in the two languages that would have occurred regardless of whether or not the languages underwent language death, or that Soo lost the special order in its own process of language death. Some evidence that special subordinate clause word order survived into Western Kuliak is found in Nyang’i temporal clauses, in which the subject precedes the verb without special focus marking.

Carlin (1993) does not explicitly detail what adverbial clauses occur in Soo, so it is difficult to compare the Nyang’i adverbial clauses with the Soo adverbial clauses. At the very least, the functions of the adverbial clauses found in Nyang’i (temporal and purposive) are found in Nyang’i. Soo has adjunctival temporal clauses, which occur preverbally (Carlin 1993:144-6), and uses the narrative plus future tense marking to encode clauses of purpose:

(10.36) mda-nec no-ko-nyen no-ko-aj-ac in jo-g-i
close.eyes-HORT NAR-FUT-see NAR-FUT-take-VEN REL.PL unripe-STAT-PL
‘…let’s close our eyes to see if we take the unripe [fruit]…’ (Carlin 1993:197)

The formal means employed to encode adverbial clauses are different between Nyang’i and Soo, but Nyang’i encodes many of the same functions by means of adverbial clauses.

<table>
<thead>
<tr>
<th>Retentions</th>
<th>Losses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relativization</td>
<td>Coding of number and tense on relativizers</td>
</tr>
<tr>
<td>Formal means for temporal adverbial clauses</td>
<td>Special relative clause constituent order?</td>
</tr>
<tr>
<td>Formal means for purposive adverbial clauses</td>
<td>A range of functions of the sequential in adverbial clauses</td>
</tr>
</tbody>
</table>

Table 10.3: Retentions and losses in the domain of subordination strategies
Chapter 11: Contraction in Nyang’i

11.1 Introduction

The foregoing chapters have provided a synchronic sketch of the grammatical system of the last idiolect of the Nyang’i language, plus some observations on what parts of the language have been lost. An additional objective of this dissertation is to evaluate the causes of grammatical loss in Nyang’i. Particularly, this dissertation aims to distinguish the following types of grammatical loss: 1) Externally-motivated grammatical loss, in which Nyang’i, under pressure from contact languages, loses categories that were contrastive in Proto-Kuliak, but which are not contrastive in the contact languages (e.g. Surmic languages such as Didima, Eastern Nilotic languages such as Karimojong, or Western Nilotic languages such as Acholi). This type of grammatical loss results in increased similarity between Nyang’i and its contact language, and cross-linguistically is common even when the simplifying language is not undergoing language shift. 2) Internally-motivated grammatical loss, in which Nyang’i does not converge toward any other language in the process of category loss.

It is entirely possible that the loss of any particular category from Nyang’i that is absent from, for example, Karimojong, could be internally-motivated in spite of the coincidental absence of the category from Karimojong, so in many cases there is no clear way to distinguish between internally-motivated loss that coincidentally results in convergence to a contact language and externally-motivated loss. One possible criterion that can be used to make this distinction is whether the entire function was lost, or only the inherited formal means for encoding the function. If the inherited formal means for encoding the given function was lost, but a new (perhaps less inflectionally intensive) coding means was adopted, and if the new
coding means bears close resemblance to the contact language, then the change was almost certainly externally-motivated. If the inherited formal means was lost, and if no compensatory change has emerged to facilitate encoding the function that had previously been encoded by the lost formal means, then the change was almost certainly internally-motivated.

This chapter takes a closer look at the types of grammatical loss that Nyang’i has undergone. It establishes whether the loss results in convergence or divergence from contact languages.

11.2 Phonology

Category loss in phonology in Nyang’i has occurred at both the segmental and the suprasegmental level. I will address segmental category loss first and suprasegmental category loss second.

