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*A Descriptive Study of Okiek Grammar*

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## Dedication

To all of us

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## List of abbreviations

AC	Adverbial clause	MC	Main clause
Adj	Adjective	MED	Medial
Adjx	Adjunct	MFUT	Medial future tense
ADV	Adverb	MPST	Medial past tense
ADVB	Adverbializer	N	Noun
ADVP	Adverb phrase	N.SG	Singular noun
AGE	Agent prefix	N.PL	Plural noun
AM	Association marker	NMLZ	Nominalizer
AM.PL	Plural association marker	NP	Noun phrase
AM.SG	Singular association marker	NUM	Numeral
ANTIC	Anticausative	DO	Direct object
ANTP	Antipassive	OC	Object complement
APERF	Already perfect	OPDP	Okiek people development program
ATR	Advance tongue root	ORD	Ordinal numeral
CARD	Cardinal numeral	P	Preposition
CAUS	Causative	PART	Participle
CauS	Causative subject	PERF	Perfect aspect
CC	Copula complement	PPERF	Progressive perfect
CF	Centrifugal	PFUT	Proximal future tense
CompC	Complement clause	PFV	Perfective aspect
COP	Copular	PK	Proto-Kalenjin
CP	Centripetal	PL	Plural
CS	Copula subject	PLUR	Subject plurality
DAT	Dative	POSS	Possessive
DEM	Demonstrative	PP	Prepositional phrase
DIS	Distal	PPERF	Progressive Perfect
DPST	Distal past tense	PPST	Proximal past tense
GEN	Genitive	PREP	Preposition
HAB	Habitual	PROX	Proximal
HORT	Hortative mood	PS	Primary suffix
HPERF	Habitual perfect	PSN	Proto-Southern Nilotic
ImP	Impersonal	PST	Past tense
IDEO	Ideophone	QUAN	Quantifier
INST	Instrument	R	Recipient /Beneficiary
INT	Interjection	REC	Reciprocal
IO	Indirect object	REF	Reflexive
IPFV	Imperfective aspect		

REF	Reflexive	VCS	Verbless clause subject
S	Subject	VP	Verb phrase
SC	Subject complement	V.1	Verb class 1
SG	Singular	V.2	Verb class 2
SS	Secondary suffix	1	First-person
V	Verb	2	Second person
VCC	Verbless clause complement	3	Third person

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# 1.0 Introduction

This study is motivated by the urgent need to analyze, explain, and document the grammatical structures of *Okiek*, an underdescribed and endangered Southern Nilotic language spoken in Kenya. While there is growing anthropological interest in the identity and lifeways of the Okiek people (Blackburn 1971, Chabeda-Barthe & Haller 2018, Kiprono *et al* 2024,), linguistic research on the grammar of the language remains significantly underrepresented. This study aims to provide a comprehensive, data-driven grammatical description of the *Nessuit variety* of Okiek, focusing on its phonological, morphological, syntactic, and negation systems, within the framework of Basic Linguistic Theory (Dixon 2010, 2015). The findings complement the grammatical sketch and short vocabulary of the *Mariashoni variety* by Micheli (2018). The central research objectives guiding this study are presented in 1.

1. Research objectives
  - a. To account for both the segmental and suprasegmental features of Okiek, along with their interactions in the broader morphological and phonotactic domains.
  - b. To classify word classes and analyze inflectional and derivational processes, with a focus on ATR vowel harmony and morpheme interaction in Okiek.
  - c. To examine clause and phrase structure, constituent order, argument marking, and grammatical relations in Okiek.
  - d. To document the morphological and syntactic strategies for expressing negation, including its interaction with grammatical categories such as tense, person and aspect in Okiek.
  - e. To highlight comparisons of Okiek grammatical features with related Southern Nilotic languages for typological and historical insights.

- f. To contribute to the preservation and accessibility of Okiek grammar through glossed examples, phoneme and morpheme inventories, and a narrative text.

By addressing these objectives, the study contributes both to the linguistic analysis of Okiek grammar and its documentation, as it also forms a fertile base for further explorations of Okiek and comparative investigations into Southern Nilotic grammar.

Section 1.0 is divided into seven subsections that briefly describe the name of the language and the socio-economic organization of its people (1.1), their demography (1.2), the genetic affiliation of Okiek (1.3), the dialects of Okiek (1.4), the previous grammatical descriptions of Okiek (1.5), the methodology adopted in the study (1.6) and the outline of the study (1.7).

## 1.1 The name of the language and its people

The term *Okiek* is a plural noun that means 'caretakers of plants and animals,' it is *Okiot* in the singular. The term also refers to both the Okiek people and their language. The Okiek are a Kenyan community whose way of life is traditionally linked to hunting and gathering (1.1.1), and bee keeping (1.1.2) within the Mau Forest complex and in the forest regions of Mt. Elgon. The criminalization of hunting and the forceful eviction of the forest dwellers from the Mau Forest complex by the government of Kenya has forced the Okiek to abandon hunting as their way of life. Let us note that the Okiek are also known by outsiders as *Dorobo* 'people who cannot afford cattle.'

### 1.1.1 Hunting and gathering

Only males were allowed to go hunting. Hunting roles were assigned to each *turintet* 'a hunter' by age, i.e., the *werik* 'boys/sons' would disturb the wild animal and force it out of its hiding while the *murenik* 'young initiates' and *netotik* 'men' would attack, capture, or kill it. The meat would be divided among the *turik* 'the hunters' who would then take it home for domestic consumption or trade. At home, the excess meat would be sun-dried and the *sirkonik* 'the dried meat' stored for domestic use or traded off. Unlike hunting, gathering is non-gender specific and not outlawed. Items gathered include but are not limited to: *norioit* (SG) or *noriek* (PL) 'wild-edible root(s)' and *taktakɔnik* 'wild berries.'

### 1.1.2 Bee-keeping and honey

Beekeeping and harvesting honey are a common way of life amongst households in the Okiek community. Honey is consumed as food and as a beverage. Beverages include but not limited to *lukumek* 'honey water' i.e., stirred honey and water, and *kɔɔtka:p komek* 'honey win.' *lukumek* 'honey water' is additionally used in spiritual rituals. Blackburn (1971) observed that honey is integrated into the personality, culture, and social systems of the Okiek. According to the Okiek Peoples' Development Program (OPDP) (2021:11), "Without honey, no ceremony would have taken place."

### 1.1.3 Cultural transmission

Intergenerational transfer of cultural knowledge is gender specific and perpetuated by the maxim: *wero ak kwanta, tiepto ak kamɛt* 'the boy and his father, the girl and her mother' i.e., male adults train boys and female adults train girls on the ways of life of a member of the Okiek community. Cultural knowledge inherited by boys includes beekeeping practices and how to use hunting tools such as *kuyan̄ta* 'a bow,' *mɔɔkɪt* 'a quiver,' and *kotiek* 'arrows' of different shapes, spikes, and sizes for hunting and self-defense. Girls are trained on how to assist their parents with domestic chores including but not limited to making ornaments, fetching firewood, water and gathering food and fruits for the family.

#### 1.1.4 Rites of passage

The rite of passage for male children is circumcision. Female circumcision is not permitted. The *torisiot* 'an initiate' (SG), or *torisiek* 'initiates' (PL) are kept in *mencet* 'a seclusion' and taught Okiek culture by the *motiriot* 'teacher of culture.' Family members and friends are not permitted around the seclusion area. The *tolonjot* 'the caretaker of the initiates' is allowed around the seclusion area to aid the healing initiates with their day-to-day activities. Initiates were traditionally encouraged to get married after initiation however, currently initiates are encouraged to continue with education beyond high school before marriage.

#### 1.1.5 Social organization

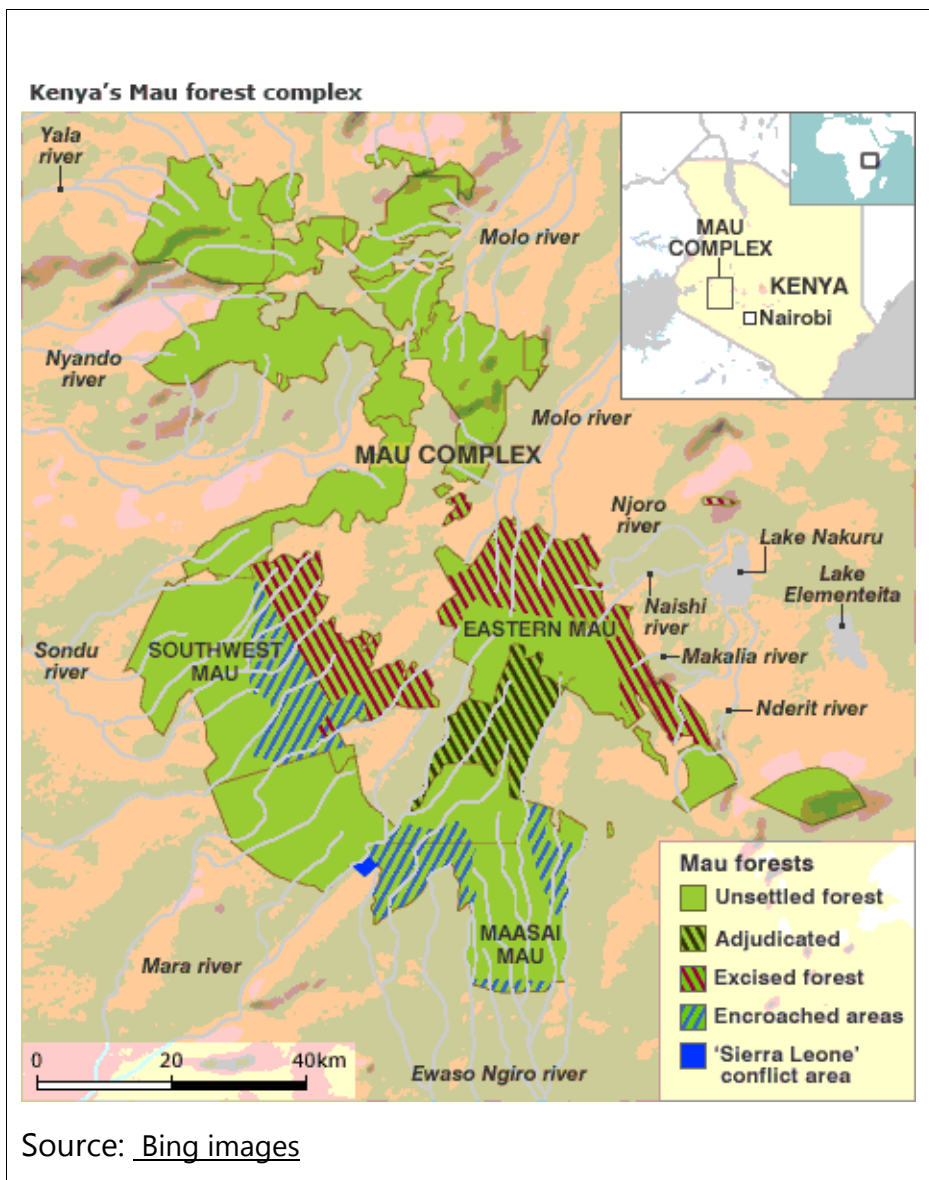
Each clan has a *pojɔn* 'an elder' who represents the clan in the council of elders and mediates between the clan and the council, and between clan members and age sets. The Okiek People Development Program (2021) reports that traditional birth attendants, age-based leaders, elected leaders, and spiritual leaders are some of the leaders that assist the council of elders in governance and decision making on behalf of the community. A clan can be named after its elder e.g., the Mariashoni clan or after a kind of a common bee in the area e.g., the *Ka:p lɛlac* or *Ka:p supulɛk* whose names contain the noun *ka:p* 'home/lineage of' and the adjective *lɛlac* 'white' and the noun *supulɛk* 'hairy' in reference to the physical attributes of a common bee in the area.

### 1.2 Demography

There are approximately 52,596 members of the Okiek community (Republic of Kenya, 2019). The Okiek People Development Program (2021) explains that approximately 45,000 members live within the various zones in the Mau Forest Complex (shown in the map in 2) while the rest are distributed in the forest regions in Mt. Elgon and other parts of the country. For example, the Okiek living in the Mau Forest complex are located in Mariashoni location (Eastern Mau), Nessuit location (Eastern Mau), Sururu (Eastern Mau) Sogoo

(Maasai Mau), Nkaroni (Maasai Mau), Kiptunga (Molo), Tertit (Eastern Mau), Tinet area and Saino (Southwestern Mau).

## 2. The map of the Mau Forest complex

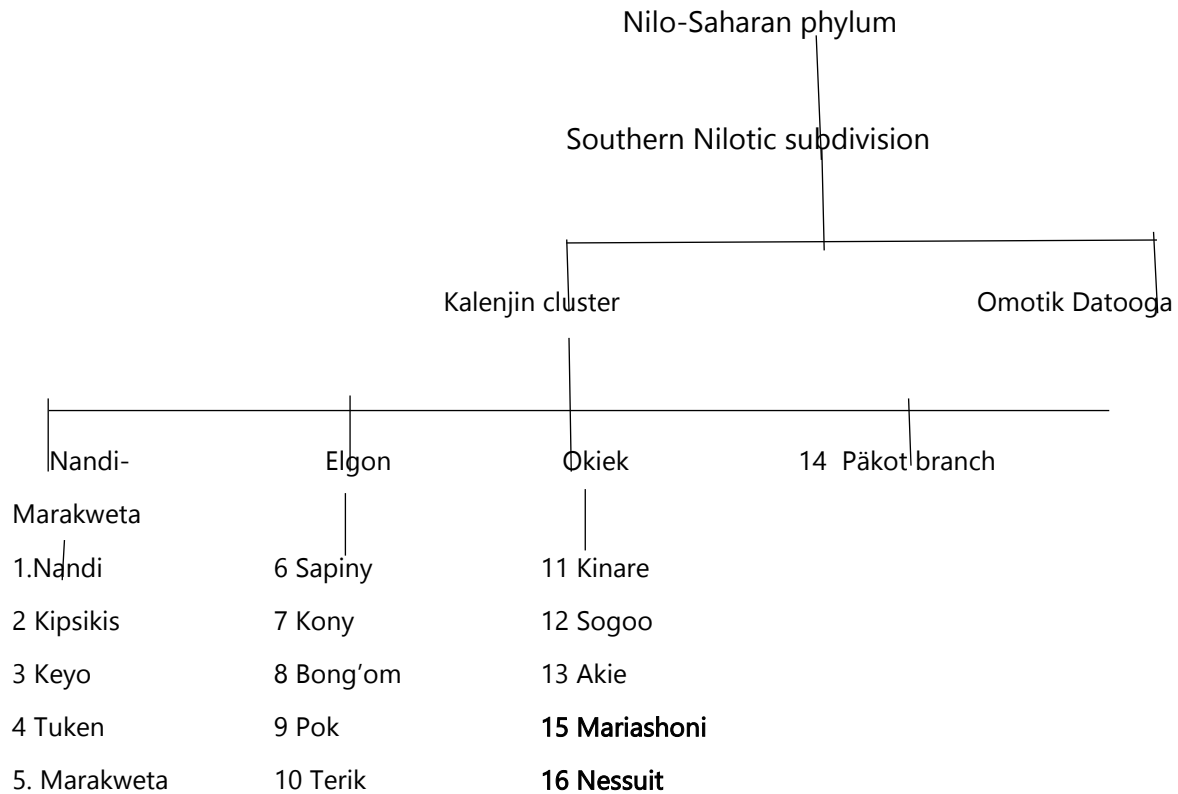


The main economic activities within the Mau forest complex include trading in honey, small-scale farming, and livestock keeping. The speakers from the *Ka:p Shoi* clan are bilingual if not multilingual and can demonstrate partial competence in local languages spoken by the neighboring communities such as Tuken, Maasai, Kikuyu, and Kipsikis, in addition to Kiswahili and English. Kikuyu and Kiswahili are used in market days in Nessuit town while Kipsikis, Kiswahili, and English are reserved for inter-community meetings within the town. Tuken and Maasai are used for domestic interactions between the Okiek, Tuken, and Maasai.

### 1.3 Genetic affiliation

Okiek is one of the four branches of the Kalenjin cluster in the Southern-Nilotic subdivision of the Nilo-Saharan genetic phylum as illustrated in 3. A list of Okiek consonant phonemes and their correspondences across Southern Nilotic in various cognate lexical as provided by Rottland (1982) is shown in section 6.1. The list shows similarities in the structure of phonemes across Southern Nilotic cognates and reaffirms a historical, genetic relationship between Okiek, Proto-Kalenjin, and Proto-Southern Nilotic. The other branch of the Southern Nilotic subdivision is the Omotik-Datooga cluster. With reference to the chart established by Rottland (1982) of the Kalenjin cluster, this study retains the numbering of the fourteen languages within the Kalenjin cluster and includes number 15 based on the grammatical sketch of the Okiek language of Mariashoni by Micheli (2018) and number 16 on the basis of this study. The updated chart is shown in 3.

### 3. The genetic affiliation of Okiek

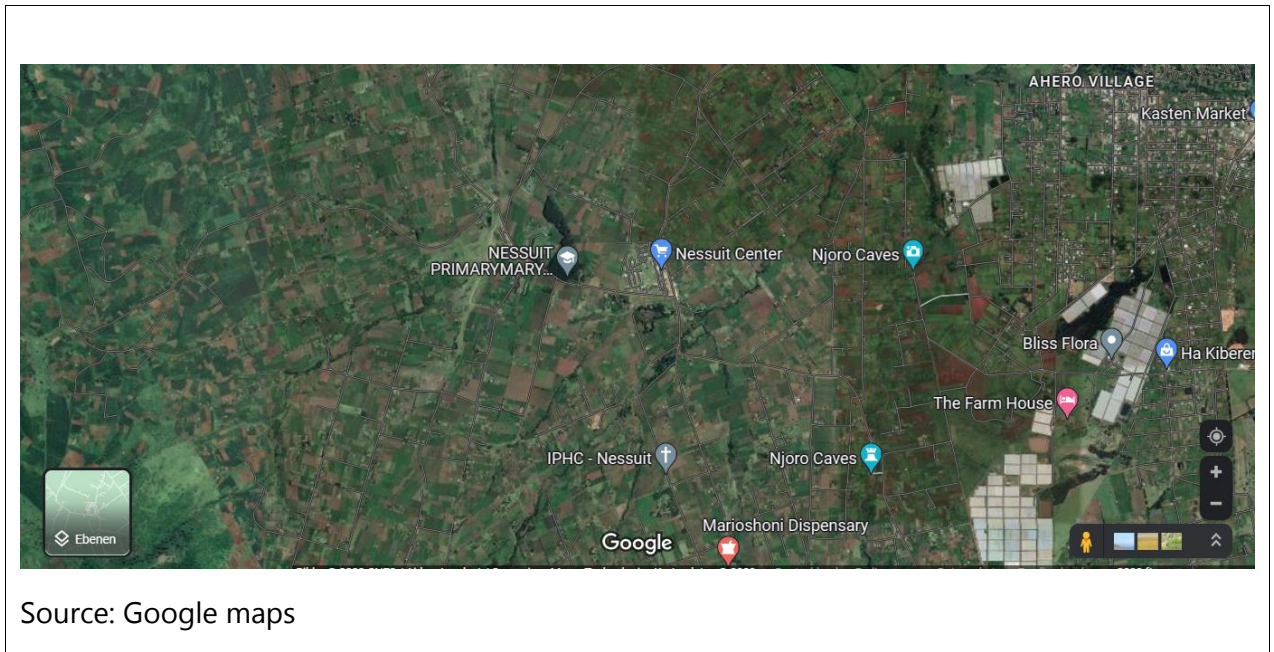


#### 1.4 Dialects

There are three main sub-families of the Okiek branch found in Eastern Mau i.e., Tiepkwererek, Morisionig (Mariashoni), and Gypohorng'woneg (Muchemi and Ehrensperger 2011). The dialect under study is the Okiek of the *Ka:p Shoi* clan in the Tiepkwererek group living in Nessuit ward (Eastern Mau), in Nakuru County. Given the spread of different clans of Okiek within and outside the Mau Forest Complex, the name of the place i.e., Nessuit designates the dialect of study and joins the other four investigated dialects in the Okie branch i.e., Kinare, Sogoo, Akie, and Mariashoni. Kinare and Sogoo dialects are dead (Rottland 1983:25), Akie is spoken in Tanzania (Konig *et al* 2015) while Mariashoni is spoken in Mariashoni (Micheli 2018). The Okiek speakers in Nessuit are geographically close to those in Mariashoni. Nessuit was chosen due to its

vitality, accessibility, and central position as the understudied language of the Tiepkwererek subfamily, allowing for both deep documentation and cross-inter-dialectal comparisons among the Nessuit, Mariashoni, and Akie dialects.

4. A map showing the relative position of Nessuit center to Mariashoni



Examples of dialectal variations between Okiek of Nessuit and Okiek of Mariashoni at the vocabulary level (5a-e) and pronunciation concerning free variation between the allophones of the semivowel /j/ (5f) are as shown in 5.

5. Dialectal variation between Okiek of Nessuit and Mariashoni

Nessuit	Mariashoni	Gloss
a. <i>ɪntɪsɪt</i>	<i>meru</i>	'a banana'
b. <i>o:rtok</i>	<i>nɛkɔ</i>	'sheep' (pl.)
c. <i>ɪmpanasɪt</i>	<i>kɪmɔkɪmɪɪt</i>	'a deer'
d. <i>ɪntɔŋkɪɛɪt</i>	<i>ɪntasatɛt</i>	'an old woman'
e. <i>papa</i>	<i>tata</i>	'father'



f. [eɜ] or [ej]	[ej]	-ej
		3.PROG

## 1.5 Previous grammatical descriptions

The grammar of the dialects within the Okiek branch of the Kalenjin language family remains significantly understudied. Rottland (1983:216) cautions that "*for Okiek, we are not only ignorant of the full extent of groups and the degree of linguistic variation, but it is also not clear—apart from lexical peculiarities—what constitutes an Okiek distinctiveness within Kal[enjin].*" Micheli (2018) provides a grammatical sketch of the Mariashoni variety of Okiek, highlighting its phonology, nominal and verbal morphology, and syntax, and includes an Okiek–English vocabulary list. This sketch reaffirms the classification of the Okiek branch within the broader Kalenjin family and draws attention to several distinctive features that characterize a living Okiek grammar.

The present study builds upon this earlier foundation and presents a comprehensive, data-driven grammatical description of the Nessuit variety of Okiek, grounded in original fieldwork. It significantly expands the descriptive scope by introducing several key advances. First, it presents a detailed consonant inventory alongside cognate comparisons within Southern Nilotic languages, thereby situating Okiek within its genealogical context. Second, it maps the positional distribution of phonemes within word structures, contributing to a better understanding of phonological constraints and segmental architecture. Third, the study deepens the analysis of Advanced Tongue Root (ATR) vowel harmony across grammatical domains such as the nominal number system, offering evidence of both morphological and phonological conditioning. Fourth, it describes the phonotactic constraints governing coda–onset (C.C) clusters, with implications for syllable structure and prosodic patterns.

In the domain of morphology, the study refines the description of noun morphology by detailing the role of primary suffixes in nominal classification, and further illustrates the complex alternations between primary and secondary suffixes in the expression of number. It also provides a comprehensive account of the distribution and morphosyntactic behaviour of negation markers, expanding our understanding of negative constructions and their interactions with clause structure. Finally, the study includes a fully glossed and analysed Okiek narrative, offering insight into natural language use and discourse structure. Each of these contributions constitutes an original addition to the grammatical description of this under-documented language. The findings lay a robust empirical foundation for further explorations into the internal diversity of Okiek, its distinctiveness within the Kalenjin cluster, and for broader comparative investigations across Southern Nilotic.

## 1.6 Methodology

The analysis of the internal organization of Okiek's grammar is informed by the assumptions of Dixon's (2010, 2015) Basic Linguistic Theory.

### 1.6.1 Basic Linguistic Theory

Basic Linguistic Theory assumes that the grammatical structures of a language, "Can be characterized with sufficient precision in English (or some other natural language) without the use of formalism" Dryer (2001). Based on this assumption, the grammar of Okiek is described from its grammatical categories by methodological procedures such as minimal contrasts, analysis of the distribution of linguistic units, and functional analysis of constructions. Each of these methodological procedures are explicitly illustrated in the chapters of phonology, morphology, syntax and negation. For instance, minimal pairs in phoneme inventory were realized through minimal contrasts and the distribution of

morphemes in the structure of the verb helped establish inflectional and derivational morphemes in verb morphology.

### 1.6.2 Data

Primary data included wordlists, phrases, sentences, and narratives collected from native consultants during fieldwork (1.6.3). Secondary data included published material on Okiek grammar from Rottland (1982/3), Micheli (2018), the chapter of Luke published by the Bible translation and Literacy (2021), and narrative texts published by the Ogiek Peoples' Development Program (OPDP) (2020).

### 1.6.3 Fieldwork

Three annual field works were conducted in Nessuit ward for this study between 2019-2022. The field trips entailed interactions with native consultants in their day-to-day activities at Nessuit center, Nessuit Primary, IPHC Nessuit; Observing traditional practices such as beekeeping and the production processes of *rotikap komek* 'honey wine' and *lukumek* 'honey water'; a walk to Mariashoni ward and in the *timto* 'forest' next to Nessuit Primary school as shown in the map in 4; and visits to the homes of parents and relatives of the native consultants to this study. These activities were valuable during data analysis and explanation.

#### 1.6.4 Data analysis

Grammatical structures, regularities, and irregularities were worked out inductively from the linguistic resources of Okiek. Linguistic units were categorized at various structural levels, including phonemes, morphemes, phrases, and clauses. The analysis encompasses the systematic observation and examination of: (i) the inventory of phonemes, phonotactic constraints within the syllable, tonal patterns and their functions, vowel quality (ATR), and vowel length, as detailed in the chapter on phonology (Chapter 2); (ii) grammatical categories across word classes, the distribution and functions of inflectional and derivational affixes, and the range of morphophonological processes, as described in the chapter on morphology (Chapter 3); (iii) the internal structure and syntactic functions of phrases and clauses, as examined in the chapter on syntax (Chapter 4); and (iv) the formal strategies for expressing negation, as outlined in the chapter on negation (Chapter 5).

#### 1.6.4 Transcription conventions

The phonological transcription of consonants and vowels follows the international phonetic Alphabet (IPA) symbols. Vowel length is indicated by the colon (:) as contrasted with unmarked short vowels as illustrated in 6. In addition, the Leipzig conventions for interlinear morpheme by morpheme glossing are adopted in this study.

##### 6. Examples indicating vowels marked for length vs. unmarked short vowels.

	Long vowels	Short vowels
i.	/a:/	/a/
ii.	/e/	/e/

Grammatical tone is indicated by diacritics as shown in 7.

## 7. Vowels marked for tone

Phoneme	High tone	Low tone
/a(:)/	/á(:)/	/à(:)/
/ɛ(:)/	/ɛ́(:)/	/ɛ̀(:)/
/ɪ(:)/	/í(:)/	/ì(:)/
/ɔ(:)/	/ɔ́(:)/	/ɔ̀(:)/
/ʊ(:)/	/ú(:)/	/ù(:)/
/e(:)/	/é(:)/	/è(:)/
/i(:)/	/í(:)/	/ì(:)/
/o(:)/	/ó(:)/	/ò(:)/
/u(:)/	/ú(:)/	/ù(:)/

### 1.7 The outline of the study

The study is organized into five chapters. Chapter 1 introduces the research, presenting the general context of the Okiek language, the sociocultural background of its speakers, the research methodology, and the overall structure of the dissertation. Chapters 2 to 5 constitute the core of the study and provide a comprehensive grammatical description of Okiek within the framework of a classical descriptive grammar.

Chapter 2 focuses on segmental and suprasegmental phonology, including phonotactics. Chapter 3 addresses the morphology of major word classes, covering both derivational and inflectional processes. Chapter 4 provides an analysis of syntax, describing the internal structure of phrases and clauses. Chapter 5 is devoted to the grammatical encoding of negation in Okiek.

The appendix includes a chart of Okiek consonant phonemes and their correspondences across Southern Nilotic cognate sets, a fully glossed Okiek narrative specimen, and an Okiek–English vocabulary list. The reference section is followed by two extended summaries of the dissertation—one in English and the other in German—as well as the required declaration on oath.

## 2.0 Okiek Phonology

### 2.1 Introduction

The aim of this chapter is to provide a descriptive study of the phonological properties of the Nessuit variety of Okiek, a Southern Nilotic language spoken in Kenya. The primary objective is to account for both the segmental and suprasegmental features of the language, along with their interactions in the broader morphological and phonotactic domains. The analysis is grounded in empirical data collected through fieldwork, with emphasis on phonemic contrasts, distributional patterns, and morphophonological processes. The research questions guiding the analysis are as listed in 8.

8. Research questions into the phonological properties of Okiek
  - a. What are the properties of the inventory of consonant phonemes in Okiek?
  - b. How many vowel contrasts does Okiek have?
  - c. How many tone distinctions are there in Okiek?
  - d. How does tone interact with Okiek morphology?
  - e. What is the basic syllable structure of Okiek?
  - f. What are the common syllable patterns in Okiek?
  - g. What are the phonotactic constraints in onset and coda positions in Okiek?
  - h. Is there vowel length contrast in Okiek?
  - i. What processes affect the shape of vowel phonemes?
  - j. What processes affect the shape of consonant phonemes?
  - k. How does Okiek modify loan words?
  - l. What are the dialectal variations between the Nessuit variety and the Mariashoni variety of Okiek at the phonological level?

To answer these questions, the chapter is organized into several sections, i.e., section 2.2 addresses the segmental phonology, offering a detailed analysis of the consonant and vowel inventories, their phonemic and phonetic realizations, and relevant minimal pair tests. Section 2.3 explores suprasegmental features, focusing primarily on tone and vowel length. Section 2.4 analyzes the syllable structure and identifies phonotactic constraints and common syllable patterns. Section 2.5 discusses the morphophonological processes that affect segment shapes and word formation. Section 2.6 provides a comparative and typological discussion, linking the findings in Nessuit Okiek to those of related Southern Nilotic languages and dialectal varieties. Finally, Section 2.6 offers a synthesis of the phonological findings and their implications for understanding the structural dynamics of Okiek.

Throughout the chapter, both phonemic and phonetic representations are presented alongside illustrative examples. These examples are drawn from a wide range of morphological contexts to demonstrate the functional and distributional characteristics of each phonological unit. The goal is to provide a descriptive account that is not only internally coherent but also typologically and theoretically informed.

## 2.2 Segmental phonology

Section 2.2 presents the description of the inventory of consonant (2.1.1) and vowel (2.1.2) phonemes. The phonemes have been established by examining (i) the articulatory properties and allophonic variations of consonant and vowel phonemes, (ii) their distribution in word positions i.e., whether the phonemes occur in word initial, word medial, word final positions or in all the three word positions, and (iii) through minimal pair analyses.

## 2.2.1 Consonants

Section 2.2.1 presents the inventory of consonant phonemes (2.2.1.1) examples of minimal pairs (2.2.1.2) in which the attested consonant phonemes occur.

### 2.2.1.1 The inventory of consonant phonemes

There are fifteen consonant phonemes as shown in the inventory of consonants in 9. The articulatory features of the consonant system include five places of articulation i.e., bilabial, labiodental, alveolar, palatal-alveolar, and velar, and six manners of articulation i.e., nasals (2.2.1.1.1), stops (2.2.1.1.2), fricatives (2.2.1.1.3), trill (2.2.1.1.4), liquid (2.2.1.1.5), and semi-vowels (2.2.1.1.6). The labiodental phoneme in bracket is restricted to loanwords.

#### 9. The inventory of consonant phonemes

m	n	ɲ	ŋ
p	t	c	k
(f)	s	ʃ	
	r, l	j	w

#### 2.2.1.1.1 Nasals

Nasal phonemes include the bilabial nasal /m/, the alveolar nasal /n/, the palatal nasal /ɲ/ and the velar nasal /ŋ/. Nasal phonemes are attested in all the three-word positions as illustrated in 10.

#### 10. The distribution of nasal phonemes

##### a. The distribution of /m/

	Phonemic	Phonetic	Morphological composition
Word initial	/mɛtɪt/	[mɛtɪt]	<i>mɛt-I-t</i> head-PS-SG 'a head'



Word medial	/alamalɪɛt/	[alamalɪɛt]	<i>alamalɪ-ɛ-t</i> student-PS-SG 'a student'
Word final	/kim/	[kim]	<i>kim</i> 'strong'

b. The distribution of /n/

	Phonemic	Phonetic	Morphological composition
Word initial	/ni/	[ni]	<i>ni</i> 'this'
Word medial	/kwɛnɪk/	[kwɛnɪx]	<i>kwɛnɪ-k</i> wood-PS-PL 'firewood'
Word final	/ʊ:n/	[ʊ:n]	<i>ʊ:n</i> 'wash'

c. The distribution of /ɲ/

	Phonemic	Phonetic	Morphological composition
Word initial	/ɲɪɪɪ:tɪɛt/	[ɲɪɪɪ:tɪɛt]	<i>ɲɪɪɪ:tɪ-ɛ-t</i> chameleon-PS-SG 'a chameleon'
Word medial	/paɲɛk/	[paɲɛx]	<i>paɲɛ-k</i> meat-PS-PL 'portions of meat'
Word final	/laɲ/	[laɲ]	<i>laɲ</i> 'climb'

d. The distribution of /ŋ/

	Phonemic	Phonetic	Morphological composition
Word initial	/ŋat/	[ŋat]	<i>ŋat</i> 'advise'
Word medial	/co:ŋinto/	[co:ŋindo]	<i>co.ŋ-in-to</i> many-NMLZ-PS 'an amount'
Word final	/ca:ŋ/	[ca:ŋ]	<i>ca.ŋ</i> 'a lot/many'

### 2.2.1.1.2 Stops

Stops include the voiceless bilabial stop /p/, the voiceless alveolar stop /t/, the voiceless palatal stop /c/, and the voiceless velar stop /k/. All stops are voiced phonetically when they are preceded by a homorganic nasal. The phonetic properties of each stop phoneme are described in turn.

The voiceless bilabial stop /p/ has three allophones i.e., the voiceless bilabial stop [p], the voiced bilabial fricative [β] and the voiced bilabial stop [b]. The distribution of the allophones is as follows: [p] occur in word initial, and word final positions as shown in 11a; [β] occurs in word medial position i.e., intervocalic, or non-intervocalic positions and word final position as shown in 11(b); [b] follows a homorganic nasal as illustrated in 11(c). The two allophones [p] and [β] are in free variation in word final position as shown in 11(a-b).

## 11. The distribution of the allophones of the phoneme /p/

### a. The distribution of [p]

	Phonemic	Phonetic	Morphological composition
Word initial	/pe:t/	[pe:t]	<i>pe:t</i> 'daytime'
Word final	/ajɛ:p/	[ajɛ:p] [ajɛ:β]	<i>ajɛ:p</i> 'generous'

### b. The distribution of [β]

	Phonemic	Phonetic	Morphological composition
word medial (non-intervocalic)	/tiepto/	[tieβto]	<i>tiep-to</i> girl-SG 'a girl'
word medial (intervocalic)	/tɛpɔsa/	[tɛβɔsa]	<i>tɛpɔs-a</i> woman-PS 'a woman'
word final	/ɔ:p/	[ɔ:β] [ɔ:p]	<i>ɔ:p</i> 'cool down'

### c. The distribution of the allophone [b]

	Phonemic	Phonetic	Morphological composition
i.	/ɪmparɛt/	[ɪmbarɛt]	<i>ɪmpar-ɛ-t</i> farm-PS-SG 'a farm'



The voiceless palatal stop /c/ has two allophones i.e., the voiceless palatal stop [c] and the voiced palatal affricate [ɟʒ]. The former is attested in word initial, medial, and final positions as shown in 14(a) while the latter follows a homorganic nasal as shown in (14b).

#### 14. The distribution of the allophones of the phoneme /c/

##### a. The distribution of [c]

	Phonemic	Phonetic	Morphological composition
Word initial	/ceko/	[ceŋo]	<i>ce-ko</i> milk-PL 'milk'
Word medial	/Icɛk/	[Icɛx]	<i>Icɛk</i> 3PL 'they'
Word final	/tac/	[tac]	<i>tac</i> 'receive'

##### b. The distribution of the allophone [ɟʒ]

	Phonemic	Phonetic	Orthography
i.	/ɲcurur/	[ɲɟʒurur]	<i>ɲcurur</i> 'stare'
ii.	/mɛɲcɛt/	[mɛɲɟʒɛt]	<i>mɛɲc-ɛ-t</i> seclusion-PS-SG 'a seclusion'

The voiceless velar stop /k/ has three allophones i.e., the voiceless velar stop [k], the voiceless velar fricative [x], and the voiced velar fricative [ɣ]. The distribution of the allophones is as follows: [k] occurs in word initial position (15a); [x] occurs in word final position (15b); [ɣ] occurs in word medial position, and when /k/ follows a homorganic nasal as shown in 15c (iii).

15. The distribution of the allophones of the voiceless velar stop /k/

a. The distribution of [k]

	Phonemic	Phonetic	Morphological composition
i.	/kɔŋta/	[kɔŋda]	<i>kɔŋ-ta</i> eye-SG 'eye'
ii.	/korik/	[korix]	<i>kor-i-k</i> blood-PS-PL 'blood'

b. The distribution of [x]

	Phonemic	Phonetic	Morphological composition
i.	/komek/	[komex]	<i>kom-e-k</i> honey-PS-PL 'honey'
ii.	/paŋɛk/	[paŋɛx]	<i>paŋ-ɛ-k</i> meat-PS-PL 'portions of meat'

c. The distribution of [ɣ]

	Phonemic	Phonetic	Morphological composition
i.	/okiek/	[oɣiɛx]	<i>ok-ie-k</i> Ogiek-PS-PL 'Ogieks'
ii.	/ŋokto/	[ŋoɣto]	<i>ŋok-to</i> dog-SG 'a dog'
iii.	/iŋkirikoit/	[iŋɣiriɣoit]	<i>iŋkirik-oi-t</i> bachelor-PS-SG 'a bachelor'

### 2.2.1.1.3 Fricatives

Fricatives include the labiodental fricative /f/, the voiceless alveolar fricative /s/ and the voiceless palato-alveolar fricative /ʃ/. Each fricative is described in turn. The voiceless labiodental fricative /f/ has one allophone i.e., the voiceless labiodental fricative [f] which is attested in word initial and medial positions in English loan words as shown in 16.

#### 16. The distribution of the voiceless labiodental fricative /f/

	Phonemic	Phonetic	Morphological composition
Word initial	/fɔm/	[fɔm]	<i>fɔm</i> 'a form'
Word medial	/tifi/	[tifi]	<i>TV</i> 'TV'

The occurrence of /f/ exclusively in loanwords reflects Okiek's adaptive response to lexical borrowing from languages such as English. These borrowings are phonologically integrated in ways that preserve native syllable structures while allowing the inclusion of non-native segments. The consistent behavior of /f/ without allophonic variation, and its confinement to specific lexical items, underscores its marginal status in the phoneme inventory and marks it as a feature of loanword phonology.

The voiceless alveolar fricative /s/ has one allophone i.e., the voiceless alveolar fricative [s] which is attested in all the three word positions as shown in 17.

#### 17. The distribution of /s/

	Phonemic	Phonetic	Morphological composition
Word initial	/sɛrɸɛn/	[sɛrɸɛn]	<i>sɛrɸɛn</i> 'small'

Word medial	/kasa:rta/	[kasa:rta]	<i>kasa:r-ta</i> time-SG 'time'
Word final	/jos/	[jos]	<i>jos</i> 'old'

The voiceless palato-alveolar fricative /ʃ/ has one allophone i.e. the voiceless palatal fricative [ç] which is only attested in word medial position as shown in 18.

18. The distribution of the voiceless palato-alveolar fricative /ʃ/

	Phonemic	Phonetic	Morphological composition
i.	/lɪanaʃɛ/	[lɪanaʃɛ]	<i>ɪanaʃɛ</i> 'a cousin'
ii.	/tɪʃɪr/	[tɪʃɪr]	<i>tɪʃɪr</i> 'separate people who are fighting'

#### 2.2.1.1.4 Trill

The alveolar trill /r/ has one allophone i.e., the voiced alveolar trill [r]. It occurs in all the three word positions as shown in 19.

19. The distribution of the voiced alveolar trill /r/

	Phonemic	Phonetic	Morphological composition
Word initial	/ra/	[ra]	<i>ra</i> 'today'
Word medial	/tɛrɛt/	[tɛrɛt]	<i>tɛrɛ-t</i> pot-SG 'a pot'
Word final	/par/	[par]	<i>par</i> 'kill'



### 2.2.1.1.5 Liquid

The voiced alveolar liquid /l/ has one allophone i.e., the voiced alveolar liquid [l] which occurs in all the three word positions as shown in 20.

20. The distribution of the voiced alveolar liquid /l/

	Phonemic	Phonetic	Morphological composition
Word initial	/lapat/	[laβat]	<i>lapat</i> 'run'
Word medial	/toloŋik/	[toloŋik]	<i>toloŋ-i-k</i> assistant-PS-PL 'assistants to initiates'
Word final	/tokol/	[toɣol]	<i>tokol</i> 'all'

### 2.2.1.1.6 Semi-vowels

Semi-vowels include the labiovelar semivowel /w/ and the palatal semivowel /j/. The labiovelar semivowel /w/ has one allophone i.e., the labiovelar semivowel [w] which occurs in all the three-word positions as illustrated in 21. All semi-vowels are phonetically voiced.

21. The distribution of the labiovelar semivowel /w/ in word positions

	Phonemic	Phonetic	Morphological composition
Word initial	/wero/	[wero]	<i>wer-o</i> boy-PS 'boy/son'
Word medial	/twaltwal/	[twatwal]	<i>twaltwal</i> 'jump repeatedly'
Word final	/lo:w/	[lo:w]	<i>lo:w</i> 'deep/far'

The palatal semivowel /j/ has two allophones i.e., the palatal semi-vowel [j] and the voiced palatal fricative [ʒ]. The two allophones are in free variation in all the three word positions as shown in 22. The free variation is not attested in the Mariashoni variety (Micheli 2018).

## 22. The distribution of the allophone [j] vs [ʒ] in word positions

	Phonemic	Phonetic	Orthography
Word initial	/ja:/	[ja:] [ʒa:]	<i>ja:</i> bad
Word medial	/polejwek/	[polejwek] [poleʒwek]	<i>polej-we-k</i> bag-PS-PL 'bags for carrying honey'
Word final	/tʊ:j/	[tʊ:j] [tʊ:ʒ]	<i>tʊ:j</i> 'black'

### 2.2.1.2 Minimal pairs

The (near-) minimal pairs shown in 23 differ in one consonant phoneme positioned in word initial position in monosyllabic words with the place and the manner of articulation being the dominant articulatory features of phonemic contrast. We could not find data to demonstrate minimal contrasts of the voiceless palatal fricative /j/ and the labio-dental fricative /f/.