A table of Nyang’i’s consonant phonemes, repeated from Section 2.2, is presented below:

<table>
<thead>
<tr>
<th>Category</th>
<th>Bilabial</th>
<th>Alveolar</th>
<th>Palatal</th>
<th>Velar</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop</td>
<td>p b</td>
<td>t d</td>
<td>c j</td>
<td>k kʷ</td>
<td>g gʷ</td>
</tr>
<tr>
<td>Nasal</td>
<td>m</td>
<td>n</td>
<td>j</td>
<td>j</td>
<td></td>
</tr>
<tr>
<td>Fricative</td>
<td>s, zʲ</td>
<td></td>
<td></td>
<td></td>
<td>(h)</td>
</tr>
<tr>
<td>Trill</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lateral</td>
<td></td>
<td>l</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lat Fricative</td>
<td></td>
<td>ɬ</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approximant</td>
<td>(w)</td>
<td></td>
<td>(j)</td>
<td></td>
<td>(h)</td>
</tr>
</tbody>
</table>

Nyang’i’s consonants are organized into three sets. First, there are stops, which contrast for four places and for voicing/nasality (with values voiced, voiceless, and nasal). This set includes labialized articulations for [-nasal] velars. Second, there are non-stop [+consonantal] sounds. These all take alveolar place of articulation, and include a fricative, a palatalized fricative, a trill, a lateral, and a lateral approximant. Finally, there are three [-consonantal] sounds: a bilabial glide, a palatal glide, and a glottal fricative.
This can be compared with the consonant inventory from Soo. In this table, categories that differ from the Nyang’i inventory are shaded. Phonemes that Soo has but that Nyang’i lacks are bolded. Phonemes that Nyang’i has but that Soo lacks are put in ((doubled parentheses)). The inventory is adapted from Carlin (1993):

<table>
<thead>
<tr>
<th></th>
<th>Bilabial</th>
<th>Alveolar</th>
<th>Palatal</th>
<th>Velar</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop</td>
<td>p b</td>
<td>t d</td>
<td>c ɟ</td>
<td>k kʷ g gʷ</td>
<td>?</td>
</tr>
<tr>
<td>Glottalized</td>
<td>b d'</td>
<td>f</td>
<td>ɟ'</td>
<td>g'</td>
<td></td>
</tr>
<tr>
<td>Nasal</td>
<td>m</td>
<td>n</td>
<td>n</td>
<td>η</td>
<td></td>
</tr>
<tr>
<td>Fricative</td>
<td>s, ((z))</td>
<td></td>
<td></td>
<td></td>
<td>((h))</td>
</tr>
<tr>
<td>Trill</td>
<td>r</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>Lateral</td>
<td>l</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Lat Fricative</td>
<td>((l))</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Approximant</td>
<td>w</td>
<td></td>
<td>j</td>
<td></td>
<td>((h))</td>
</tr>
</tbody>
</table>

Soo has five phonemes that Nyang’i lacks, but lacks three phonemes that Nyang’i has. One in each of these sets is a marginal glottal (a stop in Soo, a fricative in Nyang’i), primarily epenthesized to satisfy syllable structure constraints. The remaining two sounds that Nyang’i has (/z/ and /l/) but that Soo lacks are infrequent and phonetically unstable, and /z/ appears to be a recent innovation in Nyang’i, as argued in Section 2.6.1. The remaining four sounds that Soo has but that Nyang’i lacks are all from a single set: they are glottalized stops (specifically, voiced implosives), and can be reconstructed for Proto-Kuliak (e.g. Heine 1976, Ehret 1981a).

The exercise of reconstructing a pre-contraction Nyang’i is complicated by the fact that Soo has also undergone considerable contraction in the process of language death. Carlin qualifies the description of Soo with the following comments: “What is to be found in the So community…are a few semi-speakers who are per definitionem imperfect speakers who speak a pathologically distorted form of the language” (Carlin 1993:6) and “this present work is speculative in the sense that it is the description of an already decayed and progressively decaying language” (Carlin 1993:6-7). I have spent more time addressing the Soo consonant
system than the Ik consonant system because there is no way to determine what sounds, if any, were retained in Western Kuliak, but subsequently lost in both Soo and Nyang’i; however, the lateral fricative provides evidence that at least some phonemes retained in Proto-West Kuliak have been lost in Soo. /fiyɔ̃/, Ik for ‘cow’, includes the recent replacement of the lateral fricative as its initial consonant. This is in correspondence with Nyang’i’s /ziɔ/, which was recorded by Heine (1974/5:295) as /ɬɔ/. The retention of the lateral fricative (notwithstanding subsequent innovations in each half of the Kuliak family) in Nyang’i suggests that Soo also had a lateral fricative after the East Kuliak (Ik)/West Kuliak (Soo and Nyang’i) split. Soo has subsequently merged /ɬ/ with /l/ (as in /lɔ/, Heine and Carlin 2010:29). Nyang’i is only a few lexical items away from having lost all reflexes of /ɬ/ also: had it done so, there would have been no evidence that /ɬ/ had been retained at all in West Kuliak.