## 23. (Near-) minimal pairs of consonant phonemes

	Targeted phonemes	Phonemic	Phonetic	Morphological composition	Gloss
a.	/p/ vs. /w/ vs. /m/	/pɛ/ /wɛ/ /mɛ/	[pɛ] [wɛ] [mɛ]	<i>pɛ</i> <i>wɛ</i> <i>mɛ</i>	'shock' 'go' 'die'
b.	/p/ vs. /t/ and /m/ vs. /n/	/ɪmparɛt/ /ɪntarɛt/	[ɪmbarɛt] [ɪndarɛt]	<i>ɪmparɛt</i> <i>ɪntarɛt</i>	'a farm' 'a snake'

c.	/p/ vs. /k/	/po:/ /kɔ/	[po:] [kɔ]	<i>po:</i> <i>kɔ</i>	'belong to' 'a house'
d.	/p/ vs. /s/	/pɪr/ /sɪr/	[pɪr] [sɪr]	<i>pɪr</i> <i>sɪr</i>	'beat' 'write'
e.	/t/ vs. /l/	/ɪ:t/ /ɪ:l/	[ɪ:t] [ɪ:l]	<i>ɪ:t</i> <i>ɪ:l</i>	'arrive' 'break'
f.	/l/ vs. /r/	/li:p/ /ri:p/	[li:p] [ri:p]	<i>li:p</i> <i>ri:p</i>	'siphon' 'guard'
g.	/t/ vs. /k/	/ŋkɛn/ /ntɛn/	[ŋkɛn] [ndɛn]	<i>ŋkɛn</i> <i>ntɛn</i>	'know' 'put'
h.	/m/ vs. /r/	/mat/ /rat/	[mat] [rat]	<i>mat</i> <i>rat</i>	'force' 'tie'
i.	/s/ vs. /k/	/sɛr/ /kɛr/	[sɛr] [kɛr]	<i>sɛr</i> <i>kɛr</i>	'scatter' 'close'
j.	/ŋ/ vs. /r/	/ŋɔtwɛt/ /rɔtwɛt/	[ŋɔtwɛt] [rɔtwɛt]	<i>ŋɔtwɛt</i> <i>rɔtwɛt</i>	'a fence' 'a knife'
k.	/c/ vs. /n/	/cam/ /nam/	[cam] [nam]	<i>cam</i> <i>nam</i>	'love' 'catch/hold'
l.	/ŋ/ vs. /j/	/ŋɛ:/ /je:/	[ŋɛ:] [je:]	<i>ŋɛ:</i> <i>je:</i>	'chew' 'drink'
m.	/m/, /ŋ/ vs. /ŋ/	/marmar/ /ŋarŋar/ /ŋarŋar/	[marmar] [ŋarŋar] [ŋarŋar]	<i>marmar</i> <i>ŋarŋar</i> <i>ŋarŋar</i>	'dotted' 'soft' 'step repeatedly'

n.	/t/ vs. /m/	/tuc/	[tuc]	<i>tuc</i>	'retain'
		/muc/	[muc]	<i>muc</i>	'able'
o.	/l/, /k/, vs. /ŋ/	/laŋ/	[laŋ]	<i>laŋ</i>	'climb'
		/kaŋ/	[kaŋ]	<i>kaŋ</i>	'wait'
		/ŋaŋ/	[ŋaŋ]	<i>ŋaŋ</i>	'uncover'
p.	p/, /t/ vs. /y/	/paj/	[paj]	<i>paj</i>	'feed'
		/ta:j/	[ta:j]	<i>ta:j</i>	'ahead'
		/saj/	[saj]	<i>saj</i>	'pray'
q.	/p/, /k/, /m/, vs. /l/	/a:p/	[a:p]	<i>a:p</i>	'cool down'
		/ak/	[ak]	<i>ak</i>	'and/with'
		/al/	[al]	<i>al</i>	'trade'
		/a:m/	[a:m]	<i>a:m</i>	'eat'

## 2.2.2 Vowels

Section 2.2.2 describes the features of the vowel system i.e., the number of vowel phonemes, their articulatory features and their distribution in word positions (2.2.2.1), their categorization by quality (2.2.2.2) and length (2.2.2.3), and provides examples of near-minimal pairs in the vowel system (2.2.2.4).

### 2.2.2.1 The inventory of vowel phonemes

There are four +ATR vowels and five -ATR vowels that can occur either with (+) or without (-) length as shown in 24 therefore yielding eighteen vowel phonemes in total. The +ATR vowel /o(:)/ also serves as the harmonic counter part of the -ATR vowels /ɔ(:)/ and /a(:)/ in all + ATR environments.

#### 24. The inventory of vowel phonemes

+ATR vowels

/i, e, o, u/ ± /:/

-ATR vowels

/ɪ, ɛ, a, ɔ, ʊ/ ± /:/

Each vowel phoneme is described in turn in terms of its length (±:/), vertical tongue position (high, mid, or low), horizontal tongue position (front, central or back), quality(±ATR), and its distribution in word positions.

/i/ is a short high front +ATR vowel. It occurs in all the three word positions as shown in 25.

25. The distribution of /i/

	Phonemic	Phonetic	Morphological composition
Word initial	/ilo:loit/	[ilo:loit]	<i>ilo:loi-t</i> luggage-SG 'luggage'
Word medial	/mintilil/	[mindilil]	<i>mintilil</i> 'sour'
Word final	/rori/	[rori]	<i>rori</i> 'laugh'

/i:/ is a long high front +ATR vowel. It is attested in all the three word positions as shown in 26.

26. The distribution of /i:/

	Phonemic	Phonetic	Morphological composition
Word initial	/i:l/	[i:l]	<i>i:l</i> 'break'
Word medial	/pi:l/	[pi:l]	<i>pi:l</i> 'increase'
Word final	/lukui:/	[lukui:]	<i>lukui:</i> 'swallow'

The vowel /e/ is a short mid-front +ATR vowel. The vowel occurs in word initial, and word medial positions as shown in 27.

## 27. The distribution of /e/

	Phonemic	Phonetic	Morphological composition
Word initial	/eut/	[eut]	<i>eu-t</i> hand-SG
Word medial	/pento/	[pendo]	<i>pen-to</i> meat-PS-SG 'portions of meat'

/e:/ is a long mid-front +ATR vowel. It is attested in all the three word positions as shown in 28.

## 28. The distribution of /e:/

	Phonemic	Phonetic	Orthography
Word initial	/e:p/	[e:p]	<i>e:p</i> 'sway'
Word medial	/se:kse:k/	[se:ɣse:x]	<i>se:kse:k</i> 'scrub with a spoon'
Word final	/je:/	[je:]	<i>je:</i> 'drink'

/o/ is a short mid-back +ATR vowel. It occurs in all the three word positions as shown in 29.

## 29. The distribution of /o/

	Phonemic	Phonetic	Morphological composition
Word initial	/otepto/	[oteβto]	<i>otep-to</i> environment-SG 'environment/culture'

Word medial	/montoit/	[mondoit]	<i>montoi-t</i> bag-SG 'bag'
Word final	/ko/	[ko]	<i>ko</i> COPULAR

/o:/ is a long mid-back +ATR vowel. It occurs in all the three word positions as shown in 30.

### 30. The distribution of /o:/

	Phonemic	Phonetic	Morphological composition
Word initial	/o:rtok/	[o:rtox]	<i>o:r-to-k</i> sheep-PS-PL 'sheep'
Word medial	/pijonijon/	[pijonijon]	<i>pijonijon</i> 'satisfy'
Word final	/po:/	[po:]	<i>po:</i> 'belong'

/u/ is a short high back +ATR vowel. It occurs in all the three word positions as shown in 31.

### 31. The distribution of /u/

	Phonemic	Phonetic	Morphological composition
Word initial	/ufo/	[ufo]	<i>ufo!</i> 'Exclamation for disbelief'
Word medial	/lukumek/	[luɣumek]	<i>lukum-e-k</i> honey water-PS-PL 'honey water'

Word final	/omu/	[omu]	<i>omu</i> 'because'
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/u:/ is a long high back +ATR vowel. It attested in word initial, and word medial positions as shown in 32.

### 32. The distribution of /u:/

	Phonemic	Phonetic	Morphological composition
Word initial	/u:ju:j/	[u:ju:j]	<i>u:ju:j</i> 'difficult'
Word medial	/tu:j/	[tu:j]	<i>tu:j</i> 'black'

/ɪ/ is a short high front – ATR vowel. It occurs in word initial, and word medial positions as shown in 33.

### 33. The distribution of /ɪ/

	Phonemic	Phonetic	Morphological composition
Word initial	/ɪŋɪ:nɛɪt/	[ɪŋɪ:nɛɪt]	<i>ɪŋɪ:nɛɪ-t</i> goat-SG 'a goat'
Word medial	/nesiot/	[nesiot]	<i>nes-io-t</i> soot-PS-SG 'a soot'
Word final	/panɪ/	[panɪ]	<i>panɪ</i> 'now'

/ɪ:/ is a long high front – ATR vowel. It occurs in word initial, and word medial positions as shown in 34.



#### 34. The distribution of /ɪ:/

	Phonemic	Phonetic	Morphological composition
Word initial	/ɪ:t/	[ɪ:t]	<i>ɪ:t</i> 'arrive'
Word medial	/kɪ:t/	[kɪ:t]	<i>kɪ:t</i> 'in the event that'

/ɪ:/ is a short mid-front -ATR vowel. It occurs in all the three word positions as shown in 35.

#### 35. The distribution of /ɛ:/

	Phonemic	Phonetic	Morphological composition
Word initial	/ɛsɔ:/	[ɛsɔ:]	<i>ɛsɔ:</i> 'refuse'
Word medial	/sʊswɛk/	[sʊswɛx]	<i>sʊswɛ-k</i> 'grass-PL 'blades of grass'
Word final	/mɛ/	[mɛ]	<i>mɛ</i> 'die'

/ɛ:/ is a long mid-front -ATR vowel. It occurs in all the three word positions as shown in 36.

#### 36. The distribution of /ɛ:/

	Phonemic	Phonetic	Morphological composition
Word initial	/ɛ:r/	[ɛ:r]	<i>ɛ:r</i> 'choke'
Word medial	/kwɛ:r /	[kwɛ:r]	<i>kwɛ:r</i> 'hit'

Word final	/ɲɛ:/	[ɲɛ:]	ɲɛ: 'chew'
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/a/ is a short low-central -ATR vowel. It is attested in all the three word positions as shown in 37.

### 37. The distribution of /a/

	Phonemic	Phonetic	Morphological composition
Word initial	/alamalɪɛt/	[alamalɪɛt]	<i>alamalɪ-ɛ-t</i> student-PS-PL 'a student'
Word medial	/twa/	[twa]	<i>twa/</i> 'jump'
Word final	/salaut-a/	[salaut-a]	<i>salaut-a</i> voice-SG 'a voice'

/a:/ is a long low-central-ATR vowel. It is attested in all the three word positions as shown in 38.

### 38. The distribution of /a:/

	Phonemic	Phonetic	Morphological composition
Word initial	/a:m/	[a:m]	<i>a:m</i> 'eat'
Word medial	/kasa:rta/	[kasa:rta]	<i>kasa:r-ta</i> time-SG 'time'
Word final	/mwa:/	[mwa:]	<i>mwa:</i> 'say'

/ɔ/ is a short mid-back -ATR vowel. It is attested in all the three word positions as shown in 39.

39. The distribution of /ɔ/

	Phonemic	Phonetic	Morphological composition
Word initial	/ɔɪnɛt/	[ɔɪnɛt]	<i>ɔɪn-ɛ-t</i> river-PS-SG 'a river'
Word medial	/mɔɪta/	[mɔɪta]	<i>mɔɪ-ta</i> calf-SG 'a calf'
Word final	/akɔpɔ/	[akɔβɔ]	<i>akɔpɔ</i> 'about'

/ɔ:/ is a long mid-back -ATR vowel. It is attested in all the three word positions as shown in 40.

40. The distribution of [ɔ:]

	Phonemic	Phonetic	Morphological composition
Word initial	/ɔ:p /	[ɔ:p] [ɔ:β]	<i>ɔ:p</i> 'take'
Word medial	/twɔ:lɔt/	[twɔ:lɔt]	<i>twɔ:/-ɔ-t</i> bell-PS-SG 'a bell'
Word final	/ɛsɔ:/	[ɛsɔ:]	<i>ɛsɔ:</i> 'refuse'

/ʊ/ is a short high back -ATR vowel. It is attested in word initial and medial positions as shown in 41.

#### 41. The distribution of /ʊ/

	Phonemic	Phonetic	Morphological composition
Word initial	/ʊɪ:tɪɛt/	[ʊɪ:tɪɛt]	<i>ʊɪtɪɛ-t</i> dark-SG 'darkness'
Word medial	/mʊr/	[mʊr]	<i>mʊr</i> 'cut'

/ʊ:/ is a long high back -ATR vowel. It is attested in word initial and medial positions, only, as shown in 42.

#### 42. The distribution of the long high back -ATR vowel /ʊ:/

	Phonemic	Phonetic	Morphological composition
Word initial	/ʊ:n /	[ʊ:n]	<i>ʊ:n</i> 'wash'
Word medial	/tʊ:c /	[tʊ:c]	<i>tʊ:c</i> 'cover'

#### 2.2.2.2 Vowel quality

Vowel phonemes are produced with either an advanced tongue root (+ATR) or a retracted tongue root (-ATR) as described in section 2.2.2.1-the inventory of vowel phonemes. The categorization of vowels by ATR yields (near-) minimal pairs as shown in 43. The contrast between [ɔ] vs [ɔ:] is unattested.

### 43. (Near-) minimal pairs by vowel quality

#### a. +ATR vs. –ATR in long vowels

Target phonemes	Phonemic	Phonetic	Morphological composition
[o:] vs [ɔ:]	/into:/	[indo:]	<i>into:</i> 'if'
	/Intɔ:/	[Indɔ:]	<i>Intɔ:</i> 'lead'
[e:] vs [ɛ:]	/pe:t/	[pe:t]	<i>pe:t</i> 'day time'
	/pɛ:kɔ/	[pɛ:kɔ]	<i>pɛ:kɔ</i> 'but'
[u:] vs [ʊ:]	/mu:t/	[mu:t]	<i>mu:t</i> 'five'
	/mʊ:t/	[mʊ:t]	<i>mʊ:t</i> 'smack'
[i:] vs [ɪ:]	/ɪni:t/	[ɪni:t]	<i>ɪni:t</i> 'fill'
	/ɪɪɪ:t/	[ɪɪɪ:t]	<i>ɪɪɪ:t</i> 'realize'

#### b. +ATR vs. –ATR in short vowels

	Phonemic	Phonetic	Morphological composition
Targets			
[o] vs [ɔ]	/cor/	[cor]	<i>cor</i> 'rise'
	/cɔr/	[cɔr]	<i>cɔr</i> 'prick'

[e] vs [ɛ]	/kel/	[kel]	<i>kel</i> 'beneath'
	/kɛl/	[kɛl]	<i>kɛl</i> 'fry'
[i] vs [ɪ]	/pit/	[pit]	<i>Pit</i> 'spray'
	/pɪt/	[pɪt]	<i>pɪt</i> 'grow'
[u] vs [ʊ]	/muɲ/	[muɲ]	<i>muɲ</i> 'dirty'
	/mʊɲ/	[mʊɲ]	<i>mʊɲ</i> 'rest'

### 2.2.2.3 Vowel length

There are nine long and nine short vowels in the vowel system as described in the inventory of vowel phonemes. The categorization of vowels by length yields (near-) minimal pairs in the vowel system as illustrated in 44.

#### 44. (Near-) minimal pairs by vowel length

##### a. Short vs. Long +ATR vowels

	Targets	Phonemic	Phonetic	Morphological composition
i.	[o] vs [o:]	/ko/	[ko]	<i>ko</i> COPULAR
		/lo:w/	[lo:w]	<i>lo:w</i> 'far/deep'

ii.	[e] vs [e:]	/pet/	[pet]	<i>pet</i> 'lost'
		/pe:t/	[pe:t]	<i>pe:t</i> 'daytime'
iii.	[i] vs [i:]	/pit/	[pit]	<i>pit</i> 'spray'
		/pi:k/	[pi:x]	<i>pi:k</i> 'people-PL' 'people'
iv.	[u] vs [u:]	/tuc/	[tuc]	<i>tuc</i> 'retain'
		/tu:c/	[tu:c]	<i>tu:c</i> 'cover'

b. Short vs. Long -ATR vowels

Targets	Phonemic	Phenetic	Morphological composition
[a] vs [a:]	/cam/	[cam]	<i>cam</i> 'love'
	/ca:ŋ/	[ca:ŋ]	<i>ca:ŋ</i> 'a lot/many'
[ɛ] vs [ɛ:]	/tɛc/	[tɛc]	<i>tɛc</i> 'build'
	/tɛ:c/	[tɛ:c]	<i>tɛ:c</i> 'defend'
[ɪ] vs [ɪ:]	/sɪr/	[sɪr]	<i>sɪr</i> 'surpass'
	/sɪ:r/	[sɪ:r]	<i>sɪ:r</i> 'write'

[ɔ] vs [ɔ:]	/rɔp/	[rɔβ]	<i>rɔp</i> 'rain'
	/rɔ:p/	[rɔ:β]	<i>rɔ:p</i> 'link'
[ʊ] vs [ʊ:]	/kʊr/	[kʊr]	<i>kʊr</i> 'call'
	/kʊ:r/	[kʊ:r]	<i>kʊ:r</i> 'scratch'

#### 2.2.2.4 Minimal pairs

Minimal pairs in the vowel system are predominantly attested in monosyllabic and disyllabic words as shown in the examples in 45. Unlike in the consonant system where the dominant articulatory features of phonemic contrast in minimal pairs is one consonant phoneme positioned in word initial position in monosyllabic words with the place and the manner of articulation being the dominant articulatory features of phonemic contrast, the vowel in contrast is position in word medial position in minimal pairs in the vowel system.

#### 45. Minimal pairs in the vowel system

	Targeted phonemes	Phonemic	Phonetic	Morphological composition	Gloss
i.	/a:/ /o:/, /a/ vs. /o/	/pa:rtə/	[pa:rtə]	<i>pa:rtə</i>	'show'
		/pɔ:rtə/	[pɔ:rtə]	<i>pɔ:rtə</i>	'a body'
	/a/ vs. /ɛ/	/tər/	[tər]	<i>tər</i>	'finish'
		/tɛr/	[tɛr]	<i>tɛr</i>	'different'



ii.	/a/, /ɛ:/, /ʊ/ vs. /u:/	/tac/	[tac]	<i>tac</i>	'receive'
		/ tɛ:c/	[tɛ:c]	<i>tɛ:c</i>	'defend'
		/ tʊc/	[tʊc]	<i>tʊc</i>	'retain'
		/tu:c/	[tu:c]	<i>tu:c</i>	'cover'
iii.	/e:/, /e/, /i/, /ɪ/, vs.	/pe:t/	[pe:t]	<i>pe:t</i>	'daytime'
	/ʊ/	/pet/	[pet]	<i>pet</i>	'loss'
		/pit/	[pit]	<i>pit</i>	'spray'
		/pɪt/	[pɪt]	<i>pɪt</i>	'grow'
		/pʊt/	[pʊt]	<i>pʊt</i>	'fall'
iv.	/a/, /ɛ/, /ɔ/, vs. /ʊ/	/car/	[car]	<i>car</i>	'strike'
		/cɛr/	[cɛr]	<i>ɛr</i>	'encourage'
		/ cɔr /	[cɔr]	<i>ɔr</i>	'steal'
		/cur/	[cur]	<i>cur</i>	'expose/borrow'
	/a/, /ɛ/, /i/, /ɔ/, vs.	/pal/	[pal]	<i>pal</i>	'dig'
	/ʊ/	/pɛl/	[pɛl]	<i>pɛl</i>	'burn'
		/pil/	[pil]	<i>pil</i>	'increase in
		/pɔl/	[pɔl]	<i>pɔl</i>	number'
		/pʊl/	[pʊl]	<i>pʊl</i>	'shout'
					'mob-attack'
v.	/a/, /ɛ/, /ɪ/, /ɪ:/ vs.	/sar/	[sar]	<i>sar</i>	'scramble'
	/ɔ:/	/sɛr/	[sɛr]	<i>sɛr</i>	scatter'
		/sɪr/	[sɪ:r]	<i>sɪ:r</i>	'write'
		/sɪr /	[sɪr]	<i>sɪr</i>	'surpass'

	/sɔ:r/	[sɔ:r]	sɔ:r	'go for'
vi. /ʊ:/ vs. /u:/	/mʊ:t/	[mʊ:t]	mʊ:t	'smack'
	/mu:t/	[mu:t]	mu:t	'five'

## 2.3. Suprasegmental phonology

### 2.3.1 Tone

There are two distinct tones i.e., a high tone (H) indicated by the acute accent (´) and a low tone (L) indicated by the grave accent (`). Nouns in syntactic positions i.e., in phrases and clauses are marked for case by tone as described in section 4.2.1.3.1. Nouns in isolation have a randomly varying lexical tone pattern and are thus left without specification for tone throughout this study. The interactions of tone, tense and aspect are described in verbal morphology (3.2.2).

### 2.3.2 Vowel length

Vowel length serves as the criteria for distinguishing between 1PS/SG and 1PS/PL.

## 2.4 Syllable structure

Section 2.4 describes the basic syllable structure (2.4.1), the phonotactic constraints in the onset, nucleus and coda (2.4.2), and illustrations of common syllable patterns (2.4.3).

### 2.4.1 Basic syllable structure

The syllable is 'a representational device that encompasses principles of segment sequencing.' (Zec 2009:162). The basic syllable structure of monosyllabic roots in Okiek contains a maximum of two optional consonants in the onset, an optional consonant in the coda, and an obligatory vowel in the nucleus, thus yielding a (C<sub>1</sub>) (C<sub>2</sub>) V(C<sub>3</sub>) basic syllable structure with six basic syllable shapes as shown in 46 i.e., (a) corresponds to a

syllable with only a nucleus; 46(b) contains a nucleus and a coda; 46(c) contains an onset and a nucleus, 46(d) contains an onset, a nucleus, and a coda, 46(e) contains two consonants in the onset and a nucleus and 46(f) contains two consonants in the onset, a nucleus, and a coda.

#### 46. Basic syllable shapes of monosyllabic roots

	Shapes	Phonemic	Phonetic	Morphological composition	Gloss
a.	V	/a:/	[a:]	<i>a:</i>	'mother'
b.	VC	/al/	[al]	<i>al</i>	'trade'
c.	CV	/ra: /	[ra:]	<i>ra:</i>	'today'
d.	CVC	/saj/	[sa]	<i>saj</i>	'pray'
e.	CCV	/mwa:/	[mwa:]	<i>mwa:</i>	'tell'
f.	CCVC	/pwa:t/	[pwa:t]	<i>pwa:t</i>	'remember'

### 2.4.2 Phonotactic constraints

#### 2.4.2.1 Onset

Fourteen out of the fifteen consonant phonemes identified in section 2.2.1.1 are attested in C<sub>1</sub> -which is in the onset- except for the labiodental and palatal fricatives /f/ and /ʃ/ respectively as shown in 47.

#### 47. Consonant phonemes attested in C<sub>1</sub>

Phonemes	Phonemic	Phonetic	Morphological composition
/m/	/mutuŋ/	[mutuŋ]	<i>mutuŋ</i> 'blunt'
/n/	/naj/	[naj]	<i>naj</i> 'know'

/ɲ/	/ɲalɪ/	[ɲalɪ]	<i>ɲalɪ</i> 'green'
/ŋ/	/ŋotutiek/	[ŋotutiex]	<i>ŋot-utie-k</i> warn-PS-PL 'warnings/rules'
/p/	/pɪɾɪr/	[pɪɾɪr]	<i>pɪɾɪr</i> 'heavy'
/t/	/taβɔjat/	[taβɔjat]	<i>taβɔj-a-t</i> star-PS-SG 'a star'
/f/	/tifi/	/tifi/	<i>tifi</i> 'TV'
/c/	/co:ŋinto/	[co:ŋindo]	<i>co:ŋ-int-o</i> many-NMLZ-PS 'an amount'
/k/	/kɪβɾɔɾɔkɛt/	[kɪβɾɔɾɔɣɛt]	<i>kɪβɾɔɾɔk-ɛ-t</i> insect-PS-SG 'an insect'
/s/	/salautə/	[salautə]	<i>salaut-a</i> voice-SG 'a voice'
[ɔ]	-	-	-
/r/	/rɪŋat/	[rɪŋat]	<i>rɪŋat</i> 'short'
/l/	/lapat/	[laβat]	<i>lapat</i> 'run'
/w/	/walwal/	[walwal]	<i>walwal</i> 'exchange'

/j/	/jac/	[jac]	<i>jac</i> 'ow'
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Onset consonant clusters are attested in two types of combinations as shown in 48(a-b) i.e., a combination that contain either the semi-vowel /w/ in C<sub>2</sub> and either the nasals /m ŋ/, the stops /p t k/, or the trill /r/ in C<sub>1</sub> or the palatal /c/ in C<sub>2</sub> and either the stop /p/ or the nasal /ŋ/ in C<sub>1</sub> as shown in the examples in 48.

#### 48. The structure and examples of onset clusters

##### a. The structure of C<sub>1</sub>w onset clusters

	C <sub>1</sub>	C <sub>2</sub>
i.	/m ŋ/	
ii.	/p t k/	/w/
iii.	/r/	

##### Examples of C<sub>1</sub>w onset clusters

	C <sub>1</sub> w	Phonetic	Phonemic	Morphological composition
i.	/mw/	/mwa:/	[mwa:]	<i>mwa:</i> 'say/tell'
ii.	/ŋw/	/ŋwɔŋ/	[ŋwɔŋ]	<i>ŋwɔŋ</i> 'soil/earth'
iii.	/pw/	/pwa:t/	[pwa:t]	<i>pwa:t</i> 'remember'
iv.	/tw/	/twal/	[twal]	<i>twal</i> 'jump'
v.	/kw/	/kwɛ:r/	[kwɛ:r]	<i>kwɛ:r</i> 'hit'

vi.	/rw/	/rwɔtɪt/	[rwɔtɪt]	<i>rwɔt-ɪ-t</i> dream-PS-SG 'a dream'
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b. The structure of C<sub>1</sub>C<sub>2</sub> onset cluster

	C <sub>1</sub>	C <sub>2</sub>
i.	/p/	
ii.	/ɲ/	/c/

Examples of C<sub>1</sub>C<sub>2</sub> onset clusters

		Phonetic	Phonemic	Morphological composition
i.	/pc/	/pcɛj/	[pcɛj]	<i>pɛj</i> 'share'
ii.	/ɲc/	/ɲcɔt/	[ɲcɔt]	<i>ɲcɔt</i> 'prick/pierce'

### 2.4.2.2 Nucleus

The nucleus contains one vowel as shown in the examples of monosyllabic roots in section 2.4.1. However, vowel clusters are formed when the nucleus of one syllable is preceded by the nucleus of an adjacent syllable as shown in the examples in 49.

49. Examples of vowel clusters in words

	vowel cluster	Examples
a.	/ɔɪ/	<i>ɔɪn-ɛ-t</i> river-PS-SG 'river'

		<i>mɔɪ-ta</i> calf-SG 'a calf'
		<i>ɪŋkɪɾɪkɔɪ-t</i> bachelor-SG 'a bachelor'
b.	/ie/	<i>tiɐp-to</i> girl-SG 'a girl'
		<i>tiɛn</i> 'sing'
c.	/au/	<i>salɔʊt-a</i> voice-PS 'a voice'
d.	/eu/	<i>eu-ne-k</i> hand-PS-PL 'hands'
e.	/ei/	<i>ojei</i> 'undermine something' (Interjection)
f.	/iu/	<i>piu!</i> 'entirety' (Interjection)
g.	/aɪ/	<i>kɪkɔmp-aɪ-k</i> cup-PS-PL 'cups'

### 2.4.2.3 Coda

All consonant phonemes, with the exception of the labiodental fricative /f/, are attested in the coda as shown 50.

50. The consonant phonemes attested in the coda.

Phonemes	Phonemic	Phonetic	Morphological composition
/m/	/ŋɔm/	[ŋɔm]	<i>ŋɔm</i> 'clever'
/n/	/rɔn/	[rɔn]	<i>rɔn</i> 'sneez'
/ɲ/	/tikɲ/	[tiɣɲ]	<i>tikɲ</i> 'smile'
/ŋ/	/ca:ŋ/	[ca:ŋ]	<i>ca.ŋ</i> 'a lot/many'
/p/	/ɔ:p/	[ɔ:p]	<i>ɔ:p</i> 'take'
/t/	/jɛ.t/	[jɛ.t]	<i>jɛ.t</i> 'prevent'
/c/	/lac/	[lac]	<i>lac</i> 'wear'
/k/	/cutok/	[cutox]	<i>cutok</i> 'slow'
/s/	/kas/	[kas]	<i>kas</i> 'happen/occur'
/ʃ/	/rɔʃɪt/	[rɔʃɪt]	<i>rɔʃɪ-t</i> example-sg 'an example'
/r/	/marar/	[marar]	<i>marar</i>



			'dance'
/l	/ tɛkɛl]/	[tɛɣɛl]	tɛkɛ/ 'elect/choose'
/w/	/ow/	[ow]	ow 'big'
/y/	/tapɔjat/	[taβɔjat]	tapɔj-a-t star-PS-SG 'a star'

Coda-onset clusters (C.C) are formed when the initial consonant C occupies the coda of a preceding syllable structure, and the second consonant C presents the onset of the next syllable structure. Initial consonants in coda-onset clusters include either the stops /p, t, k/, the nasals /m, ŋ/, the trill /r/, the fricative /s/, the liquid /l/, and the semi vowel /y/ while the second consonants include either the stops /p, t, c, k/, the nasals /n, ŋ /, or the glide /w/ as shown in 51.

#### 51. Coda onset clusters in word medial position

Coda-onset clusters	Phonemic	Phonetic	Morphological composition
/mc/	/camcam/	[camcam]	camcam 'taste'
/mn/	/ ŋɔmnɔtɛt/	[ŋɔmnɔtɛt]	ŋɔmnɔt-ɛ-t wisdom-PS-SG 'wisodm'
/ŋt/	/kɔŋtɪt/	[kɔŋdɪt]	kɔŋtɪ-t obedience-SG 'obedience'
/ŋw/	/aŋwan /	[aŋwan]	aŋwan 'four'

/pt/	/rɔpta/	[rɔβta]	<i>rɔp-ta</i> rain-SG 'the rain'
/pc/	/tɔpɕɛ/	[tɔβɕɛ]	<i>tɔpɕɛ</i> 'a relative'
/pr/	/kiproroket/	[kɪβrɔrɔɣɛt]	<i>kɪprɔrɔk-ɛ-t</i> insect-PS-SG 'an insect'
/tw/	/rotwet/	[rotwet]	<i>rotwe-t</i> knife-SG 'a knife'
/kt/	/wakta/	[wayta]	<i>wak-ta</i> road-SG 'a road'
/kw/	/ɔkwɛk/	[ɔɣwɛx]	<i>ɔkwɛk</i> 2PL 'you'
/kc/	/tokcin/	[toɣcin]	<i>tokcin</i> 'aim'
/st/	/asɪsta/	[asɪsta]	<i>asɪs-ta</i> sun-SG 'the sun'
/rp/	/tapɯrpɯrɪk/	[taβɯrβɯrɪk]	<i>tapɯrpɯr-ɪ-k</i> butterfly-PS-PL 'butterflies'
/rt/	/kasa:rta/	[kasa:rta]	<i>kasa:r-ta</i> time-SG 'time'
/rɲ/	/ɲaɲaɲar/	[ɲaɲaɲar]	<i>ɲaɲaɲar</i> 'soft'

/rw/	/cɔrwɛt/	[cɔrwɛt]	<i>cɔr-wɛ-t</i> friend-PS-SG 'a friend'
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### 2.4.3 Common syllable patterns

The following categories arise when words are classified based on the number of syllables they contain i.e., monosyllabic, disyllabic, trisyllabic, tetrasyllabic, pentasyllabic, and hexasyllabic words. Out of the fourteens-word classes presented in section 3.0 (Morphology), only nouns are attested in hexasyllabic structures.

#### 2.4.3.1 Monosyllabic words

Monosyllabic words containing only a nucleus (V) are rare. Verbs are monosyllabic with VC or CV and CCV syllable shapes. Examples of monosyllabic words are shown in 52.

#### 52. Example of monosyllabic words

	Syllable shapes	Phonemic	Phonetic	Morphological composition
a.	V	/a:/	[a:]	<i>a:</i> 'a mother'
b.	CV	/ra:/	[ra:]	<i>ra:</i> 'today'
c.	VC	/a:m/	[a:m]	<i>a:m</i> 'eat'
d.	CVC	/kɔj/	[kɔj]	<i>kɔj</i> 'long'
e.	CCVC	/kwɛ:r /	[kwɛ:r]	<i>kwɛ:r</i> 'hit'

### 2.4.3.2 Disyllabic words

Disyllabic words have a (C) (V) (C) (C) V (C) syllable structure. CVCCVC syllable structures are common in reduplicated verb roots (53 e) while VCVC syllables structures are common in adjectives (53 f).

#### 53. Examples of disyllabic words

	Syllable shape	Phonemic	Phonetic	Morphological composition
a.	VC.CVC	/a:rtɛt/	[a:rtɛt]	<i>a:r-tɛ-t</i> sheep-PS-SG 'a sheep'
b.	CVC.VC	/tɔrɛt/	[tɔrɛt]	<i>tɔrɛt</i> 'help'
c.	CV.VC	/tien/	[tien]	<i>tien</i> 'sing'
d.	CVC.CV	/ɲokto/	[ɲoɣto]	<i>ɲok-to</i> dog-SG 'a dog'
e.	CVC.CVC	/kulkul/	[kulyul]	<i>kulkul</i> 'dig using hands'
f.	VC.VC	/u:su:s/	[u:su:s]	<i>u:su:s</i> 'light'

### 2.4.3.3 Trisyllabic words

Trisyllabic words are predominantly nouns and adjectives. The structure CV.VC.VC and VC.VC.VC are common among nouns and adjectives while reduplicated verbs occur in CVC.CVC.VC syllable shapes as shown in the examples of trisyllabic words in 54.

#### 54. Examples of trisyllabic words

	Syllable shape	Phonemic	Phonetic	Morphological composition
a.	CVC.CV.CVC	/ŋɔmnɔtɛt/	[ŋɔmnɔtɛt]	<i>ŋɔmnɔt-ɛ-t</i> wisdom-PS-SG 'wisodm'
b.	CV.VC.CV	/tiepto/	[tieβto]	<i>tiɛp-to</i> girl-SG 'a girl'
c.	CV.VC.VC	/pɔɪnɛt/	[pɔɪnɛt]	<i>pɔɪn-ɛ-t</i> antelope-PS-SG 'an antelope'
d.	CV.CV.CV	/tucupo /	[tucuβo]	<i>tucupo</i> 'little'
e.	CV.CVC.VC	/tapɔjat /	[taβɔjat]	<i>tapɔj-a-t</i> star-PS-SG 'a star'
f.	CVC.CVC.VC	/tʊmtʊman/	[tʊmtʊman]	<i>tʊmtʊman</i> nosebleed'

#### 2.4.3.4 Tetrasyllabic words

Examples of tetrasyllabic to hexasyllabic syllable shapes and their corresponding nouns are shown in 55-57.

#### 55. Examples of tetrasyllabic words

Syllable shape	Phonemic	Phonetic	Morphological composition
CV.VC.VC.V	/lɪanaʃɛ/	[lɪanaʃɛ]	<i>lɪanaʃɛ</i> 'a cousin'

CV.CV.VC.V	/salauta/	[salauta]	<i>salaut-a</i> voice-PS 'a voice'
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### 2.4.3.5 Pentasyllabic words

#### 56. Examples of pentasyllabic nouns

	Syllable shape	Phonemic	Phonetic	Morphological composition
a.	VC.CV.CV.CV.VC	/ɪŋkɪnalɪt /	[ɪŋɣɪnalɪt]	<i>ɪŋkɪnalɪ-t</i> commotion-SG 'a commotion'
b.	VC.CV.CV.CV.VC	/ɪŋkɪɾɪkɪt/	[ɪŋɣɪɾɪkɪt]	<i>ɪŋkɪɾɪkɪ-t</i> bachelor-SG 'a bachelor'
c.	CV.CV.CV.CV	/sɪŋɔɓɔɪɛt/	[sɪŋɔɓɔɪɛt]	<i>sɪŋɔɓɔɪɛ-t</i> sliding game-SG 'a sliding game'

### 2.4.3.6 Hexasyllabic words

#### 57. Example of hexasyllabic noun

	Syllable shapes	Phonemic	Phonetic	Morphological composition
a.	CV.CVC.CVC.VC.VC.CV	/topurpuroninto/	[toβurβuronindo]	<i>topurpuron-in-to</i> circle-NMLZ-PS 'a circle'
b.	CV.CVC.CVC.VC.VC.CV	/koriomokeci/	[koriomokeci]	<i>koriomokeci</i> 'a coincidence'

## 2.5 Morphophonological processes

This section summarizes the attested morphophonological processes (as shown in 58) given the absence of regular morphophonological processes based on regular predictable rules that cover the entire system. As a result, each morphophonological process will be highlighted in its specific section in morphology.

Overall, Okiek morphophonology reveals an interplay between phonology and morphological forms, with [ $\pm$ ATR] vowel harmony as a central organizing principle. The language operates a dominant-recessive harmony system, where certain morphemes—like the progressive suffixes *-e*, *-ej*, and the centripetal *-u*—impose [+ATR] harmony across the word. Harmonizing morphemes such as causative prefixes (*ɪ-* ~ *i-*), demonstrative suffixes, and tense markers assimilate to the ATR value of adjacent elements, promoting cohesion within harmony domains.

However, some morphemes (e.g., *ma-*, *kar-*, *-ci*) behave opaquely, resisting harmony and marking morphosyntactic boundaries. Additional morphophonological processes include grammatically meaningful vowel lengthening (e.g., distinguishing person and number), consonant deletion at morpheme boundaries to avoid illegal clusters, and palatal–velar alternations in plural and derivational forms. Degemination also applies at affix junctures to avoid geminate consonants.

Affix alternation, especially in nominalization, showcases how suffixes adjust phonologically based on harmony and morphotactic constraints. Loanwords—mainly from English—introduce non-native segments like /f/, which are adapted to Okiek's syllable patterns and sometimes undergo harmony.

## 58. A summary of Okiek morphophonology

Category	Process / Type	Description	Example(s)	Function'
Vowel Harmony	Dominant Morphemes	Trigger [+ATR] harmony in the word	<i>ŋalan</i> 'speak' → <i>ŋolon-ej</i> 'it/(s)he is speaking';	Enforce [+ATR] vowel assimilation
Vowel Harmony	Opaque Morphemes	Do not undergo or trigger harmony; block vowel harmony chain	<i>kar-</i> , <i>-ka:n</i> ,	Mark morphosyntactic boundaries
Vowel Processes	Vowel Lengthening	Vowel becomes long to indicate person/number/aspect distinction	/a:/(1SG) vs. /a/ (2PL)	Encodes morphosyntactic contrast
Consonant Processes	Consonant Deletion	Final consonant in prefix deleted to simplify onset clusters	<i>kɪp</i> + <i>mut</i> → <i>kɪmut</i>	Maintains phonotactic well-formedness
Consonant Processes	Palatal–Velar Alternation	Alternation of final consonants in plural/derivational forms	<i>paŋ</i> → <i>paŋ</i> , <i>ɲac</i> → <i>ɲak</i>	Morphological number marking
Consonant Processes	Degemination	Identical consonants reduced at morpheme boundaries		Avoids illegal geminate clusters
Affixal Processes	Suffix Alternation	Allomorphs change based on ATR harmony and context	<i>cɔr-wɛ-t</i> vs. <i>tul-we-t</i>	Maintains harmonic consistency
Affixal Processes	Nominalization	Involves vowel harmony, consonant	(-ATR) <i>kerke</i> → (+ATR) <i>ker-ke-in-to</i>	Derives nouns from verb stems



		alternation, and affixal fusion		
Loanword Adaptation	/f/ Integration	/f/ occurs only in loanwords, retained in CVCV forms	fom, tifi	Expands lexicon while conforming to native rules

## 2.6 Comparative and typological discussion

The consonant phonemes observed in the language under discussion are broadly consistent with those found in other Southern Nilotic languages, as documented by Rottland (1982), and closely mirror the inventory described for the Mariashoni variety of Okiek by Micheli (2018), with the notable exception of the absence of the /f/ phoneme. A phonetic feature widely attested across these languages is the voicing of stop phonemes following nasal consonants—a pattern also reported in Kalenjin varieties such as Akie (König et al. 2015), Nandi (Creider & Creider 1989), Chereng’any (Mietzner 2015), and Mariashoni Okiek (Micheli 2018). Regarding vowel systems, Kalenjin languages characteristically exhibit a contrast between [+ATR] and [–ATR] vowels, which are alternatively described in the literature as closed versus open (Tucker & Bryan 1964, 1966) or tense versus lax (Toweet 1975). Okiek, like all Kalenjin languages, exhibits grammatical tone—a prominent typological feature in the group (Tucker & Bryan 1964). Further comparative investigation is recommended on syllable structure, particularly focusing on basic syllable types, phonotactic constraints, and recurrent syllable patterns across Okiek and related Kalenjin languages.

## 2.7 Conclusion

This study of Okiek phonology, based on the Nessuit variety, reveals a well-structured and typologically consistent Southern Nilotic sound system. The analysis has addressed key domains including the phoneme inventory, suprasegmental features, syllable structure, phonotactics, segmental alternations, and dialectal variation. Okiek has fifteen consonant phonemes—comprising stops, nasals, fricatives, approximants, a trill, and semivowels—which are distributed across onset and coda positions. The phoneme /f/ occurs only in loanwords and is not fully integrated into native phonotactics. The vowel system comprises nine basic vowel qualities distinguished by tongue height, backness, and [ATR], yielding eighteen phonemic vowels when vowel length is included. A dominant-recessive ATR vowel harmony system governs stem-affix interactions, although some morphemes behave opaquely, revealing morphosyntactic boundaries within prosodic domains.

Suprasegmental features such as tone and vowel length serve both lexical and grammatical functions. Okiek employs high and low tones to mark grammatical categories such as case and aspect, while vowel length distinguishes person and number in the verbal system. The language adheres to a  $(C_1)(C_2)V(C_3)$  syllable structure, with attested types including CV, CVC, and CCVC, and with restrictions on the distribution of certain consonants in specific positions. Segmental processes—such as degemination, palatal-velar alternation, and prefix-final consonant deletion—facilitate phonotactic well-formedness and support morphophonological operations. Loanwords are selectively adapted to conform to Okiek phonological structure, often undergoing vowel harmony and modification to fit native syllable patterns.

Although the primary focus of this chapter is the Nessuit variety, the Mariashoni dialect of Okiek displays a broadly similar phonological core with only minor differences. Overall, the phonology of Okiek is shown to be tightly constrained, morphologically integrated, and sufficiently flexible to accommodate grammatical complexity and lexical expansion.