In the case of the lateral fricative, enough fragmentary evidence remains in the last records of Nyang’i to reconstruct its retention in West Kuliak and subsequent total loss in Soo and near-total loss in Nyang’i. Because there is evidence that the available description of Soo has undergone contraction, and because there is evidence that Soo has undergone contraction in its phonological system independently from Nyang’i, the Ik consonant system is worthy of consideration, as it is possible that contrasts that exist in Ik were retained through the split of Nyang’i and Soo from each other, and then subsequently lost in the course of language death in both languages. The primary features found in the Ik consonantal system but missing from the Soo and Nyang’i consonantal system include a voicing contrast for glottalized stops, a voicing contrast for lateral fricatives (which has been subject to innovations observable synchronically on the chronolectal level: Schrock 2014:38), a voicing contrast for the alveolar fricative, and a labiodental fricative.
Each of the changes elaborated above (the loss of glottalized stops and the near-loss of lateral fricative are losses in Nyang’i relative to Soo, and the loss of a voicing contrast for glottalized stops, the loss of a voicing contrast for lateral fricatives, the loss of a voicing contrast for the alveolar fricative, and the loss of the labiodental fricative) can be explained as externally-motivated change resulting in convergence to Eastern Nilotic. Consider the Turkana consonantal system, adapted here from Dimmendaal (1983:7). Again, cells differing from Nyang’i are shaded. Sounds present in Nyang’i but missing from Turkana are in ((doubled parentheses)):

<table>
<thead>
<tr>
<th></th>
<th>Bilabial</th>
<th>Alveolar</th>
<th>Palatal</th>
<th>Velar</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop</td>
<td>p b</td>
<td>t d</td>
<td>c j</td>
<td>k ((kʷ))</td>
<td>g ((gʷ))</td>
</tr>
<tr>
<td>Nasal</td>
<td>m</td>
<td>n</td>
<td>n j</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fricative</td>
<td>s ((z/))</td>
<td></td>
<td></td>
<td></td>
<td>((h))</td>
</tr>
<tr>
<td>Trill</td>
<td>r</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lateral</td>
<td>l</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lateral Fric</td>
<td>(l)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approximant</td>
<td></td>
<td>j</td>
<td>w</td>
<td></td>
<td>((h))</td>
</tr>
</tbody>
</table>

Turkana has no consonant phonemes that are absent from Nyang’i. Nyang’i, on the other hand, has five consonant phonemes that are absent from Turkana. One of these five phonemes is the glottal fricative, which occurs frequently word-initially in the Napore dialect of Karimojong to avoid words that begin without an onset. Two more of the five Nyang’i phonemes missing from Turkana are /z/ and /l/, which are, as mentioned above, very infrequent in Nyang’i. The remaining two Nyang’i phonemes missing from Turkana are /kʷ/ and /gʷ/, which are missing from Turkana only as unit phonemes: /kw/ and /gw/ are common sequences. All of the losses in the Nyang’i consonant system, then, have resulted in convergence to the Eastern Nilotic systems found in the area. The outcome is that the Nyang’i consonant system is nearly identical to the Turkana consonant system, substantively differing only in terms of two very infrequent sounds, sounds which seem as if they have nearly been lost from Nyang’i.
Turkana lacks phonemic implosives. Both Nyang’i and Turkana (Dimmendaal 1983:9) voiced stops (particularly in onsets) tend to be produced with implosive airstream mechanism; implosive airstream is in free variation with pulmonic airstream for both Turkana and Nyang’i voiced stops. Therefore there is a precedent in Turkana for implosive and pulmonic voiced stops to both belong to a single category, providing a model for reanalysis of the status of implosive airstream in Nyang’i.