## 3.0 Morphology

### 3.1 Introduction

Chapter 3 presents a descriptive study of the morphology of the Nessuit variety of Okiek. The overall objective is to classify word classes and analyze inflectional and derivational processes, with a focus on ATR vowel harmony and morpheme interaction. Specifically, the chapter analyses the morphological, morphosyntactic, syntactic and morphophonological properties of the word classes listed in 60. The semantic properties of each word class are highlighted where necessary in addition to the aforementioned linguistic properties under focus in this chapter. The research questions guiding the examination of word structures, morphological processes and the interfaces with morphology in Okiek are as listed in 59

59. The Research questions into the morphological properties of Okiek

- a. How can the morphemes in Okiek morphology be classified?
- b. What are the morphological processes in Okiek morphology?
- c. What are the morphological structures of the members of the word classes in Okiek?
- d. What are the effects of the morphophonological processes in Okiek morphology?
- e. What are the properties of the interface between morphology and syntax in Okiek?
- f. What is the typological profile of Okiek morphology?

In an attempt to respond to the questions listed in 59, the analysis entailed: (i) identifying all morphemes and classifying them into roots, affixes and particles through morphological segmentation as guided by Leipzig glossing rules, (ii) determining the distribution, functions and productivity of morphemes, (iii) examining morpheme order and morpheme co-occurrence rules, (iv) identifying morphophonological processes, (v) collecting full paradigms for word classes, (vi) examining agreement rules and word order

flexibility, (vii) identifying borrowed morphemes, and (viii) comparing the findings with historical data on the morphology of Southern Nilotic languages (Rottland, 1982/3, Creider and Creider 1989, Mietzner 2006, König *et al* 2016, Micheli 2018).

## 3.2 Word classes and Morphological structures

The word classes in Okiek have been categorized as listed in 60 following an empirical examination of the morphological, morphosyntactic, morphophonological and semantic effects of morphemes in the data collected for this study. This method of categorizing the parts of speech of a language mirrors the proposals on how to classify members of a word class by Schachter and Shopen (2007), and Payne (1997). The description of the phonological structures of members of a word class not only focuses on the description of the discrepancies to the general phonotactic constraints described in Okiek phonology (2.0), but also serves as the phonological foundations upon which morphological and morphophonological processes will be applied.

### 60. The inventory of word classes

	Word class	Examples
a.	Nouns	<i>ɛʊt</i> 'hand'
b.	Verbs	<i>kʷɛ:r</i> 'hit'
c.	Adjectives	<i>ajɛp</i> 'generous'
d.	Adverbs	<i>mutjo</i> 'slowly'
e.	Pronouns	<i>anɛ</i> 'I'
f.	Participle	<i>comotin</i> 'loved' (PL)

g. Particles:

-Numerals	<i>ɔɛŋ</i> 'two'
-Quantifier	<i>alak</i> 'some'
-Preposition	<i>ɛn</i> 'in'

### 3.2.1 Nouns

Section 3.2.1 describes the criteria of identifying nouns (3.2.1.1), the phonological structure of nominal roots (3.2.1.2), the morphological structure of nouns (3.2.1.3), noun derivation (3.2.1.4), noun inflection (3.2.1.5), and nominal definiteness and specificity (3.2.1.6). The noun morphology of Okiek exhibits a richly agglutinative structure organized through multiple affixal layers, encoding lexical, grammatical, and discourse-relevant features. Nouns are typically composed of a root morpheme, optionally preceded by agentive or nominalizing prefixes, and followed by a series of suffixes that include nominalizers, class markers (primary suffixes), number markers (secondary suffixes), and possessive or demonstrative suffixes. The interaction between these suffixes reflects a tightly constrained morphotactic system where suffix co-occurrence is governed by semantic roles and syntactic context.

Primary suffixes function both as nominal class markers and indicators of number (e.g., *-tɛ*, *-aɪ*, *-ɔɪɪ*), showing allomorphic variation triggered by ATR vowel harmony and root phonotactics. Secondary suffixes such as *-t* (singular) and *-k* (plural) express number and exhibit systematic alternation patterns that correlate with semantic distinctions and definiteness. Demonstrative and possessive suffixes block secondary suffixes, introducing morphological competition in the suffixal paradigm.

The number-marking system is notably asymmetrical: plural is more overtly marked and morphologically varied, while singular may be zero-marked or indicated only by default suffixes. Suppletive and reduplicated forms further expand the morphological inventory, especially among kinship, body part, and mass nouns. Possession is marked by suffixes

that encode both person and number of the possessor and often trigger deletion of other suffixes. Demonstratives reflect proximal, medial, and distal reference distinctions and play a role in definiteness and specificity marking.

Morphophonologically, suffixal behaviour is shaped by ATR harmony, vowel coalescence, and consonantal alternation. Semantically, noun morphology interacts with definiteness, specificity, possession, and quantity, reflecting both referential properties and culturally salient classifications. This system supports a high degree of semantic granularity and syntactic agreement, offering a compelling lens into the grammatical, cognitive, and discourse structures of the Okiek language.

### 3.2.1.1 Criteria of identification

Morphologically, nominal roots accept: derivational affixes i.e., primary suffixes (PS) (3.2.1.4.1.1); secondary suffixes (SS) (3.2.1.4.1.2); the nominalizer (NMLZ) suffix *-int* (3.2.1.4.1.4); the nominalizer prefix (NMLZ) *ka-* (3.2.1.4.1.5); and the agent prefix (AGP) *kɛp-* (3.1.4.1.6), Inflectional affixes i.e., demonstrative (DEM) suffixes (3.2.1.5.1); possessive (POSS) suffixes (3.2.1.5.2); the genitive (GEN) suffix *-a:p* (4.1.1.2.7); and case marking (4.2.1.3.1) by tone (2.2). All inflectional affixes in noun morphology are categorized for number with the exception of the genitive suffix *-a:p* and tonal inflections for case.

Syntactically, nouns serve as: heads of noun phrases (4.1.1), nominal modifiers in the noun phrase (4.1.1.2.6), and as predicates in nominal clauses (4.2.1.2.1).

Given that there is no overt morphological marker of definiteness and specificity in Okiek morphology, the definiteness or specificity of each noun is inferred either from the context or through the strategies described in section 3.2.1.6. The use of the English articles 'a/an/the' by the author is idiosyncratic.

### 3.2.1.2 Phonological structure of nominal roots

The distribution of phonemes in word initial, medial, and final positions in nominal roots matches the distribution of phonemes described in the chapter on phonology (2.0). Examples of nominal roots by number of syllables and syllable shapes, are provided in 61. The nominal stems which are regularly used in discourse are shown in the last column.

#### 61. Examples of nominal roots by number of syllables

	Syllable shapes	Nominal roots Phonemic	Phonetic	Nominal stems
Monosyllabic:				
	V	/a:/	[a:]	<i>a:</i> 'mother'
	CV	[ka]	[ka]	<i>ka</i> 'home'
	CVC	/tap/	[taβ]	<i>tap-tɛ-t</i> flower-PS-SG 'a flower'
Disyllabic:				
	VC.CVC	/Inta:r/	[Inda:r]	<i>Inta:r-ɛ-t</i> snake-PS-SG 'a snake'
	CVC.CV	/tupco/	[tuβco]	<i>tupco</i> 'an auntie'
	CVC.VC	/tarɪt/	[tarɪt]	<i>tarɪt-tɛ-t</i> bird-PS-SG 'a bird'
Trisyllabic:				
	V.CV.CV	/ilolo/	[ilolo]	<i>ilolo-i-t</i> luggage-PS-SG 'luggage'

CV.CV.CV	/pamʊŋɔ/	[pamʊŋɔ]	pamʊŋɔ- <i>ɪstɛ-k</i> father in law-PS-PL 'fathers in law'
VC. CV.CVC	/ɪŋkanas/	[ɪŋɣanas]	<i>ɪnkanas-ɛ-t</i> society-PS-SG 'a society/village'
Tetrasyllabic:			
CV.VC.VC.V	/ɪanaɲɛ/	[ɪanaɲɛ]	ɪanaɲɛ- <i>ɪstɛ-k</i> cousin-PS-PL 'cousins'
CV.CV.CV.CV	/sinɔloli/	[sinɔloli]	<i>sinɔloli-e-t</i> swinging game-PS-SG 'a swinging game'

### 3.2.1.3 The morphological structure of nouns

The examination of the inventory of morphological slots in the structure of nouns reveals that there are six slots as shown in 62 i.e., one prefix slot, one root slot, and four suffix slots. While inflectional affixers expressing nominal grammatical categories are restricted to suffixation, derivational affixes affecting lexical meaning allow for either prefixation, suffixation and circumfixing as shown in noun derivation (3.2.1.4).

The derivational prefixes i.e., the agent prefix (AGP) *kɪp-* and the nominalizer prefix (NMLZ) *ka* are mutually exclusive in the prefix slot. A noun, verb or adjective can occur in the root slot in the formation of denominal nouns, deverbal nouns, and deadjectival nouns respectively as described in noun derivation (3.2.1.4). Additional derivational affixes in the suffix slot include the nominalizer suffix *-in* in the +1 position, a primary suffix in the +2



position, and a secondary suffix in the +3 position. Inflectional affixes i.e., demonstrative suffixes and suffixes of possession only occur in the suffix slots. A possessive suffix can either occur in the +3 or +4 positions. The SG secondary suffix *-t*, possessive suffixes and demonstrative suffixes are mutually exclusive in the +3 position as illustrated in the distributional and functional analysis of demonstrative suffixes (3.2.1.5.1) and possessive suffixes (3.2.1.5.2). In addition, possessive suffixes and the genitive suffix *a:p* are mutually exclusive in +4. Though the structure of nouns is agglutinative at face value, the fusion of the category number with that of possessive and demonstrative suffixes presents a situation where the instead of two morphemes, one morpheme e.g., a possessive suffix expresses both possession and number simultaneously.

The structure of the nominal stem containing up to five nominal affixes as presented in 62 relates to what could be identified as a noun phrase in English.

## 62. The morphological structure of nouns

a.

Prefix slot		Root slot	Suffix slots			
AGP	<i>kɪp-</i>		NMLZ	PS	SG/PL	POSS
			<i>-in</i>			
NMLZ	<i>ka-</i>				SG/POSS	GEN
				PS.SG/DEM	SG.PL/DEM	
-1		0	+1	+2	+3	+4

b. *ko-net-in-te-ni-ŋon*

NMLZ-teach-NMLZ-PS-DEM.PROX.SG-SG.POSS.SG

'this my teacher'

- c. *ko-net-i-cu-non*  
 NMLZ-teach-NMLZ-PS-DEM.PROX.PL-SG.POSS.SG  
 'these my teachers'

Further morphotactic analysis of the morphological structure of nouns reveals that nouns can occur as simple stems only consisting of only a root e.g., *ka* 'home' or a root plus one or both of what are known as primary and secondary suffixes in Southern Nilotic grammar yielding what are known as primary and secondary forms which relate to definiteness and specificity as discussed in section (3.2.1.6).

In that case the morphological structure of nouns can be re-analyzed as contains three structural positions i.e., a root slot, and two suffix slots as shown in 5(a). optional primary suffixes in position +1 precede optional secondary suffixes (SG/PL) in position +2 i.e., [root] +\_/PS,SS/. This recategorization of nouns yields four nominal shapes i.e., A noun that can occur as a root (63b), a primary form i.e., a root modified by a primary suffix (63c), or as a secondary form i.e., a root modified by a secondary suffix (63d) or a root modified by both primary and secondary suffixes (63e).

### 63. The derivational structure of nouns

a.

Root	PS	SS
0	+1	+2

	Nominal structures	Examples
b.	<i>Root</i>	<i>patɪɛp</i> 'partner'
c.	<i>root-PS</i>	<i>salaut-a</i> voice-PS 'a voice'
d.	<i>root-SS</i>	<i>kɛɪ-t</i> tree-SG 'a tree'
e.	<i>root-PS-SS</i>	<i>o:r-to-k</i> sheep-PS-PL 'sheep'

### 3.2.1.4 Noun derivation

Section 3.2.1.4 describes the morphology, morphophonological and semantic effects of nominal derivational affixes. There are two strategies for noun derivation i.e., affixation (3.2.1.4.1) and reduplication (3.2.1.4.2).

#### 3.2.1.4.1 Affixation

The inventory of morphemes in noun derivation includes primary suffixes (3.2.1.4.1.1), secondary suffixes (3.2.1.4.1.2), the nominalizer suffix *-in* (3.2.1.4.1.3), the nominalizer prefix *ka-* (3.2.1.4.1.5), and the agent prefix *kɪp-* (3.2.1.4.1.6).

##### 3.2.1.4.1.1 Primary suffixes

Primary suffixes are formative morphemes in noun derivation that are categorized into three i.e., singular primary suffixes, plural primary suffixes, and primary suffixes non-specified for number as shown in 64. Morphophonologically, primary suffixes are harmonizing suffixes in relation to ATR vowel harmony. That is, they adjust their ATR value to suit the ATR value of the vowels in the noun stem that they intend to attach to.

Consequently, primary suffixes are presented in their -ATR form in the inventory shown in 64.

#### 64. The inventory of primary suffixes

SG	<i>-a</i>	<i>-(t)u</i>	<i>-wɔ</i>	<i>-ɔn</i>	<i>-nɛ</i>	<i>-sɛ</i>	<i>-ti a</i>	<i>-(n)ti</i>	<i>-iɔ</i>	<i>-wanti</i>	
PL	<i>- iɛ</i>	<i>-aɪ</i>	<i>-ɔɪ</i>		<i>-ɔni</i>	<i>-ɔno</i>	<i>- ɔniɛ</i>	<i>-iɔɔni</i>	<i>-wɔki</i>	<i>-ɛni</i>	<i>-ini</i>
Non- specified for number	<i>-ɛ</i>	<i>-ɪ</i>	<i>-ɔ</i>	<i>-wɛ</i>	<i>-tɛ</i>	<i>-tɔ</i>	<i>-ut(iɛ)</i>	<i>-(V)siɛ</i>	<i>-∅</i>		

Investigations into the distribution of primary suffixes in nominal stems show that plural primary suffixes predominantly occur in their +ATR forms in plural noun stems as shown in the alternation of primary suffixes in singular and plural number paradigm in the nominal number system (3.2.1.4.1.3). The trigger of ATR vowel harmony being the morphologization of ATR. In the examples in 65, the singular primary suffix *-wɛ* harmonizes with the -ATR vowels in the singular nominal root in 65(a) and the +ATR vowels in the noun in 65(b).

#### 65. ATR aspects of primary suffixes

- a. *ɔr-wɛ-t*  
friend-PS-SG  
a 'friend'
- b. *tul-we-t*  
hill-PS-SG  
'a hill/mountain'

Exceptionally, different primary suffixes can occur with the same nominal root thus presenting historical or lexicalized irregularities as exhibited by the two examples in 66. In addition, the alternations of primary suffixes in the same nominal stem are accompanied by the inclusion of the singular secondary suffix *-t* as shown in singular nouns in 66 (a).

66. Different primary suffixes for the same nominal root

a. Singular nouns

	without a secondary suffix	With a secondary suffix
i.	<i>wer-o</i> boy-PS 'a boy/son'	<i>wer-i-t</i> boy-PS-SG 'a boy/son'
ii.	<i>tiεpɔs-a</i> woman-PS 'a woman'	<i>tiεpɔs-ε-t</i> woman-PS-SG 'a woman'

b. Plural noun

<i>rop-ini-k</i> money-PS-PL 'money'	<i>rop-isie-k</i> money-PS-PL 'money'
--	---

The morphotactic analysis between primary suffixes and the progressive aspect demonstrative suffixes (3.2.1.5.1.2), further reveal the use of demonstrative suffixes triggers an alternation of a primary suffix in the nominal stem, i.e., a different primary suffix is used with the noun in isolation and a different primary suffix is used with the noun when modified by a progressive suffix as shown in section 3.2.1.5.1.2.

Semantically, primary suffixes have an arbitrary function in the categorization of nouns but can serve as devices for their morphological classification as attested in Kalenjin languages (Tucker & Bryan 1962, 1964; Creider & Creider 1989; and Toweet 1975) and in Datooga (Kießling 2000, Griscom 2019).

### 3.2.1.4.1.1 Singular primary suffixes

Singular primary suffixes predominately derive denominal nouns with the exception of the singular suffix *-sɛ* and *-(n)ɿ* which derive deverbal nouns as shown in 67(f) and 67i(i).

#### 67. Nouns categorized by singular primary suffixes

##### a. *-a*

i. *salaut-a*  
voice-PS  
'a voice'

ii. *tiɛɔs-a*  
woman-PS  
'a woman'

iii. *tapɔj-a-t*  
star-PS-SG  
'a star'

##### b. *-ʊ*

*sɛr-ʊ-t*  
nose-PS-SG  
'a nose'

##### c. *-wɔ*

*ɿkɿk-wɔ-t*  
shoulder- PS-SG  
'a shoulder'

d. -ɔn

pɔj-ɔn  
elder-PS  
'an elder'

e. -nɛ

mɔr-nɛ-t  
toe-PS-SG  
'a toe'

f. -sɛ

	verb roots	Nominal stems
i.	<i>tac</i> 'receive'	<i>tok-se-t</i> receive-PS-SG 'a reception'
ii.	<i>kur</i> 'call'	<i>kur-se-t</i> call-PS-SG 'a call'

g. -tɪa

pan-tɪa-t  
maize-PS-SG  
'maize'

h. -ɪɔ

i. *sok-io-t*  
leaf-PS-SG  
'a leaf'

iii. *pel-io-t*  
elephant-PS-SG  
'an elephant'

ii. *ɲol-io-t*  
word-PS-SG  
'a word/message'

iv. *kom-io-t*  
honey-PS-SG  
'honey'

v. *put-io-t*  
hair-PS-SG  
'hair'

vi. *motir-io-t*  
teacher of culture-PS-SG  
'a teacher of culture'

i. (n)ɬɪ

i. *a:m* *o:m-ti-t*  
'eat' eat-PS-SG  
'food'

ii. *tupco* *tupcon-ti-t*  
'relative' relative-PS-SG  
'brotherhood'

j. -wantɪ

*lak-wɛ-t* *lak-wantɪ-t*  
child-PS-SG child-PS-SG  
'childhood'

### 3.2.1.4.1.1.2 Plural primary suffixes

Examples of nouns categorized by the plural primary suffixes are as shown in 68. The plural primary suffix -wɔkɪ exceptionally derives a nominal stem from the numeral *taman* 'ten' as shown in 68(h).

68. Nouns categorized by plural primary suffixes

a. -iɛ

*kel-ie-k*  
leg-PS-PL  
'legs'



b. -aɪ/oɪ

i. kɪkɔmp-aɪ-k  
cup-PS-PL  
'cups'

ii. ɪmpɪr-aɪ-k  
ball-PS-PL  
'balls'

iii. keɪk-oɪ-k  
spoon-PS-PL  
'spoons'

c. -(ɪ)nɪ

i. tere-nɪ-k  
pot-PS-PL  
'pots'

ii. eu-nɪ-k  
hand-PS-PL  
'hands'

iii. kurkot-ini-k  
door-PS-PL  
'doors'

iv. ser-nɪ-k  
nose-PS-PL  
'noses'

v. rop-ini-k  
money-PS-PL  
'money'

d. -ɔno

i. tul-ono-k  
hill-PS-PL  
'hills'

ii. cor-ono-k  
friend-PS-PL  
'friends'

iii. tul-ono-k  
hill-PS-PL  
'hills'

e. -ɔnɪ

*mʊkat-ɔnɪ-k*  
bread-PS-PL  
'loaves of bread'

f. -ʊnɪɛ

verb

Noun stem

*sior*  
discover  
'discover'

*ko-sior-unie-t*  
NMLZ-discover-PS-SG  
'a discovery'

g. -ɪsɔnɪ

*pɔ-ɪsɔnɪ-k*  
elder-PS-PL  
'elders'

h. -wɔkɪ

<i>taman</i>	<i>tomon-woki-k</i>
'ten'	ten-PS-PL
	'sets of ten'

i. -ɛnɪ

*motir-eni-k*  
teacher of culture-PS-PL  
'teachers of culture'

### 3.2.1.4.1.1.3 Primary suffixes non-specified to number

Primary suffixes non-specified for number can occur in either singular or plural noun stems. Examples of nouns categorized by primary suffixes non-specific to number are shown in 69. De-pronominal nouns are derived by the primary suffix *-tɛ* as shown in 69(e). The suffix *-(V)ɛɪtɛ* derives abstract deverbal nouns as shown in 69(h) and it is commonly attested in loan nouns e.g., the Kiswahili loan words *karɪ* 'a car' *ɛɪɛkalɪ* 'a government' as shown in 69(g). Nouns that are unmarked by a primary suffix are shown in 69(h).

69. Examples of nouns categorized by primary suffixes unspecified for number

a. *-ɛ*

Singular nouns categorized by the primary suffix *-ɛ*

- |      |  |       |  |
|------|--|-------|--|
| i.   | <i>ɔɔn-ɛ-t</i><br>bush-PS-SG<br>'a bush'         | vii.  | <i>ɔɪn-ɛ-t</i><br>river-PS-SG<br>'a river'                   |
| ii.  | <i>ɪɪɪ-ɛ-t</i><br>monkey-PS-SG<br>'a monkey'     | viii. | <i>kikɔmp-ɛ-t</i><br>cup-PS-SG<br>'a cup'                    |
| iii. | <i>ta:ɪɪɪ-ɛ-t</i><br>bird-PS-SG<br>'a bird'      | ix.   | <i>ɪɪanas-ɛ-t</i><br>society-PS-SG<br>'a society/town'       |
| iv.  | <i>kwej-ɛ-t</i><br>shoe-PS-SG<br>'a shoe'        | x.    | <i>kalam-ɛ-t</i><br>pen-PS-SG<br>'a pen'                     |
| v.   | <i>kɔt-ɛ-t</i><br>language-PS-SG<br>'a language' | xi.   | <i>kɛɪk-ɛ-t</i><br>spoon-PS-SG<br>'a spoon'                  |
| vi.  | <i>ɪmpɪr-ɛ-t</i><br>ball-PS-SG<br>'a ball'       | xii.  | <i>ɪnt-ɛ-t</i><br>brother in law-PS-SG<br>'a brother in law' |

xiii. *sɔp-ɛ-t*  
 life- PS-SG  
 'a life'

xiv. *ɬɪɪf-ɛ-t*  
 window-PS-SG  
 'a window'

xv. *pɔɪn-ɛ-t*  
 antelope-PS-SG  
 'an antelope'

# Plural nouns categorized by the primary suffix -ɛ

i. *sok-e-k*  
 leaf-PS-PL  
 leaves

ii. *kɔŋ-e-k*  
 eye-PS-PL  
 'eyes'

iii. *to-e-k*  
 visitor-PS-PL  
 visitors

iv. *ŋa/-ɛ-k*  
 word-PS-PL  
 'words/messages'

v. *pe/-e-k*  
 elephant-PS-PL  
 'elephants'

vi. *sok-e-k*  
 leaf-PS-PL  
 'leaves'

vii. *pəŋ-ɛ-k*  
 meat-PS-PL  
 'portions of meat'

- viii. *put-e-k*  
hair-PS-PL  
'hairs'

b. -ɪ

Singular nouns categorized by the primary suffix -ɪ

- |   |  |
|---|--|
| i. <i>mɛt-ɪ-t</i><br>head-PS-SG<br>'a head'   | iii. <i>ɛt-ɪ-t</i><br>behind-PS-SG<br>'behind'   |
| ii. <i>ta:j-ɪ-t</i><br>ahead-PS-SG<br>'ahead' | iv. <i>saŋ-ɪ-t</i><br>outside-PS-SG<br>'outside' |

Plural nouns categorized by the primary suffix -ɪ

- |  |   |
|--|---|
| i. <i>ŋok-i-k</i><br>dog-PS-PL<br>'dogs'             | v. <i>wer-i-k</i><br>boy-PS-PL<br>'boys'              |
| ii. <i>mor-i-k</i><br>toe-PS-PL<br>'toes'            | vi. <i>topo-i-k</i><br>star-PS-PL<br>'stars'          |
| iii. <i>ŋetot-i-k</i><br>man-PS-PL<br>'men'          | vii. <i>kor-i-k</i><br>house-PS-PL<br>'houses'        |
| iv. <i>poin-i-k</i><br>antelope-PS-PL<br>'antelopes' | viii. <i>kwen-i-k</i><br>firewood-PS-PL<br>'firewood' |

- ix. *tokoc-i-k*  
forehead-PS-PL  
'foreheads'

c. -ɔ

Singular nouns categorized by the primary suffix -ɔ

- i. *to-o-t*  
visitor-PS-SG  
'a visitor'
- ii. *pele-o-t*  
elephant-PS-SG  
'an elephant'
- iii. *teket-o-t*  
chest-PS-SG  
'a chest'
- iv. *wer-o*  
boy-PS  
'a boy/son'

Plural nouns categorized by the primary suffix -ɔ

- i. *tiepos-o-k*  
woman-PS-PL  
'women'
- ii. *tisi-o-k*  
monkey-PS-PL  
'monkeys'
- iii. *kwe-o-k*  
shoe-PS-PL  
'shoes'
- iv. *rot-o-k*  
knife-PL  
'knives'
- v. *lok-o-k*  
child-PS-SG  
'child'
- vi. *tirif-o-k*  
window-PS-PL  
'windows'

vii. *tisi-o-k*  
monkey-PS-PL  
'monkeys'

viii. *kwe-o-t*  
shoe-PS-SG  
'shoes'

d. -wɛ

Singular nouns categorized by the primary suffix -wɛ

i. *ɾt-wɛ-t*  
knife-PS-SG  
'a knife'

iii. *lak-wɛ-t*  
child-PS-SG  
'a child'

ii. *ɔr-wɛ-t*  
friend-PS-SG  
'a friend'

iv. *ɔkɔɾm-wɛ-t*  
lion-PS-SG  
'a lion'

Plural nouns categorized by the primary suffix -wɛ

i. *tim-we-k*  
forest-PS-PL  
'forests'

iv. *koso:r-we-k*  
time-PS-PL  
'times'

ii. *ikur-we-k*  
ear-PS-PL  
'ears'

iii. *kujon-we-k*  
bow-PS-PL  
'bows'

v. *tiep-we-k*  
girl-PS-PL  
'girls'

e. *-tɛ*

Singular nouns categorized by the primary suffix *-tɛ*

- |   |  |
|---|--|
| i. <i>anɛ-tɛ-t</i><br>1SG-SE-SG<br>'I as me'                      | iv. <i>tap-tɛ-t</i><br>flower- PS-SG<br>'a flower'     |
| ii. <i>ɪnɛ-tɛ-t</i><br>2SG-SE-SG<br>'you as you'                  |  |
| iii. <i>ɪnɛ-tɛ-t</i><br>3SG-SE-SG<br>'her as her/<br>'him as him' | v. <i>a:r-tɛ-t</i><br>sheep- PS-SG<br>'a sheep'        |
|   | vi. <i>kwɛn-tɛ-t</i><br>firewood-PS-SG<br>'a firewood' |

Plural nouns categorized by the primary suffix *-tɛ*

*pan-tɛ-k*  
maize-PS-PL  
'maize'

f. *-ʊt(ɪɛ)*

*into:sot-utie-k*  
elderly woman-PS-PL  
'elderly women'

g. *-Vɪɛ (-ɪɛ, -ɪɪɛ, ʊɪɛ, and -ɔɪɛ)*

Plural nouns marked by the primary suffix *-(V)ɪɛ*



i.	<i>ɪlɪɪa-ɪsɪɛ-k</i> weed-PS-PL 'weeds'	x.	<i>ɪŋɪɔɪ-ɪsɪɛ-k</i> aborted fetus-PS-PL 'aborted fetuses'
ii.	<i>pɛ:t-usie-k</i> day-PS-PL 'days'	xi.	<i>sɛɾɛkɪ-ɪsɪɛ-k</i> government-PS-PL 'governments'
iii.	<i>sɪnt-osie-k</i> brother in law-PS-PL 'brothers in law'	xii.	<i>kɪɪ-ɪsɪɛ-k</i> car-PS-PL 'cars'
iv.	<i>kɛɲɪ-ɪsɪɛ-k</i> year-PS-PL 'years'	xiii.	<i>koti-sie-k</i> koti-PS-PL 'coats'
v.	<i>sop-usie-k</i> life-PS-PL 'lives'	xiv.	<i>lonɟi-isie-k</i> pant-PS-PL 'pants'
vi.	<i>kɔt-ɪsɪɛ-k</i> language-PS-PL 'languages'	xv.	<i>ɪŋurup-isie-k</i> group-PS-PL 'groups'
vii.	<i>kalam-ɔsɪɛ-k</i> pen-PS-PL 'pens'	xvi.	<i>rop-isie-k</i> money-PS-PL 'money'
viii.	<i>ɪŋanas-ɔsɪɛ-k</i> society-PS-PL 'societies'	xvii.	<i>kɪɪ-ɪsɪɛ -x</i> car-PS-PL 'cars'
ix.	<i>son-osie-k</i> leaf-PS-PL 'bushes'	xviii.	<i>kɛtapu-ɪsɪɛ-k</i> book-PS-PL 'book'

Singular deverbal nouns marked by the primary suffix *-ɪsɪɛ* .

Morphophonologically, the palatal /c/ in the verb in (iv) alternates with the velar /k/ in the noun stem.

	Verb root	Noun stem
i.	<i>pæj</i> 'donate'	<i>pcej-isie-t</i> donate-PS-SG 'a donation'
ii.	<i>ken</i> 'deceive'	<i>ken-isie-t</i> deceive-PS-SG 'a deception'
iii.	<i>jaj</i> 'create'/'do'	<i>joj-isie-t</i> create-PS-SG 'a creation'
iv.	<i>wec</i> 'hate'	<i>wek-isie-t</i> hate-PS-SG 'a hatred'

h. -∅

Singular nouns unmarked by a primary suffix

i. <i>sukul</i> 'a school'	vi. <i>tere-t</i> pot-SE-SG 'a pot'
ii. <i>ɲaɲa</i> 'a tomato'	vii. <i>ɪnta:sat</i> 'an elderly woman'
iii. <i>ɪntɛɾɛpa</i> 'a driver'	viii. <i>sɔwɛ-t</i> back-SG 'back'
iv. <i>sɔɲɔɾa</i> 'a rabbit'	
v. <i>kɛtɔɲɔ</i> 'an onion'	ix. <i>kɛtɪ-t</i> tree-SG 'a tree'

- |  |   |
|--|---|
| x. <i>kʊkʊ</i><br>'a grandfather'        | xv. <i>ɛʊ-t</i><br>hand-SG<br>'a hand'      |
| xi. <i>kʊkʊ</i><br>'a grandmother'       | xvi. <i>ŋɔŋɔ/-t</i><br>pot-SG<br>'a pot'    |
| xii. <i>ejo</i><br>'mother'              | xvii. <i>mɔntɔ/-t</i><br>bag-SG<br>'a bag'  |
| xiii. <i>mama</i><br>uncle<br>'an uncle' | xviii. <i>kɛŋɪ-t</i><br>year-SG<br>'a year' |
| xiv. <i>pamʊŋɔ</i><br>'father in law'    |   |

Plural nouns unmarked by a primary suffix

- |  |  |
|--|--|
| i. <i>ce-ko</i><br>milk-PL<br>'milk'       | vi. <i>ŋule-k</i><br>saliva-PL<br>'saliva'   |
| ii. <i>keti-k</i><br>tree-PL<br>'trees'    | vii. <i>koi-k</i><br>stone-PL<br>'stones'    |
| iii. <i>tʊ-ka</i><br>cow-PL<br>'cows'      | viii. <i>koroti-k</i><br>blood-PL<br>'blood' |
| iv. <i>to:riti-k</i><br>bird-PL<br>'birds' | ix. <i>sokose-k</i><br>urine-PL<br>'urine'   |
| v. <i>pe:-k</i><br>water-PL<br>'water'     | x. <i>ɪpcaɪ-k</i><br>sweat-PL<br>'sweat'     |

- xi. *sute-k*  
soup-PL  
'soup'

i. *-to*

Singular nouns marked by the primary suffix *-to*

- |  |  |
|--|--|
| i. <i>kɔɪ-ta</i><br>stone-PS<br>'a stone'    | viii. <i>kasa:r-ta</i><br>time- PS<br>'time'       |
| ii. <i>kɔŋ-ta</i><br>eye- PS<br>'an eye'     | ix. <i>tɔkɔj-ta</i><br>forehead-PS<br>'a forehead' |
| iii. <i>tɛ-ta</i><br>COW- PS<br>'a cow'      | x. <i>wak-ta</i><br>road- PS<br>'a road'           |
| iv. <i>kel-to</i><br>leg- PS<br>'a leg'      | xi. <i>ɾɔp-ta</i><br>rain- PS<br>'rain'            |
| v. <i>tɪm-to</i><br>forest- PS<br>'a forest' | xii. <i>asɪs-ta</i><br>sun- PS<br>'the sun'        |
| vi. <i>ɪkʊr-ta</i><br>ear- PS<br>'an ear'    | xiii. <i>pen-to</i><br>meat-Ps<br>'meat'           |
| vii. <i>kujan-ta</i><br>bow- PS<br>'a bow'   | xiv. <i>ŋok-to</i><br>dog- PS<br>'a dog'           |

Plural nouns marked by the primary suffix *-to*

- i. *o:r-to-k*  
sheep-PS-PL  
'sheep'
- ii. *top-to-k*  
flower-PS-PL  
'flowers'

### 3.2.1.4.1.2 Secondary suffixes

Secondary suffixes include singular secondary suffixes (3.2.1.4.1.2.1) and plural secondary suffixes (3.2.1.4.1.2.2). Secondary suffixes are mutually exclusive with demonstrative suffixes (3.2.1.5.1).

#### 3.2.1.4.1.2.1 Singular secondary suffix

Singular secondary suffixes include the suffix *-t* and the zero morpheme  $\emptyset$ . Nouns derived by the singular secondary suffix *-t* are shown in 70 (a) and those derived by the zero morpheme are shown in 70(b).

70. Noun derived by singular secondary suffix *-t*

a. Singular secondary suffix *-t*

i *tere-t*  
pot-SG  
'a pot'

ii *sonε-t*  
back-SG  
'a back'

iii *kεt-t*  
tree-SG  
'a tree'

iv *ευ-t*  
hand-SG  
'a hand'

v *τηνηχ-t*  
pot-SG  
a 'pot'

vi *mɔntɔɪ-t*  
bag-SG  
'a bag'

vii *kɛɲɪ-t*  
year-SG  
'a year'

b. Singular nouns unmarked by secondary suffix

i *ɬanaɬɛ*  
cousin  
'a cousin'

iii *ɲɔj-ɔn*  
elder-PS  
'an elder'

ii *ɬɛɲɔs-a*  
woman-PS  
'a woman'

### 3.2.1.4.1.2.2 Plural secondary suffixes

Plural secondary suffixes include *-k*, the -ATR plural secondary suffix *-ka*, and the +ATR allomorph *-ko*. The plural secondary suffix *-k* derives mass nouns with an exception shown in 71a(i and iv). Nouns derived by the plural markers *-ka* and *-ko* are uncommon. Examples of nouns derived by *-ka* and *-ko* are shown in 71(b).

#### 71. Nouns derived by plural secondary suffixes

a. Examples of nouns marked by the plural suffix *-k*

i. *keti-k*  
tree-PL  
'trees'

ii. *pe:-k*  
water-PL  
'water'

iii. *ɲule-k*  
saliva-PL  
'saliva'

iv. *koi-k*  
stone-PL  
'stones'

v. *koroti-k*  
blood-PL  
'blood'

vi. *sokose-k*  
urine-PL  
'urine'

vii. *ɫpcaɲ-k*  
sweat-PL  
'sweat'

viii. *sute-k*  
soup-PL  
'soup'

b. Plural suffixes *-ka* and *-ko*

i. *ce-ko*  
milk-PL  
'milk'

ii. *tu-ka*  
cow-PL  
'cows'

### 3.2.1.4.1.3 The nominal number system

Okiek displays a defective nominal number marking system with five strategies for indicating number in nouns as shown in 72 i.e., *singulare tantum*-nouns that exist only in their marked singular forms without an existing plural form<sup>14(a)</sup>, *plurale tantum*-nouns that exist only in their marked plural forms without an existing singular form 72(b), canonical number marking alternations- nouns that are overtly marked for number in both their singular and plural forms 72(c), and unmarked singular base forms 72(d-e). There are two kinds of nouns in the unmarked singular base forms i.e., nouns unmarked for number in their singular form and exist with no plural forms (72d), and nouns unmarked for number in their singular form but contrast with their marked plural forms 72(e). The semantic impact of the presence and/or absence of primary and secondary suffixes in marking nominal number is explained in section 3.2.1.6 (definiteness and specificity).

## 72. Strategies for marking nominal number

	Strategies	Singular	Plural
a.	Singulare tantum	Marked	Doesn't exist
b.	Plurale tantum	Doesn't exist	Marked
c.	Canonical	Marked	Marked
d.	Unmarked singular base	Unmarked	Doesn't exist
e.	Unmarked singular base	Unmarked	Marked

### a. Singulare tantum

- |   |   |
|---|---|
| <p>i. <i>ara-wε-t</i><br/>moon-PS-SG<br/>'the moon'</p>             | <p>vii. <i>sorun-int-e-t</i><br/>save-NMLZ-PS-SG<br/>'savior'</p> |
| <p>ii. <i>oroken-e-t</i><br/>fear-PS-SG<br/>'fear'</p>              | <p>viii. <i>toror-e-t</i><br/>God-PS-SG<br/>'God'</p>             |
| <p>iii. <i>kamuk-ε-t</i><br/>power-PS-SG<br/>'power'</p>            | <p>ix. <i>turu-e-t</i><br/>sky-PS-SG<br/>'the sky'</p>            |
| <p>iv. <i>pol-o-t</i><br/>argue-PS-SG<br/>'argument'</p>            | <p>x. <i>tul-we-t</i><br/>thunder-PS-SG<br/>'thunder'</p>         |
| <p>v. <i>lak-want-t</i><br/>child-PS-SG<br/>'childhood'</p>         | <p>xi. <i>il-e-t</i><br/>light-PS-SG<br/>'light'</p>              |
| <p>vi. <i>ηwon-in-tu-t</i><br/>earth-NMLZ-PS-SG<br/>'the world'</p> | <p>xii. <i>sikis-ie-t</i><br/>parent-PS-SG<br/>'parenting'</p>    |



xiii. *rori-o-t*  
laugh-PS-SG  
'laugh'

xvi. *maŋ-nat-ε-t*  
brave-PART-SE-SG  
'bravery'

xiv. *kuton-e-t*  
weather-PS-SG  
'wind'

xvii. *kim-not-e-t*  
strong-PART-PS-SG  
'strength'

xv. *wek-isie-t*  
hate-PS-SG  
'hatred'

#### b. Plurale tantum

i. *ce-ko*  
milk-PL  
'milk'

v. *sokose-k*  
urine-PL  
'urine'

ii. *pe:-k*  
water-PL  
'water'

vi. *ɫɪpcaɪ-k*  
sweat-PL  
'sweat'

iii. *ŋule-k*  
saliva-PL  
'saliva'

vii. *sute-k*  
soup-PL  
'soup'

iv. *ko:roti-k*  
blood-PL  
'blood'

#### c. Examples of canonical number marking alternations

i. SG  
*teket-o-t*  
chest-PS-SG  
'a chest'

PL  
*teket-i-k*  
chest-PS-PL  
'chests'

- |     |   |   |
|-----|---|---|
| ii. | <i>wer-i-t</i><br>boy-PS-SG<br>'a boy/ son' | <i>wer-i-k</i><br>boy-PS-PL<br>'boys/ sons' |
|-----|---|---|

d. Unmarked singular base forms with no plurals

- |      |  |     |   |
|------|--|-----|---|
| i.   | <i>asɪs-ta</i><br>sun-PS<br>'the sun'              | iv. | <i>perper-in-to</i><br>foolish-NMLZ-PS<br>'folly' |
| ii.  | <i>koris-to</i><br>weather-PS<br>'air/the weather' | v.  | <i>pirir-in-to</i><br>red-NMLZ-PS<br>'reddish'    |
| iii. | <i>ko-in-to</i><br>long-NMLZ-PS<br>'length'        | vi. | <i>kipseŋkwet</i><br>'Heaven'                     |

e. Unmarked singular base forms with marked plural forms

- |      |  |   |
|------|--|---|
|      | SG                                       | PL  |
| i.   | <i>ejo</i><br>mother<br>'a mother'       | <i>eyo-isie-k</i><br>mother-PS-PL<br>'mothers'  |
| ii.  | <i>papa</i><br>father<br>'a father'      | <i>papa-ɪsɪɛ-k</i><br>father-PS-PL<br>'fathers' |
| iii. | <i>ɪɛpɔs-a</i><br>woman- PS<br>'a woman' | <i>tiepos-o-k</i><br>woman-PS-PL<br>'women'     |

iv.	<i>ɾop-ta</i> rain-PS 'rain'	<i>ɾop-we-k</i> rain-PS-PL 'rains'
v.	<i>salɔt-a</i> voice-PS 'a voice'	<i>salɔt-wɛ-k</i> voice-PS-PL 'voices'
vi.	<i>koko</i> grandfather 'a grandfather'	<i>koko-isie-k</i> grandfather-PS-PL 'grandfathers'
vii.	<i>mama</i> uncle 'an uncle'	<i>mama-ɪsɪɛ-k</i> uncle-PS-PL 'uncles'
viii.	<i>ŋok-to</i> dog-PS 'a dog'	<i>ŋok-i-k</i> dog-PS-PL 'dogs'

The alternations of plural and secondary suffixes in the marking of nominal number yields five main replacement patterns of primary and secondary suffixes in singular and plural noun stems as shown in 73 i.e., Singular nouns unmarked by both primary and secondary suffixes vs. plural nouns marked by both primary and secondary suffixes i.e., SG:  $\emptyset \emptyset$  vs. PL:PS PL (3.2.1.4.1.3.1); singular nouns marked by a primary suffix and unmarked by a secondary suffix vs. plural nouns marked by both primary and secondary suffixes i.e., SG: PS  $\emptyset$  vs. PL: PS PL (3.2.1.4.1.3.2); singular nouns unmarked by primary suffix and marked by secondary suffix vs. plural nouns marked for both primary and secondary suffixes i.e., SG:  $\emptyset$  SG vs. PL:PS PL (3.2.1.4.1.3.3); singular and plural nouns marked by both primary and secondary suffixes i.e., SG: PS SG vs. PL: PS PL (3.2.1.4.1.3.4); and singular and plural nouns unmarked by primary suffixes and marked by secondary suffixes i.e., SG:  $\emptyset$  SG vs. PL:  $\emptyset$  PL (3.2.1.4.1.3.5). While pattern 74(a) seems to include only humans, it is also evident

that some theoretically possible patterns are not attested at all e.g., all combinations including R-PS-Ø on the plural side of the opposition.

73. The replacement patterns of primary and secondary suffixes in nominal number paradigm

	SG	PL
a.	R-Ø-Ø	R-PS-PL
b.	R-PS-Ø	R-PS-PL
c.	R-Ø-SG	R-PS-PL
d.	R-PS-SG	R-PS-PL
e.	R-Ø-SG	R-Ø PL

The alternation of primary and secondary suffixes in the nominal number system also reveals the alternation of primary suffixes within the nominal number system as exemplified by the table in 21. The shift in ATR value of vowels in nouns is triggered by the morphologization of ATR (3.2.2.3)

#### 3.2.1.4.1.3.1 SG: Ø Ø vs. PL: PS PL

74. Examples of nouns in the SG: Ø Ø vs. PL:PS PL paradigm

a. Ø vs. -*ISIE*

	SG	PL
i.	<i>ejo</i> mother 'a mother'	<i>ejo-isie-k</i> mother-PS-PL 'mothers'
ii.	<i>papa</i> father 'a father'	<i>papa-ISIE-k</i> father-PS-PL 'fathers'

iii.	<i>ḥanaʃɛ</i> cousin 'a cousin'	<i>ḥanaʃɛ-ɪsɪɛ-k</i> cousin-PS-PL 'cousins'
iv.	<i>pamʊŋɔ</i> father in law 'a father in law'	<i>pamʊŋɔ-ɪsɪɛ-k</i> father in law-PS-PL 'fathers in law'
v.	<i>ɪntawɔ</i> brother 'a brother'	<i>ɪntawɔ-ɪsɪɛ-k</i> brother- PS -PL 'brothers'
vi.	<i>koko</i> grandfather 'a grandfather'	<i>koko-isie-k</i> grandfather-PS-PL 'grandfathers'
vii.	<i>mama</i> uncle 'an uncle'	<i>mama-ɪsɪɛ-k</i> uncle-PS-PL 'uncles'
viii.	<i>patɪɛp</i> partner 'a partner'	<i>patɪɛp-ɪsɪɛ-k</i> partner-PS-PL 'partners'
b. $\emptyset$ vs. -(V) <i>sɪɔni</i>		
	SG <i>tata</i> auntie 'auntie'	PL <i>tata-sɪɔni-k</i> auntie-PS-PL 'aunties'
c. $\emptyset$ vs. - <i>ʊtɪɛ</i>		
	SG <i>ɪnta:sat</i> 'an elderly woman'	PL <i>indo:sot-utie-k</i> elderly woman-PS-PL 'elderly women'

d. Ø vs. -I

SG	PL
<i>ηεtat</i>	<i>ηεtot-i-k</i>
<i>man</i>	man-PS-PL
'a man'	'men'

### 3.2.1.4.1.3.2 SG: PS Ø vs. PL: PS PL

75. Examples of nouns in the SG: PS Ø vs. PL: PS PL paradigm

a. -a vs. -wε

SG	PL
<i>salaut-a</i>	<i>salaut-wε-k</i>
voice-PS	voice-PS-PL
'a voice'	'voices'

b. -a vs -a

SG	PL
<i>tiepos-a</i>	<i>tiepos-o-k</i>
woman- PS	woman-PS-PL
'a woman'	'women'

c. -ɔn vs -ισɔni

SG	PL
<i>poly-ɔn</i>	<i>po-ισɔni-k</i>
elder-PS	elder-PS-PL
'an elder'	'elders'

d. -to vs -wε

	SG	PL
i.	<i>tim-to</i>	<i>tim-we-k</i>
	forest-PS	forest-PS-PL
	'a forest'	'forests'
ii.	<i>ikur-ta</i>	<i>ikur-we-k</i>
	ear- PS	ear-PS-PL
	'an ear'	'ears'
iii.	<i>kujan-ta</i>	<i>kujon-we-k</i>
	bow- PS	bow-PS-PL
	a 'bow'	'bows'

iv.	<i>kasa:r-ta</i> time- PS 'time'	<i>koso:r-we-k</i> time-PS-PL 'times'
v.	<i>wak-ta</i> road-PS 'a road'	<i>wok-we-k</i> road-PS-PL 'roads'
vi.	<i>rop-ta</i> rain-PS 'rain'	<i>rop-we-k</i> rain-PS-PL 'rains'
vii.	<i>sowε-t</i> back- PS 'a back'	<i>sowe-we-k</i> back-SE-PL 'backs'
e.	- <i>tɔ</i> vs - <i>ε</i> SG	PL
i.	<i>kɔŋ-ta</i> eye- PS 'an eye'	<i>kɔŋ-e-k</i> eye-PL 'eyes'
ii.	<i>pen-to</i> meat- PS 'meat'	<i>pəŋ-ε-k</i> meat-SE-PL 'portions of meat'
f.	- <i>tɔ</i> vs - <i>ɪ</i> SG	PL
i.	<i>tɔkɔj-ta</i> forehead-PS 'a forehead'	<i>tokoc-i-k</i> forehead-PS-PL 'foreheads'
ii.	<i>ŋok-to</i> dog- PS 'a dog'	<i>ŋok-i-k</i> dog-PS-PL 'dogs'

g. -*tə* vs -*ɪɛ*  
 SG  
*kel-tə*  
 leg-PS  
 'a leg'

PL  
*kel-ɪe-k*  
 leg-PS-PL  
 'legs'

### 3.2.1.4.1.3.3. SG: ∅ SG vs. PL: PS PL

76. Examples of nouns in the SG: ∅ SG vs. PL:PS PL paradigm

a. ∅ vs -*ni*

i. SG  
*ɛv-t*  
 hand-SG  
 'a hand'

PL  
*ɛv-ni-k*  
 hand-PS-PL  
 'hands'

ii. *tere-t*  
 pot-SG  
 'a pot'

*tere-ni-k*  
 pot-PS-PL  
 'pots'

b. ∅ vs -(*V*)*ɪɛ*

i. SG  
*ɪŋɔŋɔɪ-t*  
 pot-SG  
 'a pot'

PL  
*ɪŋɔŋɔɪ-ɪɛ-k*  
 pot-PS-PL  
 'pot'

ii. *mɔntɔɪ-t*  
 bag-SG  
 'a bag'

*mɔntɔɪ-ɪɛ-k*  
 bag-PS-PL  
 'bags'

iii. *keŋɪ-t*  
 year-SG  
 'a year'

*keŋɪ-ɪɛ-k*  
 year-PS-PL  
 'years'



iv.	<i>pɛtʊ-t</i> day-SG 'a day'	<i>pɛtʊ-sɛ-k</i> day-PL 'days'
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### 3.2.1.4.1.3.4 SG: PS SG vs. PL: PS

77. Examples of nouns in the SG: PS SG vs. PL:PS PL paradigm

a. -o vs -i

	SG	PL
i.	<i>teket-o-t</i> chest-PS-SG 'a chest'	<i>teket-i-k</i> chest-PS-PL 'chests'
ii.	<i>wer-o</i> boy-PS 'a boy/ son'	<i>wer-i-k</i> boy-PS-PL 'boys/ sons'
iii.	<i>tapɔj-a-t</i> star-PS-SG 'a star'	<i>topo-i-k</i> star-PS-PL 'stars'

b. -io vs -ε

	SG	PL
i.	<i>sok-io-t</i> leaf-PS-SG 'a leaf'	<i>sok-e-k</i> leaf-PS-PL 'leaves'
ii.	<i>pel-io-t</i> elephant-PS-SG 'an elephant'	<i>pel-e-k</i> elephant-PS-PL 'elephants'
iii.	<i>ɲol-io-t</i> word-PS-SG 'a word/message'	<i>ɲal-ε-k</i> word-PS-PL 'words/messages'

iv.	<i>kom-io-t</i> honey-PS-SG 'honey'	<i>kom-e-k</i> honey-PS-PL 'honey'
c. -ε vs -(V)σιε		
	SG	PL
i.	<i>son-e-t</i> bush-SG 'a bush'	<i>son-osie-k</i> leaf-PS-PL 'bushes'
ii.	<i>kot-e-t</i> language-PS-SG 'a language'	<i>kot-isie-k</i> language-PS-PL 'languages'
iii.	<i>οιν-ε-t</i> river-SG 'a river'	<i>οιν-osie-k</i> river-PS-PL 'rivers'
iv.	<i>ιηanas-ε-t</i> society-PS-SG 'a society/town'	<i>ιηanas-οσιε-k</i> society-PS-PL 'societies'
v.	<i>kalam-ε-t</i> pen-PS-SG 'a pen'	<i>kalam-οσιε-k</i> pen-PS-PL 'pens'
vi.	<i>sint-e-t</i> brother in law-PS-SG 'a brother in law'	<i>sint-osie-k</i> brother in law-PS-PL 'brothers in law'
d. -ε vs -ο		
	SG	PL
i.	<i>tisi-e-t</i> monkey-SG a 'monkey'	<i>tisi-o-k</i> monkey-PS-PL 'monkeys'

- |      |  |   |
|------|--|---|
| ii.  | <i>kwej-e-t</i><br>shoe-PS-SG<br>'a shoe'      | <i>kwe-o-t</i><br>shoe-PS-SG<br>'shoes'       |
| iii. | <i>tirɪf-e-t</i><br>window-PS-SG<br>'a window' | <i>tirɪf-o-k</i><br>window-PS-PL<br>'windows' |

e. -ε vs -ɪ

SG

PL

- i. *pɔɪn-ε-t*  
antelope-PS-SG  
'an antelope'

*poin-i-k*  
antelope-PS-PL  
'antelopes'

f. -ε vs -aɪ

SG

PL

- i. *ɪmpɪr-ε-t*  
ball-PS-SG  
'a ball'

*ɪmpɪr-aɪ-k*  
ball-PS-PL  
'balls'

- ii. *ɪkɔmp-ε-t*  
cup-PS-SG  
'a cup'

*ɪkɔmp-aɪ-k*  
cup-PS-PL  
'cups'

- iii. *kecik-e-t*  
spoon-PS-SG  
'a spoon'

*kecik-oi-k*  
spoon-PS-PL  
'spoons'

g. -u vs -ni

SG

PL

*ser-u-t*

*ser-ni-k*

nose-PS-SG

nose-PS-PL

'a nose'

'noses'

<p>h. -I vs -ɔwɛ</p> <p>SG</p> <p><i>mɛt-I-t</i></p> <p>head-PS-SG</p> <p>'a head'</p>	<p>PL</p> <p><i>met-owe-k</i></p> <p>head-PS-PL</p> <p>'heads'</p>
<p>i. -wɛ vs -ɔ</p> <p>SG</p> <p>i. <i>rot-we-t</i></p> <p>knife-PS-SG</p> <p>'a knife'</p>	<p>PL</p> <p><i>rot-o-k</i></p> <p>knife-PL</p> <p>'knives'</p>
<p>ii. <i>lak-wɛ-t</i></p> <p>child-PS-SG</p> <p>'a child'</p>	<p><i>lok-o-k</i></p> <p>child-PS-PL</p> <p>'children'</p>
<p>j. -wɛ vs -ɔɪ</p> <p>SG</p> <p>i. <i>okorom-we-t</i></p> <p>lion-PS-SG</p> <p>'a lion'</p>	<p>PL</p> <p><i>okorom-oi-k</i></p> <p>lion-PS-PL</p> <p>'lions'</p>
<p>k. -wɛ vs -ɔno</p> <p>SG</p> <p>i. <i>ɔr-wɛ-t</i></p> <p>friend-PS-SG</p> <p>a 'friend'</p>	<p>PL</p> <p><i>cor-ono-k</i></p> <p>friend-PS-PL</p> <p>'friends'</p>
<p>ii. <i>tul-we-t</i></p> <p>hill-PS-SG</p> <p>'a hill/mountain'</p>	<p><i>tul-ono-k</i></p> <p>hill-PS-PL</p> <p>'hills/mountains'</p>

l. -wɔ vs -wɛ

SG

*tikik-wɔ-t*

shoulder- PS-SG

'a shoulder'

PL

*tikik-we-k*

shoulder- PS-PL

'shoulders'

m. -tɛ vs -tɔ

SG

i. *tap-tɛ-t*

flower- PS-SG

'a flower'

PL

*top-to-k*

flower-PS-PL

'flowers'

ii. *a:r-tɛ-t*

sheep-PS-SG

'a sheep'

*o:r-to-k*

sheep-PS-PL

'sheep'

n. -tɛ vs -ɪ

SG

i. *kwɛn-tɛ-t*

firewood-PS-SG

'a firewood'

PL

*kwɛn-i-k*

firewood-PS-PL

'firewood'

o. -nɛ vs -ɪ

SG

*mor-nɛ-t*

toe-PS-SG

'a toe'

PL

*mor-i-k*

toe-PS-PL

'toes'

p. -tia vs -tɛ

SG

i. *pan-tia-t*

maize-PS-SG

'maize'

PL

*pan-tɛ-k*

maize-PS-PL

'maize'

q. <i>-vɬɛ</i> vs <i>-vɬ</i>	
	SG PL
i.	<i>ɲot-utɛ-t</i> <i>ɲot- uti-k</i>
	warn-PS-SG warn-PS-PL
	'a warning/rule' 'warnings/rules'
ii.	<i>wol-utɛ-t</i> <i>wol-uti-k</i>
	answer-PS-SG answer-PS-PL
	'an answer' 'answers'

### 3.2.1,4.1.3.5 SG: ∅ SG vs. PL: ∅ PL

78. Examples of nouns in the SG:∅ SG vs PL: ∅ PL paradigm

	SG PL
i.	<i>koi-ta</i> <i>koi-k</i>
	stone-SG stone-PL
	'a stone' 'stones'
i.	<i>tɛ-ta</i> <i>tu-ka</i>
	COW-SG COW-PL
	'a cow' 'cows'
ii.	<i>kɛɬ-t</i> <i>keti-k</i>
	tree-SG tree-PL
	'a tree' 'trees'

The alternation of primary suffixes in singular and plural nominal number system is summarized in 79.

### 79. Alternation of primary suffixes in singular and plural nominal number

a.	-∅	-∅
b.	-a	-a
c.	-ε	-ε
d.	-I	-I
e.	-ə	-ɔ
f.	-u	-wε
g.	-wε	-I s I ɔ n I
h.	-ɔ n	-u t I
i.	-I ɔ	-tɔ
j.	-wɔ	-I ε
k.	-tε	-ɔ n ɔ
l.	-nε	-ɔ wε
m.	-t I a	-n I
n.	-u t I ε	-(V) s I ε
o.		-tε
p.		-a I
q.		-ɔ I

#### 3.2.1.4.1.4 The nominalizer suffix *-in*

The nominalizer suffix *-in* derives singular agent nouns from class 1 verbs and abstract deadjectival nouns as shown in 80(a) and 80(b) respectively. Morphologically, the derived deverbal nouns are marked for number by the singular suffix *-t* while deadjectival nouns are morphologically unmarked for number. The primary suffix *-tε* is used in the derived singular noun stems while the primary suffix *-tɔ* is used in the deadjectival nouns. Morphophonologically, the suffix *-in* is a +ATR dominant morpheme hence capable of triggering the change in vowel quality from -ATR in non-nominal stems to +ATR in the derived nominal stems. In addition, the suffix *-in* regularly triggers the deletion of the semi-vowel /j/ in adjectival root final position as shown in 80b(iii-v).

## 80. The derivation of single agent nouns and abstract deadjectival nouns

### a. Singular agent nouns

	Verbal roots	Noun stems
i.	<i>tur</i> 'hunt'	<i>tur-in-te-t</i> hunt-NMLZ-PS-SG 'a hunter'
ii.	<i>ŋalan</i> 'speak'	<i>ŋolon-in-te-t</i> speak-NMLZ-PS-SG 'a speaker'
iii.	<i>jaj</i> 'create'	<i>joj-in-te-t</i> create-NMLZ-PS-SG 'a creator'
iv.	<i>al</i> 'trade'	<i>ol-in-te-t</i> trade-NMLZ-PS-SG 'a trader'
v.	<i>amta</i> 'preach'	<i>omto-in-te-t</i> preach-NMLZ-PS-SG 'a preacher'
vi.	<i>par</i> 'kill'	<i>por-in-te-t</i> kill-NMLZ-PS-SG 'a killer'

### b. Abstract deadjectival nouns

	Adjective roots	Noun stems
i.	<i>lel</i> 'white'	<i>lel-in-to</i> white-NMLZ-PS 'whiteness'
ii.	<i>toror</i> 'high'	<i>toror-in-to</i> high-NMLZ-PS 'height'



iii.	<i>tu:j</i> 'black'	<i>tu:-in-to</i> black-NMLZ-PS 'blackness'
iv.	<i>kɔj</i> 'long'	<i>ko-in-to</i> long-NMLZ-PS 'length'
v.	<i>kɛr-kɛj</i> look-REC 'Look alike'	<i>ker-ke-in-to</i> look-REC-NMLZ-PS 'a shape'
vi.	<i>tɛpɛs</i> 'wide'	<i>tepes-in-to</i> wide-NMLZ-PS 'width'
vii.	<i>pɪtɪr</i> 'wide'	<i>pitir-in-to</i> heavy-NMLZ-PS 'weight'
viii.	<i>ca.ŋ</i> 'a lot'	<i>co.ŋ-in-to</i> a lot-NMLZ-PS 'an amount'

The nominalizer suffix *-in* combines with the nominalizer suffix *ka-* (3.2.1.4.1.5) and *kɪp-* (3.2.1.4.1.6). The nominalizer suffix *-in* which is attested in the derivation of singular agent nouns from class 2 verbs is deleted in the formation of plural agent nouns as shown (3.2.1.4.1.5).

#### 3.2.1.4.1.5 The nominalizer prefix *ka-*

The nominalizer prefix *ka-* derives abstract nouns from class 1 verbs (81), plural agent nouns from class 2 verbs (81) and combines with the nominalizer suffix *-in* during the derivation of singular nouns from class 1 verbs (83). The prefix is a harmonizing affix in relation to ATR i.e., the -ATR vowel [a] in the prefix undergoes ATR vowel harmony triggered by +ATR vowels in noun stems in the yielding the +ATR allomorph *ko-*. Vowel

harmony in these derivations is triggered by the morphologization of ATR in noun morphology. The palatal /*ɲ*/ in verb root final position in 81(c) alternates with the velar nasal /*ŋ*/ in the derived noun stem.

81. Derivation of abstract nouns from class 1 verbs by the nominalizer prefix *ka-*

	Verb roots	Noun stems
a.	<i>sɔr</i> 'discover'	<i>ko-sior-unie-t</i> NMLZ-discover-PS-SG 'a discovery'
b.	<i>pwa:t</i> 'remember'	<i>ko-pwo:t-utie-t</i> NMLZ-remember-PS-SG 'a memory/thought'
c.	<i>mu:ɲ</i> 'rest'	<i>ko-mu.ŋ-e-t</i> NMLZ-rest-PS-SG 'a relaxation'
d.	<i>rwotit</i> 'dream'	<i>ko-rwotit-e-t</i> NMLZ-dream-PS-SG 'a dream'
e.	<i>ka:t</i> 'greet'	<i>ko-ko:t-e-t</i> NMLZ-greet-PS-SG 'a greeting'
f.	<i>jan</i> 'believe'	<i>ka-jan-ɛ-t</i> NMLZ-believe-PS-SG 'a belief'
g.	<i>twal</i> 'jump'	<i>ka-twal-ɛ-t</i> NMLZ-jump-PS-SG 'a jump'

While singular agent nouns derived from class 2 verbs are marked by the singular primary suffix *-tɛ* (83), plural agent nouns derived from class 2 are marked by the plural primary suffix *-ɪ* (82). The causative prefix *ɪ-* in the verb is regularly deleted in the derived nouns.

82. Examples of plural agent nouns derived from class 2 verbs by the prefix *ka-*

	Class 2 verbs	PL noun stems
a.	<i>ɪ-nɛt</i> CAUS-teach 'cause to teach'	<i>ko-net-i-k</i> NMLZ-teach-PS-PL 'teachers'
b.	<i>ɪ-ɲɔk</i> CAUS-send 'cause to send'	<i>ko-jok-i-k</i> NMLZ-send-PS-PL 'senders'
c.	<i>ɪ-ɲum</i> CAUS-gather 'cause to gather'	<i>ko-jum-i-k</i> NMLZ-gather-PS-PL 'gatherers'
d.	<i>ɪ-sɔp</i> CAUS-heal 'cause to heal'	<i>ko-sop-i-k</i> NMLZ-heal-PS-PL 'healers'
e.	<i>ɪ-ntɔ</i> CAUS-lead 'cause to lead'	<i>ko-nto-i-k</i> NMLZ-lead- PS -PL 'leaders'
f.	<i>ɪ-sɪp</i> CAUS-follow 'cause to follow'	<i>ko-sip-i-k</i> NMLZ-follow-PS-PL 'followers'
g.	<i>ɪ-ɲal</i> CAUS-destroy 'cause to destroy'	<i>ko-ɲol-i-k</i> NMLZ-destroy- PS -PL 'destroyers'
h.	<i>ɪ-ɲɔ</i> CAUS-cook 'cause to cook'	<i>ko-jo-i-k</i> NMLZ-cook-PS-PL 'cooks'

The nominalizer suffix *-in* triggers ATR vowel harmony in the noun stems yielding the +ATR allomorph *ko-* of the nominalizer prefix as shown in 83.

83. Derivation of agent nouns from class 1 verbs

	Class 2 verbs	Singular derived nouns
a.	<i>ɪ-nɛt</i> CAUS-teach 'teach'	<i>ko-net-in-te-t</i> NMLZ-teach-NMLZ-PS-SG 'a teacher'
b.	<i>ɪ-jɔk</i> CAUS-send 'send'	<i>ko-jok-in-te-t</i> NMLZ-send-NMLZ-PS-SG 'a sender'
c.	<i>ɪ-jum</i> CAUS-gather 'gather'	<i>ko-jum-in-te-t</i> NMLZ-gather-NMLZ-PS-SG 'a gatherer'
d.	<i>ɪ-sɔp</i> CAUS-heal 'heal'	<i>ko-sop-in-te-t</i> NMLZ-heal-NMLZ-PS-SG 'a healer'
e.	<i>ɪ-ntɔ</i> CAUS-lead 'lead'	<i>ko-nto-in-te-t</i> NMLZ-lead-NMLZ-PS-SG 'a leader'
f.	<i>ɪ-sɪp</i> CAUS-follow 'follow'	<i>ko-sip-in-te-t</i> NMLZ-follow-NMLZ-PS-SG 'a follower'
g.	<i>ɪ-ɲal</i> CAUS-destroy 'destroy'	<i>ko-ɲol-in-te-t</i> NMLZ-destroy-NMLZ-PS-SG 'a destroyer'
h.	<i>ɪ-ɲ</i> CAUS-cook 'cook'	<i>ko-jo-in-te-t</i> NMLZ-cook-NMLZ-PS-SG 'a cook'

### 3.2.1.4.1.6 The agent prefix *kɪp-*

The agent (AGP) prefix *kɪp-* derives agent nouns from verbs roots. Unlike the prefix *ka-* which also derives adgent nouns, the agent prefix *kɪp-* derives epithets and is not interchangeable with the nominalizer prefix *ka-*. The -ATR vowel *-ɪ* in the agent prefix harmonizes with -ATR vowels in the noun stem as shown in 84(a-c). The bilabial plosive /p/ in the agent prefix final position is exceptionally deleted in the formation of the noun in 84(e). The agent prefix is fossilized in the noun in 84(e). The palatal /c/ in the verb root in 84(e) is replaced by the velar stop /k/ in the noun stem.

#### 84. The derivation of agent nouns by the agent prefix *kɪp-*

	Class 2 verb	SG	PL
a.	<i>sɔman</i> 'read'	<i>kɪp-sɔman-ɪa-t</i> AGP-read-PS-SG 'a reader/student'	<i>kɪp-sɔman-ɪɛ-k</i> AGP-read-PS-PL 'readers/students'
b.	<i>panan</i> '(be) poor'	<i>kɪ-panan-ɪ-t</i> AGP-poor-PS-SG 'a poor person'	-
c.	<i>pɔr</i> 'initiate'	<i>kɪ-pɔr-ɛtɪɛ-t</i> AGP-initiate-PS-SG 'the first initiate'	-
d.	<i>tɛŋɛkɛk</i> 'sin'	<i>kɪp-tɛŋɛkɛk-io-t</i> Ag-sin-PS-SG 'a sinner'	<i>kɪp-tɛŋɛkɛk-ni-k</i> AGP-sin-PS-PL 'sinners'
e.	<i>rwɔc</i> 'dispense justice'	<i>ki-rwok-int-e-t</i> AGP-justice-NMLZ-PS-SG 'chief'	<i>ki-rwok-i-k</i> AGP-justice-NMLZ-PS-SG 'chief'

- f. *kipsenkwet*  
'Heaven'

### 3.2.1.4.2 Reduplication

Reduplication in noun derivation distinguishes between complete reduplication of the root (85a) and partial reduplication targeting the second syllable in the nominal root (85b). The reduplicants express different semantic notions such as plants 85a(i), the environment 82a(ii), insects 85b(i) and parts of the body 85b(ii-iii). The nouns are lexicalized as reduplicated roots without simplexes. While some reduplicated stems have /ta/ as an initial syllable, its morphological status as a prefix cannot be proven, hence they are analyzed as fossilized reduplications.

#### 85. Example of reduplicated nominal roots

##### a. Complete reduplication

Roots		Reduplicated stems
Phonemic	Phonetic	
i. /taktak/	[taɣtak]	<i>taktak-ɔnɪ-k</i> wild berry-PS-PL 'wild berries'
ii. /carcar/	[carcar]	<i>carcar-ɪɛ-t</i> narrow-PS-SG 'a narrow place'
iii. /cɛmcɛm/	[cɛmcɛm]	<i>cɛmcɛm</i> 'a sliding down the slope'

b. Partial reduplication

Root		Reduplicated stem
Phonemic	Phonetic	
i. /tapɯrpɯr/	[tapɯrpɯr]	<i>tapɯrpɯr-ɪ-k</i> butterfly-PS-PL butterflies
ii. /takɪlkɪ/	[takɪlkɪ]	<i>takɪ/kɪ-ɪɛ-t</i> jawbone-PS-SG 'a jawbone'
iii. /tamɪrmɪr/	[tamɪrmɪr]	<i>tamɪrmɪr-ɪɛ-t</i> heart-PS-SG 'a heart'

### 3.2.1.5 Noun inflection

Section 3.2.1.5 describes the morphology, the semantic and morphophonological aspects of categories in nominal inflection i.e., demonstrative suffixes (3.2.1.5.1) and possessive suffixes (3.2.1.5.2), the genitive suffix *-a:p* (4.1.1.2.8), and case (4.2.1.3.1). Nominal number is described in section 3.2.1.4.1.3 owing to the derivational alternations of primary and secondary suffixes in nominal roots. Inflectional processes include affixation (suffixation only), and tonal alternation to indicate case. Nominal inflection reflects syntactic economy in the verb phrase at clause level where the presence of a demonstrative suffix restricts the tense and aspect categories of the verb. The relationship between nominal inflection and verbal morphology is analyzed as part of marking definiteness and specificity (3.2.1.6) during the conceptualization of an event. Demonstrative suffixes assimilate to the tonal marking patterns assigned to noun in syntactic roles as described in case.

### 3.2.1.5.1 Demonstrative suffixes

Demonstrative suffixes indicate the location of a referent in relation to a deictic center identical to the position of the speaker. There are two kinds of demonstrative suffixes distinguishable by form, function and how they relate to tense and aspect categories verb morphology (3.2.2) i.e., the past tense demonstrative suffix *-ka:n* (3.2.1.5.1.1) and the progressive aspect demonstrative suffixes (3.2.1.5.1.2) A noun in isolation is modified by a progressive aspect demonstrative suffix (3.2.1.5.1.2).

#### 3.2.1.5.1.1 Past tense demonstrative suffixes *-ka:n*

The past tense demonstrative suffix *-ka:n* indicates location that is in medial reference point from the deictic center. The suffix is only used with nouns that occur at the clause level and whose main verb is marked for the past tense. Unlike the progressive demonstrative suffixes that have three a distinct spatial referencing system, the past tense demonstrative suffix only indicates a medial refence point from the deictic center. Exceptionally, the progressive aspect demonstrative suffixes (3.2.1.5.1.2) are used when nouns in isolation are modified by demonstrative suffixes. The suffix *-ka:n* is a morphophonologically opaque suffix in relation to ATR vowel harmony hence causing vowel disharmony in the nominal stem as shown in the examples in 86(a/b), i.e., while the morphologization of ATR triggers change in the vowel quality of vowels from their -ATR value in the singular nominal stem *ɲɛtat* 'man' (in 86a) to +ATR in the plural nominal stem *ɲetotik* 'men' (86b), the vowel quality of the vowel in the demonstrative suffix remains unchanged. The plural marker *-k* in the noun *ɲetotik* 'men' is deleted and is replaced by the demonstrative suffix *ka:n* owing to the mutually exclusive relationship between the two morphemes in the morphological structure of nouns (3.2.1.3).

#### 86. Modification by the perfective aspect demonstrative suffix

- a. PST                      *kɛ-a:m*    *pàŋ-ɛ-k*                      *ɲétót-í-kà:n*  
DPST-eat    meat-PS-PL.ACC    man-PS-DEM.PST.NOM  
'Those men ate meat.'



- b. PST      *kɪ-a:m    pàŋ-ɛ́-k    ɳɛtat-ɪ-kà:n*  
 DPST-eat   meat-PS-PL.ACC   man-PS-DEM.PST.NOM  
 'That man ate meat.'
- c. PROG      *o:m-ej    pàŋ-ɛ́-k    ɳétót-í-còn*  
 eat-PROG   meat-PS-PL.ACC   man-PS-DEM.PROX.PL.PROG.NOM  
 'Those men are eating meat.'
- d. PST.PROG      *ki-o:m-ej    pàŋ-ɛ́-k    ɳétót-í-còn*  
 DPST-eat-PROG   meat-PS-PL.ACC   man-PS-DEM.PROX.PL.PROG.NOM  
 'Those men were eating meat.'

The added primary suffix harmonizes to the -ATR value of the nominal stem as demonstrated by the contrasts between the -ATR /ɪ/ vs. /i/ in singular and plural (86a-b)- this serves as proof of the morphologization of ATR serving as the trigger of vowel harmony. The past tense demonstrative suffix is mutually exclusive with a past tense marker (3.2.2.6.2) i.e., when the verb is inflected for past tense and progressive aspect (3.2.2.6.2.1), a demonstrative suffix is used instead as shown in 86(c). These and more agreement dependencies between nominal and verbal inflections are further analysed in relation definiteness and specificity (3.2.1.6).

### 3.2.1.5.1.2 Progressive aspect demonstrative suffixes

The progressive aspect demonstrative suffixes (DEM.PROG) are realized as six monosyllabic suffixes with a (C) V (C) syllable structure and are analyzable into three degrees of spatial contrast i.e., proximal (PROX) demonstrative suffixes which indicate that the referent is near the deictic center; medial (MED) demonstrative suffixes which indicate that the referent is a distance away; and distal (DIS) demonstrative suffixes that indicate that the referent is far away from the deictic center; and two number contrasts i.e., singular and plural as shown in 87. Number and spatial reference points are coded phonotactically i.e., the initial /n/ and /c/ encodes singular and plural forms, respectively. Singular proximal and distal reference points are coded by the high front vowel /ɪ/, plural proximal and distal reference

points are coded by the high back vowel /ʊ/, singular and plural medial reference points are coded by the low vowel /a/. The alveolar nasal /n/ occurs in the coda position of both singular and plural medial and distal demonstrative forms. Demonstrative suffixes are comparable in form to free demonstrative pronouns (3.5.2) and are inflected for case as described in section 4.2.1.3.1.

#### 87. The inventory of the progressive aspect demonstrative suffixes

	SG	PL
Proximal	<i>-nɪ</i>	<i>-ɔ</i>
Medial	<i>-nan</i>	<i>-can</i>
Distal	<i>-nɪn</i>	<i>-ɔn</i>

The presence or the absence of the final alveolar nasal /n/ marks the opposition between proximal and distal reference points. This supports the argument for the analysis of phonological structure of stems and affixes in Southern Nilotic languages, and calls for the same in description of the grammar of other language families in Kenya.

Demonstrative suffixes are harmonizing morphemes in relation to ATR vowel harmony and the morphologization of ATR in the nominal morphology is the trigger of change in vowel quality in the demonstrative suffixes. Morphotactically, demonstrative suffixes are mutually exclusive with singular primary suffixes i.e., the presence of a progressive demonstrative suffix triggers the deletion of a singular primary suffix (3.2.4.1.1.1) as shown in the examples in 88(c-f). The mutually exclusive relationship between demonstrative and secondary suffixes in the morphological structure of nouns is further analyzed in relation to definiteness and specificity (3.2.1.6).

## 88. Nouns modified by demonstrative suffixes

	Noun	Proximal	Medial	Distal
a.	<i>simu</i> 'a phone'	<i>simu-ni</i> phone- DEM.PROX.SG. PROG 'this phone'	<i>simu-non</i> phone- DEM.MED.SG. PROG 'that phone'	<i>simu-nin</i> phone- DEM.DIS.SG. PROG 'that phone far away'
b.	<i>mama</i> 'an uncle'	<i>mama-nɪ</i> uncle-DEM.PROX.SG. PROG 'this uncle'	<i>mama-nan</i> uncle-DEM.MED.SG. PROG 'that uncle'	<i>mama-nɪn</i> uncle-DEM.DIS.SG. PROG 'that uncle far away'
c.	<i>ŋok-to</i> dog-PS 'a dog'	<i>ŋok-i</i> dog-DEM.PROX.SG. PROG 'this dog'	<i>ŋok-on</i> dog-DEM.MED.SG. PROG 'that dog'	<i>ŋok-in</i> dog-DEM.DIS.SG. PROG 'that dog far away'
d.	<i>wak-ta</i> road-PS 'a road'	<i>wak-ɪ</i> road-DEM.PROX.SG. PROG 'this road'	<i>wak-an</i> road-PL-DEM.MED.SG. PROG 'that road'	<i>wak-ɪn</i> road-DEM.DIS.SG. PROG 'that road far away'
e.	<i>ŋok-i-k</i> dog-PS-PL 'dogs'	<i>ŋok-i-cu</i> dog-PS-DEM.PROX.PL. PROG 'these dogs'	<i>ŋok-i-con</i> dog-PS-DEM.MED.PL. PROG 'those dogs'	<i>ŋok-i-cun</i> dog-PS-DEM.DIS.PL. PROG 'those dogs far away'
f.	<i>tu-ka</i> COW-PL 'cows'	<i>tu-cu</i> COW-DEM.PROX.PL.PROG 'these cows'	<i>tu-can</i> COW-DEM.MED.PL. PROG 'those cows'	<i>tu-ɔn</i> COW-DEM.DIS.PL. PROG 'those cows far away'

Further morphophonological and morphosyntactic examination of the progressive demonstrative suffixes show that the initial alveolar nasal /n/ in singular demonstrative suffixes is regularly retained when the demonstrative suffix is attached to a noun stem with a zero coda 88(a-b) but deleted when the suffix is attached to a noun stem with a coda (88c-d). The process of deletion of the nasal /n/ adds to the arguments for the study of how the phonological structure of affixes integrate into the phonological structure of stems.

Some notable exceptions in the marking of nouns using demonstrative suffixes are that: the singular demonstrative suffixes regularly trigger the change of the singular primary suffix *-wɛ* to *-wa* in the nouns shown in 89(a-b) while plural demonstrative suffixes change the plural primary suffix *-o* to *-io* in the noun shown in 89(c).

89. Change of primary suffixes triggered by demonstrative suffixes

Noun	Proximal	Medial	Distal
a. <i>lak-wɛ-t</i> child-PS-SG 'child'	<i>lak-wa-nɪ</i> child-PS-DEM.PROX.SG.PROG 'this child'	<i>lak-wa-nan</i> child-PS-DEM.MED.SG.PROG 'that child'	<i>lak-wa-nɪn</i> child-PS-DEM.DIS.SG.PROG 'that child far way'
b. <i>ɔr-wɛ-t</i> friend-PS-SG 'friend'	<i>ɔr-wa-nɪ</i> friend-PS-DEM.PROX.SG.PROG 'this child'	<i>ɔr-wa-nan</i> friend-PS-DEM.MED.SG.PROG 'that friend'	<i>ɔr-wa-nɪn</i> friend-PS-DEM.DIS.SG.PROG 'that friend far way'
c. <i>lok-o-k</i> child-PS-PL 'children'	<i>lok-oi-cu</i> child-PS-DEM.PROX.PL.PROG 'these children'	<i>lok-oi-con</i> child-PS-DEM.MED.PL.PROG 'those children'	<i>lok-oi-cun</i> child-PS-DEM.DIS.PL.PROG 'those children far away'

Additionally, another exception is that the alveolar nasal /n/ in the singular progressive demonstrative suffixes is regularly palatalized to /ɲ/ i.e., the proximal demonstrative *-ɲɪ*, the medial demonstrative suffix *-ɲan*, and the distal demonstrative suffix *-ɲɪn* are used in the modification of the noun *teta* 'a cow' as shown in 90.

90. The imperfective demonstrative suffixes used with the noun *teta* 'a cow'

Singular noun	Proximal	Medial	Distal
<i>tɛ-ta</i> COW-SG 'a cow'	<i>tɛ-ɲɪ</i> COW- DEM.PROX.SG.PROG 'this cow'	<i>tɛ-ɲan</i> COW-DEM.MED.SG.PROG 'that cow'	<i>tɛ-ɲɪn</i> COW-DEM.DIS.SG.PROG 'that cow far way'

### 3.2.1.5.2 Possessive suffixes

Possessive suffixes are analyzable as eight grammatical morphemes that phonetically code three kinds of information i.e., the number of possessed item (SG/PL), the number of the possessor (SG/PL), and the person of the possessor (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>) as shown in 91. The possessor is indicated by the possessive roots *o* (1SG/PL), *u* (2SG/PL), *i* (3SG) and *uwa* (3PL); the circumfixes for singular possessed items are /ɲ/- and -/n/ (with the allomorph /ŋ/- and -/ŋ/ for 2SG/PL possessors); the circumfixes for plural possessed items are /c/- and /k/- with the allomorph circumfixes /k/- and /k/- for 2SG/PL, number of possessor is morphologically distinguished for the 3 person and neutralized for 1 and 2 possessors. Possessive suffixes are comparable to free possessive pronouns (3.5.3) and are inflected for case as described in section 4.2.1.3.1.

#### 91. Inventory of possessive suffixes

Number of possessors	Number of possessed item	
	SG	PL
1SG/PL	-ɲɔn	-ɔk
2SG/PL	-ŋʊŋ	-kʊk
3SG	-ɲɪn	-ɔk
3PL	-ɲʊwan	-ɔwak

Possessive suffixes are opaque affixes in relation to ATR vowel harmony i.e., they can neither trigger nor be subjected to ATR vowel harmony as shown in the examples in 34(a-c) where + ATR plural noun stems co-occur with -ATR possessive suffixes. Morphotactically, possessive suffixes and the singular secondary suffix -t are mutually exclusive in the suffix slots in the morphological structure of nouns i.e., the possessive suffixes regularly trigger the deletion of the singular secondary suffix -t in nouns e.g. in the noun *ketit* 'a tree' and *konetintet* 'a teacher' as shown in 92(a-b).

92. Example of nouns modified by possessive suffixes

Number of possessed item	
SG	PL
a. <i>kɛɪ-ŋʊŋ</i> tree-2.POSS.SG 'your tree'	<i>kɛɪ-k-kʊk</i> tree-PL-2.POSS.PL 'your trees'
b. <i>ko-net-int-e-ŋɪn</i> NMLZ-teach-PS-3SG.POSS.SG 'his/her teacher'	<i>ko-net-i-k-ɔk</i> NMLZ-teach-PS-PL-3SG.POSS.PL 'his/her teachers'
c. <i>wak-ta-ŋʊwan</i> road-SG-3PL.POSS.SG 'their road'	<i>wok-we-k-ɔwak</i> road-PS-PL-3PL.POSS.PL 'their roads'
d. <i>tiɛp-to-ŋʊwan</i> girl-SG-3PL.POSS.SG 'their girl'	<i>tiɛp-i-k-ɔwak</i> girl-PS-PL-3PL.POSS.PL 'their girls'

### 3.2.1.6 Definiteness and specificity

Okiek grammar does not have overt articles like English (a, an, the), but it employs a range of morphological strategies to express definiteness and specificity, which are crucial for referential interpretation in discourse. These strategies involve suffixal behavior, morpheme blocking, and contextual inference, as summarized in 93

#### 93. Strategies for indicating definiteness/specificity

	Strategy	Description	Effect on Interpretation	Example
i.	Secondary suffix presence	Use of suffixes like -t (SG) and -k (PL) in noun stems	Default/indefinite reference	<i>ɲɛtát</i> 'a/the man'
ii.	Blocking by demonstratives	Demonstrative suffixes prevent secondary suffixes from appearing	Shifts to specific/definite reference	<i>ɲetoticon</i> 'those men'
iii.	Possessive suffix blocking	Possessive suffixes displace secondary suffixes	Implies referential anchoring/ownership	<i>konetɪɲɔn</i> 'my teacher'
iv.	Use of demonstrative suffixes	Adds deictic and specificity values (proximal, medial, distal)	Explicitly definite and context-bound meaning	<i>lakwanɪ</i> 'this child'

v.	Zero-marking (bare noun)	Noun root without overt suffixes	Often interpreted as generic or indefinite	ka 'home'
vi.	Contextual inference	Interpretation guided by discourse and co-text	Allows fluidity in specificity	<i>ɲetotik</i> = 'men' (definite or not)

The most basic strategy involves the use of secondary suffixes, such as -t for singular and -k for plural. These suffixes typically mark number but also correlate with indefinite or non-specific readings when no other markers are present. For example, *ɲokik* can be interpreted as 'dogs', highlighting its general and possibly non-identifiable reference.

In contrast, definiteness and specificity are introduced by blocking these suffixes through the presence of higher-ranking morphemes like demonstrative or possessive suffixes. For instance, when the demonstrative suffix *-cu* appears in *ɲokicu* 'these dogs' it prevents the plural suffix -k from surfacing, thereby signaling a specific, contextually known referent 'these dogs'. A similar blocking effect on the plural marker is not attested with possessive suffixes.

Demonstrative suffixes are especially powerful in marking specificity. They not only block other suffixes but also add spatial deixis, allowing the speaker to distinguish between referents that are proximal, medial, or distal, which reinforces definite, anchored meaning. Sometimes, bare nouns without suffixes (e.g., ka 'home') are used. These can function generically, indefinitely, or be interpreted contextually depending on discourse cues, illustrating the language's reliance on contextual inference when morphology is underspecified.

Taken together, these strategies reveal how Okiek speakers use morphotactic competition, suffix blocking, and contextual grounding to express nuances of definiteness and specificity without a formal article system.



### 3.2.2 Verbs

Section 3.2.2 describes the morphosyntactic criteria of identifying verbs (3.2.2.1), the phonological structure of verbal roots (3.2.2.2), the morphological structure of verbs (3.2.2.3), verb classes (3.2.2.4), verb derivation (3.2.2.5) and verb inflection (3.2.2.6). Verb morphology exhibits interdependency in the distribution of the allomorphs of verbal grammatical categories including the allomorphs of the imperfective aspect (3.2.2.6.2.1) which is determined by person (3.2.2.6.1) and number categories. Interdependency of categories in verb morphology is also attested in Datooga (Rottland 1983). Okiek verb morphology reveals complex derivational layering, selective inflectional coding and complex rules of co-occurrence and exclusion of affixes as exhibited by, for example, the interactions between morphology, syntax, semantic and discourse regarding subject marking and aspect, and verbal derivational categories.

Morphophonological alternations, particularly ATR vowel harmony, shape the distribution of allomorphs across person, aspect, and verb class distinctions. Prefixal and suffixal combinations often trigger phonological fusion, deletion, or consonant shift, particularly in verb roots ending in palatal consonants or semi-vowels. Verb roots fall into distinct morphological classes, with Class 2 verbs exhibiting fossilized causative morphology and reduced compatibility with certain derivational processes. Morphological derivation interfaces with discourse pragmatics, evidencing cognitive dimensions such as agency, instrumentality, and directionality.