The changes to Nyang’i’s consonant inventory, then, are very likely to have been at least partially caused by external pressure from Eastern Nilotic. The one caveat to this observation is that the phonemes that were lost or seem nearest to being lost from Nyang’i are also the most typologically rare sounds: implosives and lateral fricatives (the loss of which was never ultimately completed). These sounds are both the sounds that are the least likely to be found in a neighboring language (as they are the least likely to be found in any language) and the most likely to be among the first lost.

The vowel inventory offers a different perspective. The Nyang’i vowel chart from Section 2.3 is reproduced here:

<table>
<thead>
<tr>
<th></th>
<th>Front</th>
<th>Central</th>
<th>Back</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>+ATR</td>
<td>-ATR</td>
<td>+ATR</td>
</tr>
<tr>
<td>High</td>
<td>i</td>
<td>(i)</td>
<td>u</td>
</tr>
<tr>
<td>Mid</td>
<td>e</td>
<td>(ɛ)</td>
<td>o</td>
</tr>
<tr>
<td>Low</td>
<td></td>
<td>a</td>
<td></td>
</tr>
</tbody>
</table>

Nyang’i tentatively has a nine vowel system: mid and high vowels contrast for frontness vs. backness and possibly for [+/-ATR]. Additionally, there is a single low vowel. ATR carries a very low functional load: only one possible minimal pair has been identified, and harmony processes, if they occur at all, never coerce alternation along any other vowel parameter (unlike, for example, Karimojong, in which [a] and [o] can alternate with each other as part of the ATR
harmony system. As explained in Section 2.3.1, the high [-ATR] vowels are even more marginal than the mid [-ATR] vowels. The reduced functional load of the ATR contrast means that Nyang’i could possibly be analyzed as having a seven (as Heine 1974/5 posits) or even five vowel system.

The vowel inventories of Karimojong, Turkana, Soo, and Ik are all identical to the nine-vowel option for Nyang’i. Structural loss in the vowel inventory under the current analysis, then, is at a lower level than phoneme loss. The loss in Nyang’i is in terms of the functional load of the ATR contrast. The Proto-Kuliak vowel harmony system (described as thriving in Ik by Schrock (2014:79-99) and as deteriorating but persistent in Soo by Carlin (1993:20-25)) has been lost, and the parameter [ATR] does not function in the domain of contrast. Similarly to the state of the lateral fricative, it appears that [ATR] as a phonemic category and as a grammatical category has faced a trajectory of loss, but did not ultimately disappear completely.

Unlike the situation with the consonant inventory, the vowel inventory in Proto-Kuliak was not larger than the vowel inventory in Eastern Nilotic. As a consequence of this, any losses in Nyang’i result in divergence from rather than convergence to its contact languages. The decline of the ATR system in Nyang’i is a case of internally-motivated contraction.

The last remaining point of phonological loss in Nyang’i is the tonal system. Dimmendaal (1983:36-37) observes that tonal lexical minimal pairs are rare (but presumably existent) in Turkana. At the grammatical level, though, tone is often the sole means of contrast (e.g. between different noun cases or verb tenses). Nyang’i’s loss of all contrastive functions of tone (discussed in Section 2.6.3), then, cannot easily be explained as change toward or due to pressure from Eastern Nilotic grammatical patterns. The decline of tone in Nyang’i is a case of internally-motivated contraction.
11.3 Noun Morphology

The most obvious loss in noun morphology in Nyang’i is in the complete (or nearly complete) disappearance of the case marking system. Where Ik marks eight cases by means of affixation, and where Soo marks three cases by means of affixation, Nyang’i appears to mark no case by means of affixation (although see notes on the “linking vowel” in Section 8.2 for a candidate for an optional case marker that takes inconsistent forms).

While the Kuliak languages use suffixes to mark case, Eastern Nilotic languages use tone (Dimmendaal 1983:259-269). Because tone is mostly inoperative as a formal coding means in Nyang’i, using tone to mark case would require the addition of a new category of complexity. This has not been done. Turkana does mark one case (the locative) with prefixes (Dimmendaal 1983:215-216). Nyang’i’s loss of affixes as coding means in the functional domain of case marking could be attributed, at least in part, to external pressure, then, but the loss of the functional domain as a whole is a clear case of structural contraction in language death.