### 3.2.2.1 Criteria of identification

Verbs are morphologically identified by their structure specific derivational and inflectional categories. Verbal derivation categories include: valency reducing affixes i.e., the antipassive (ANTP) suffix *-isie* (3.2.2.5.1.1.1), the anticausative (ANTIC) suffix *-ak* (3.2.2.5.1.1.2), the subject focus prefix *kε-* (3.2.2.5.1.1.3); valency increasing affixes i.e., the dative (DAT) suffix *-ci* (3.2.2.5.1.2.1), the instrument (INST) suffix *-εn* (3.2.2.5.1.2.2), causative (CAUS) affixes (3.2.2.5.1.2.3); miscellaneous affixes i.e., the centrifugal (CF) suffix *-ta* (3.2.2.5.1.3.1), the centripetal (CP) suffix *-un* (3.2.2.5.1.3.2) and the reflexive (REF) suffix *-kεj* (3.2.2.5.1.3.3). Verbal inflection categories include person (3.2.2.6.1), past tense (3.2.2.6.2), aspect (3.2.2.6.3), mood (3.2.2.6.4), the infinitive prefix *kε-* (3.2.2.6.5), and negation (5.0). Syntactically, verbs serve as heads of verb phrases (4.1.2) and as predicates in verbal clauses (4.2.1.1).

### 3.2.2.2 Phonological structure of verbal roots

Verbs are monosyllabic and can occur in up to trisyllabic syllable structures- (C)(C)(V)(C)(V)(C)V(C)- as shown in 94. The distribution of phonemes in verb initial, medial, and final positions match the general distribution of phonemes described in Okiek phonology (2.0). The trisyllabic root for 'fly' is analyzed as an instance of fossilized reduplication.

#### 94. Examples of syllable shapes of verb roots

	Syllable shapes	Verb root form		Orthography
		Phonemic	Phonetic	
Monosyllabic verb roots :	CV	/pa/	[pa]	<i>pa:</i> 'go'
	VC	/ɪ:t/	[ɪ:t]	<i>ɪ:t</i> 'arrive'

		CVC	/sus/	[sus]	<i>sus</i> 'bite'
		CCV	/twa:/	[twa:]	<i>twa:</i> 'touch'
		CCVC	/twal/	[twal]	<i>twal</i> 'jump'
Disyllabic roots :	verb				
		CV.CV	/sɯwa/	[sɯwa]	<i>sɯwa</i> 'see'
		CV.VC	/rɪɔn/	[rɪɔn]	<i>rɪɔn</i> 'sneez'
		CCV.CVC	/rwɔtɪt /	[rwɔtɪt]	<i>rwɔtɪt</i> 'dream'
Trisyllabic roots:	verb				
		CV.CV.VC	/marɪan/	[marɪan]	<i>marɪan</i> 'whistle'
		CVC.CVC.CVC	/pʊrpʊrtɛn/	[pʊrpʊrtɛn]	<i>pʊrpʊrtɛn</i> 'fly'

### 3.2.2.3 Morphological structure of verbs

The verb structure is multilayered, i.e., morphemes are arranged in a specified sequence. The seven structural positions in the prefix and suffix complexes, one root position and the morphological sequence of affixes in the structure of verbs is as shown in 95(a). Past tense (PST) is marked twice i.e., in positions -7 and -3. The topic focus (TF) prefix *kɛ-* is mutually exclusive with bound subject pronoun prefixes in position -2. Inflectional morphemes are at the periphery of derivational morphemes in the suffix thus re-affirming Greenberg's (1963) principle on affix ordering. Subject plurality suffixes (3.2.6.1.3),

causative and anticausative suffixes are mutually exclusive in position +1 while the instrument marker, the imperfective aspect suffixes, and the reflexive suffix *-kɛj* are mutually exclusive in position 7. The causative prefix *ɪ-* is not included in the table due its lexicalization in class 2 verbs (3.2.2.4). As shown in 95, the order of inflectional categories in the prefix i.e., tense-aspect-negation-tense-person/voice-mood contradicts Booij (2010) generalization of hierarchy of inflectional affixes in verbs i.e., voice > aspect > tense > agreement. An example of a verb stem that contains the attested highest number of affixes is presented in 95(b) where the transitive English verb ‘smell’ is the root predicate and its object has been deleted by the presence of the antipassive suffix.

## 95. The structural positions in verb morphology.

### a. Structural slots of the verb

Prefix complex							Suffix complex							
DPST	PERF	PPERF	NEG	PPST	SUBJ	MOOD	<u>ROOT</u>	PLUR	ANTP	CF	CP	DAT	OBJ	INST
<i>kɪ-</i>	<i>ka-</i> <i>kar-</i>	<i>ta-</i>	<i>ma-</i>	<i>ɪnka</i> <i>-</i> <i>kɔ-</i> <i>kɪ-</i>		HORT <i>nkɛ-</i>		<i>-tos</i> <i>-eso</i>	<i>-isie</i>	<i>-ta</i>	<i>-un</i>	<i>-ci</i>		<i>-en</i>
					SUBJ			CAUS					OBJ	PRO
								<i>-ɪt</i>						G
					TF			<i>-ɪs</i>						<i>-e/</i> <i>-ej</i>
					<i>kɛ-</i>			ANTIC						REF
								<i>-ak</i>						<i>-kɛj</i>
-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7

### b. Example of a verb root modified by verbal affixes in as used in a clause

*ki-ko-to-mo-kò-ɲu-ɪs-to*                      *ɲók-tò*                      *ɛn íntòɲó*  
 DPST-PERF-PPERF-NEG-3-smell-ANTP-CF      dog-SG.NOM      in market.ACC  
 ‘The dog had not been smelling in the market.’

The complex interactions between the morphemes of verb derivation, verb inflection and verbal roots yield a unique slot-based morphological template, suggesting rules of co-occurrence and exclusion of verbal affixes. That is, the examination of the tagmemic overview of structural slots of the verb in 95(a) brings out the typological uniqueness of Okiek verb morphology i.e., First, it seems odd that the two suffixes of centrifugal (CF) and centripetal (CP) are not combined into one slot, since one would have expected them to be mutually exclusive on the basis of their semantic antonymy, but this is otherwise as described in verbal derivation (3.2.2.5). Second a variety of suffixes have been placed in one slot and thus categorized as mutually exclusive, although they do not seem to be semantically incompatible at all e.g., the subject plurality (PLUR) (3.2.6.1.3), the causative (CAUS) (3.2.2.5.1.2.3), and the anticausative (ANTIC) (3.2.2.5.1.1.1) on the one hand and the instrumental (INST) (3.2.2.5.1.2.2), the progressive (PROG) (3.2.2.6.3.1), and the reflexive (REF) (3.2.2.5.1.3.3), but this is otherwise as shown in the morphotactic of the mentioned morphemes in the cross sections. The rules of co-occurrence and exclusion serves as a strategy for indicating how grammatical information is structurally prioritized or instances of functional overlap e.g. where a subject plurality marker implies progressive aspect resulting into a morphosemantically motivated blocking of the co-occurrence of the two morphemes, yet this is not observable from the tagmemic overview.

### 3.2.2.4 Verb classes

Verbs are morphologically classified into class 1 (96a) and class 2 (96b) on the basis of the absence or presence of the initial high front vowel that serves as the causative prefix *ɪ-*, respectively. The two verb classes are attested in Nilotic languages (Dimmendal 1982, Rottland 1982). The grammatical properties of the causative prefix are described in section (3.2.2.5.1.2.3.1).

96. Example of verbs categorized into morphological classes

a. Class 1 verbs

- |      |                         |       |                        |
|------|-------------------------|-------|------------------------|
| i.   | <i>lapat</i><br>'run'   | vii.  | <i>rorɪ</i><br>'laugh' |
| ii.  | <i>twal</i><br>'jump'   | viii. | <i>rʊ</i><br>'sleep'   |
| iii. | <i>pʊ/pʊ/</i><br>'boil' |       |                        |
| iv.  | <i>ŋalan</i><br>'speak' | ix.   | <i>twal</i><br>'jump'  |
| v.   | <i>tʊj</i><br>'meet'    | x.    | <i>ŋɔr</i><br>'scrub'  |
| vi.  | <i>marar</i><br>'dance' |       |                        |

b. Class 2 verbs

- |      |  |       |  |
|------|--|-------|--|
| i.   | <i>ɪ-nɛt</i><br>CAUS-teach<br>'cause to teach'           | v.    | <i>ɪ-ɪp</i><br>CAUS-follow<br>'cause to follow'  |
| ii.  | <i>ɪ-ʃʊm</i><br>CAUS-gather<br>'cause to gather/collect' | vi.   | <i>ɪ-ntɛn</i><br>CAUS-put<br>'put'               |
| iii. | <i>ɪ-ŋɪt</i><br>CAUS-fill<br>'cause to fill'             | vii.  | <i>ɪ-ʒɛj</i><br>CAUS-return<br>'cause to return' |
| iv.  | <i>ɪ-ŋɔ/</i><br>CAUS-destroy<br>'cause to destroy'       | viii. | <i>ɪ-tɛ</i><br>CAUS-scream<br>'cause to scream'  |
|      |  | ix.   | <i>ɪ-kwɔ/</i><br>CAUS-bend<br>'cause to bend'    |

x.	<i>I-nɛr</i> CAUS-fat 'fatten'	xiv.	<i>I-ɔ̃</i> CAUS-cook 'cause to cook'
		xv.	<i>I-rwɔ̃tɪt</i> CAUS-dream 'cause to dream'
xi.	<i>I-mʊt</i> CAUS-marry 'cause to marry'	xvi.	<i>I-mʊc</i> CAUS-be able 'cause to be able/can'
xii.	<i>I-ɔ̃k</i> CAUS-send 'cause to send'	xvii.	<i>I-ɔ̃p</i> CAUS-heal 'cause to heal'
xiii.	<i>I-pɪɔ̃ŋ</i> CAUS-satiTFy 'cause to satisfy'	xviii.	<i>I-tʊtʊn</i> CAUS-resurrect 'cause to resurrect'

Class 1 verbs take up causative affixes in the formation of causative verb stems as shown in 3.2.5.1.2.3.1. The morphological influence of the two verb classes in noun derivation is that agent nouns are derived from class 2 verbs by the combination of the nominalizer prefix *ka-* and the nominalizer suffix *-in* while the suffix *-in* derives agent nouns from class 1 verbs as explained in noun derivation (3.2.1.4).

### 3.2.2.5 Verb derivation

There are two verb derivation strategies i.e., affixation (3.2.5.1) and reduplication (3.2.5.2). Section 3.2.5.1 describes the morphosyntactic, semantic and morpho-phonological effects of verbal derivation affixes. The analysis of derivational morphemes in verbal derivation shows (1) that valency changing morphology is productive and structured with the derivational system supporting argument addition (e.g., instruments, agents, recipients)

and co-reference/argument reduction (reflexivization) as controlled by highly productive and rule-governed valency-altering system with clear morphological markers, (2) ATR vowel harmony is a major structural constraint that shapes the distribution of derivational morphemes, (3) derivational morphemes interact with TAM and argument structure through rules of compatibility, exclusion, and fusion (e.g., Some suffixes are mutually exclusive with tense/aspect morphology i.e., *-ɛn* vs. 3<sup>rd</sup> person progressive, *-un* vs. progressive, Certain morphemes interact to restructure argument roles (agent deletion, patient promotion), (4) directional morphology encodes speaker oriented deixis i.e., the verbal system grammatically encodes deixis, and spatial perspective is integrated with argument structure, and (5) there is semantic overlap of categories demanding for context sensitive semantic interpretations.

On the other hand, reduplication occurs in two main forms i.e., phonological and morphological reduplications. Phonological reduplication involves full stem repetition (e.g., *murmur* from *mur* 'cut') to express aspectual meanings like repetition or frequency. Morphological reduplication, on the other hand, produces forms with no direct formal link to the base verb but conveys extended meanings such as attenuation, continuous action, or instrumentality (e.g., *kurur* from *ɛr* 'write' meaning 'write illegibly'). These forms are often lexicalized and reflect historical or idiomatic processes rather than active grammatical rules.



### 3.2.2.5.1 Affixation

The verbal derivational affixes identified in section 3.2.2.1 are reproduced in 97 with an additional column indicating their semantic effects. Combination of the allomorphs of derivational affixes exhibit interdependency of derivational categories as illustrated in the respective subsections in section 3.2.2.5.1.

#### 97. The inventory of verbal derivational affixes and their semantic effects

	Category	Form	Effects
a.	Valency reducing	Antipassive suffix <i>-isiə</i>	Deletes patient object.
		Anticausative suffix <i>-ak</i>	Deletes agent subject.
		Subject focus prefix <i>kε-</i>	Topic Focus
b.	Valency increasing	Dative suffix <i>-ci</i>	Adds a recipient object or a stimulus object.
		Instrument suffix <i>-εn</i>	Adds a tool.
		Causative prefix <i>ɪ-</i>	<i>ɪ-</i> combines with <i>-ɪs</i> to add a subject agent in class 1 verb stems. <i>ɪ-</i> is fossilized in class 2 verb stems with 3 <sup>rd</sup> person subjects
		Causative suffix <i>-ɪt</i>	Adds an agent subject.
		Causative suffix <i>-ɪs</i>	Combines with <i>ɪ-</i> to add an agent subject.
c.	Miscellaneous	Centrifugal suffix <i>ta-</i>	Orients motion away from speaker/ adds a recipient.
		Centripetal suffix <i>-un</i>	Orients motion towards speaker/adds 1/2-person recipient.

Reflexive suffix *-kɛj*

Makes subject =object

### 3.2.2.5.1.1 Valency reducing operations

#### 3.2.2.5.1.1.1 The Antipassive suffix *-isie*

Morphosyntactically, the antipassive (ANTP) suffix *-isie* derives an intransitive clause by triggering the deletion of the patient-object in the underlying transitive clause as shown in 98. In addition, the suffix is a +ATR dominant morpheme i.e., it for example, regularly triggers the change of the allomorphs of the progressive aspect from *-e* for first and second person and *-ej* for third person to *-i* for all persons in the derived intransitive clause.

#### 98. Derivation of intransitive clause by the antipassive suffix *-isie*

Transitive clauses			Intransitive clauses	
a.	<i>ki-ó-til-e</i> DPST-1SG-CUT-PROG 'I was cutting the meat.'	<i>pàŋ-ɛ́-k</i> meat-PS-PL.ACC	<i>ki-ó-til-isie-i</i> DPST-1SG-CUT-ANTP-PROG 'I was cutting.'	
b.	<i>ki-í-til-e</i> DPST-1SG-CUT-ANTP-PROG 'You were cutting the meat.'	<i>pàŋ-ɛ́-k</i> meat-PS-PL.ACC	<i>ki-í-til-isie-i</i> DPST-1SG-CUT-ANTP-PROG 'I cut the meat.'	
c.	<i>ki-til-ej</i> DPST-CUT-ANTP-PROG '(S)he were cutting the meat.'	<i>pàŋ-ɛ́-k</i> meat-PS-PL.ACC	<i>ki-til-isie-i</i> DPST-CUT-ANTP-PROG '(S)he was cutting.'	<i>ɪ́ŋɛ̀</i> 3SG.NOM

The antipassive suffix fails to trigger ATR vowel harmony in the ATR neutral present perfect aspect (with temporal focus) prefix marker *kar-*.

99. The formation of intransitive clauses by using the antipassive suffix *-isie*

	Transitive clauses	Intransitive clauses
a.	<i>to-í-nol-e</i> <i>ɲp-ìsìè-ḱ-kuk</i> PPERF-2SG-waste-PROG   money-PS-PL.SG.POSS.SG.ACC 'You are still wasting your money.'	<i>to-í-nol-isie-i</i> PPERF-2SG-waste-ANTP-PROG 'You are still wasting.'
b.	<i>kar-ɪ-laj</i> <i>pólòlón</i> APERF-2SG-carry                      honey bag.ACC 'You have carried the honey bag'	<i>kar-í-loj-isie</i> APERF-2SG-carry-ANTP 'You have carried.'

The allomorphs of the antipassive suffix include *-isie*, *-is -se*, and *-isie*. The distribution of the allomorphs exhibit interdependency with other verbal derivation affixes as shown in 96. That is, the allomorph *-isie* combines with the allomorph *-n* of the instrument suffix (3.2.2.5.1.2.2) or the dative suffix *-ci* (3.2.2.5.1.2.1) as shown in 100b-100c respectively; The allomorph *-is* combines with the centripetal suffix *-un* (3.2.5.1.3.2) or the allomorph of the centrifugal marker *-to* (3.2.5.1.3.1) as shown in 100(d); *-se* combines with either the centripetal suffix *-un* or in a combination of the dative suffix *-cino* and the instrument suffix *-en* in the derivation of transitive clauses from ditransitive clauses as shown in 100(d).

100. The distribution of the allomorphs of the antipassive with other verbal derivation affixes

a. Context and function

<u>Allomorphs</u>	<u>Co-occurring morpheme</u>	<u>Morphological context/function</u>
<i>-isie</i>	<i>-n</i> (instrument) / <i>-ci</i> (dative)	Occurs when instrument or dative suffixes are used in antipassive clauses.
<i>-is</i>	<i>-un</i> (centripetal) / <i>-to</i> (centrifugal)	Occurs with directional extensions (motion verbs, spatial construals).
<i>-se</i>	<i>-un</i> (centripetal) / <i>-cino</i> (dative)	Used in the derivation of transitive clauses from ditransitive verbs

+ - *en* (instrument)

b. Combination of *-isie* and INST suffix

- i. *ɿ:r-ɛn*      *kálàm-ɛ-t*      *párv-ɛ-t*      *wér-ò*  
write-INST pen-PS-SG.ACC letter-PS-SG.ACC boy-PS.NOM  
'The boy is writing a letter with a pen.'

- ii. *si:r-isie-n*      *kálàm-ɛ-t*      *wér-ò*  
write-ANTP-INST pen-PS-SG.ACC boy-PS.NOM  
'The boy is writing with a pen.'

c. Combination of *-isie* and DAT suffix

- i. *í-jo-nci*      *pán-t-ɛ-k*      *tò-é-k*      *tiép-tò*  
CAUS-COOK-ANTP-DAT maize-PS-PL.ACC visitor-PS-PL.ACC girl-SG.NOM  
'The girl is cooking maize for the visitors.'

- ii. *í-jo-isie-nci*      *tò-é-k*      *tiép-tò*  
CAUS-COOK-ANTP-DAT visitor-PS-PL.ACC girl-SG.NOM  
'The girl is cooking for the visitors.'

d. Combinations of *-is* and CF or CP suffixes

- i. *ko-por-ej*      *ókóróm-ói-k*      *pɔ̃n-ɛ-t*  
MPST-kill-PROG lion-PS-PL.NOM antelope-PS-SG.ACC  
'The lions killed the antelope.'
- ii. *ko-por-is-to*      *ókóróm-ói-k*  
MPST-kill-ANTP-CF lion-PS-PL.NOM  
'The lions killed away from the speaker.'
- iii. *ko-por-is-un*      *ókóróm-ói-k*  
MPST-kill-ANTP-CP lion-PS-PL.NOM  
'The lions killed towards the speaker.'

e. Combinations of -se and DAT, INST, or CP markers

Ditransitive clauses unmarked by antipassive suffix

- i. *ki-tep kò-tek-cino-en inɛ́ ɲátàt-ìá-t kòr-í-k íɛk*  
 DPST-HPERF 3-build-DAT-INST 3SG.ACC mud-PS-SG.ACC house-PS-PL.ACC 3PL.NOM  
 'They used to build houses for him/her with mud.'
- ii. *ki-tep kò-tek-un-ec ɲátàt-ìá-t kòr-í-k íɛk*  
 DPST-HPERF 3-build-CP-1PL mud-PS-SG.ACC house-PS-PL.ACC 3PL.NOM  
 'They used to build houses for us with mud.'

Derived transitive clauses marked by antipassive suffix -se

- i. *ki-tep kò-tek-se-cino-en inɛ́ ɲátàt-ìá-t íɛk*  
 DPST-HPERF 3-build-ANTP-DAT-INST 3SG.ACC mud-PS-SG.ACC 3PL.NOM  
 'They used to build for him/her with mud.'
- ii. *ki-tep kò-tek-se-un-ec ɲátàt-ìá-t íɛk*  
 DPST-HPERF 3-build-ANTP-CP-1PL mud-PS-SG.ACC 3PL.NOM  
 'They used to build for us with mud.'

The examination of the distribution and conditioning of the allomorphs of the antipassive suffix show that: (i) the allomorphy is mainly morphologically conditioned and reflects morpheme compatibility based on derivational sequencing, (ii) possibly for the sake of economy or fluency, the suffix -se is used in saturated suffix slots, hinting at suffix ordering constraints, (iii) the use of the allomorphs with directional markers shows how semantic alignment of the allomorphs of the antipassive and directional markers reflects the relation between valency and event structure, (iv) different allomorph relates to different valency manipulation strategies either highlighting the subject or action and backgrounding the object or realignment of argument roles, and that (v) valency, argument structure and motion are templatically integrated in the verbal structure.

### 3.2.2.5.1.1.2 The anticausative suffix *-ak*

The anticausative (ANTIC) suffix *-ak* derives an intransitive clause by triggering the deletion of the agent-subject in the underlying transitive clause and promotes the patient-object of the underlying transitive clause to the patient-subject function in the derived intransitive clause as shown in 101. The patient-subject occurs in the nominative case. The suffix has three allomorphs i.e., the +ATR anticausative suffix *-ok*, the -ATR anticausative suffix *-ak* and the allomorph *-okse* which is used in combination with dative and centripetal suffixes as shown in 103. The -ATR allomorph *-ak* harmonizes with -ATR verb stems (101a-b) while the +ATR allomorph combines with +ATR verb stems (101c). Morphophonologically, the derivation process triggers the velarization of the palatal stop /c/ in the verb root in 43(c).

#### 101. Derivation of intransitive clauses by the anticausative suffix *-ak*

	Transitive clauses			Intransitive clauses	
a.	<i>kɔ-pat</i>	<i>tíɛpɔ́s-à</i>	<i>tɛɛ́-t</i>	<i>kɪ-pat-ak</i>	<i>tɛɛ́-t</i>
	MPST-break	woman-PS-PL.NOM	pot-SG.ACC	DPST-press-ANTIC	pot-SG.NOM
	'The woman broke pot.'			'The pot broke.'	
b.	<i>kɔ-pac</i>	<i>wér-ò</i>	<i>kɛtí-t</i>	<i>kɔ-pac-ak</i>	<i>kɛtí-t</i>
	MPST-peel	boy-PS.NOM	tree-SG.ACC	DPST-peel-ANTIC	tree-SG.NOM
	'The boy peeled the tree.'			'The tree peeled.'	
c.	<i>ki-noc</i>	<i>pɔ́ín-ɛ́-t</i>	<i>ánw-ɛ́-t</i>	<i>ki-nok-ok</i>	<i>pɔ́ín-ɛ́-t</i>
	DPST-trip	antelope-PS-SG.ACC	rope-PS-SG.NOM	DPST-trip-ANTIC	antelope-PS-SG.NOM
	'The rope tripped the antelope.'			'The antelope tripped.'	

The combination of the anticausative prefix *-okse* and the allomorph of the dative suffix *-ncin* derives a transitive clause by adding a third person beneficiary direct object to an underlying intransitive clause as shown in 102(b). The combination of *-okse* and the centripetal suffix adds a first- or second-person beneficiary direct object in the intransitive

clause as shown in 103(b-c). The progressive aspect marker is deleted and thus aspect is inferred in context.

102. The anticausative suffix *-okse* and the dative suffix *-ncin*

- a. *jot-okse-j*            *kuʁk-ὲ-ṭ*  
       open-ANTIC-PROG    door-PS-SG.NOM  
       ‘The door is opening.’
- b. *jot-okse-ncin*        *kuʁk-ὲ-ṭ*            *iæk*  
       open-ANTIC-DAT    door-PS-SG.NOM    3PL.ACC  
       ‘The door is opening for him/her.’

103. The anticausative suffix *-okse* and the centripetal suffix *-u*

- a. *jot-okse-j*            *kuʁk-ὲ-ṭ*  
       open-ANTIC-PROG    door-PS-SG.NOM  
       ‘The door is opening.’
- b. *jot-okse-u-on*        *kuʁk-ὲ-ṭ*  
       open-ANTIC-CP-1SG    door-PS-SG.NOM  
       ‘The door is opening for me/towards me.’
- c. *jot-okse-u-in*        *kuʁk-ὲ-ṭ*  
       open-ANTIC-CP-2SG    door-PS-SG.NOM  
       ‘The door is opening for you/towards you.’

### 3.2.2.5.1.1.3 The topic focus prefix *kε-*

The topic focus (TF) prefix *kε-* marks the experiencer-subject role of a transitive clause for 1/2/3 persons as shown in 104. The patient-direct object occurs in the absolutive case and the optional subject occurs in the nominative case. The prefix has three allomorphs i.e., the -ATR prefix *kε-* vs. the +ATR prefix *ke-*, and *kɪ-*. Exceptionally, the Topic Focus marker *kɪ-* only combines with the past tense prefix *kɪ-* as shown in 104b(ii) or with the negation marker *mac-* as illustrated in section 5.0. The progressive aspect marker in 104a(ii) triggers ART vowel harmony while the -ATR allomorph prefix *kε-* harmonizes with

the -ATR vowels in the verb in 104b(ii). Morphotactically, the impersonal prefix is mutually exclusive with bound subject pronouns in the prefix complex as contrasted in 104b(i-ii).

104. Verb derivation by the topic focus prefix *kɛ-*

a.

- i. *tos kó-wec-ej kí-rwók-ínt-è-t pí:-k ɛ ɲori-ot-in*  
 PFUT 3-hate-PROG NMLZ-chief-NMLZ-PS-SG.NOM people-PL.ACC AM.PL lazy-PART-PL  
 'The chief will hate lazy people.'

- ii. *tos ke-wec-ej pí-k ɛ ɲori-ot-in*  
 PFUT TF-hate-PROG people-PL.ACC AM.PL lazy-PART-PL  
 'Lazy people will be hated (by someone).'

b. Topic prefix mutually exclusive with bound subject pronouns

- i. *kɪ-I-ɲɪɪɪt àn-wɛ-ʔt*  
 DPST-2SG-pull rope-PS-SG.ACC  
 'You pulled the rope.'

- ii. *kɪ-kɪ-ɲɪɪɪt àn-wɛ-ʔt*  
 DPST-TF-pull rope-PS-SG.ACC  
 'The rope was pulled (by someone).'

### 3.2.2.5.1.2 Valency increasing operations

#### 3.2.2.5.1.2.1 The dative suffix *-ci*

The dative suffix *-ci* has different effects when applied to a transitive and an intransitive verb stem i.e., the suffix triggers the addition of a third person recipient/beneficiary indirect object when applied to underlying transitive verbs (105a-b) and a stimulus-indirect object when applied to intransitive verb 105 (b). The allomorphs of the dative suffix include i.e. the suffix *-(n)ci*, *-(n)cín*, and *-(n)cino*. The optional alveolar nasal /n/ in brackets is added when the suffix is preceded by a verb stem with a zero coda. The suffix *-cín* occurs when the dative precedes a bound object pronoun (105b) and in combinations



with other derivational affixes, while *-cino* exclusively combines with the instrument marker *-ɛn* (3.2.5.1.2.2). The dative suffix is a +ATR dominant suffix. Morphotactically, the suffix is mutually exclusive with the progressive aspect suffixes as contrasted in 105a (i) vs. 105a (ii).

105. Derivation by the dative suffix

a. Derivation of transitive clause b(ii) from transitive clause b(i)

- i. *tos kó-ne-ej íṣṣí-t wér-ò*  
 PFUT 3-slaughter-PROG goat-SG.ACC boy-PS.NOM  
 'The boy will be slaughtering the goat.'
- ii. *tos kó-ne-ci íṣṣí-t tò-é-k wér-ò*  
 PFUT 3-slaughter-DAT goat-SG.ACC visit-PS-PL.ACC boy-PS.NOM  
 'The boy will be slaughtering the goat for the visitors.'

b. Addition of stimulus-indirect object by dative suffix

- |     | Intransitive clause   | Derived transitive clause  |
|-----|---|--|
| i.  | <i>ɔɔkɛn wér-ò</i><br>afraid boy-PS.NOM<br>'The boy is afraid.'                         | <i>oroken-cin-on wér-ò</i><br>afraid-DAT-1SG boy-PS.NOM<br>'The boy is afraid of me.'                      |
| ii. | <i>ki-rori-e tíép-tò</i><br>DPST-1SG-laugh-PROG girl-SG.NOM<br>'The girl was laughing.' | <i>ki-rorie-cin-on tíép-tò</i><br>DPST-1SG-laugh-DAT-1SG.OBJ girl-SG.NOM<br>'The girl was laughing at me.' |

The dative suffix combines with the centripetal or centrifugal suffixes as shown in 106.

106. The dative combining with suffixes of orientation of motion

- i. *ki-lapat mɔ́í-tà*  
 DPST-run calf-SG.NOM  
 'The calf ran.'

	VP: V-CP-DAT		VP:V-CF-DAT
ii.	<i>ki-lopot-un-cin-on</i> <i>mɔ́-tà</i> DPST-run-CP-DAT-1SG   calf-SG.NOM 'The calf ran towards me.'		<i>ki-lopot-te-cin-on</i> <i>mɔ́-tà</i> DPST-run-CF-DAT-1SG   calf-SG.NOM 'The calf ran away from me.'
iii.	<i>ki-lopot-un-cin</i> <i>mɔ́-tà</i> <i>ìnɛ´</i> DPST-run-CP-DAT   calf-SG-SG.NOM   3SG.ACC 'The calf ran towards him/her.'		<i>ki-lopot-te-cin</i> <i>mɔ́-tà</i> <i>ìnɛ´</i> DPST-run-CP-DAT   calf-SG.NOM   3SG.ACC 'The calf ran away from him/her.'

The third person recipient-indirect object can also be introduced by the centrifugal marker *-ta* with the verb *koi-* 'give' as shown in 3.2.5.1.3.1.

The distribution and interaction of the allomorphs of the dative suffix reveal that the suffix occurs in a series of interactions across verb class (transitive/intransitive), person hierarchy (1<sup>st</sup>/2<sup>nd</sup> vs. 3<sup>rd</sup>), directional marking and morphological co-occurrences that point at how complex alignment between person, semantic roles, and directionality in Okiek morphosyntax are accounted for in the tagmemic overview of structural slots of the verb in section 3.2.2.3.

#### 3.2.2.5.1.2.2 The instrument suffix *-ɛn*

The instrument suffix *-ɛn* derives a ditransitive clause by adding a tool indirect object to the underlying transitive clause. The suffix has two allomorphs on the basis of ATR vowel harmony i.e., the -ATR and +ATR instrument suffixes *-ɛn* and *-en*, respectively. The progressive aspect marker *-e* in 107(b) triggers the use of the +ATR allomorph as contrasted with the -ATR allomorph in 107(a). Morphotactically, the instrument suffix is mutually exclusive with the progressive aspect marker for third person as shown in 107(d).

107. Derivations by the instrument suffix *-ɛn*

- |    |  |                                    |   |   |                                   |                                      |                            |
|----|--|------------------------------------|---|---|-----------------------------------|--------------------------------------|----------------------------|
| a. | <i>kɔ-ɪ-am</i><br>MPST-2SG-eat<br>'You ate rice.'                | <i>mʊɛɛɛ-k</i><br>rice-PL.ACC      | <i>kɔ-ɪ-am-ɛn</i><br>MPST-2SG-eat-INST        | <i>kɛɛik-ɛ-t</i><br>spoon-PS-SG.ACC       | <i>mʊɛɛɛ-k</i><br>rice-PL.ACC     | 'You ate rice with a spoon.'         |                            |
| b. | <i>ko-í-om-e</i><br>MPST-2SG-eat-PROG<br>'You were eating rice.' | <i>mʊɛɛɛ-k</i><br>rice-PL.ACC      | <i>ko-í-om-en-e</i><br>MPST-2SG-eat-INST-PROG | <i>kɛɛik-ɛ-t</i><br>spoon-PS-SG.ACC       | <i>mʊɛɛɛ-k</i><br>rice-PL.ACC     | 'You were eating rice with a spoon.' |                            |
| c. | <i>ke-tec-e</i><br>1PL-build-PROG<br>'We are building houses.'   | <i>kòr-í-k</i><br>house-SE-PL.ACC  | <i>ke-tec-en-e</i><br>1PL-build-INST-PROG     | <i>kòr-í-k</i><br>house-PS-PL.ACC         | <i>ɲʊtətɪá-t</i><br>mud-SG.ACC    | 'We are building houses with mud.'   |                            |
| d. | <i>sir-ej</i><br>write-PROG                                      | <i>páɽ-ɛ-t</i><br>letter-PS-SG.ACC | <i>wér-ò</i><br>boy-PS.NOM                    | <i>sir-en</i><br>write-INST               | <i>kálàm-ɛ-t</i><br>pen-PS-SG.ACC | <i>páɽ-ɛ-t</i><br>letter-PS-SG.ACC   | <i>wér-ò</i><br>boy-PS.NOM |
|    | 'The boy is writing a letter.'                                   |                                    |   | 'The boy is writing a letter with a pen.' |                                   |                                      |                            |

The instrument suffix combines with the antipassive suffix *-isie* as shown in 3.2.2.5.1.1.1. The examination of the distribution of the instrument suffix shows that: (i) the suffix is semantically limited to the instrument role, (ii) it displays harmony driven surface variations that do not alter its semantic function, (iii) there is either competition for slots in the verbal structure or a semantic clash where progressive aspect markers would imply emphasis on process over end point while the instrument suffix would imply emphasis on completed or resultative action involving a tool.

### 3.2.2.5.1.2.3 Causative affixes

Causative affixes include the causative prefix *ɪ-*, the causative suffixes *-ɪt* and *-ɪs*.

#### 3.2.2.5.1.2.3.1 The causative prefix *ɪ-*

The causative prefix *ɪ-* is fossilized in class 2 verbs (3.2.4). The fossilized causative prefix is mutually exclusive with first and second person bound subject pronouns as shown in 108. This alludes to the possibility of one morphosyntactic slot for subject information in the verbal structure. The prefix is a harmonizing morpheme in relation to ATR vowel harmony i.e., it has two allomorphs on the basis of ATR i.e., -ATR allomorph *ɪ-* 108(a-b) and the

+ATR allomorph *i-*, this reaffirms the strong phonology-morphology interface in Okiek. Vowel harmony in 108 is triggered by progressive aspect marker -i 108(c).

108. The paradigm of the causative prefix *ɪ-* and bound subject pronouns

Person	SG		PL
1.	<i>ko-ó-put-i</i> MPST-1SG-fall-PROG 'I was falling.'		<i>ko-ké-put-i</i> MPST-1PL-fall-PROG 'We were falling.'
2.	<i>ko-í-put-i</i> MPST-2SG-fall-PROG 'You were falling.'		<i>ko-ó:-put-i</i> MPST-2PL-fall-PROG 'You were falling.'
3.	<i>ko-í-put-i</i> MPST-CAUS-fall-PROG '(S)he/it was falling.'	<i>ɪhé`</i> 3SG.NOM	<i>ko-í-put-i</i> MPST-CAUS-fall-PROG 'They were falling.'
			<i>ɪɛk</i> 3PL.NOM

The circumfixing of the causative suffix *-ɪs* and the causative prefix *ɪ-* in class 1 verb stems adds a primary agent subject who causes a secondary agent object to perform some action. This bipartite morpheme -a circumfix- shows that syntactically, this causative is not just valency increasing, but also an agent-adding morpheme with a clear thematic hierarchy shift. The primary agent regularly occurs in clause final position in the nominative case while the secondary agent immediately follows the verb in the accusative case as shown in 109. The semantic roles are tightly tied to case and position, even if word order is flexible.

109. Addition of a primary agent by causative affixes *ɪ-* and *-ɪs*

- a. *kɔ-kɛr*      *kɔŋ-tá*      *lák-wɛ-t*  
MPST-close   eye-SG.ACC      child-PS-SG.NOM  
'The child closed an eye.'
- b. *kɔ-ɪ-kɛr-ɪs*      *lák-wɛ-t*      *kɔŋ-tá*      *kó-sóp-ínt-è-t*  
MPST-CAUS-close-CAUS   child-PS-SG.ACC   eye-SG.ACC   NMLZ-heal-NMLZ-PS-SG.NOM  
'The healer caused the child to close an eye.'

The causative prefix is deleted in noun derivation (3.1.5). The combination of the two affixes i.e., *ɪ-* and *-ɪs* is attested in Kipsikiis where Toweett (1979) analyses a morphosyntactically comparable suffix *-ɪs* as a marker of ‘detransitivization or indirect causation’ Dimmendaal (2020:371).

### 3.2.2.5.1.2.3.2 The causative suffix *-ɪt*

Morphologically, the causative suffix *-ɪt* derives de-adjectival verbs from adjectival roots as shown in 110. The semi-vowel /j/ in adjective final position is regularly deleted in the derivation of de-adjectival verbs with the exception in 110(j). The causative prefix has two allomorphs in relation to ATR i.e., +ATR allomorph *-it* vs. the -ATR allomorph *-ɪt*.

#### 110. Derivation of deadjectival verbs by the causative suffix *-ɪt*

	<u>Adjectives</u>	<u>Verbs</u>			
			e.	<i>ɲwɛn</i> 'fast'	<i>ɲwɛn-ɪt</i> fast-CAUS 'hasten'
a.	<i>ɲatɪp</i> 'sharp'	<i>ɲatɪp-ɪt</i> sharp-CAUS 'sharpen'			
			f.	<i>lo:w</i> 'deep'	<i>lo:w-ɪt</i> deep-CAUS 'deepen'
b.	<i>kɪm</i> 'strong'	<i>kɪm-ɪt</i> strong-CAUS 'strengthen'			
			g.	<i>para</i> 'wide'	<i>para-ɪt</i> wide-CAUS 'widen'
c.	<i>ja</i> 'bad'	<i>ja-ɪt</i> bad-CAUS 'worsen'			
			h.	<i>koj</i> 'long'	<i>ko-ɪt</i> long-CAUS 'lengthen'
d.	<i>kɪtɪt</i> 'cold'	<i>kɪtɪt-ɪt</i> cold-CAUS 'make cold'			
			i.	<i>tɔ:j</i> 'black'	<i>tɔ:-ɪt</i> black-CAUS 'blacken'

j.	<i>u:ju:j</i> 'hard'	<i>u:ju:j-it</i> hard-CAUS	'harden'
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Syntactically, the causative suffix *-it* derives transitive deadjectival verbal clauses by adding an agent-subject in underlying intransitive adjectival clauses as shown in 111. The causative suffix regularly triggers the velarization of the voiceless palatal stop /c/ in the adjectival plural marker(111a).

111. The derivation of transitive verbal clauses from intransitive adjectival clauses

	Intransitive adjectival clauses	Transitive deadejctival verbal clauses
a.	<i>inko-mintilil-ec cé-kò</i> PPST-SOUR-PL milk-PL.NOM 'The milk was sour.'	<i>inko-mintilil-ek-it cè téɛ̀-t</i> PPST-SOUR-PL-CAUS milk-PL.ACC pot-SG.NOM 'The pot soured the milk.'
b.	<i>ki-piɪr ísùntá-ì-t</i> DPST-red wall-PS-SG.NOM 'The wall was red.'	<i>ki-piɪr-it ísùntà-í-t tíép-tò</i> DPST-red-CAUS wall-PS-SG.ACC girl-SG.NOM 'The girl reddened the wall.'

Morphotactically, the combination of the causative suffix *-it* and the centripetal suffix *-un* triggers the deletion of their agent subject in transitive deadjectival verb stems and promotes its patient object to patient subject function in the derived intransitive clause as shown in 112. This combination yields a derived intransitive clause with the patient in subject role, a kind of detransitivization or anticausative/passive-like effect.

112. The deletion of the agent-subject of transitive deadjectival verbal clauses

	Transitive clauses	Intransitive clauses
a.	<i>ki-mintilil-ek-it    cè-kó    tɛ́ɛ̀-t</i> DPST-SOUR-PL-CAUS   milk-PL.ACC   pot-SG.NOM 'The pot soured the milk.'	<i>ki-mintilil-ek-it-un    cé-kò</i> DPST-SOUR-PL-CAUS-CP   milk-PL.NOM 'The milk became sour'
b.	<i>ko-ɔɲɲ-ek-it    cúmp-ì-k    pàɲ-ɛ̀-k</i> DPST-SOUR-PL-CAUS   salt-PL.NOM   meat-PS-SG.ACC 'The salt sweetened the meat.'	<i>ko-ɔɲɲ-ek-it-un    páɲ-ɛ̀-k</i> DPST-SOUR-PL-CAUS-CP   meat-PS-SG.NOM 'The meat became sweet.'

The effects of the causative suffix *-ɪt* can be summerzied as shown in 113.

113. The effects of the causative suffix in verb derivation

	Feature	Description	Implication
i.	Derivational function	-ɪt derives verbs from adjectives	Category-changing, causative de-adjectival
ii.	/j/ deletion	Final /j/ of adjective root deleted	Phonological simplification in derivation
iii.	Valency change	Adds agent subject to underlying adjectival clause	valency-increasing and agent-introducing.
iv.	Velarization of /c/	Plural marker /c/ becomes velar in presence of -ɪt	Suffix-driven phonological alternation
v.	Combination with CP <i>-un</i>	-ɪt + -un deletes agent and promotes object to subject	morpheme stacking can lead to valency reduction, not just increase

### 3.2.2.5.1.3 Miscellaneous suffixes

The centrifugal suffix *-ta* and centripetal suffixes *-un* distinguish between morphosyntactic function i.e., the addition a participant in the predicate frame of verbs and semantic function i.e., the indication of orientation of motion.

#### 3.2.2.5.1.3.1 The centrifugal suffix *-ta*

The centripetal suffix *-ta* indicates that the action described by the predicate is directed away from the speaker. It is a harmonizing morpheme in relation to ATR vowel harmony with attested allomorphs i.e., *-ta*, *-to*, *-te*, *-t*, and *-ito* as summarized in 114. *-ta* occurs in -ATR verbs stems e.g. in 114(b), while *-to* occurs in +ATR verb stems e.g., 114(c) where the progressive aspect suffix *-j* triggers vowel harmony in the verb stem.

114. Orientation of motion away from the speaker by the CF allomorphs *-ta* and *-to*

- a. *ka-kɔ̀-tɔr*      *tɛ́-tà*      *tíɛ̀pɔ̀s-á*  
PERF-3-push      COW-SG.NOM      woman-SG.ACC  
'The cow has pushed the woman.'
- b. *ka-kɔ̀-tɔr-ta*      *tɛ́-tà*      *tíɛ̀pɔ̀s-á*  
PERF-3-push-CF      COW-SG.NOM      woman-SG.ACC  
'The cow has pushed the woman away.'
- c. *tor-to-j*      *tɛ́-tà*      *tíɛ̀pɔ̀s-á*  
push-CF-PROG      COW-SG.NOM      woman-SG.ACC  
'The cow is pushing the woman away.'

The allomorph *-t* combines with bound object pronouns (115a-b) or the imperative suffix *-ɛn* (115c).



115. The combinations with the allomorph *-t*

a. *kɪ-ɪ-jak-t-an*

DPST-2SG-pay-CF-1SG

'You paid me away.'

b. *kɔ-tɔr-t-ɛc*

DPST-push-CF-1PL

'(S)he/it pushed us away.'

c. *kɛr-t-ɛn*

look-CF-IMP

'look away!'

The allomorph *-ito* presents a fusion of the centrifugal with the dative suffix and occurs in +ATR stems in clauses in which the recipient indirect object is introduced by a prepositional phrase e.g., the recipient *ɛn kirwokintet* ‘to the chief’ 116a(i) vs. 116(ii) where it is licensed as an argument by the dative suffix *-ci*; and it is fossilized in the verb *toito* ‘wrap with’ such that the instrument *sokek* ‘leaves’ is not introduced by neither the instrument suffix *-ɛn* nor a preposition.

116. The distribution of the allomorph *-ito*

- a. *cam ké-mwo:ito-i còr-í-k ɛn kí-rwòk-ìnt-é-t*  
 HAB 1PL-tell-CF-PROG thief-PS-PL.ACC in NMLZ-chief-NMLZ-PS-SG.ACC  
 ‘We are usually telling/reporting away thieves to the chief.’
- b. *cam ké-mwo:ci còr-í-k kí-rwòk-ìnt-é-t*  
 HAB 1PL-tell-DAT thief-PS-PL.ACC NMLZ-judge-NMLZ-PS-SG.ACC  
 ‘We are usually telling/reporting thieves to chief.’
- c. *ké-to-ito-i sòk-é-k òm-tí-t*  
 1PL-wrap-CF-PROG leaf-PS-PL.ACC eat-PS-SG.ACC  
 ‘We are wrapping food with leaves.’

The allomorph *-ta* has the effect of adding a source object argument when used with the verb *ɪm* ‘force.’ The added source argument regularly precedes the agent subject of the underlying transitive clause as contrasted in 117(a) and 117(b).

117. The introduction of a source argument by the centrifugal marker *-ta*

- a. *κɪ-ɪm róri-ó-t Máɔ̀ní*  
 DPST-force laugh-PS-SG.ACC Machoni.NOM  
 ‘Machoni forced laughter.’ Lit. ‘Machoni forced himself to laugh.’
- b. *κɪ-ɪm-ta róri-ó-t Máɔ̀ɛjá Máɔ̀ní*  
 DPST-force-CF laugh-PS-SG.ACC Mabeya.ACC Machoni.NOM  
 ‘Machoni forced laughter out of Mabeya.’

The allomorph *-te* combines with the centripetal suffix *-u* to indicate the auto-benefactive function in relation to the subject in the clause. Morphotactically, the centrifugal suffix precedes the centripetal suffix as shown in 118 (b).

118. Combination of the centripetal suffix *-u* and the centrifugal suffix *-ta*

- a. *tekel-isie pì-k*  
 choose-ANTP people-PL.NOM  
 'People are choosing.'
- b. *tekel-te-u pì-k ìæk kò-ek kó-ntò-ì-k-cwák*  
 choose-CF-CP people-PL.NOM 3PL.ACC 3-be NMLZ-lead-PS-SG-3PL.POSS.PL.ACC  
 'People chose them to be their leaders.'

The implications of the distribution of the allomorphs of the centrifugal suffix are summarized in 119.

119. The implications of the distribution of the allomorphs of the centrifugal suffix

Allomorph	Distribution	Function/implication
i. <i>-ta</i>	Occurs with –ATR verb stems	ATR-harmonizing; basic centrifugal meaning
ii. <i>-to</i>	Occurs with +ATR verb stems	ATR-harmonizing counterpart to <i>-ta</i>
iii. <i>-t</i>	Occurs with bound object pronouns or the imperative suffix <i>-ɛn</i>	Reduced allomorph in phonologically dense/morphotactically constrained environments
iv. <i>-te</i>	Combines with centripetal suffix <i>-u</i> to express auto-benefactive meaning	indicates subject benefits from action; morphologically encodes self-directed benefit and directionality

- v. *-ito* +ATR stems in clauses with a recipient indirect object reflects compositional meaning (direction + recipient) being bundled into a single fused form

### 3.2.2.5.1.3.2 The centripetal suffix *-un*

Syntactically, the centripetal suffix *-un* derives ditransitive clauses (120b) from transitive clauses (120a) by triggering the addition of 1SG/PL or 2SG/PL recipient indirect object- this shows that recipient marking is grammatically encoded, and directionality interacts with person. The suffix is a +ATR morpheme with two allomorphs i.e., the *-u* used in combination with bound object pronouns and *-un* used in combination with derivational morphemes- these two allomorphs imply morphotactic adaptation of the suffixes to environment. The centripetal suffix is mutually exclusive with the progressive aspect suffixes, suggesting a slot sharing constraints in the structure of the verb (120b). The +ATR allomorph *-un* triggers vowel harmony in the verb stems in 120(b).

#### 120. Examples of derivations by the centripetal suffix *-un*

##### a. Transitive clauses

- i. *tos kó-ŋe-ej íṅṅɛí-t tó-è-k*  
 PFUT 3-slaughter-PROG goat-SG.ACC visit-PS-PL.NOM  
 'The visitors will be slaughtering the goat.'
- ii. *oror-ej keric-ó-t kó-sóp-ì-k*  
 describe-PROG medicine-PS-PL.ACC NMLZ-heal-PS-PL.NOM  
 'The healers are describing the medicine to the people.'

##### b. Ditransitive clauses

- i. *tos kó-ŋe-u-on íṅṅɛí-t tó-è-k*  
 PFUT 3-slaughter-CP-1SG goat-SG.ACC visit-PS-PL.NOM  
 'The visitors will be slaughtering the goat for me.'

- ii. *oror-u-ok*                      *kéric-ó-t*                      *kó-sóp-ì-k*  
 describe-CP-2PL      medicine-PS-PL.ACC      NMLZ-heal-PS-PL.NOM  
 'The healers are describing the medicine to you'

Semantically, in relation to encoding speaker-oriented deixis, the suffix indicates that the action described by the predicate is directed towards the speaker as contrasted with the centrifugal suffix *-ta* in 121. The centripetal suffix *-un* fails to trigger ATR vowel harmony in the perfect aspect prefix *ka-* but triggers change in vowel harmony in the verb root *tor* 'push.'

#### 121. A contrast of semantic functions between *-ta* and *-un*

Motion away from the speaker <i>-ta</i>			Motion towards the speaker <i>-un</i>		
a.	<i>kar-tor-ta</i>	<i>tɛ́-tà</i> <i>tíɛ̀pɔ̀s-á</i>	<i>kar-tor-un</i>	<i>tɛ́-tà</i> <i>tíɛ̀pɔ̀s-á</i>	
	PERF-push-CF	COW-SG.NOM      woman-SG.ACC	PERF-push-CP	COW-SG.NOM      woman-SG.ACC	
	'The cow has already pushed the woman away.'		'The cow has already pushed the woman towards the speaker.'		
b.	<i>ker-to-y</i>	<i>wér-ò</i>	<i>ker-un</i>	<i>wér-ò</i>	
	look-CF-PROG	boy-SG.NOM	look-CP	boy-SG.NOM	
	'The boy is looking away.'		'The boy is looking towards the speaker.'		

The centripetal suffix *-un* combines with the causative suffix *-it* implying that verb derivation supports compositional layering: direction + causation as shown in 112 in section 3.2.5.1.2.3.2

#### 3.2.2.5.1.3.3 The reflexive suffix *-kɛj*

The reflexive (REF) suffix *-kɛj* indicates that the agent-subject and the patient-object in the predicate frame of the verb are co-referential as shown in 122. The reflexive and reciprocal (REC) categories overlap in the reflexive suffix yielding a REF-REC category with similar properties identified by Heine and Narrog (2010:409-410) i.e., the suffix receives a reflexive reading when used with singular subject referents (122b) and it receives either a reflexive

or reciprocal reading when used with plural subject referents (122c). The suffix *-kɛj* is identified as the reflexive suffix because it is less constrained in its use with singular referents. It undergoes ATR vowel harmony yielding two allomorphs i.e., the +ATR *-kej* and –ATR: *-kɛj*. The +ATR verb stems in 122(b-c) trigger vowel harmony in the suffix.

122. Examples of derivations by the reflexive suffix *-kɛj*

a. Unmarked by reflexive

- i. *ko-ò-toret*                      *ɔ́r-wɛ̀-ɲón*  
MPST-1SG-help              friend-PS-1SG.POSS.SG.ACC  
'I helped my friend.'
  
- ii. *ko-ì-kujo*                      *kó-nèt-í-k*  
MPST-2SG-understand      NMLZ-teach-PS-PL.ACC  
'You understood the teachers'

b. The reflexive suffix used with singular subject referents

- i. *ko-ò-toret-kej*  
MPST-1SG-help-REF  
'I helped myself.'
  
- ii. *ko-ì-kujo-kej*  
MPST-2SG-understand-REF  
'You understand yourself.'

c. The reflexive suffix used with plural subject referents

- i. *ko-ò:-toret-kej*  
MPST-2PL-help-REF  
'You helped yourselves/You helped each other.'
  
- ii. *ko-kè-kujo-kej*  
MPST-1PL-understand-REF  
'We understood ourselves/We understood each other.'

### 3.2.2.5.2 Reduplication

Reduplication is a word formation process in which a part of a word or a phrase is repeated (Urbanczyk 2007). Reduplication distinguishes phonological reduplication and morphological reduplication yielding two kinds of reduplicants in verb derivation i.e., reduplicants with simplexes (123) and reduplicants without simplexes (124).

Reduplicants with simplexes represent the phonological level of reduplication where all segments of the verb stem are reduplicated such that the segments in the reduplicants are identical to the segments in the simplex as shown in 123(a-d). Semantically, the reduplication adds aspectual meaning—repetition or frequency—without changing argument structure.

123. Examples of reduplicated verb stems with a simplex.

	Simplexes	Reduplicants
a.	<i>mʊr</i> 'cut'	<i>mʊrmʊr</i> 'cut repeatedly into pieces'
b.	<i>am</i> 'eat'	<i>amam</i> 'eat repeatedly'
c.	<i>wal</i> 'change'	<i>walwal</i> 'change repeatedly' / 'exchange'
d.	<i>twal</i> 'jump'	<i>twaltwal</i> 'jump repeatedly'

Reduplicants without simplexes bear no formal relation to their verbal bases but they exhibit modified semantic notions of the non-reduplicated stems e.g., attenuation 124(a-b), continuity 124(c-d), and instrumentality 124(e-f). These meanings are semantic extensions of the base, not predictable from form and therefore imply a process of semantic bleaching or metaphorical extension in verbal derivation.

124. Reduplicated stems without a simplex

	Semantically related forms	Reduplicants
a.	<i>sr</i> 'write'	<i>ksr</i> 'write illegibly'
b.	<i>hʔh</i> 'speak'	<i>hʔhʔhʔh</i> 'speak inarticulately'
c.	<i>p</i> 'boil'	<i>pʊpʊ</i> 'boil releasing bubbles'
d.	<i>hp</i> 'mash'	<i>haph</i> 'mash continuously'
e.	<i>hʔr</i> 'scrub'	<i>sɛksɛk</i> 'scrub with a spoon'
f.	<i>hm</i> 'dig'	<i>kulkul</i> 'dig using hands'

Additionally, having no simplexes suggests that the lexicalized or fossilized reduplicative forms may not be generated by synchronically productive rules, and that they represent historical processes or idiomatic verb formations processes.



### 3.2.2.6 Verb inflection

Section 3.2.2.6 describes the forms, meanings, distributions and functions of inflectional affixes in verb morphology. Okiek presents a complex verbal inflection system which encodes grammatical categories- person (3.2.2.6.1), tense (3.2.2.6.2), aspect (3.2.2.6.3), mood (3.2.2.6.4) and the infinitive (3.2.2.6.5)- through dynamic interplay of prefixes, suffixes, particles and tone patterns. The category of aspect includes progressive, habitual, perfect, perfect progressive, and future-oriented aspectual constructions. Notably, the progressive aspect functions as a base layer, combining with other aspectual forms to express fine-grained temporal contours. Tense is primarily marked through a tripartite system of past tense prefixes—*ɪnka*- (proximal), *kɔ*- (medial), and *kɪ*- (distal), present tense is morphologically unmarked while future tense is coded syntactically or exceptionally via the centripetal suffix *-u* in constructions with the verb *ek* 'become'. Mood distinctions include hortative, imperative, and hypothetical, each realized through distinct morphosyntactic strategies i.e., hortative constructions use the morphological markers such as *ɲkɛ*- and the syntactic marker *nan*, while imperative mood is encoded by a set of allomorphs (*-en*, *-n*, *-jen*,  $\emptyset$ ) that are governed by co-occurrence restrictions with person marked and verbal derivation morphemes. In addition, the hypothetical mood reflects counterfactual ongoing action and is marked by a combination of continuative and past tense prefixes (*ta*-, *kɔ*-, *kɪ*-) followed by progressive morphology. Suggesting complex interplay between mood-tense-aspect. Furthermore, the category of person is expressed through bound subject and object pronouns, with subject prefixes showing ATR vowel harmony and tone alternations based on aspect. Third-person marking varies by tense and clause type, with zero allomorphs in some contexts and *ko*- in others. Subject plurality is marked via affixation or suppletion, often interacting with aspectual forms. Finally, the infinitive form is marked by the prefix *kɛ*- (or its +ATR allomorph *ke*-) and forms the base of non-finite verb phrases. Across all these domains, Okiek exhibits intricate morphotactic constraints, morphophonological harmony systems, and rich semantic distinctions,

offering insights into how grammar encodes categories such as temporality, agency, and intentionality, while also reflecting culturally embedded communicative practices.

### 3.2.2.6.1 Person

Person is a deictic category that encodes participants in a speech. Participants are distinguished by number i.e., singular vs. plural and into three speech participants i.e., first person which refers to the speaker, the second person which refers to the addressee and the third person who is neither the speaker nor the addressee (Cysouw 2009). Information about the category of person is coded by bound subject pronouns (3.2.6.1.1), bound object pronouns (3.2.6.1.2), and subject plurality suffixes (3.2.6.1.3) as shown in 125. The person category distinguishes between prefixes (e.g., *ko-* SUBJ 3SG/PL) and suffixes (e.g., *-an* OBJ 1SG). Tone distinguishes aspect distinctions (i.e., high in Progressive aspect, low in Perfect aspect). Object and subject bound pronouns are harmonizing morphemes in relation to ATR vowel harmony. Bound object pronouns are mutually exclusive with progressive aspect markers indicating strong morphotactic constraints in the verb structure. Suppletion in special verb form *pa:* 'go in marking subject plurality indicate historical layering and possible grammatical paths in the coding of tense/aspect and subject plurality. Subject plurality markers are categorized by aspect thus pointing to a tight dependency between person features and aspect.

#### 125. Person markers and their features

	Marker type	Form (example)	Description
i.		Prefixes (e.g., <i>ko-</i> , $\emptyset$ )	coded for person and number (except 3rd person); undergo ATR vowel harmony; marked by tone (H for PROG, L for PER)
	Bound subject pronouns	<i>ko-</i>	Used in FUT, HAB, PERF, and complement clauses.
		$\emptyset$	Used in simple past, past PROG, and simple PROG constructions.

ii.	Bound object pronouns	Suffixes (e.g., <i>an</i> 1SG)	ATR vowel harmony observed; mutually exclusive with PROG aspect; number for 1/2SG/PL is encoded phonotactically; 3SG/3PL unmarked; correspond to free pronouns
		-(t)os, ∅	Progressive aspect plurality suffix; allomorph -os
iii.	Subject plurality	-(e)so, -jo, -je, ∅	Perfect aspect plurality markers; allomorphs depend on verb stem structure and subject person/number.
		-tin, ∅	Fossilized fusion of centrifugal and progressive markers with suppletive stems.
		Suppletive stem, <i>p:a</i> 'go'	

### 3.2.6.1.1 Bound subject pronouns

Bound subject pronouns are morphologically analyzable as prefixes categorized for person and number with the exception of third person subject pronoun which does not distinguish for number and has a zero allomorph as shown in 126. 1SG, 2SG and 2PL occur in a V syllable structure, while 1PL and 3P occur in a CV syllable structure. 1SG and 2SG bound subject pronouns are analyzable as the initial vowel in their corresponding free personal pronoun forms (3.5.1).

#### 126. The inventory of bound subject pronouns

Person	Number	
	SG	PL
First person (1)	<i>a-</i>	<i>kɛ-</i>
Second person (2)	<i>ɪ-</i>	<i>ɔ-</i>
Third person (3)	<i>∅/kɔ-</i>	

Morphophonologically, bound subject prefixes undergo ATR vowel harmony in +ATR domain as shown in 127(b) where the progressive aspect suffixes trigger vowel harmony. The +ATR allomorph of the 2PL subject prefix is lengthened to distinguish it from the +ATR 1SG subject prefix. Bound subject pronouns are regularly marked by a low tone in the perfective aspect (127a) and a high tone in the imperfective aspect constructions (127b). Morphotactically, bound subject pronouns are obligatorily marked on the verb. (Creissels 2005:44) explains that when they are used as subject markers, the pronouns “correspond to a noun phrase in subject function.”

127. Allomorphs of bound subject pronouns by ATR

a. -ATR allomorphs of bound subject pronouns

	SG		PL
i.	<i>ki-à-put</i> <i>en ηωῶḡ</i> DPST-1SG-fall   in down.ACC 'I fell down.'		<i>ki-kè-put</i> <i>en ηωῶḡ</i> DPST-1PL-fall   in down.ACC 'We fell down.'
ii.	<i>ki-i-put</i> <i>en ηωῶḡ</i> DPST-1SG-fall in down.ACC 'You fell down.'		<i>ki-ɔ̄-put</i> <i>en ηωῶḡ</i> DPST-2PL-fall in down.ACC 'You fell down.'
iii.	<i>ki-put</i> <i>en ηωῶḡ</i> DPST-fall in down.ACC '(S)he fell down.'		<i>ki-put</i> <i>en ηωῶḡ</i> DPST-fall in down.ACC 'They fell down.'

b. +ATR allomorph of bound subject pronouns

	SG		PL
i.	<i>ki-ó-put-e</i> <i>en ηωῶḡ ḡ</i> DPST-1SG-fall-PROG   in down.ACC 'I was falling down.'		<i>ki-ké-put-e</i> <i>en ηωῶḡ</i> DPST-1SG-fall-PROG   in down.ACC 'We wer falling down.'
ii.	<i>ki-í-put-e</i> <i>en ηωῶḡ</i> DPST-1SG-fall-PROG   in down.ACC 'You were falling down.'		<i>ki-ó̄-put-e</i> <i>en ηωῶḡ</i> DPST-1SG-fall-PROG   in down.ACC 'You were falling down.'

- |      |                           |                |                           |                |
|------|---------------------------|----------------|---------------------------|----------------|
| iii. | <i>ki-put-ej</i>          | <i>en ηωῶν</i> | <i>ki-put-ej</i>          | <i>en ηωῶν</i> |
|      | DPST-1SG-fall-PROG        | in down.ACC    | DPST-fall-PROG            | in down.ACC    |
|      | ‘(S)he was falling down.’ |                | ‘They were falling down.’ |                |

The distribution of the third person bound subject pronoun markers  $\emptyset$ , and *ko-* is governed by the tense and aspect features of the predicate they are attached to, and clause types they occur in as highlighted in 128. That is, the zero allomorph is used in simple past tense, past imperfective, and simple imperfective constructions while *ko-* is used in future tense, habitual imperfective aspect, perfect aspect constructions and complement clauses. Examples of the distribution are illustrated in the respective sections in this study.

128. The distribution of the third person bound subject pronoun.

a.  $\emptyset$

	Tense/aspect	Sections
i.	Past tense	3.2.2.6.2.1
ii.	Progressive aspect	3.2.2.6.3.1.1
iii.	Past progressive aspect	3.2.2.6.3.1.6
iv.	Still progressive aspect	3.2.2.6.3.1.2

b. *ko-*

	Tense/aspect/clause type	
i.	Future tense	3.2.2.6.2.2
ii.	Perfect aspect	3.2.2.6.3.2.1
iii.	Habitual progressive	3.2.2.6.3.1.4
iv.	Complement clauses	4.2.3.1

### 3.2.6.1.2 Bound object pronouns

Bound object pronouns are phonotactically realized as suffixes with a VC syllable structure. Number for 1SG and 2SG is coded by the alveolar nasal /*n*/ in suffix final position. The voiceless palatal /*c*/ and the voiceless velar /*k*/ code number for 1PL and 2PL respectively as shown in 129. The third person object pronoun is morphologically unmarked. 1PL and 2PL object pronouns are analyzable as the initial VC sequence of phonemes in their corresponding free pronoun forms (3.2.5.1).

#### 129. The inventory of bound object pronouns

Person	SG	PL
First (1)	- <i>an</i>	- <i>ɛc</i>
Second (2)	- <i>ɪn</i>	- <i>ɔk</i>
Third (3)		∅

Bound object pronouns are subjected to ATR vowel harmony as shown in 130(a) where the -ATR allomorphs harmonize with the -ATR vowels in the verbs while they are subjected to ATR vowel harmony by the progressive aspect markers in 130(b). Morphotactically, bound object pronouns from 1SG/PL and 2SG/PL are mutually exclusive with the progressive aspect markers. The progressive aspect is represented by the zero allomorph in 130b(i-ii) and -*ej* in 130b(iii). Free third person personal pronouns *ɪnɛ* '(s)he/her/him' or *ɪæk* 'them/them' are used to disambiguate for number for the third person singular and plural objects respectively as shown in 130a(iii) and 130b(iii).

130. The distribution of the allomorphs of bound object pronouns by ATR

a. -ATR allomorphs

	SG		PL
i.	<i>ka-kɔ̀-ʔuc-an wér-ò</i> PERF-3-punch-1SG boy-PS.NOM 'The boy has punched me.'		<i>ka-kɔ̀-ʔuc-ɛc wér-ò</i> PERF-3-punch-1PL boy-PS.NOM 'The boy has punched us.'
ii.	<i>ka-kɔ̀-ʔuc-in wér-ò</i> PERF-3-punch-2SG boy-PS.NOM 'The boy has punched you.'		<i>ka-kɔ̀-ʔuc-ɔk wér-ò</i> PERF-3-punch-2PL boy-PS.NOM 'The boy has punched you.'
iii.	<i>ka-kɔ̀-ʔuc wér-ò inɛ́</i> PERF-3-punch boy-PS.NOM 3SG.ACC 'The boy has punched her/him/it.'		<i>ka-kɔ̀-ʔuc wér-ò iɛk</i> PERF-3-punch boy-PS.NOM 3PL.ACC 'The boy has punched them.'

b. -ATR allomorphs of bound object pronouns

	SG		PL
i.	<i>ʔuc-on wér-ò</i> punch-1SG boy-PS.NOM 'The boy is punching me.'		<i>ʔuc-ec wér-ò</i> punch-1PL boy-PS.NOM 'The boy is punching us.'
ii.	<i>ʔuc-in wér-ò</i> punch-2SG boy-PS.NOM 'The boy is punching you.'		<i>ʔuc-ok wér-ò</i> punch-2PL boy-PS.NOM 'The boy is punching you.'
iii.	<i>ʔuc-ej wér-ò inɛ́</i> punch-PROG boy-PS.NOM 3SG.ACC 'The boy is punching her/him/it.'		<i>ʔuc-ej wér-ò iɛk</i> punch-PROG boy-PS.NOM 3PL.ACC 'Boy is punching them.'

### 3.2.6.1.3 Subject plurality

There are two strategies of indicating subject plurality i.e., affixation (131-133) and suppletion (134). Not all verbs are morphologically marked for subject plurality. Additionally, the criteria of identifying which verbs are marked for subject plurality and which one are not seems ambiguous. Each strategy is described in turn.

Morphological coding of subject plurality via affixation exhibits interdependency with aspect markers. That is, affixes that indicate subject plurality include the progressive aspect subject plurality marker *-(t)os*, the perfective aspect subject plurality markers *-(e)so*, *-jo*, and *-je*; and the zero morph ( $\emptyset$ ). The allomorph *-os* of the suffix *-tos* is used to avoid identical consonant cluster as shown in 131(c) while the allomorph *-so* of the marker *-eso* is attached to verb stems without a coda as shown in 131(e) or preceded by the semi-vowel as in 131(f). Subject plurality markers are +ATR dominant morphemes and are morphotactically mutually exclusive with progressive aspect markers. This is a classic case where morphology, syntax, and semantics intersect to shape surface grammar. Further studies are needed to find out if the mutual exclusivity is due to slot competition, form overlap, semantic redundancy, historical evolution, or phonological constraints.

#### 131. Examples of subject plurality constructions

	Verb root	Imperfective aspect	Perfective aspect
a.	<i>twa/</i> 'jump'	<i>twol-tos</i> <i>tʷ-kà</i> jump-PLUR COW-PL.NOM 'The cows are jumping.'	<i>ko-twol-eso</i> <i>tʷ-kà</i> MPTS-jump-PLUR COW-PL.NOM 'The cows jumped.'
b.	<i>ŋalan</i> 'speak'	<i>ŋolon-tos</i> <i>tó-è-k</i> speak-PLUR visit-PS-PL.NOM 'The visitors are talking.'	<i>ko-ŋolon-eso</i> <i>tó-è-k</i> MPST-speak-PLUR visit-PS-PL.NOM 'The visitors spoke.'
c.	<i>lapat</i> 'run'	<i>lopot-os</i> <i>túr-ì-k</i> laugh-PLUR hunt-PS-PL.NOM 'The hunters are running.'	<i>ko-lopot-eso</i> <i>túr-ì-k</i> MPTS-run-PLUR hunt-PS-PL.NOM 'The hunters ran.'



- |    |                         |                                    |                                   |   |                                   |
|----|-------------------------|------------------------------------|-----------------------------------|---|-----------------------------------|
| d. | <i>marar</i><br>'dance' | <i>moror-tos</i><br>dance-PLUR     | <i>lók-ò-k</i><br>child-PS-PL.NOM | <i>ko-moror-eso</i><br>MPST-dance-PLUR    | <i>lók-ò-k</i><br>child-PS-PL.NOM |
|    |                         | 'The children are dancing.'        |                                   | 'The children danced.'                    |                                   |
| e. | <i>rori</i><br>'laugh'  | <i>rori-tos</i><br>laugh-PLUR      | <i>wér-ì-k</i><br>boy-PS-PL.NOM   | <i>ko-rori-so</i><br>MPST-laugh-PLUR      | <i>wér-ì-k</i><br>boy-PS-PL.NOM   |
|    |                         | 'The boys are laughing.'           |                                   | 'The boys laughed.'                       |                                   |
| f. | <i>tuj</i><br>'meet'    | <i>ké-tuj-tos</i><br>1SG-meet-PLUR | <i>ko mo-low</i><br>COP NEG-far   | <i>ko-kè-tuj-so</i><br>MPTS-1SG-meet-PLUR |                                   |
|    |                         | 'We will meet soon.'               |                                   | 'We met.'                                 |                                   |

The perfective aspect allomorph *-eso* is used interchangeably with the suffix *-jo* for third person subject plurals with verbs in the perfective aspect as shown in 132.

132. The subject plurality allomorphs *-jo* and *-eso*

- |    |  |  |                                       |   |
|----|--|--|---------------------------------------|---|
| a. | <i>ki-moror-eso</i><br>DPST-dance-PLUR | <i>kó-nét-ì-k</i><br>NMLZ-teach-PS.NOM | <i>ki-moror-jo</i><br>DPST-dance-PLUR | <i>kó-nét-ì-k</i><br>NMLZ-teach-PS-PL.NOM |
|    | 'The teachers danced'                  |  | 'The teachers danced'                 |   |
| b. | <i>lopot-eso</i><br>laugh-PLUR         | <i>túr-ì-k</i><br>hunt-PS-PL.NOM       | <i>ki-lopot-jo</i><br>DPST-laugh-PLUR | <i>túr-ì-k</i><br>hunt-PS-PL.NOM          |
|    | 'The hunters ran.'                     |  | 'The hunters ran.'                    |   |

The allomorph *-je* is attested with the verb *ru* 'sleep' to indicate plurality of the subject for 2PL as shown in 126. 1PL is unmarked for subject plurality with the verb *ru* 'sleep'.

133. The Subject plurality allomorphs *-je* and  $\emptyset$

- |    |                                     |                          |                                     |
|----|-------------------------------------|--------------------------|-------------------------------------|
|    | SG                                  |                          | PL                                  |
| a. | <i>ot kɔ̀-ì:t</i><br>until 3-arrive | <i>ò-ru</i><br>1SG-sleep | <i>ot kɔ̀-ì:t</i><br>until 3-arrive |
|    | 'Until I sleep.'                    |                          | <i>kè-ru</i><br>3PL-sleep.'         |
|    |                                     |                          | 'Until we sleep.'                   |
| b. | <i>ot kɔ̀-ì:t</i><br>until 3-arrive | <i>ì-ru</i><br>2SG-sleep | <i>ot kɔ̀-ì:t</i><br>until 3-arrive |
|    | 'Until you sleep.'                  |                          | <i>ò:-ru-je</i><br>2PL-sleep-PLUR   |
|    |                                     |                          | 'Until you sleep.'                  |

c. *ot kɔ̀-ɪ:t kò-ru*  
 until 3-arrive 3SG-sleep  
 'Until (s)he sleeps.'

*ot kɔ̀-ɪ:t kò-ru-jo*  
 until 3-arrive 3PL-sleep-PLUR  
 'Until they sleep.'

Subject plurality is indicated by suppletion in the case of the verbs *pa:* 'go' and *pwa* 'come' as shown in 134. The verb *pa:* 'go' becomes *wen* 'go' in singular progressive aspect; *we* 'go' in singular and plural perfective; and *pen* 'go' in plural imperfective. The suppletive stems accept the bimorphemic marker *-tin* analyzable as a fossilized fusion of the centrifugal suffix and progressive aspect suffix. The verb *pwa* 'come' becomes *non* 'come' in singular imperfective and *pwon* 'come' with plural subjects in the progressive aspect. The alveolar nasal /n/ in stem final position in suppletive progressive stems is deleted in the past tense.

134. Examples of expressions indicating subject plurality by suppletive verb roots.

a. *pa:* 'go'

Singular

PRO *wen-tin ɔ́ɪn-ɛ́-t pɔ́ɪn-ɛ́-t*  
 G go-CF.PROG river-PS-SG.ACC antelope-PS-SG.NOM  
 'The antelope is going to the river.'

PST *ki-we ɔ́ɪn-ɛ́-t pɔ́ɪn-ɛ́-t*  
 DPST-go river-PS-SG-PS-SG.ACC antelope-PS-SG-PS-SG.NOM  
 'The antelope went to the river.'

Plural

*pen-tin ɔ́ɪn-ɛ́-t pɔ́ɪn-ì-k*  
 go-CF.PROG river-PS-SG.ACC antelope-PS-PL.NOM  
 'The antelopes are going to the river.'

*ki-we ɔ́ɪn-ɛ́-t pɔ́ɪn-ì-k*  
 DPST-go river-PS-SG.ACC antelope-PS-PL.NOM  
 'The antelopes went to the river.'

b. *pwa* 'come'

Singular

PROG *non-ej kó-nét-ínt-è-t*  
 come-PROG NMLZ-teach-NMLZ-PS-SG.NOM  
 'The teacher is coming.'

Plural

*pwon-ej kó-nét-ì-k*  
 come-PROG NMLZ-teach-PS-PL.NOM  
 'The teachers are coming.'

PST	<i>ko-no</i>	<i>kó-nét-ínt-è-t</i>	<i>ko-pwo</i>	<i>kó-nét-ì-k</i>
	MPST-come	NMLZ-teach-NMLZ-PS-SG.NOM	MPST-come	NMLZ-teach-PS-PL.NOM
	'The teacher came.'		'The teachers came.'	

Subject plurality marking in Okiek is distinguished from the widespread prototypical pluractionality which indicates action is performed several times by a singular subject in intransitive clauses or by multiple objects in transitive clauses as described by Dimmendaal (2014:595).

### 3.2.2.6.2 Tense

Tense is a deictic category that relates an event to a temporal reference point usually identical to the present moment (Comrie 1985). Past tense is expressed via past tense prefixes (3.2.6.2.1); present tense is morphologically unmarked; and future tense is indicated syntactically (3.2.6.2.2.1.7) as summarized in 135. That is, the tense category distinguishes between unmarked present tense, past tense (3.2.2.6.2.1) and future progressive aspect (3.2.2.6.3.1.7). Tense prefixes are productive and morphotactically precede the verb and subject pronouns. Past tense prefixes are harmonizing morphemes in relation to ATR vowel harmony. Syntactically, tense markers combine with mood and aspect yielding layered verbal structure. Tense nuances are less fine grained than those of aspect.

#### 135. Tense markers in Okiek

	Tense	Markers	Compatible aspect	Description
i.	Present	∅	Progressive aspect (SUBJ-V-PROG)	Default temporal reference; ongoing action; aspect
			Habitual progressive aspect (HAB SUBJ-V-PROG)	disambiguates temporal range.

ii.	Proximal Past	<i>ɪnka-</i>	Perfect, (PERF-PPST-SUBJ-V) Progressive, (PPST-SUBJ-V-PROG) Habitual Progressive (PPST-HAB SUBJ-V-PROG)	Proximity to speech time enhances immediacy; Recent past (e.g., earlier today); ATR harmonizing.
ii.	Medial Past	<i>kɔ-</i>	Perfect, (PERF-MPST-SUBJ-V) Progressive, (MPST-SUBJ-V-PROG) Hypothetical MPST-SUBJ-CON-V-PROG	Intermediate past (e.g., yesterday); ATR harmonizing; Used in counterfactuals and complex clauses
v.	Distal past	<i>kɪ-</i>	Habitual, Perfect Progressive, Hypothetical DPST-SUBJ-V	Distant, habitual, and unrealized actions.
v.	Future	<i>tos</i> (PFUT) <i>totun</i> (MFUT)	Progressive (with PFUT) FUT SUBJ-V-PROG	Syntactic.

All the three tense categories combine with aspect markers. Aspect is the grammatical category that indicates the internal temporal structure of an event i.e., whether the action of the verb is ongoing or finished (Comrie 1976).

### 3.2.2.6.2.1 Past tense

There are three past tense markers analyzable as prefixes that indicate three degrees of remoteness from the deictic center i.e., the proximal past tense marker (PPST) *ɪnka-*, the medial past tense marker (MPST) *kɔ-* and the distal past tense marker (DPST) *kɪ-* as shown in

136. The three past tenses are attested in Southern Nilotic languages (Rottland 1982, 1983) such as Akie (König *et al*/2015), Nandi (Creider and Creider 1989), and Okiek of Mariashoni (Micheli 2018)

136. The inventory of past tense marker

PPST	MPST	DPST
<i>ɪnka-</i>	<i>kɔ-</i>	<i>kɪ-</i>

Past tense markers regularly undergo ATR vowel harmony as shown in 137 where the allomorphs of the progressive aspect serve as the triggers of ATR vowel harmony. Past tense markers morphotactically precede subject pronouns as in PST-SUB-V.

137. Examples of past tense constructions

a. Proximal simple past tense

-ATR      *ɪnka-kɛr    tiép-tò    áràwɛ́-t*  
 PPST-look girl-SG.NOM moon-SG.ACC  
 'The girl looked at the moon.'

+ATR      *inko-ker-ej    tiép-tò    áràwɛ́-t*  
 PPST-look-PROG girl-SG.NOM moon-SG.ACC  
 'The girl was looking at the moon.'

b. Medial simple past tense

-ATR      *kɔ-ɪ-sɪp            wér-ò            nɛ            sɛrɛn            à:r-tɛ́-t*  
 MPST-CAUS-follow boy-PS.NOM AM.SG young sheep-PS-SG.ACC  
 'The young boy followed the sheep.'

+ATR      *ko-í-sip-ij            wér-ò            nɛ            sɛrɛn            à:r-tɛ́-t*  
 MPST-follow-PROG boy-PS.NOM AM.SG young sheep-PS-SG.ACC  
 'The young boy was following the sheep.'

c. Distal simple past tense

-ATR	<i>kɪ-kɛ̀-ṭɛp</i>	<i>tùr-í-k</i>	<i>tépùt-í-k</i>	<i>ɕɛ</i>	<i>ca.ŋ</i>
	DPST-1PL-ask	hunters-PS-PL.ACC	question-PS-PL.ACC	AM.PL	many
	'We asked the hunters many questions.'				
+ATR	<i>ki-ké-tep-ej</i>	<i>tùr-í-k</i>	<i>tépùt-í-k</i>	<i>ɕɛ</i>	<i>ca.ŋ</i>
	DPST-1PL-ask-PROG	hunters-PS-PL.ACC	question-PS-PL.ACC	AM.PL	many
	'We were asking the hunters many questions.'				

Combinations of past tense markers are attested in the formation of sub-ordinate conjunctions (3.2.6.2) and in the negation of non-verbal clauses (5.0).

### 3.2.2.6.2.2 Future tense

Future tense is indicated via the future tense particle (3.2.6.7) *tos* (Proximal future) and *totun* (medial future) in combination with the progressive aspect i.e., FUT SUBJ-V-PROG as shown in section 3.2.26.3.1.7.

### 3.2.2.6.3 Aspect

With the use of a single aspect markers or compound aspect markers, Okiek speakers can distinguish a wide range of aspect types including: the progressive aspect, the still progressive aspect, the still progressive (hypothetical) aspect, the habitual progressive aspect, the past habitual progressive aspect, the past progressive aspect, the future progressive aspect, the present perfect aspect, the present perfect aspect (with temporal focus), the past perfect aspect, the habitual perfect progressive aspect, and past perfect progressive as shown in 138. Single aspect markers include the progressive aspect markers *-e* 1/2 SG/PL and *-ej* 3 SG/PL), and the perfect aspect marker *kar-*. Compound aspect markers include the use of the habitual marker *cam* and progressive marker (HAB, PROG). The strategies for indicating aspect include the use of morphological markers (prefixes e.g., *ka* perfect aspect /suffixes e.g., *-e/-ej* progressive aspect) or syntactic markers (e.g., *cam* habitual) or a combination of both strategies (e.g., PST-HAB SUBJ-V-PROG, past habitual progressive aspect). This indicates a mixed morphological alignment

that flexibly employs both affixation and syntactic morphology and a gradient of grammaticalization in the aspectual system. Based on the type of and the use of aspectual marker(s), the aspectual types can be condensed into three major aspect types i.e., the progressive aspect (3.2.2.6.3.1) and the perfect aspect (3.2.2.6.3.2), the progressive and perfect aspect combinations (3.2.2.6.3.3). The progressive aspect marker (3.2.2.6.3.1.1) serves as the base layer for encode more nuanced aspectual constructions given that it can appear on its own or it can combine with majority of other aspect (and even tense) markers. The presence of lexicalized and morphological markers. combinatorial restrictions indicate strategies for morphological and syntactic aspect stacking (e.g., PER-SUBJ-V-PROG, and cam SUB-V-PROG) thus reflecting a templatic morpheme ordering rule system in verb morphology, certain combinations with person markers (3.2.2.6.1), verb classes (3.2.2.4) and verbal derivation markers (3.2.2.5) suggest morphosyntactic exclusivity that constrain the overt specification for aspect (thus the zero allomorph ( $\emptyset$ )). This point to a person sensitive morphological agreement system in the aspect category and suggest strategies for the neutralization of aspect. Aspectual markers distinguish between harmonizing morphemes (e.g., the still progressive prefix *ta-*), +ATR dominant morpheme (e.g., the progressive suffix *-e* 1/2 SG/PL and *-ej* 3 SG/PL), and neutral morpheme (e.g., perfect aspect marker *kar-*) in relation to ATR vowel harmony. Some aspectual constructions interact with tense and mood supporting a layered system of combining TAM in the verb structure (3.2.2.3) and morphophonological interdependency between tense and aspect morphemes. The interaction of aspect markers and subject, tense, and mood markers and certain verbal derivational morphemes (e.g., the dative *-c*) require specific morphotactic arrangements (e.g., PST-HAB SUBJ-V-PROG=the past habitual progressive aspect. Derived aspectual categories yield aspectual constructions that allows speakers to express action with semantic precision i.e., not just what happened but when, how, and with what persistence.

## 138. The inventory of aspect markers and properties of the aspect system

Aspect type	Aspect markers /morphological form	Distribution	Implications
i. Progressive SUBJ-V-PROG	-e (1/2SG/PL), -e/-ij Ø (3SG/PL), -i (Class 2),	Indicates ongoing action; allomorphy depends on subject person, verb class, and derivation; +ATR dominant; base layer	Complex morphology; Ø allomorph requires context; +ATR dominance reflects systemic harmony patterns.
ii. Still progressive CON-SUBJ-V-PROG	ta-/to-, +PRO	indicates ongoing action with persistence; prefix is ATR-harmonizing.	Expresses persistence; allows mood-aspect interaction.
iii. Still progressive (hypothetical) DPST-CON-SUBJ-V-PROG	DPST, CON, PROG	Hypothetical mood via combo with the distal past marker 'ki-', continuative prefix, and progressive aspect. Lexicalized structure.	Reinforcing the morphophonological integration of mood and aspect; deep past + continuative + progressive gives rise to hypothetical interpretation
iv. Habitual progressive HAB SUBJ-V-PROG	cam +PROG	Indicates regularly recurring action; mutually exclusive with subject plurality marker; syntactic marker.	Shows grammaticalized aspectual layering; tense aspect stacking
v. Past habitual progressive PST-HAB SUBJ-V-PROG	PST-cam +PROG	Indicates past habitual progressive action, with frequentative/repeated context.	Encodes repetition in the past with progressive contour
vi. Past progressive PST-SUBJ-V-PROG	PST+PROG	Indicates past progressive action	Encodes the past with progressive contour
vii. Perfect PERF-SUBJ-V	ka-	Indicates action completed with relevance to present; prefix is neutral to ATR harmony.	Emphasizes completion + present relevance; morphologically stable.
viii. Perfect (Temporal focus) PERF-TF-SUBJ-V	ka-r- (kar-)	Adds temporal/emphatic focus to present perfect; similar to ra- in Akie (Konig et al 2016).	Highlights recentness/emphasis; cross-linguistic similarity



ix.	Perfect progressive PPERF-SUBJ-V or PST-PPERF-SUBJ-V	<i>tep</i> PST- <i>tep</i>	Combines perfective and progressive with habitual nuance; often expresses resultative state; syntactic marker.	Long-term actions with habitual continuity; cultural expression of ongoing routines; tense and aspect layering.
x.	Future progressive PFUT/MFUT SUBJ-V-PROG	<i>tos/totun</i> + PROG	indicates near or medial future ongoing events; future marker is syntactic; aspect marker is suffixal.	Clear separation of tense and aspect marking; projects action forward.

### 3.2.2.6.3.1 Progressive aspect

The progressive aspect denotes an ongoing action. The progressive aspect marker (3.2.2.6.3.1.1) is a core component in compound aspect constructions i.e., the still-progressive aspect (3.2.2.6.3.1.2), the still-hypothetical progressive aspect (3.2.2.6.3.1.3) the habitual progressive aspect (3.2.2.6.3.1.4), past habitual progressive (3.2.2.6.3.1.5), the past progressive aspect (3.2.2.6.3.1.6), and the future progressive aspect (3.2.2.6.3.1.7). When unmarked for the past tense or the future tense, the verb inflected for the progressive aspect receives a present tense reading, i.e., present progressive aspect.