In the domain of noun number marking, Nyang’i has retained comparable ornamental complexity in its number marking system to that found in Ik and Soo, as it has retained a wide array of semantically redundant number marking suffixes. However, Nyang’i has lost systemic complexity in its number marking system by losing the singulative/plurative lexical contrast. This loss does not result in convergence with its contact languages. Turkana, for instance, retains “the archaic Eastern Sudanic system whereby nouns are marked as singulatives, pluratives, or whereby both the singular and the plural form is marked (i.e. replacement)” (Dimmendaal 1983:223). Because the Proto-Kuliak singulative/plurative system, in which noun roots could be lexically singular or plural (or bound, requiring number affixation for both singular and plural),
is analogous to the number-marking system of the contact languages, its loss in Nyang’i represents internally-motivated change, likely as a structural consequence of language death.

The last domain in which Nyang’i noun morphology has simplified is in demonstrative reference, in which a system that marked three degrees of distance in Proto-Kuliak has contracted to mark only two degrees of distance. This contraction has resulted in convergence toward the Eastern Nilotic system--or at least to the [-referential] component of the Eastern Nilotic system. Dimmendaal (1983:306-308) describes Turkana demonstratives as encoding a contrast between [-referential] and [+referential], with [+referential] forms “used when the modified noun is given as a topic about which information is being communicated.” [-referential] demonstratives take different forms for [+near] and [-near], as in Nyang’i. Turkana demonstratives also inflect for two numbers (singular and plural) and, unlike Nyang’i, three genders (two in the plural). Nyang’i has shed contrasts not found in Eastern Nilotic, but has not acquired any of the contrasts found in Eastern Nilotic but absent from Kuliak. Nyang’i has not yet fully lost any contrasts in the domain of demonstrative reference that are found in Eastern Nilotic, although the inconsistency with which the singular and plural contrast is observed in demonstratives in Nyang’i suggests that this dimension may have been in the process of being lost.

11.4 Verb Morphology

As presented in Section 5.5, Nyang’i has almost entirely lost the proto-Kuliak system of aspectual/modal derivation, retaining only an infrequent inchoative, some as yet unidentified aspectual functions encoded by means of the directional extensions, and possibly a sequential. Nyang’i has lost the entire system of proto-Kuliak valency-changing derivation and the entire inflectional system for marking person and number of the subject on the verb.
Turkana, like Ik and Soo, has a robust system of verbal derivation. Turkana has a derivational strategy for the inchoative, and the Turkana subsecutive (Dimmendaal 1983:174-178) corresponds in function almost exactly with the Ik sequential, as summarized by Schrock (2014:366). Thus Turkana has structures analogous to the aspectual/modal extensions retained in Nyang’i. Turkana and Ik share in common the deployment of the ventive directional extension to encode prospective meaning (per Dimmendaal 1983:111) or inchoative aspect (per Schrock 2014:372) and the itive/andative directional extension to encode retrospective meaning (per Dimmendaal 1983:112) or completive aspect (per Schrock 2014:376). Nyang’i shares in common with Ik and Turkana the deployment of the ventive for inchoative aspect (in conjunction with an additional extension, /-ik/). It remains to be seen if any retrospective or completive sense can be associated with the itive in Nyang’i.

Some aspectual/modal extensions, such as habituals, intensive/pluractionals, and optatives, are represented both in at least one Kuliak language and Turkana, but not in Nyang’i. The absence of these forms from Nyang’i is most easily attributed to internally-motivated change in the process of language death.

The entire Proto-Kuliak system of valency-changing derivation has been lost. This includes causative constructions, impersonal constructions, reciprocal constructions, intransitive/passive constructions, and a middle. Each of these functions is morphologically encoded in at least one Kuliak language and Turkana. Many of these forms share a common etymology across the language families (e.g. the causative: /-sit/ in Soo, /-it-/ in Ik, /-itV-/ in Turkana). The intense similarity between the Kuliak and Eastern Nilotic valency-changing derivation systems, both in terms of form and of function, provides no external pressure at all for
loss in this functional domain. Loss in the system of valency-changing derivation, then, can only be accounted for as internally-motivated change in the process of language death.

A similar situation obtains for the loss of person and number marking of the subject on the verb. Both Ik and Soo mark seven categories of person and number of the subject on the verb. Turkana (notwithstanding having an inclusive/exclusive distinction in free pronouns) marks six such categories. No such person and number marking is found in the last idiolect of Nyang’i. The lack of external pressure is less striking for this functional domain than for the domain of valency-changing derivation, as the Eastern Nilotic forms are neither as similar in form nor in strategy to the Kuliak forms as in valency-changing derivation. Where the Kuliak languages use a system consisting entirely of suffixes, the Eastern Nilotic languages use a combined system, in which prefixes encode primarily the person of the subject and suffixes encode primarily the number of the subject. Therefore, there may be more external pressure in this domain than in the domain of valency-changing derivation, but the loss still seems most likely to be a result of internally-motivated change.

11.5 Pronouns

Although Nyang’i has lost pronominal inflection on the verb for the person and number of the subject, it retains a set of free personal pronouns and a set of personal possessive pronouns. The free personal pronouns are restricted to the singular, and the etymological third person singular personal pronoun occurs almost exclusively in a cleft construction that is a calque from Western Nilotic. Western Nilotic influence is more evident in the pronominal system than in other grammatical systems in Nyang’i. In addition to the pattern borrowing in the cleft construction calque, the Acooli (Western Nilotic) third person plural pronoun /gūn/ (Crazzolara 1955:64) possibly shares a source with the Nyang’i third person plural pronoun /gin/,
reported by Heine (1974/5:285), but lost in its free form in the last idiolect of Nyang’i. Ik, Soo, Turkana, and Lango all have a full set of singular and plural free pronouns that inflect for three persons and two numbers. All of the above languages except for Lango also have an inclusive/exclusive distinction for first person plural. Losing the plural free pronouns does not result in any convergence toward contact languages for Nyang’i. This loss is a case of internally-motivated language change. 

Allowing the caveat that the possessive personal pronoun system is subject to the instabilities described in Section 7.2.2, the possessive personal pronouns have survived intact except for the loss of the third person plural form and the loss of the contrast between inclusive and exclusive first person plural. The loss of the inclusive/exclusive distinction does not appear to have an external motivation: Ik, Soo, and Turkana all have an inclusive/exclusive distinction for first person plural. Western Nilotic languages lack this distinction, and may be a source of pressure. The loss of the third person plural possessive form is more noteworthy, as the inclusive/exclusive distinction is, if not particularly rare, at least typologically marked, but the third person plural possessive is far less marked. It, too, can only be accounted for as an instance of internally-motivated loss in the course of language death.

11.6 Noun Phrase

In two identifiable respects, the Nyang’i noun phrase has clearly contracted: Nyang’i lacks the existential possessive construction, and no longer requires numerals to occur in a relative clause construction. Two more potential areas of contraction are also apparent: Ik’s special possessive pronouns for kinship terms are not found in Nyang’i, and Ik’s verbal inflection on numerals is not found in Nyang’i.
The loss of the existential possessive construction is a result of internally-motivated language change. Existential possessive constructions are found in Ik, Soo, and Turkana.

The losses involving numerals appear to be linked. In Ik, numerals inflect for verbal categories, and in Soo, numerals must occur in relative clauses. Both of these properties align numerals with verbs. Nyang’i, on the other hand, seems to align numerals more loosely with nouns (while still allowing numerals to be the only word in a relative clause). This alignment takes the form of numerals having distinctly nominal properties such as being able to form an NP constituent with a preceding noun (without being relativized) and taking nominal plural marking. Turkana, also aligns numerals more closely with nouns than with verbs. Turkana numerals take nominal gender inflection (belonging to the feminine set, Dimmendaal 1983:302-303) and follow their nouns—dependents tend to follow their heads in Turkana. This may be an externally-motivated change.

The special possessive forms for kinship terms in Ik are not attested in Soo or Turkana; however, Lango has distinct sets of possessive (or associative) forms for inalienable possession and alienable possession, possibly indicating a similar underlying structure.