#### 3.2.2.6.3.1.1 The progressive aspect

The progressive aspect is indicated by the standard markers *-e* for 1 SG/PL and 2 SG/PL referents and *-e/* for 3 SG/PL referents. The distribution of the allomorphs of the progressive aspect depends on the person category, morphological verb class, and their combination with verbal derivational affixes as summarized in 139. The progressive aspect markers are +ATR dominant morphemes i.e., they trigger ATR vowel harmony in verb stems. The distribution of *ach* suffix is described in turn. The progressive marker is compatible with perfect aspect (3.2.2.6.3.1.3), past tense marking (3.2.2.6.3.1.6) and future tense marking (3.2.2.6.3.1.7). The progressive aspect allomorphy is maintained across aspectual constructions.

139. The distribution of the allomorphs of the present progressive aspect

		Persons	Verb classes	Derivational affixes
i.	<i>-e</i>	1/2 SG/PL	1	CF <i>-ta</i>
ii.	<i>-ej</i>	3SG/PL	1	-
iii.	<i>-i</i>	1/2 SG/PL	2	
		1/2 PL	1/2	PLUR: <i>-tos</i>
		1/2 SG/PL	1/2	ANTP: <i>-isie</i>
iv.	<i>-ij</i>	3SG/PL	2	
v.	<i>-j</i>	3SG/PL	1/2	ANTP: <i>-isie</i> /CF: <i>-ta</i>
vi.	<i>-∅</i>	Object pronouns	1/2	DAT: <i>-ci</i>
				CP: <i>-un</i>
				INST: <i>-ɛn</i>
				REF: <i>-kɛj</i>
		3PL `	1/2	PLUR: <i>-tos</i>

The suffix *-e* occurs with 1SG/PL and 2SG/PL subjects in clauses containing class 1 verbal clauses as shown in 140.

140. The progressive aspect marker *-e*

	SG		PL
a.	<i>ó-tec-e</i> 1SG-build-PROG 'I am building a house.'	<i>kó</i> house.ACC	<i>ké-tec-e</i> 1PL-build-PROG 'We are building a house.'
b.	<i>í-tec-e</i> 2SG-build-PROG 'You are building a house.'	<i>kó</i> house.ACC	<i>ó:-tec-e</i> 2PL-build-PROG 'You are building a house.'

The allomorph *-ej* and *-ij* occur with 3SG/PL subjects in clauses containing class 1 (141a) or class 2 (141b) verbal predicates, respectively.

141. The allomorph *-ej* vs. *-ij*

- a. *com-ej*      *tiépos-à*      *keti-t*  
 build-PROG    woman-PS.NOM    tree-SG.ACC  
 'The woman loves the tree'
- b. *i-poj-i*      *keti-t*      *tiépos-à*  
 CAUS-peel-PROG    tree-SG.ACC    woman-PS.NOM  
 'The woman is causing the tree to peel.'

The allomorph *-i* is marked for 1SG/PL and 2SG/PL subjects with class 2 verbs as shown in 142. The allomorph is used in combination with the subject plurality marker *-tos* (142b) or the antipassive suffix *-isie* for 1PL and 2PL subjects (142c).

142. The imperfective aspect allomorph *-i*

a. Paradigm with class 2 verbs

- |     | Singular  | Plural   |
|-----|---|--|
| i.  | <i>ó-poj-i</i> <i>keti-t</i><br>1SG-peel-PROG    tree-SG.ACC<br>'I am peeling the tree.'    | <i>ké-poj-i</i> <i>keti-t</i><br>1PL-peel-PROG    tree-SG.ACC<br>'We are peeling the tree.'  |
| ii. | <i>í-poj-i</i> <i>keti-t</i><br>1SG-peel-PROG    tree-SG.ACC<br>'You are peeling the tree.' | <i>ó:-poj-i</i> <i>keti-t</i><br>2PL-peel-PROG    tree-SG.ACC<br>'You are peeling the tree.' |

b. Combination with subject plurality marker *-tos*

- |    | Singular   | Plural   |
|----|--|--|
| i. | <i>ó-rori-e</i><br>1SG-laugh-PROG<br>'I am laughing.'    | <i>ké-rori-tos-i</i><br>1PL-laugh-PLUR-PROG<br>'We are laughing.'  |
| ii | <i>í-rori-e</i><br>2SG-laugh-PROG<br>'You are laughing.' | <i>ó:-rori-tos-i</i><br>2PL-laugh-PLUR-PROG<br>'You are laughing.' |

c. Combination with the antipassive suffix *-isie*

	Singular	Plural
i.	<i>ó-o:m-isie-i</i> 1SG-eat-ANTP-PROG 'I am eating.'	<i>ké-o:m-isie-i</i> 1PL-eat-ANTP-PROG 'We are eating.'
ii.	<i>í-o:m-isie-i</i> 2SG-eat-ANTP-PROG 'You are eating.'	<i>ó:-o:m-isie-i</i> 2PL-eat-ANTP-PROG 'You are eating.'

The 3SG/PL allomorph *-j* combines with the centrifugal marker *ta-* 143(b), or the antipassive suffix *-isie* 143(c) as contrasted with 143(a).

143. The allomorph *-j*
- a. *wir-ej òm-tí-t íæk*  
throw-PROG eat-PS-SG.ACC 3PL.NOM  
'They are throwing food.'
- b. *wir-to-j òm-tí-t íæk*  
throw-CF-PROG eat-PS-SG.ACC 3PL.NOM  
'They are throwing food away.'
- c. *wir-isie-j íæk*  
throw-ANTP-PROG 3PL.NOM  
'They are throwing.'

Verb stems marked by bound object pronouns (144b-c) are unmarked for the present progressive aspect ( $\emptyset$ ) as contrasted with 144(a). In case of the zero allomorph, the morphologization of ATR covertly triggers the change in vowel quality from the -ATR vowel [a] in the verb root *pakac* 'leave' to +ATR [o] in the verb stem and in the bound object pronouns as shown in 144(b-c).

144. The zero morph  $\emptyset$  of the progressive aspect and bound object pronouns

- a. *pokoc-ej wér-ò*  
leave-PROG boy-PS.NOM  
'The boy is leaving.'
- b. *pokoc-on wér-ò*  
leave-1SG boy-PS.NOM  
'The boy is leaving me.'
- c. *pokoc-in wér-ò*  
leave-2SG boy-PS.NOM  
'The boy is leaving you.'

In addition, the zero allomorph of the progressive aspect is attested in combinations with derivational markers i.e., the dative *-ci* (3.2.5.1.2.1) 145(b) and the instrument marker *-en* (3.2.5.1.2.1) 145(c) or combinations with the dative and instrument marker 145(d) as contrasted with 145(a).

145. The combinations of the zero allomorph and derivational markers

- a. *si:r-ej párv-ε-t pápà*  
write-PROG letter-PS-SG.ACC father.NOM  
'Father is writing a letter.'
- b. *si:r-ci párv-ε-t pápà kó-nèt-í-k*  
write-PROG letter-PS-SG.ACC father.NOM NMLZ-teach-PS-PL.ACC  
'Father is writing a letter for the teachers.'
- c. *si:r-en kálàm-ε-t párv-ε-t pápà*  
write-INST pen-PS-SG.ACC letter-PS-SG.ACC father.NOM  
'Father is writing a letter with a pen.'
- d. *si:r-cino-en párv-ε-t kálàm-ε-t kó-nèt-í-k pápà*  
write-DAT-INST letter-PS-SG.ACC pen-PS-SG.ACC NMLZ-teach-PS-PL.ACC father.NOM  
'Father is writing a letter for the teachers with a pen.'

Furthermore, the zero allomorph occurs with the 3PL subjects in class 1 verb stems marked by subject plurality marker *-tos* as shown in 146.

146. The zero allomorph of the present progressive and the suffix *-tos*

	Singular		Plural
a.	<i>rori-ej</i> <i>ínɛ`</i> laugh-PROG    3SG.NOM '(S)he is laughing.'		<i>rori-tos</i> <i>íæk</i> laugh-PLUR    3PL.NOM 'They are laughing.'
b.	<i>moron-ej</i> <i>ínɛ`</i> dance-PROG    3SG.NOM '(S)he is dancing.'		<i>moron-tos</i> <i>íæk</i> dance-PLUR    3PL.NOM 'They are dancing.'

### 3.2.2.6.3.1.2 The Still-progressive aspect

The still progressive aspect combines the meaning of progressive aspect (an ongoing action) and adds a nuance of persistence or continuity. The aspect is morphologically encoded by the combination of the continuative marker (CON) *ta-* and an allomorph of the progressive aspect (PROG) suffix i.e., CON-SUB-V-PROG. The prefix has two allomorphs i.e., the +ATR *to-* and the -ATR *ta-* in relation to ATR vowel harmony. For instance, the progressive aspect suffix in 147(a) subjects the prefix to ATR vowel harmony contrasted with 147(b) where the +ATR dative suffix fails to subject it to vowel harmony. The aspect indicates past actions with results in the present.

147. Examples of present perfect progressive aspect

	Progressive aspect		present perfect progressive aspect
a.	<i>je-ej</i> <i>pé-k</i> <i>pél-è-k</i> drink-PROG    water-PLACC    elephant-PS-PL.NOM 'The elephants are drinking water.'		<i>to-je-ej</i> <i>pé-k</i> <i>pél-è-k</i> CON-drink-PROG    water-PLACC    elephant-PS-PL.NOM 'The elephants are still drinking water.'
b.	<i>ké-omun-ci</i> <i>kòm-é-k</i> <i>wèr-ó</i> 1PL-farm-DAT    honey-PS-PLACC    boy-PS.ACC 'We are harvesting honey for the boy.'		<i>ta-ké-omun-cin</i> <i>kòm-é-k</i> <i>wèr-ó</i> CON-1PL-farm-DAT    maize-PS-PLACC    boy-PS.NOM 'We are still harvesting honey for the boy.'

The +ATR allomorph *to-* combines with a past tense marker in the formation of hypothetical mood constructions as shown in 3.2.6.3.1.3. The still progressive aspect showcases a layered morpho-semantic system combining persistence (*ta-/to-*) and ongoing (PROG). The aspect is harmonically sensitive, morphotactically compositional, and interfaces with tense and mood, particularly through the +ATR form *to-*. This complexity reflects a culture that attends to temporal detail, values sustained action, and supports rich discourse functions through grammatical structure.

### 3.2.2.6.3.1.3 The Still-progressive hypothetical aspect

The hypothetical mood indicates that an action was possible or was expected to have happen in the past, but remained unrealized, a counterfactual ongoing action. It is expressed by the combination of the continuative marker *ta-* and the distal past tense marker *kɛ-* or medial past tense marker *kɔ-*. The morphotactic arrangement is: DPST-CON-S-V-PROG or MPST-CON-S-V-PROG as shown in the examples in 148. The still progressive prefix *to-* suggests grammaticalization of mood in the aspect system.

#### 148. Examples of the still-progressive (hypothetical mood) constructions

	progressive perfect aspect			Hypothetical constructions		
a.	<i>to-je-ej</i>	<i>pé-k</i>	<i>pél-è-k</i>	<i>ki-to-je-ej</i>	<i>pé-k</i>	<i>pél-è-k</i>
	CON-drink-PROG	water-PL.ACC	elephant-PS-PL.NOM	DPST-CON-drink-PROG	water-PL.ACC	elephant-PS-PL.NOM
	'The elephants are still drinking water.'			'The elephants would still be drinking water.'		
b.	<i>to-kè-min-e</i>	<i>pàn-tɛ́-k</i>		<i>ko-to-kè-min-e</i>	<i>pàn-tɛ́-k</i>	
	CON-1PL-farm-PROG	maize-PS-PL.ACC		MPST-CON-1PL-farm-PROG	maize-PS-PL.ACC	
	'We are still growing maize.'			'We would still be growing maize.'		

### 3.2.2.6.3.1.4 The habitual progressive aspect

The habitual progressive aspect indicates the routine occurrence of the action expressed by the predicate. The aspect is indicated syntactically by the marker *cam* in combination with a progressive aspect marker. The marker regularly precedes the verb stem with the

following morphotactic template: HAB SUBJ-V-PROG as shown in 149. Due to competition for inflectional slots in the verbal structure (3.2.2.3), subject plurality markers (3.2.6.1.3) are mutually exclusive with progressive aspect markers as in 149(b-c). The independent marker is morphosyntactically compatible with past tense markers (3.2.2.6.2.1)

149. Habitual progressive aspect constructions

- a. *cam kó-om-ej pèn-tó nɛ sic-ej kojop tìm-tó*  
 HAB 3-eat-PROG meat-SG.ACC AM.SG get-PROG from forest-SG-PS.ACC  
 'They usually eat meat they get from the forest.'
- b. *cam kó-jom-tos pàn-tɛ́-k ɛn áràw-ɛ́-t akɛɲkɛ*  
 HAB 3-dry-PLUR maize-PS-PL.NOM in month-PS-SG.ACC one  
 'Maize usually dries in one month.'
- c. *cam kó-pe:t-os pì-k ɛn ij-ú*  
 HAB 3-disappear-PLUR people-PL.NOM in place-DEM.PROX.SG.PROG.ACC  
 'People usually disappear here.'

### 3.2.2.6.3.1.5 The past habitual progressive aspect

This aspect encodes the repetition of an action in the past with a progressive contour. The habitual aspect (HAB) marker *cam* is inflected for past tense in the formation of past habitual progressive aspect constructions i.e., PST-*cam* SUBJ-V-PROG as shown in 150.

150. Examples of past habitual aspect constructions

- a. *kɛ-cam kó-om-ej pèn-tó nɛ sic-ej kojop tìm-tó*  
 DPST-HAB 3-eat-PROG meat-SG.ACC AM.SG get-PROG from forest-SG-PS.ACC  
 'They used to eat meat they get from the forest.'
- d. *kɔ-cam kò-jom-tos pàn-tɛ́-k ɛn áràw-ɛ́-t akɛɲkɛ*  
 MPTS-HAB 3-dry-PLUR maize-PS-PL.ACC in month-PS-SG.ACC one  
 'Maize used to dry in one month.'
- e. *ɪnkɔ-cam kò-pe:t-os pì-k ɛn ij-ú*  
 PPST-HAB 3-disappear-PLUR people-PL.NOM in place-DEM.PROX.SG.ACC  
 'People used to disappear here.'



### 3.2.2.6.3.1.6 The past progressive aspect

The past progressive aspect indicates that an action was ongoing at a point in time in the past. It is coded by a past tense marker in the prefix slot and the progressive aspect suffix in the suffix slot i.e., PST-SUBJ-V-PROG as shown in 151.

#### 151. Example of past progressive aspect constructions

	progressive aspect		past progressive aspect	
a.	<i>ké-ol-e</i> 1PL-trade-PROG 'We are buying'	<i>pàn-tɛ́k</i> maize-PS-PL.ACC maize'	<i>ko-ké-ol-e</i> MPST-1PL-trade-PROG 'We were buying'	<i>pàn-tɛ́k</i> maize-PS-PL.ACC maize'
b.	<i>rori-ej</i> DPST-laugh-PROG '(S)he is laughing.'	<i>ínɛ̀</i> 3SG.NOM	<i>ki-rori-ej</i> DPST-laugh-PROG '(S)he was laughing.'	<i>ínɛ̀</i> 3SG.NOM

### 3.2.2.6.3.1.7 The future progressive aspect

The future progressive aspect indicates that an action will be ongoing at a point in time in the future. It is indicated as a compound aspectual construction consisting the combination of the independent proximal future marker (PFUT) *tos* 'will' or the medial future marker (MFUT) *totun* 'will' and the progressive aspect i.e., (PFUT/MFUT) SUBJ-V-PROG, as shown in 152.

#### 152. Examples of future progressive aspect constructions

##### a. Proximal future constructions

- i. *tos kó-ŋe-ej cáŋkwɛɪtɪ-ɛ́t wér-ò*  
PFUT 3-slaughter-PROG chicken-PS-SG.ACC boy-PS.NOM  
'The boy will be slaughtering the chicken in the near future.'
- ii. *tos ó-ŋolon-e ókì-é-k*  
PFUT 1SG-speak-PROG Okiek-PS-PL.ACC  
'I will be speaking Okiek.'

- iii. *tos ke-jok-to-j kó-rièm-int-é-t*  
 PFUT TF-pay-CP-PROG NMLZ-farm-NMLZ-PS-SG.ACC  
 'The farmer will be paid (by someone) in the near future.'

b. Medial future constructions

- i. *totun kó-ṣe-ej cáṅkwèṣṣi-é-t wér-ò*  
 MFUT 3-slaughter-PROG chicken-PS-SG.ACC boy-PS.NOM  
 'The boy will be slaughtering the chicken in the near future.'
- ii. *totun ó-ṣolon-e ókì-é-k*  
 MFUT 1SG-speak-PROG Okiek-PS-PL.ACC  
 'I will be speaking Okiek in the near future'
- iii. *totun ke-jok-to-j kó-rièm-int-é-t*  
 MFUT TF-pay-CP-PROG NMLZ-farm-NMLZ-PS-SG.ACC  
 'The farmer will be paid in the near future'

On the contrary, simple future tense is indicated by the centripetal suffix -u (3.2.2.5.1.3.2) when the verb *ek* 'become' is used as the predicate as shown in 153.

153. Expressing simple future tense by the centripetal suffix -u

a. The verb *ek* 'become'

- i. *ek-u ókì-é-k tó-è-k*  
 be-CP Okiek-PS-PL.ACC visitor-PS-PL.NOM  
 'The visitors will become Okieks.'
- ii. *ek-u cì-tó nɛ ow wér-ò nɛ sɛpɛn*  
 be-CP person-SG.ACC AM.SG big boy-PS.NOM AM.SG young  
 'The young boy will become a big man.'

### 3.2.2.6.3.2 Perfect aspect

The perfect aspect Indicates action completed with a relevance to the present moment. It distinguishes between the perfect aspect (3.2.2.6.3.2.1), the perfect aspect with a temporal focus (3.2.2.6.3.2.2), and the past perfect aspect (3.2.2.6.3.2.3). The aspect is indicated morphologically (e.g., *ka-* perfect aspect vs. bipartite perfect aspect *kar-*) and syntactically (e.g., *tep* for habitual perfect aspect).

#### 3.2.2.6.3.2.1 The perfect aspect

The perfect aspect is indicated by the prefix *ka-*. It encodes completed action and recentness. It morphotactically precedes subject markers and the verb as in PERF-SUBJ-V. The prefix is neutral to ATR vowel harmony as shown in 154(c) where the regularly +ATR dominant antipassive suffix triggers vowel assimilation in the verb stem but not in the present perfect aspect prefix.

#### 154. Examples of present perfect aspect constructions

- a.            *ka-kɛ̀-tɛs*      *pé-k*  
PERF-1PL-add water-PL.ACC  
'We have added water.'
- b.            *ka-kò-til-un-on*    *pàn-tɛ́-k*            *íæk*  
PERF-3-CUT-CP-1SG maize-PS-PL.ACC 3PL.NOM  
'They have cut maize for me'
- c.            *ka-ì-tur-isie*  
PERF-1PL-hunt-ANTP  
'You have hunted.'
- d.            *ka-kɔ̀-kɛr*    *kɔŋ*    *tùr-í-k*            *kí-rwók-ínt-è-t*  
PERF-3-close eye hunt-PS-PL.ACC NMLZ-chief-NMLZ-PS-SG.NOM  
'The chief has warned the hunters.'

### 3.2.2.6.3.2.2 The perfect aspect (with temporal focus)

The perfect with temporal focus aspect (APERF) is indicated by the marker *r-*. indicates that an action occurred a short while from the present moment. The prefix *r-* only occurs in combination with the present perfect marker *ka-*. The bipartite prefix is abbreviated as APERF. The combination of the prefixes yields a morpheme neutral to ATR vowel harmony despite the presence of +ATR dominant centrifugal marker *-u* in 155(c). The prefix presents a cross linguistic similarity to the independent marker *ra-* in Akie aspect system, however, König *et al* (2015:43-44) show that the prefix *\*ra* can occur independently from the perfect marker *ka-*. (König *et al* 2016)

#### 155. Examples of the already present perfect aspect constructions

- a. *kar-kɛ̀-tes pé-k*  
APERF-1PL-add water-PL.ACC  
'We have already added water.'
- b. *kar-kɛ̀-ko kònút párs-ɛ̀-t*  
APERF-1PL-give father.ACC letter-PS-SG.ACC  
'We have already given your father the letter.'
- c. *kar-kè-pir-u-n*  
APERF-1PL-call-CP-2SG  
'We have already called you.'

### 3.2.2.6.3.2.3 The past perfect aspect

The past perfect aspect is indicated by a combination of a past tense marker and the perfect aspect marker *ka-*. The past tense markers regularly precede the perfect aspect marker as in PST-*ka*-SUBJ-V as shown in the examples in 156. The perfect aspect prefix blocks the centripetal suffix *-u* from triggering vowel harmony in the tense marker in 156(c).

156. Examples of past perfect aspect constructions

- a. *kɔ-ka-kɛ-tɛs*      *pé-k*  
 MPST-PERF-1PL-add water-PL.ACC  
 'We had added water.'
- b. *kɪ-ka-kɔ-kɛr*      *kɔŋ*      *tùr-í-k*      *kí-rwók-ínt-è-t*  
 DPST-PERF-3-close eye hunt-PS-PL.ACC NMLZ-chief-NMLZ-PS-SG.NOM  
 'The chief had warned the hunters.'
- c. *kɪ-ka-kè-til-u-n*  
 DPST-PERF-1PL-cut-CP-2SG  
 'We had cut for you.'

3.2.2.6.3.2 Perfect + Progressive combination

3.2.2.6.3.2.1 The habitual perfect progressive aspect

The habitual present perfect progressive (HPERF) aspect indicates the relevance of a habitual action in the past to the present moment. It is indicated syntactically by the habitual perfect progressive aspect particle *tep*. Morphotactically, the aspect particle regularly occurs with a past tense marker i.e. PST-*tep* SUBJ-V as shown in 157.

157. Examples of habitual past perfect aspect

- a. *ko-tep*      *kò-kɛr*      *kɔŋ*      *tùr-í-k*      *kí-rwók-ínt-è-t*  
 MPST-HPERF      3-close eye hunt-PS-PL.ACC NMLZ-chief-NMLZ-PS-SG.NOM  
 'The chief has been warning the hunters.'
- b. *ko-tep*      *kɔ-yɛp*      *ɪt*      *ómtò-í-k*      *tíɛpɔ́s-à*  
 MPST-HPERF      3-set ear preach-PS-PL.ACC woman-PS.NOM  
 'The woman has been listening to the preachers.'

### 3.2.2.6.3.2.2 The past perfect progressive aspect

Past perfect progressive aspect indicates an ongoing past action with results in the present as shown in 158. Their constructions are coded by the combination of the continuative marker *ta-*, the perfect aspect marker *ka-*, the distal past tense prefix *kɪ-*, and an allomorph of the proressive aspect i.e., PST-PERF-CON-SUBJ-V-PROG. The +ATR dominant progressive aspect suffix triggers vowel harmony in the verb root but fails to subject the past tense prefix, the prefect aspect prefix and the continuative marker to vowel harmony suggesting a verbal template with specific morphosyntactic structure blocking vowel harmony to signify aspectual markedness as shown in 158

#### 158. Examples of past perfect progressive aspect constructions

- a. *kɪ-ka-ta-ko-je-ej*                      *pé-k*              *pél-è-k*  
DPST-PERF-PPERF-3-drink-PROG water-PL.ACC elephant -PS-PL  
'The elephants had been drinking water.'
- b. *kɪ-ka-ta-ko-kè-min-e*                      *pàn-tɛ́-k*  
DPST-PERF-PPERF-1PL-farm-PROG maize-PS-PL.ACC  
'We had been growing maize.'

### 3.2.2.6.4 Mood

The mood system distinguishes between three mood types as shown in 159 i.e., the hortative mood (3.2.2.6.4.1), the imperative (3.2.2.6.4.2), and the hypothetical mood (3.2.2.6.3.1.3) via morphological, syntactic or a combination of tense and aspect markers. The interplay between mood, tense and aspect person, and verbal derivation categories preludes morphotactic complexities in the verb structure, where for instance, the imperatives exhibit mutual exclusivity with person features (e.g., *ηkε-* is restricted to 2SG/PL). Morphotactically, mood is encoded through strict morpheme order sequencing in both morphological marking (e.g., 2SG/PL-HORT-V) and syntactic marking (e.g., *nan* (HORT) SUBJ-V). Consequently, mood interacts with constituent order. Typologically, mood focuses on directness of the command by avoiding elaborations on goal, source, recipient, and agent through an integrated tense, aspect, and mood system. The three mood types suggest cultural strategies for giving commands to others, and reasoning about expected and unrealized actions.

#### 159. The inventory and distribution of mood markers

	Mood type	Mood markers	Morpheme order	Description
i.	Hortative	<i>ηkε-</i>	2SG/PL+SUBJ-V	Mutually exclusive with 1/2 SG/PL bound pronouns; Morphological marker.
		<i>nan</i>	HORT SUBJ-V	Combines with 1/3 SG/PL bound pronouns; syntactic marker.
ii.	Imperative	<i>-en,</i>  <i>-n,</i>  <i>-jen, and</i>	V-IMP	Complex morphotactics: <i>-n</i> combines with antipassive <i>-isie</i> <i>-en</i> combines with centrifugal marker <i>t-</i>

∅

*-jen* is mutually exclusive with  
pluractional marker *-tos*  
imperative forms mutually exclusive  
with: dative *-cin*, centripetal *-u*,  
centrifugal *te-*, and bound object  
pronouns.

- |      |              |   |  |
|------|--------------|---|--|
| iii. | Hypothetical | <i>ta-</i> (CON) + <i>kɪ-</i> DPST/MPST-CON-<br>(DPST)/ <i>kɔ-</i> SUBJ-V-PROG<br>(MPST) + V + <i>-ej</i><br>(PROG) | Indicates counterfactual ongoing action;<br>presents cross categorial (TAM)<br>interplay |
|------|--------------|---|--|

#### 3.2.2.6.4.1 Hortative mood

The hortative marker *ɪkɛ-* encourages the addressee to conduct the action expressed by the predicate. The prefix regularly precedes the verb and only combines with 2SG/PL bound subject pronouns i.e., 2SG/PL-HORT-V as shown in the examples in 160.

#### 160. Examples of hortative constructions

	Singular	Plural
a.	<i>ɪ-ɪkɛ-tɔnɔn</i> 2SG-HORT-stand 'You should stand.'	<i>ɔ-ɪkɛ-tɔnɔn</i> 2PL-HORT-stand 'You should stand.'
b.	<i>ɪ-ɪkɛ-am</i> 2PL-HORT-eat 'You should eat.'	<i>ɔ-ɪkɛ-am</i> 2PL-HORT-eat 'You should eat.'
c.	<i>ɪ-ɪkɛ-mɔʃɪn</i> 2SG-HORT-rest 'You should rest.'	<i>ɔ-ɪkɛ-mɔʃɪn</i> 2PL-HORT-rest 'You should rest.'



1SG/PL and 3SG/PL hortative constructions are indicated syntactically by the marker *nan* which regularly precedes the verb stem as in HORT S-V as shown in 161.

161. Hortative mood first and third person

- a. *nan kɛ-tɔnɔn*  
 HORT 1PL-stand  
 'We should stand.'
- b. *nan kɛ-pir-cin inɛ'*  
 HORT 1PL-call-DAT 3SG.ACC  
 'We should call for her/him.'

3.2.2.6.4.2 Imperative mood

The imperative mood indicates a command. Imperative constructions are indicated by imperative marker *-en*. The allomorphs include *-en*, *-n*, *-jen*, and the zero morph  $\emptyset$ . Verb roots, or verb roots inflected for second person plural bound subject pronoun receive imperative readings as shown in 162. Exceptionally, imperative form is provided via suppletion in 162(b-c).

162. Examples of imperative constructions via

	verb root	SG	PL
a.	<i>tɪ/</i> 'cut'	<i>tɪ/</i> cut 'Cut!'	<i>ɔ-tɪ/</i> 2PL-cut 'Cut!'
b.	<i>pwa</i> 'come'	<i>ɲɔn</i> come 'Come!'	<i>ɔ-pwan</i> 2PL-come 'Come!'
c.	<i>pa:</i> 'go'	<i>wɔj</i> go	<i>ɔ-pa:</i> 2PL-go

'Go!'

'Go!'

The imperative allomorph *-n* combines with the antipassive suffix *-isie* 163(a); the allomorph *-en* combines with the centrifugal allomorph *t-* 163(b); the allomorph *-jen* is mutually exclusive with the pluractional marker *-tos* 163(c); the dative suffix *-cin* and the centripetal marker *-u*, the centrifugal allomorph *tɛ-*, and bound object pronouns are mutually exclusive with imperative mood markers. The +ATR dominant centripetal suffix *-u* fails to trigger vowel harmony in imperative construction in 163(f).

163. Imperative constructions with verbs stems containing a derivational morpheme

	Verb root	SG	PL
a.	<i>a:m</i> 'eat'	<i>om-isi-en</i> eat-ANTP-IMP 'Eat!'	<i>ò-o:m-isie-n</i> 2PL-eat-ANTP-IMP 'You eat!'
b.	<i>tɔr</i> push 'push'	<i>tɔr-tɛn</i> push-CF 'Push away!'	<i>ò:-tɔr-t-en</i> 2PL-push-CF-IMP 'You push away!'
c.	<i>lapat</i> 'run'	<i>lapat</i> 'run'	<i>ò:-lopot-jen</i> 2PL-run-IMP 'You run!'
d.	<i>ɪ-kɔ</i> CAUS-give 'give'	<i>ì-ko-cin</i> CAUS-give-DAT 'Give!'	<i>ò:-ko-cin</i> 2PL-give-DAT 'You give!'
e.	<i>wɪr</i> 'throw'	<i>wɪr-tɛ-u-an</i> throw-CF-1SG 'throw for me!'	<i>ɔ-wɪr-tɛ-u-an</i> throw-CP-CF-1SG 'You throw for me!'

### 3.2.2.6.5 Infinitive prefix *kɛ-*

The infinitive prefix *kɛ-* is attached to all verb roots to in the formation of infinitive forms INF-V. The prefix has -ATR *kɛ-* and +ATR *ke-* allomorphs as shown in 164. Infinitive stems serve as the head of infinitive verb phrases (4.1.2.2).

#### 164. Examples of derivation by the infinitive prefix

	Verb root	Infinitive stems
i.	<i>ɾt</i> 'flow'	<i>kɛ-ɾt</i> INF-flow 'to flow'
ii.	<i>kɯtɯŋ</i> 'kneel'	<i>kɛ-kɯtɯŋ</i> INF-kneel 'to kneel'
iii.	<i>tikijŋ</i> 'smile'	<i>ke-tikijŋ</i> INF-smile 'to smile'
iv.	<i>pir pe:k</i> beat water-PL 'swim'	<i>ke-pir pe:-k</i> INF-beat water-PL 'to swim'
v.	<i>ru</i> 'sleep'	<i>ke-ru</i> INF-sleep 'to sleep'

### 3.2.3 Adjectives

Section 3.2.3. describes the morphosyntactic criteria of identifying adjectives (3.2.3.1), the phonological structure of adjectival roots (3.2.3.2), the morphological structure of adjectives (3.2.3.3), the semantic classification of adjectives (3.2.3.4), and the adjectival number system (3.2.3.5).

The morphology of adjectives in Okiek exhibits a structurally streamlined and semantically expressive system that integrates number marking, morphophonological conditioning, and multifunctional syntactic behaviour. Adjectival roots occur in mono-, di-, and trisyllabic forms and follow general phonotactic constraints of the language. Morphologically, adjectives consist of a root and a dedicated number suffix slot, with plural marking realized through suffixation and, in exceptional cases, through suppletion.

The number system in adjectives is marked asymmetrically. Singular forms are frequently unmarked or take the singular suffix *-ɛj*, while plural forms are expressed through a range of suffixes including *-ɛn*, *-ac*, *-ɛc*, and *-ɛk*. The suffix *-ɛn* functions as a default plural marker and alternates with a zero morph in the singular. The suffix *-ɛc* is primarily used in plural adjectival predicates, while its allomorph *-ɛk* surfaces in derived deadjectival verbs, highlighting the interface between adjectival and verbal morphology. Suppletion is attested in certain high-frequency adjectives (e.g., *ec* ~ *ow* 'big'), indicating lexicalized morphological contrasts.

Adjectives function syntactically as heads of adjectival phrases, modifiers in noun phrases, and predicates in adjectival clauses. Number marking on adjectives agrees with the head noun in noun phrases and with the subject NP in adjectival predicate clauses. The number suffix *-in* also appears on plural participles derived from adjectives, demonstrating cross-categorical morphological cohesion. ATR vowel harmony conditions suffix selection, with plural suffixes often displaying +ATR dominance.

Morphologically, the adjectival system is compact but productive, with clear pathways to derivational extension (e.g., deadjectival verb and adverb formation). The morphological behaviour of adjectives thus contributes to the overall typological profile of Okiek as a language with a robust, agreement-sensitive morphology that encodes categorical distinctions relevant to syntax, semantics, and discourse. This system supports nuanced reference tracking and descriptive elaboration in noun phrases and predicate structures, reflecting both grammatical precision and culturally embedded modes of classification.

### 3.2.3.1 Criteria of identification adjectives

Adjectives are morphologically marked for number (3.2.3.5). Syntactically, they serve as heads of adjectival phrases (4.1.1.2.3), as modifiers in noun phrases (4.1.1) and as predicates in adjectival clauses (4.2.1.2.3).

### 3.2.3.2 Phonological structure of adjective roots

The distribution of phonemes in adjectival roots matches the general phonotactics described in phonology (2.0). Adjectival roots occur in monosyllabic, disyllabic, and trisyllabic structures as shown in 165.

#### 165. Examples of syllable shapes of adjectival roots

	Syllable shapes	Verb root forms		Orthography
		Phonemic	Phonetic	
Monosyllabic Adjectival roots :				
	VC	/ow/	[ow]	<i>ow</i> 'big'
	CVC	/low/	[low]	<i>lo:w</i> 'deep/far'
	CCVC	/twon/	[twon]	<i>twon</i> 'wet'

Disyllabic  
adjectival roots  
:

CV.CV	/para/	[para]	<i>para</i> 'wide'
CVC.CVC	/ɲarɲar/	[ɲarɲar]	<i>ɲarɲar</i> 'soft'
CVC.VC	/nalɪ/	[nalɪ]	<i>nalɪ</i> 'green'
CV.CVC	/marɪc/	[marɪc]	<i>marɪc</i> 'narrow'

Trisyllabic  
adjectival roots:

CVC.CV.CVC	/mintilɪ/	[mintilɪ]	<i>mintilɪ</i> 'sour'
CV.VC.VC	/kariɪt/	[kariɪt]	<i>kariɪt</i> 'cold'

### 3.2.3.3 Morphological structure of adjectives

The morphological structure of adjectives has two structural positions i.e., a root slot and a suffix slot for coding number as shown in 166(a) with an example of an adjectival root inflected for the plural in 166(b). The morphological structure of adjectival predicates is described in section 4.2.1.2.3.

166. The morphological structure of adjectives.

- a. root-  
NUM
- b. *pitɪr-ɛn*  
heavy-PL  
'heavy'

3.2.3.4 Semantic classification of adjectives

Adjectives can be categorized into Dixon's (1982, 2010) semantic categories for adjectives i.e., adjectives of dimension (167a), color (167b), value (167c), age (167d), physical property value(167e), human propensity age(167f), speed (167g), difficulty(167h), similarity (167i), and qualification(167j). The adjective *serpɛn* 'small' 167a(ii) can occur in the category of age and dimension.

167. Semantic categorization of adjectives

a. Adjectives of dimension

	Adjective	Gloss
i.	<i>ow</i>	'big'
ii.	<i>serpɛn</i>	'small'
iii.	<i>koj</i>	'long'
iv.	<i>lo:w</i>	'deep'
v.	<i>para</i>	'wide'
vi.	<i>marɪc</i>	'narrow'

b. Adjectives of color

	Adjective	Gloss
i.	<i>ɛ/</i>	'white/fresh'
ii.	<i>tu:j</i>	'black'
iii.	<i>pɪɾɾ</i>	'red'
iv.	<i>ɲaɪ/</i>	'green'

c. Value

	Adjective	Gloss
i.	<i>siŋoi</i>	'good'
ii.	<i>ja</i>	'bad'

d. Age

<i>jos</i>	'old'
------------	-------

e. Adjectives of physical properties

Adjective	Gloss		Adjective	Gloss
i. <i>u:ju:j</i>	'hard'	vi.	<i>mutuŋ</i>	'blunt'
ii. <i>ɲaɲar</i>	'soft'	vii.	<i>kaɪtɪt</i>	'cold'
iii. <i>pɪɾɾ</i>	'heavy'	viii.	<i>twon</i>	'wet'
iv. <i>u:su:s</i>	'light'	ix.	<i>mintilil</i>	'sour'
v. <i>ɲaɪp</i>	'sharp'	x.	<i>ɲwan</i>	'bitter'
		xi.	<i>mɪɔɲɪj</i>	'sick'



xii. *lomom* 'thick

f. Human propensities

Adjective Gloss

i. *ηom* 'clever'

ii. *πiαj* 'mean'

iii. *kim* 'strong'

iv. *ayεp* 'generous'

v. *πok* 'kind'

g. Speed

Adjective Gloss

i. *ηwεn* 'fast'

ii. *mutjɔ* 'slow'

h. Difficulty

Adjective Gloss

i. *u:ju:j* 'hard'

ii. *ηamar* 'soft'

iii. *u:su:s* 'easy'

i. Similarity

Adjective Gloss

i. *jujo* 'similar'

ii. *tεr* 'different'

j. Qualification

Adjective Gloss

*Iman* 'true'

### 3.2.3.5 Adjectival number system

The adjectival number system demonstrates a dynamic interplay of affixation, morphophonological alternations, suppletive and syntactic sensitivity in the strategies for marking number. Singular number markers include  $-\varepsilon j$ , and the zero morph  $\emptyset$  while Plural suffixes include  $-\varepsilon c$ ,  $-ac$ ,  $-\varepsilon n$  and  $-\varepsilon k$  as shown in 168.

168. The number markers in the adjectival number marking system

Markers	Description
i. $-\emptyset$	Dominant marker in singular adjectives;
ii. $-\varepsilon j$ (SG)	Alternates with $-ac$ (PL); highlights the system's flexibility
iii. $-ac$ (PL)	Alternates with $-\varepsilon j$ (SG); Distinct morphological change for plural marking
iv. $-\varepsilon c$ (PL)	Used in adjectival predicates; sensitivity to syntax.
v. $-\varepsilon n$ (PL)	Alternates with zero morph; More default plural marker
vi. $-\varepsilon k$ (PL)	Allomorph of $-\varepsilon c$ in the formation of transitive deadjectival verb stems; links adjective morphology to verb morphology as shown in example 111.

Singular adjectives are generally morphologically unmarked for number in isolation with the exception of the adjective in 169(b) where the singular suffix  $-\varepsilon j$  alternates with the plural suffix  $-ac$ . The alternation between  $-\varepsilon j$  and  $-ac$  for singular and plural forms in certain adjectives, such as  $m\mathbf{I}\varepsilon j$  'friendly' and  $m\mathbf{I}ac$  'friendly (PL)', introduces a level of exceptionality and flexibility to the number marking system. Adjectives marked for the plural by the suffix  $-\varepsilon n$  are the adjectives that are morphologically unmarked for number in the singular as shown in 169(a). The plural marker  $-\varepsilon n$  presents as the default pattern for marking plural adjectives. Exceptionally, the adjective  $\mathbf{k}$  'white' is unmarked for number in the singular but takes the plural suffix  $-ac$ . Adjectival number is an agreement operation between adjectives and the head noun in the noun phrase (4.1.1), and between adjective predicate and the NP subject in adjectival clauses (4.2.1.2.3) The plural adjectival predicates are marked for number by the suffix  $-\varepsilon c$  while its allomorph  $-\varepsilon k$  combines with

the causative suffix *-ɪt* in the formation of transitive deadjectival verb stems. The distinction between marking for number in adjectives used predicatively vs. attributively signifies how the adjective number system interacts with syntactic structures like predicate formations and verb derivations. Some level of suppletion where entirely different roots are used to indicate number, add to the more irregular pattern of number agreement in adjective morphology. Number marking pattern are shown in 169 i.e.,

169. Number marking in adjectives via suffixation

a. SG:  $\emptyset$  vs PL: *-ɛn*

	SG	PL
i.	<i>ɲwɛn</i> 'fast'	<i>ɲwɛn-ɛn</i> fast-PL 'fast'
ii.	<i>mɪtyɔ</i> 'slow'	<i>mɪtyɔ-ɛn</i> slow-PL 'slow'
iii.	<i>pitir</i> 'heavy'	<i>pitir-en</i> heavy-PL 'heavy'

b. SG: *-ɛj* vs PL: *-ac*

<i>mɪ-ɛj</i> friendly-SG 'friendly'	<i>mɪ-ac</i> friendly-PL 'friendly'
---	---

c. SG:  $\emptyset$  vs PL: *-ac*

SG	PL
<i>lɛl</i> 'white'	<i>lɛl-ac</i> white-PL 'white'

The plural of the adjective *ow* 'big' is provided via suppletion i.e., the singular adjective is *ec* 'big.'

### 3.2.4 Pronouns

The pronoun system distinguishes between free personal pronouns (3.2.4.1), bound subject pronouns (3.2.6.1.1), bound object pronouns (3.2.6.1.2), free demonstrative pronouns (3.2.4.2), free possessive pronouns, possessive suffixes (3.2.1.5.2), and interrogative pronouns (3.2.4.4). Examples of indefinite pronouns realized as lexicalized negated verb phrases. Free personal pronouns are phonotactically structured to encode person and number through initial vowels and final consonants, respectively, and are used emphatically or for disambiguation, especially in third person reference. Demonstratives and possessives can occur both as independent pronouns and suffixes, with matching forms and semantic functions. In addition, indefinite pronouns arise through lexicalized negated verbs, indicating the absence of specific referents. The pronominal system presents intricate interplay with phonological, morphological, and syntactic domains, reflecting a high degree of structural integration and functional specificity across the systems of Okiek grammar.

#### 3.2.4.1 Free personal pronouns

Free pronouns occur as six independent grammatical items with a VCV (<sub>SG</sub>) and VC(G)VC (<sub>PL</sub>) syllable structures that are semantically and phonotactically analyzable into three persons and two numbers as shown in 170. The category person is coded in the initial V for (<sub>SG</sub>) and (<sub>PL</sub>) forms. Number is coded in the final C in plural forms while singular forms are unmarked for number.

## 170. Free personal pronouns

Person	Singular	Plural
Speaker (1)	<i>anɛ</i>	<i>ɛɛk</i>
Addressee (2)	<i>ɪnɛ</i>	<i>ɔkwɛk</i>
Third person (3)	<i>ɪnɛ</i>	<i>ɪɛk</i>

Free personal pronouns are used for emphatic reasons as either subjects or objects in clauses where the predicate is already marked by an obligatory bound subject pronoun (171a-b), or to distinguish number between 3SG and 3PL referents (171a). The pronouns are inflected for case by grammatical tone.