11.7 Subordination Strategies

Nyang’i relativizers do not inflect for any categories associated with the forms that they are coreferential with. This is in contrast with Soo and Ik. Soo and Ik both encode the number of the noun that they are coreferential with on their relativizers, and Ik additionally encodes the tense of the relative clause on its relativizers. Turkana does not encode tense, but does encode gender and number of the coreferential noun on relativizers. The loss of tense coding on relativizers in Nyang’i could conceivably be externally-motivated, but the loss of number coding on relativizers is clearly an internally motivated consequence of language death.
The loss of a special constituent order for relative clauses, clearly attested in Ik, but not in Soo, with possible attestation in Nyang’i temporal adjunct clauses, results in convergence toward Turkana, in which relative clauses take the same constituent order as main clauses (Dimmendaal 1983:309). This could be an externally-motivated change.

11.8 Summary

The types of language change proposed for features lost by Nyang’i are presented below in Table 11.1. Features that have not been completely lost, but that have apparently undergone considerable reduction, are listed in (parentheses).

<table>
<thead>
<tr>
<th>Domain</th>
<th>Possibly External</th>
<th>Likely Internal: Drift</th>
<th>Likely Internal: Death</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phonology</td>
<td>Loss of implosives</td>
<td>(Loss of ATR contrasts)</td>
<td>Loss of ATR Harmony</td>
</tr>
<tr>
<td>Phonology</td>
<td>(Loss of lateral fricatives)</td>
<td></td>
<td>Loss of tone contrasts</td>
</tr>
<tr>
<td>Noun Morphology</td>
<td>Loss of case suffixes</td>
<td></td>
<td>Loss of morphologically marked case</td>
</tr>
<tr>
<td>Noun Morphology</td>
<td>Loss of medial demonstrative value</td>
<td></td>
<td>Loss of singulative and plurative root contrast</td>
</tr>
<tr>
<td>Verb Morphology</td>
<td></td>
<td></td>
<td>Loss of aspectual and modal derivation terms</td>
</tr>
<tr>
<td>Verb Morphology</td>
<td></td>
<td></td>
<td>Loss of valency-changing derivation</td>
</tr>
<tr>
<td>Verb Morphology</td>
<td></td>
<td></td>
<td>Loss of person and number marking for subjects</td>
</tr>
<tr>
<td>Pronouns</td>
<td>Loss of contrast: inclusive/exclusive</td>
<td></td>
<td>Loss of plural free personal pronouns</td>
</tr>
<tr>
<td>Pronouns</td>
<td></td>
<td></td>
<td>Loss of 3.pl free personal pronoun</td>
</tr>
<tr>
<td>Noun Phrase</td>
<td>Loss of verbal properties on numerals</td>
<td></td>
<td>Loss of existential possessive construction</td>
</tr>
<tr>
<td>Subordination</td>
<td>Loss of special relative clause word order</td>
<td></td>
<td>Loss of number coding on relativizers</td>
</tr>
</tbody>
</table>
In phonology, external factors were less likely to be involved in suprasegmental than in segmental simplifications. In noun morphology, specific functions or coding means were more likely to be influenced by external factors than were systemic principles. External factors seemed to play no role in simplification in verb morphology. In fact, Nyang’i has lost a large number of verbal categories that shared both form and function with analogs in the contact languages.

Competence in the contact language was essentially sufficient to know how to use these forms in Nyang’i. Their loss is particularly surprising. Plural forms were particularly susceptible to change due to language death in Nyang’i. Singular forms were more likely to be preserved.

Simplification of numerals caused by external factors involved aligning the closed class of numerals more closely with nouns than with verbs. Morphological properties associated with verbs were dropped, morphological properties associated with nouns were not added, and syntactic properties associated with nouns were adopted.

11.9 Closing Remarks

Data is precious. In this project, simply collecting a few minutes of reasonably natural speech was an objective that could take weeks to succeed at. Each indication of acceptance or rejection of a particular structure was a rare treasure. The principles ordering Nyang’i’s grammar have only started to be systematically analyzed. It is my hope that this project provides methodological guidance to those who, against the guidance of countless field methods manuals and wise mentors, choose to pursue the description of languages that can only be described through semi-speaker data. It is my hope that the data recorded here bring linguistic scientists one step closer to understanding the social and cognitive factors that condition the differential simplification of dying languages. More than any of that, of course, it is my hope that this project provides a durable record of what we can know of Nyang’i in 2016, that the day comes when
Nyang’i children want to have the opportunity to learn something of the language of their ancestors, and that the work that I have undertaken in this project facilitates such learning.
References