## 171. Uses of free pronouns

SG	PL
<p>a. <i>tos kó-com-ej tìm-wé-k ínɛ`</i>  PFUT 3-love-PROG forest-PS-PL 3SG.NOM  ‘(s)he will love the forests.’</p>	<p><i>tos kó-com-ej tìm-wé-k íɛk</i>  PFUT 3-love-PROG forest-PS-PL.ACC 3PL.NOM  ‘They will love the forests.’</p>
<p>b. <i>tos ó-com-e tìm-wé-k ánɛ`</i>  PFUT 1SG-love-PROG forest-PS-PL.ACC 1SG.NOM  ‘Me, I will love the forests.’</p>	<p><i>tos kè-com-e tìm-wé-k ɛ́ɛk</i>  PFUT 1PL-love-PROG forest-PS-PL.ACC 1PL.NOM  ‘Us, we will love the forests.’</p>

Both singular and plural free personal pronouns can be inflected by the reflexive suffix -*kɛj* in the formation of emphatic forms as shown in 172. The velar stop /k/ in the reflexive suffix is deleted to avoid sequence of identical consonants in the third person in 172(c).

172. Reflexive free personal pronouns

Person		Singular	Plural
Speaker	1	<i>anɛ-kɛj</i> 1SG-REF 'myself'	<i>ɛɛk-k-ɛj</i> 1PL-REF 'ourselves'
Addressee	2	<i>ɪnɛ-kɛj</i> 2SG-REF 'yourself'	<i>ɔkwɛk-k-ɛj</i> 2PL-REF 'yourselves'
Third person	3	<i>ɪnɛ-kɛj</i> 3SG-REF 'himself/herself'	<i>ɪɛk-k-ɛj</i> 3PL-REF 'themselves'

### 3.2.4.2 Free demonstrative pronouns

Free demonstrative pronouns are realized as independent grammatical items as shown in 173. They are identical in form and categorization by aspect with the demonstrative suffixes described in section 3.2.1.5.1. Syntactically, free demonstrative pronouns can occur as the *dummy head* in headless NPs (4.1.1.2.10).

173. Free demonstrative pronouns

	Imperfective		Perfective
Spatial Reference	Singular	Plural	
Proximal	<i>nɪ</i>	<i>ɑ</i>	<i>ka:n</i>
Medial	<i>nan</i>	<i>ɔn</i>	
Distal	<i>nɪn</i>	<i>ɔn</i>	

### 3.2.4.3 Free possessive pronouns

Free possessive pronouns are independent grammatical items that are phonotactically and semantically similar with the possessive suffixes described in section 3.1.5.2. The free forms are presented in 174.

#### 174. Free possessive pronouns

Number of possessor	Number of possessed item	
	SG	PL
1SG/PL	<i>ɲɔn</i>	<i>ɔk</i>
2SG/PL	<i>ɲʊɲ</i>	<i>kʊk</i>
3SG	<i>ɲɪn</i>	<i>ɛk</i>
3PL	<i>ɲʊwan</i>	<i>ɔwak</i>

Free possessive pronouns are introduced by the association markers *ɲɛ* (SG) and *ɛɛ* (PL) when used in the modification of nouns.

### 3.2.4.4 Interrogative pronouns

They are analyzable as monosyllabic, dissyllabic, and trisyllabic independent grammatical items as shown in 175. Interrogative pronouns are used to code verbless interrogative clauses (4.2.1.1.4).

#### 175. Interrogative pronouns

Syllable	Forms	Gloss
Monosyllabic:		
	<i>ɲo</i>	'who,' 'whom,' 'whose'
	<i>ne</i>	'what'
Disyllabic:		
	<i>omu</i>	'why'
	<i>anɔ</i>	'where'
	<i>ɪan</i>	'how many/much'

Trisyllabic:

<i>aɪɔn</i>	'which'
<i>oiju</i>	'when'

### 3.2.5 Adverbs

Adverbs in Okiek are a distinct word class. They exhibit flexibility in syntactic function, serving as heads of adverbial phrases (4.1.3) and modifiers within other phrase structures (Verb phrase 4.1.2, adjective phrase 4.1.1.2.3). Morphologically derived through the adverbializer prefix *kɔ-* attached to adjectives. Additionally, adverbs show phonological patterns such as ATR vowel harmony, linking them to the adjectival source. This morphology reinforces the autonomy of adverbs as a separate class. Adverbs can semantically be categorized on the basis of notions such as time (a), manner (b), degree (c), direction (d), and frequency (e) as shown in 176.

#### 176. Semantic categories of adverbs

##### a. Adverbs of time

	Adverb	Gloss
i.	<i>os</i>	'later/after'
ii.	<i>onon</i>	'sometime'
iii.	<i>keŋ</i>	'a long time'

##### b. Adverbs of manner

i.	<i>tuwaɪj</i>	'together'
ii.	<i>kopoto</i>	'together with'
iii.	<i>Ko</i>	'as'



c. Adverbs of place

- i. *ɯjaŋ* 'somewhere'
- ii. *pataj* 'above'

d. Adverbs of degree

*otko* 'very'

e. Adverb of frequency

*ocej* 'always'

The adverbializer prefix (ADVB) *kɔ-* derives deadjectival adverbs from adjectival roots as shown in 177. The adverbializer prefix is subjected to ATR vowel harmony by +ATR vowels in the adjectives(177b-c) .

177. The derivation of deadjectival adverbs by the prefix *kɔ-*

	Adjectives/verb	Adverb
a.	<i>ja</i> 'bad'	<i>kɔ-ja</i> ADVB-bad 'badly'
b.	<i>siŋoi</i> 'good'	<i>ko-siŋoi</i> ADVB-good 'well'
c.	<i>sorcin</i> 'quick'	<i>ko-sorcin</i> ADVB-quick 'quickly'

### 3.2.7 Participles

Participles are morphologically derived from verbal roots using the participial (PART) suffix *-at*. The suffix is an ATR harmonizing morpheme. Plural participles are marked by *-in* while singular participles remain unmarked as shown in their derivation in 179. The plural suffix *-in* is a [+ATR] dominant morpheme that triggers vowel harmony in the participial stem. Participles function both as modifiers within noun phrases (4.1.1.2.7) and as predicates in participial clauses (4.2.1.2.4). Their complex morphophonological properties and dual syntactic functions support their analysis as a distinct grammatical class in Okiek grammar as summarised in 178. As predicates, participles can only mark for tense and subject as in PST-SUBJ-PART.

#### 178. The morphosyntax of Participles

	Feature	Marker/Pattern	Description
i.	Participle formation	<i>-at</i> (–ATR), <i>-ot</i> (+ATR)	Derives participles from verb roots; reflects ATR vowel harmony.
ii.	Plural marking	<i>-in</i> (+ATR dominant)	Indicates number on participles; triggers ATR vowel harmony in stem vowels.
iii.	Singular marking	Zero morph ( $\emptyset$ )	Aligns with broader pattern of unmarked singulars.
iv.	NP Modifier Role	Participles modify nouns in noun phrases	Functions adjectivally; supports their derivational nature from verb roots
v.	Predicate Role in Clauses	Used in non-finite participial (relative) clauses	Forms complex predicates; adds syntactic flexibility to verb-derived constructions.

vi.	Tense & Subject Marking	Pattern: PST–SUBJ– PART	Participial predicates can encode tense and subject, showing interaction with verbal inflection.
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179. The derivation and number marking of participles

Participles

	Verb roots	(SG)	(PL)
a.	<i>tac</i> 'invite'	<i>tac-at</i> invite-PART 'invited'	<i>toc-ot-in</i> invite-PART-PL 'invited'
b.	<i>cam</i> 'love'	<i>cam-at</i> love-PART 'loved'	<i>com-ot-in</i> love-PART-PL 'loved'
c.	<i>jat</i> 'open'	<i>jat-at</i> open-PART 'opened'	<i>jot-ot-in</i> open-PART-PL 'opened'
d.	<i>jan</i> 'believe'	<i>jan-at</i> believe-PART 'believed'	<i>jon-ot-in</i> believed-PART-PL 'believed'
e.	<i>ɲɲ</i> 'short'	<i>ɲɲ-at</i> short-PART 'shortened'	<i>ɲɲ-ot-in</i> short-PART-PL 'shortened'
f.	<i>ɲar</i> 'lazy'	<i>ɲar-at</i> lazy-PART 'idled'	<i>ɲor-ot-in</i> lazy-PART-PL 'idled'

g.	<i>ɲɛɾɛk</i>	<i>ɲɛɾɛk-at</i>	<i>ɲɛɾɛk-ot-in</i>
	'happy'	happy-PART 'pleased'	happy-PART-PL 'pleased'

### 3.2.6 Particles

In Okiek, particles are invariable grammatical elements that serve various syntactic and discourse functions without undergoing inflection. They are typically short—often monosyllabic—and occur at the edges of clauses, within verb complexes, or near focus and negation elements. Semantically, they convey emphasis, polarity, modality, interrogatively, and discourse structuring. Although some particles have parallels in related Southern Nilotic languages, Okiek shows unique patterns in their usage and distribution, reflecting both innovation and retention.

#### 3.2.6.1 Possession particle *pɔ*:

The particle of possession is used in the formation of ordinal numerals (3.2.6.14.3). Morphologically, the suffix does not take any affixes.

#### 3.2.6.2 Association markers

The association markers include the singular association marker (AM.SG) *nɛ* and the plural association marker (AM.PL) *æ*. They inflect for number hence used to track number concord in associative constructions. Their syntactic function is to link modifiers to the head noun in noun phrases and link verbless clause subjects to verbless clause complements.

#### 3.2.6.3 Modal particle

Modal particles serve as helping verbs in the verb phrase (4.1.2). Modal verbs listed in 180 do not accept any inflection. They act as operators in the verb phrase without altering

morphophonology of the main verb. Their semantic bleaching and syntactic fixation reflect typical grammaticalization of modal expressions.

180. List of modal particles

- |    |                                  |   |
|----|----------------------------------|---|
| a. | <i>nolu</i><br>'should'          | deontic modality (obligation/should)  |
| b. | <i>maktat</i><br>'must'          | epistemic/deontic necessity ('must')  |
| c. | <i>ot</i><br>'until/as'          | temporal/modal boundary ('until/as') — marginal modal with subordinating traits |
| d. | <i>kaɪkaɪ</i><br>'rather/prefer' | temporal/modal boundary ('until/as') — marginal modal with subordinating traits |

### 3.2.6.1 Copular particle *ko*

The copular particle *ko* is used in the formation of copular clauses (4.2.1.2.1). The particle does not take any affixes.

### 3.2.6.2 Conjunctions

Conjunctions in Okiek function as invariant grammatical particles and fall into coordinating and subordinating types. Coordination is structured around syntactic domains—nouns (*ak*), verbs (*isko*), and clauses (*so*). Subordination is achieved through a diverse set of morphemes ranging from monosyllables to trisyllables, each marking logical, temporal, or causal relationships. Temporal subordination can also be encoded morphologically via tense stacking (DPST-PPST-SUBJ-V). This suggests an innovative integration of tense and subordination. Some subordinators, such as *si*, cross over into narrative coordination (6.2), reflecting a functional overlap between discourse and syntax. Overall, conjunctions occupy a closed-class category of particles central to clause linkage and discourse structuring.

### 3.2.6.2.1 Coordinating conjunctions

Coordinating conjunctions include conjunctions of addition i.e., *ak* 'and' which connects noun phrases (4.1.1), *isko* which connects verb phrases (4.1.2), and *so* which connects clauses in narratives (6.2); adversative conjunction *pe:ko*, and disjunct conjunction *onon* 'or.' The form *ak* also serves as the preposition 'with'.

### 3.2.6.2.2 Subordinating conjunctions

Subordinating conjunctions exhibit a range of phonological structures. Their size often correlates with semantic complexity. They include monosyllabic, disyllabic and trisyllabic morphemes as shown in 181. Temporal subordination may be expressed morphologically via tense stacking, functioning similarly to subordination by the combination of the distal past tense marker *kɛ-* and the proximal past tense marker *ɪnka-* (DPST-PPST-SUBJ-V) as shown in Section 4.2.3.2.1.

#### 181. Subordinating conjunctions

Syllable type	Form	Semantic notions
Monosyllabic:	<i>si</i>	'so that'
	<i>os</i>	'after'
Disyllabic:	<i>koten</i>	'while'
	<i>kotom</i>	'before'
	<i>omu</i>	'because'
	<i>ɪntɔ</i>	'if'
	<i>otos</i>	'if'
	<i>ɪntan</i>	'so that'
Trisyllabic:	<i>tankɪtɔ</i>	'provided that'

<i>kɔpatɛn</i>	'provided that'
<i>koŋeten</i>	'since'
<i>ɪŋantan</i>	'(even) although'

Some subordinators like *si* double as discourse-structuring tools in narratives (6.2), blurring coordination and subordination.

### 3.2.6.3 Interjections

Interjections in Okiek constitute an independent grammatical category characterized by non-integration into clause structure- occur as independent utterances., absence of morphosyntactic features- they are morphologically unanalyzable and lack inflection and no agreement or derivation applies to them. They express emotions, reactions, and affective states such as surprise, amazement, joy, or distress., as shown in 182. Some complex interjections involve lexicalized phrases with prepositions, showing a blend of lexical and pragmatic innovation. In relation to sociolinguistic usage, some forms are gendered-specific (e.g., *julo!* used by young women), This indicates discourse-level relevance of interjections, including speaker identity.

182. Examples of interjections and their semantic concepts.

	Interjection	Semantic concepts
a.	<i>ufo!</i>	'surprise'
b.	<i>ɔtamɔt!</i>	'disagreement/ boasting'
c.	<i>o:j!</i>	'sigh of relief/pain'
d.	<i>wɔtaɪsoɕj!</i>	'amazement'
e.	<i>ojei!</i>	'to undermine/ downplay somebody/something'
f.	<i>auwɛj</i>	'distress'

- |    |                 |   |
|----|-----------------|---|
| g. | <i>tapa!</i>    | 'shock'                                     |
| h. | <i>ɛaja!</i>    | 'surprise'                                  |
| i. | <i>piu!</i>     | 'entirety'                                  |
| j. | <i>julo!</i>    | 'used mainly by young women to express joy' |
| k. | <i>ɔtaɪsɔɔ!</i> | 'surprise/shock'                            |

Interjections expressed as lexicalized prepositional phrases contain the preposition particle *ju* 'like' and an interjection word as shown 183.

183. Interjections realized as prepositional phrases.

- |     | interjection  | Semantic notion |
|-----|---|-----------------|
| i.  | <i>ju pokine!</i><br>'like the one who shaves boys before initiation' | a swear phrase  |
| ii. | <i>ju ejo!</i><br>'like mother'                                       | a swear phrase  |

### 3.2.6.4 Prepositions

Prepositions form a closed, invariant grammatical class consisting of simple and lexicalized locative items. Simple prepositions such as *ɛn* ('at/in/for') and *ak* ('with') are polysemous and often serve multiple roles (e.g., locative, comitative, instrumental). The language also employs a variety of complex locative forms as in 184 (e.g., *kɛaɪta* 'across', *tɛkɛt* 'near'), many of which bear the *kɛ-* prefix, potentially signaling fossilized locative derivation. The fact that *kɛ-* occurs frequently across spatial and directional forms suggests that it may have historically been: a locative prefix indicating space direction and position, or an adverbializer prefix deriving location, time, manner from verbs and nouns. Syntactically, prepositions serve as heads of prepositional phrases, selecting nominal complements and functioning primarily as modifiers of verbs and nouns. Some prepositions, like *ak*, exhibit



lexical multifunctionality, acting also as coordinating conjunctions, highlighting a flexible but bounded functional inventory.

184. Inventory of prepositions

- a.       *tɛkɛt*  
          'near'
- b.       *kɛaɪta*  
          'across'
- c.       *kɛcut*  
          'along'
- d.       *kɛtaman*  
          'around'
- e.       *kɛ/*  
          'under'
- f.       *akɔpɔ*  
          'about'
- g.       *pataj*  
          'on top of '
- h.       *ju*  
          'like'
- i.       *ɛn*  
          'at/in/for/

### 3.2.6.5 Onomatopoeic words

Onomatopoeic words in Okiek are morphologically invariable sound-symbolic expressions that imitate actions, states, or sensory effects as shown in 185. They serve as complements in lexicalized transitive clauses (4.2.1.1.2) built around the verb /e 'say,' which is obligatorily inflected by a third person bound subject pronoun (*ko-*). These constructions function as ideophones—performative expressions that evoke vivid sensory imagery, sudden action, or emotional intensity. While onomatopoeic words are lexically independent, they exhibit grammatical dependence on the speech verb.

#### 185. Onomatopoeic words and their semantic notions

	Onomatopoeia	Semantic concepts
a.	<i>wer</i>	'appear suddenly'
b.	<i>ser</i>	'disappear with a bang'
c.	<i>pe:kek</i>	'infinite time'
d.	<i>cwer</i>	'appearance'
e.	<i>mst</i>	'Boom/exact!'
f.	<i>cok</i>	'exact/exactly'

### 3.2.6.7 Future tense particles

Future particles and tense-marking particles that include the proximal future (PFUT) particle *tos* and the medial future particle *totun*. The particles are invariable to inflection. They syntactically serve as serving as preverbal tense markers: FUT SUBJ-V. The particles imply a particle-based tense system for future reference, marking discourse-relevant temporal precision.

### 3.2.6.8 Complementizers

The complementizer *ɪŋkɔ* in Okiek functions as an invariable grammatical item that introduces verbal clauses serving as arguments to higher predicates. It typically marks embedded yes/no questions or epistemically uncertain clauses, signaling that the embedded proposition is under evaluation. Syntactically, *ɪŋkɔ* precedes a finite clause and does not inflect for any morphosyntactic category. Its behavior aligns with complementizers in other Nilotic languages and contributes to the clausal architecture by enabling complex sentence formation as shown in section 4.2.3.1.

### 3.2.6.10 Interrogative particles

Interrogative particles in Okiek include the polar clause-initial particle *asa* and the clause-final tag particles *e* and *i*. The particle *asa* introduces yes-no questions, while *e* and *i* transform declaratives into tag questions, often adding pragmatic nuance such as confirmation or emphasis. These particles are grammatically invariable and occupy fixed positions within the polar clause structure (4.2.4). Their properties suggest a categorization as interrogative discourse particles rather than inflectional or derivational morphemes, highlighting their syntactic independence and functional specificity within clause types.

### 3.2.6.12 Quantifiers

Quantifiers in Okiek constitute a small, closed class of independent grammatical morphemes that function primarily as nominal modifiers. They semantically distinguish number, with forms like *akɛ* 'some' (SG) and *alak* 'some' (PL) occurring in singular and plural noun phrases, respectively. Morphologically, quantifiers do not inflect for agreement but may undergo derivation, as illustrated by the quantifier *tucupone* '(a) little,' which is formed from the root *tucupo* 'some' with the derivational suffix *-ne*. This pattern reflects a productive morphological process within an otherwise invariant system. Syntactically, quantifiers consistently modify noun phrases and do not occupy core argument positions. Their structural independence, lack of agreement, and functional

similarity with numerals support their classification as quantificational particles rather than members of a distinct word class. The quantifiers that modify singular nouns are as listed in 186.

186. Quantifiers that modify singular nouns

	SG	PL
a.	<i>akε</i> 'some'	<i>alak</i> 'some'
b.		<i>tucupo</i> 'some'
c.		<i>tokol</i> 'all'

The quantifier suffix *-ne* derives the quantifier *tucupone* '(a) little' from the quantifier root *tucupo* 'some.'

### 3.2.6.13 Habitual perfect progressive aspect marker

The habitual perfect progressive aspect particle *tep* exceptionally inflects for past tense, when used in the construction of habitual past aspect expressions (3.2.2.6.3.2.1). This presents hybrid particles in the language and signs of linguistic innovation.

### 3.2.6.14 Numerals

The numeral system encompasses simple cardinal numerals (3.2.6.14.1), complex cardinal numerals (3.2.6.14.2) and ordinal numeral (3.2.6.14.3). Cardinal numerals are morphologically invariant and function syntactically as quantificational particles rather than forming a productive word class. Therefore, it is syntactic combinations rather than morphological variation, that encode numeric value. Complex numerals are constructed analytically using a compositional noun phrase structure. Multiplicands like *tomonwokik* 'sets of ten' derived from the base numeral *taman* 'ten' combine with other cardinals to build complex (*tomonwokik* +[MULTIPLIER] + *ak* +[NUMERAL]'). The coordinating conjunction *ak* 'and' is regularly used in additive combinations to form compound numerals. Ordinal numerals, on the other hand, are morphologically complex, realized through headless noun phrases containing an association marker *nɛ*, the particle of possession *po*: 'belong', and a cardinal numeral. The ordinal 'first' exhibits exceptional derivation through the locational noun *tajj* 'ahead'. These grammatical properties of Okiek numerals supports an analysis of them as semantically rich but morphologically and syntactically distinct without necessarily constituting an independent word class.

#### 3.2.6.14.1 Simple cardinal numerals

Simple cardinal numerals are realized as single independent morphemes as shown in 187 while complex cardinal numerals are realized as lexicalized noun phrases.

#### 187. Simple cardinal numerals

Numerals	Arabic digits	<i>somok</i>	3
<i>kolen</i>	0	'three'	
'zero'			
<i>akɛŋkɛ</i>	1	<i>aŋwan</i>	4
'one'		'four'	
<i>oɛŋ</i>	2	<i>mut</i>	5
'two'		'five'	

<i>lo</i> 'six'	6
<i>tɪsap</i> 'seven'	7
<i>sɪsɪt</i> 'eight'	8
<i>sokol</i> 'nine'	9
<i>taman</i> 'ten'	10

### 3.2.6.14.2 Complex cardinal numeral phrases

Augments of 10, Multiples of 10, 100, and 1000 and their augments are realized as lexicalized complex noun phrases that contain the multiplicand *tomonwokik* 'sets of ten' as the head of the noun phrase followed cardinal numerals of different combinations. The multiplicand is derived from the simple cardinal numeral *taman* 'ten' as described in noun derivation (3.2.1.4).

#### 3.2.6.14.2.1 Augments of 10

The augments of ten i.e., 11-19 are realized as conjoined numeral phrases that consist of the base *taman* 'ten' linked to a simple cardinal numeral by the conjunction *ak* 'and' as shown in 188. Numeral phrases serve as modifiers in the noun phrase (4.1.1).

#### 188. Simple augments of 10

	Linguistic expression	Arabic digit
a.	<i>taman ak akɛŋkɛ</i> ten and one 'eleven'	11
b.	<i>taman ak oɛŋ</i> ten and two 'twelve'	12
c.	<i>taman ak somok</i> ten and three 'thirteen'	13
d.	<i>taman ak aŋwan</i> ten and four 'fourteen'	14
e.	<i>taman ak mut</i> ten and five 'fifteen'	15
f.	<i>taman ak lo</i> ten and six	16

	'sixteen'	
g.	<i>taman ak tɪsap</i> ten and seven 'seventeen'	17
h.	<i>taman ak sɪst</i> ten and eight 'eighteen'	18
i.	<i>taman ak sokol</i> ten and nine 'nineteen'	19

### 3.2.6.14.2.2 Multiples of 10

The multiples of ten are realized as a noun phrase that contains the multiplicand *tomonwokik* 'sets of ten' juxtaposed with a simple cardinal numeral i.e., from the set 1-9 as shown in the examples in 189.

#### 189. The multiples of 10

	Linguistic expression	Digits
a.	<i>tomon-woki-k</i> <i>oen</i> ten-PS-PL        two 'two sets of ten/twenty'	20
b.	<i>tomon-woki-k</i> <i>somok</i> ten-PS-PL        three 'three sets of ten/thirty'	30
c.	<i>tomon-woki-k</i> <i>aŋwan</i> ten-PS-PL        four 'four sets of ten/forty'	40
d.	<i>tomon-woki-k</i> <i>mut</i> ten-PS-PL        five 'five sets of ten/fifty'	50



e.	<i>tomon-woki-k lo</i>	
	ten-PS-PL          six	60
	'six sets of ten/sixty'	
f.	<i>tomon-woki-k tɪsap</i>	
	ten-PS-PL          seven	70
	'seven sets of ten/seventy'	
g.	<i>tomon-woki-k sɪst</i>	
	ten-PS-PL          eight	80
	'two sets of ten/eighty'	
h.	<i>tomon-woki-k sokol</i>	
	ten-PS-PL          nine	90
	'nine sets of ten/ninety'	

### 3.2.6.14.2.3 The augmented multiples of 10

The augmented multiples of ten are realized as a complex NP that contain the multiple of 10 linked with a simple cardinal numeral by the conjunction *ak* 'and' shown in 190.

#### 190. Examples of augmented multiples of 10

	Linguistic expression	Digits
a.	<i>tomon-woki-k somok ak sokol</i>	
	ten-PS-PL          three and nine	39
	'three sets of ten and nine /thirty nine'	
b.	<i>tomon-woki-k aŋwan ak aŋwan</i>	
	ten-PS-PL          four and four	44
	'four sets of ten and four /forty four'	
c.	<i>tomon-woki-k mut ak lo</i>	
	ten-NMLZ-PS-PL          five and six	56
	'five sets of ten and six /fifty six'	

### 3.2.6.14.2.4 Multiples of 100

The multiples of 100 are realized as complex NPs that contain the multiplicand *tomonwokik* 'sets of ten' juxtaposed with the cardinal *taman* 'ten' followed by a simple cardinal numeral as shown in 191.

191. The multiples of 100

Linguistic expressions	Digits
<i>tomon-woki-k taman lo</i> ten-PS-PL      ten    six 'six hundred'	600
<i>tomon-woki-k taman tisap</i> ten-PS-PL      ten    seven 'seven hundred'	700
<i>tomon-woki-k taman sisit</i> ten-PS-PL      ten    eight 'eight hundred'	800

### 3.2.6.14.2.5 The augments of the multiples of 100

They are realized as a complex NP that contain the multiples of 100 linked to a simple cardinal numeral by the conjunction *ak* 'and' as shown in 192.

192. Examples of augments of the multiples of 100

	Linguistic expression	Digits
a.	<i>tomon-woki-k taman akɛŋkɛ ak oɛŋ</i> ten-PS-PL      ten    one    and two 'one hundred and two'	102
b.	<i>tomon-woki-k taman akɛŋkɛ taman ak oɛŋ</i> ten-PS-PL      ten    one    ten    and two 'one hundred and twelve'	112

- c. *tomon-woki-k taman akɛŋkɛ tomon-woki-k oɛŋ* 120  
 ten-PS-PL ten one ten-PS-PL two  
 'one hundred and twenty'
- d. *tomon-woki-k taman akɛŋkɛ tomon-woki-k oɛŋ ak lo* 126  
 ten-PS-PL ten one ten-PS-PL two and six  
 'one hundred and twenty six'

### 3.2.6.14.2.6 The multiples of 1000

They are realized as a complex NP that contains the multiplicand *tomonwokik* 'sets of ten' modified by duplicated *taman* 'ten' followed by a cardinal numeral in a fixed order as shown in 193.

#### 193. Examples of the multiples of 1000

	Linguistic expression	Arabic digits
a.	<i>tomon-woki-k taman taman akɛŋkɛ</i> ten-PS-PL ten ten one 'one thousand'	1000
b.	<i>tomon-woki-k taman taman somok</i> ten-NMLZ-PS-PL ten ten three 'three thousand'	3000
c.	<i>tomon-woki-k taman taman lo</i> ten-PS-PL ten ten six 'six thousand'	6000
d.	<i>tomon-woki-k taman taman tɪsap</i> ten-PS-PL ten ten seven 'seven thousand'	7000
e.	<i>tomon-woki-k taman taman sokol</i> ten-PS-PL ten ten nine 'nine thousand'	9000

### 3.2.6.14.2.7 The augments of the multiples of 1000

The augmented multiples of 1000 are realized as a complex NP that contains the multiples of 1000 juxtaposed with a numeral phrase as shown in 194.

#### 194. Examples of the augmented multiples of 1000

	Linguistic expression	Arabic digit
a.	<i>tomon-woki-k taman taman sokol ak taman</i> ten-PS-PL    ten    ten    nine and ten 'nine thousand and ten'	9010
b.	<i>tomon-woki-k taman taman sɪsɪt taman ak tɪsap</i> ten-PS-PL    ten    ten    eight    ten and seven 'eight thousand and seventeen'	8017
c.	<i>tomon-woki-k taman taman somok tomon-woki-k oep</i> ten-PS-PL    ten    ten    three    ten-PS-PL    two 'three thousand and twenty'	3020
d.	<i>tomon-woki-k taman taman lo tomon-woki-k aɲwan ak oep</i> ten-PS-PL    ten    ten    six    ten-PS-PL    four and two 'six thousand and forty two'	6042

### 3.2.6.14.3 Ordinal numerals

Ordinal numerals are expressed as lexicalized headless noun phrases that invariably contain the association marker *nɛ* followed by the verb of possession *po:* 'belong' and a cardinal numeral as shown in 195. Exceptionally, the first ordinal numeral contains the locational noun *ta:j* 'ahead' instead of the simple cardinal numeral *akenke* 'one' as shown in 195 (a).

195. Examples of ordinal numerals.

- a. *nɛ po: ta:j*  
AM.SG. belong ahead  
'first' (Lit: which belongs ahead)
- b. *nɛ po: oɐŋ*  
AM.SG. belong two  
'second' (Lit: which belongs to two)
- c. *nɛ po: somok*  
AM.SG. belong three  
'third' (Lit: which belongs to three)
- d. *nɛ po: aŋwan*  
AM.SG. belong four  
'fourth' (Lit: which belongs to four)
- e. *nɛ po: mut*  
AM.SG. belong five  
'fifth' (Lit: which belongs to five)
- f. *nɛ po: taman*  
AM.SG. belong ten  
'tenth' (Lit: which belongs to ten)
- g. *nɛ po: taman ak oɐŋ*  
AM.SG. belong ten and one  
'eleventh' (Lit: which belongs to eleven)

Ordinal modification of nouns is achieved via genitive constructions containing noun marked by the genitive suffix and modified by a cardinal numeral.

3.2.6.15 Adverbial negation particle

The adverbial negation particle *ɔ/takaj* 'ever' is used in the formation of negative constructions (5.0)

### 3.3 Conclusion

The morphology of Okiek, as presented in this chapter, illustrates a linguistically rich and structurally complex system that combines agglutinative, fusional, and analytic features. The study identifies and classifies morphemes across major word classes and demonstrates how these morphemes interact morphologically and phonologically to encode core grammatical information. Through a data-driven approach grounded in segmentation, glossing, and typological comparison, the analysis confirms the presence of both fossilized and productive affixes in nominal and verbal derivation. A key finding of the study is the pivotal role of morphotactic organization in regulating suffix order, mutual exclusivity, and the co-expression of grammatical categories. Many suffixes in Okiek perform multiple grammatical functions simultaneously, challenging the notion of Okiek as a purely agglutinative language. Instead, the language exhibits signs of defective or hybrid morphology, where morphologically complex forms may encode tense, aspect, person, and number within a single affixal unit.

The chapter further reveals that vowel harmony, consonant alternation, and morphophonological simplification are not marginal phonological processes but deeply tied to morphological constructions. Agreement rules in person, number, and possession—especially as realized through bound pronouns and suffixes—show the interaction of phonology with morphosyntactic structure. Additionally, definiteness and specificity are encoded indirectly through suffixal blocking, demonstrative layering, and possessive constructions, revealing a subtle but highly structured strategy for referential management. The study also notes lexical and grammatical borrowings, particularly in noun morphology, which demonstrate Okiek's responsiveness to language contact while maintaining its core grammatical identity.

## 4.0 Syntax

The objective of this section is to describe the structure of phrases and clauses, constituent order, argument marking, and grammatical relations as guided by the research questions listed in 196.

196. Research objectives governing the examination of syntactic structures in Okiek
  - i. To identify and describe the types and internal organization of phrases in Okiek.
  - ii. To determine and describe the canonical and alternative clause structures in Okiek.
  - iii. To analyze how grammatical relations are syntactically encoded in phrases and clauses.
  - iv. To document the mechanisms for linking phrases and clauses
  - v. To examine the morphology-syntax interface with respect to agreement patterns.
  - vi. To describe structural differences across clause types and functional domains.
  - vii. To situate Okiek's syntax within a wider Southern Nilotic typological context.

## 4.1 Phrases

The head of a phrase is the element that bears the overall semantic content of the phrase. All heads of phrases are overtly obligatory with the exception of noun phrases (4.1.1) where the head noun may be omitted (4.1.1.2.10). All phrases exhibit head initial syntax. Verb phrases may contain a modal particle preceding the head verb as shown in section 4.1.2.2.

### 4.1.1 Noun phrases

Section 4.1.1 begins with the description of the structure of simple, unmodified noun phrases (4.1.1.1) followed by the description of noun phrases that contain a modified noun (4.1.1.2), conjoined noun phrases (4.1.1.3) and finally the description of lexicalized noun phrases (4.1.1.4). Morphosyntactically, noun phrases are inflected for case (4.2.1.3.1) by grammatical tone (2.2) and by the genitive suffix *-a:p* (4.1.1.2.7). Syntactically, noun phrases serve as predicates in nominal clauses (4.2.1.2.1), as complements in prepositional phrases (4.1.5), and as core arguments or optional constituents in clauses (4.2). The strategies for specifying definiteness or specificity of the noun (phrase) are as explained in 3.2.1.6.

#### 4.1.1.1 Simple noun phrases

The internal structure of a simple noun phrase may contain either a single noun e.g. *tu ka* 'cows' (197a), a free personal pronoun e.g., *i nɛ* '(s)he/it' (197b), a free demonstrative pronoun *ni* 'this' (197c), or an interrogative pronoun e.g., *ŋo* 'who' (197d).

#### 197. Examples of simple noun phrases

- a.     *tok-u*     *tu-kà*  
visible-CP COW-PL.NOM  
'The cows are visible.'



- b. *tien-ej ínɛ`*  
sing-IPFV 3SG.NOM  
'(S)he is singing.'
- c. *ní ko ñòk-tó*  
DEM.PROX.SG.IPFV.ACC COP dog-SG.ACC  
'This is a dog.'
- d. *í-kur-e ñó*  
2SG-call-IPFV who.ACC  
'Who are you calling?'

#### 4.1.1.2 Modified nouns

There are three kinds of nominal modifiers i.e., affixal modifiers ( demonstrative (DEM) suffixes (3.2.1.5.1), possessive (POSS) suffixes (3.2.1.5.2) and the genitive (GEN) suffix *-ap* (4.1.1.2.8), modifiers that are juxtaposed to the head nouns quantifiers (QUAN) (4.1.1.2.1), numerals (4.1.1.2.2), and relative clauses (4.1.1.2.9), and modifiers that are linked to the head noun by the association marker *ɲɛ* (SG) or *ɛ* (PL) i.e., (adjectives (ADJ), free possessive pronouns (3.2.4.3), interrogative (INT) pronouns (3.2.4.4), nouns (N) (3.2.1). The sequence of the modifiers in the noun phrase is head first (N + (*ɲɛ/ɛ*) modifier) however the association markers *ɲɛ* (SG) or *ɛ* (PL)- are mutually exclusive with demonstrative suffixes as contrasted in 198b(i) vs. 176b(ii).

198. The sequence of nominal modifiers in the noun phrase

a.

<u>Root</u>	<u>Bound modifiers</u>		<u>Free modifiers</u>				
N	-DEM	-POSS	QUAN	NUM	ADJP	POSS	N
	-POSS	-GEN					

b.

- i. *ɲok-i-k æ sɛpɛn-ɛn*  
dog-PS-PL AM.PL small-PL  
'small dogs'

- ii. *ɲok-i-cu tokol lo sɛpɛn-ɛn ts:-ɛn cok*  
dog-PS-DEM.PROX.PL.IPFV all six small-PL black-PL 1SG.POSS.PL  
'all these six small black dogs of mine'

#### 4.1.1.2.1 Quantifiers

A noun modified by a quantifier (QUAN) makes up a noun phrase i.e., NP=N QUAN as shown in 199. The noun agrees in number with the quantifier as contrasted in the examples of singular and plural modified nouns in 199.

199. Nouns modified by quantifiers.

	SG		PL
a.	<i>wer-o akɛ</i> boy-PS some.SG 'some boy'		<i>wer-i-k alak</i> boy-PS-PL some.PL 'some boys'
b.	<i>tur-in-te-t akɛ</i> hunt-NMLZ-PS-SG some.SG 'some hunter'		<i>tur-i-k tokol</i> hunt-PS-PL all 'all hunters'

#### 4.1.1.2.2 Cardinal Numerals

Cardinal numerals follow the noun they modify i.e., NP = N CARD as shown in the example in 200.

a.	<i>lak-wɛ-t</i> child-PS-SG 'one child'	<i>akɛŋkɛ</i> one	c.	<i>lok-o-k</i> child-PS-PL 'three children'	<i>somok</i> three
b.	<i>lok-o-k</i> child-PS-PL 'two children'	<i>ɔɛŋ</i> two	d.	<i>lok-o-k</i> child-PS-PL 'four children'	<i>aŋwan</i> four

Adjectives are regularly introduced by the association marker *nɛ* (SG) or *æɛ* (PL) in the modification of nouns. The association marker (AM) immediately follows the noun (N), while the adjective (ADJ) occurs in phrase final position i.e., NP= N AM ADJ as shown in 201. The adjective and the association marker must agree in number with the head noun of the noun phrase.

	SG			PL		
a.	<i>tarɪt-ɪɛ-t</i>	<i>nɛ</i>	<i>sɛrɸɛn</i>	<i>torit-i-k</i>	<i>æ</i>	<i>sɛrɸɛ-ɛn</i>
	bird-PS-SG	AM.SG	small	bird-PS-PL	AM.PL	small-PL
	'a small bird'			'small birds'		
b.	<i>tɛput-ɪɛ-t</i>	<i>nɛ</i>	<i>u:su:s</i>	<i>tɛput-i-k</i>	<i>æ</i>	<i>u:su:s-en</i>
	question-PS-SG	AM.SG	easy	question-PS-PL	AM.PL	easy-PL
	'an easy question'			'easy questions'		
c.	<i>ɲok-to</i>	<i>nɛ</i>	<i>mɪ-ɛj</i>	<i>ɲok-i-k</i>	<i>æ</i>	<i>mɪ-ac</i>
	dog-SG	AM.SG	friendly-SG	dog-PS-PL	AM.PL	friendly-PL
	'a friendly dog.'			'friendly dogs.'		
d.	<i>tɛput-ɪɛ-t</i>	<i>nɛ</i>	<i>u:su:s</i>	<i>tɛput-i-k</i>	<i>æ</i>	<i>u:su:s-en</i>
	question-PS-SG	AM.SG	easy	question-PS-PL	AM.PL	easy-PL
	'The easiest question'			'the easiest questions'		

The adjective may be modified for intensity by the adverb *otko* 'very' (202a), and the superlative form of adjectives indicated by the modifying prepositional phrase *en tokol* 'in all' i.e., NP= N +AM+ ADJ+ *otko* (202b).

202. Modification

a. Adjectives modified by the adverb *otko* 'very' NP= N AM ADJ *otko*

	SG				PL			
i.	<i>taɪt-ɪɛ-t</i>	<i>nɛ</i>	<i>ɕɪpɛn</i>	<i>otko</i>	<i>torit-i-k</i>	<i>æ</i>	<i>ɕɪpɛ-ɛn</i>	<i>otko</i>
	bird-PS-SG	AM.SG	small	very	bird-PS-PL	AM.PL	small-PL	very
	'a very small bird'				'very small birds'			
ii.	<i>tɛput-ɪɛ-t</i>	<i>nɛ</i>	<i>u:su:s</i>	<i>otko</i>	<i>tɛput-i-k</i>	<i>æ</i>	<i>u:su:s-en</i>	<i>otko</i>
	question-PS-SG	AM.SG	easy	very	question-PS-PL	AM.PL	easy-PL	very
	'a very easy question'				'very easy questions'			

b. Adjective modified by prepositional phrase *en tokol* 'in all'

	SG				PL			
i.	<i>taɪt-ɪɛ-t</i>	<i>nɛ</i>	<i>ɕɪpɛn</i>	<i>en tokol</i>	<i>torit-i-k</i>	<i>æ</i>	<i>ɕɪpɛ-ɛn</i>	<i>en tokol</i>
	bird-PS-SG	AM.SG	small	in all	bird-PS-PL	AM.PL	small-PL	in all
	'the smallest bird'				'The smallest birds'			
ii.	<i>tɛput-ɪɛ-t</i>	<i>nɛ</i>	<i>u:su:s</i>	<i>en tokol</i>	<i>tɛput-i-k</i>	<i>æ</i>	<i>u:su:s-en</i>	<i>en tokol</i>
	question-PS-SG	AM.SG	easy	in all	question-PS-PL	AM.PL	easy-PL	in all
	'the easiest question'				'the easiest questions'			

Nouns may be modified by more than one adjective. In such cases, each adjective is introduced by the association marker *nɛ* (SG) or *æ* (PL) as shown in 203. Adjectives of size regularly precedes those of color, age, physical property, and quality.

203. Noun modified by more than one adjective

		Size	Color	age	Physical property	Quality
a.	<i>ɲɔt-wɛ-t</i>	<i>nɛ ow</i>	<i>nɛ lɛl</i>	<i>nɛ yos</i>	<i>nɛ ɲatɪp</i>	<i>nɛ siŋoi</i>
	knife-PS-SG	AM.SG big	AM.SG white	AM.SG old	AM.SG sharp	AM.SG good
	'a good old big sharp white knife'					
b.	<i>rot-o-k</i>	<i>æ ec-en</i>	<i>æ lɛl-ac</i>	<i>æ yos-en</i>	<i>æ ɲatɪp-ɛn</i>	<i>æ siŋoi-en</i>
	knife-PS-PL	AM.PL big-PL	AM.PL white-PL	AM.PL old-PL	AM.PL sharp-PL	AM.PL good-PL
	'good old big sharp white knives'					

#### 4.1.1.2.4 Free possessive pronouns

Free possessive pronouns (POSS) that modify nouns are introduced by an association marker *nɛ* (SG) or *æ* (PL) as shown in 204 i.e., NP=N + AM +POSS. The association marker has to agree in number with the head noun and the possessive modifier.

204. Nouns modified by possessive pronouns

	Singular nouns	Plural nouns
a.	<i>salaut-a nɛ ɲɔn</i> voice-PS AM.SG 1SG.SG 'a voice which is mine '	<i>salaut-wɛ-k æ ɔk</i> voice-PS-PL AM.PL 1SG.POSS.PL 'voices which are mine '
b.	<i>sarɯn-ɪnt-ɛ-t nɛ ɲuwan</i> savior-NMLZ-PS-SG AM.SG 3SG.POSS.SG 'savior of his/her/it '	<i>sarɯn-ɪ-k æ ɲuwan</i> savior-PS-PL AM.PL 3SG.POSS.SG 'saviors of his/her/it '
c.	<i>kɔɪ-ta nɛ ɲɔn</i> stone-SG AM.SG 1PL.POSS.SG 'a stone of ours'	<i>kɔi-i-k æ ɲɔn</i> stone-PS-PL AM.PL 1PL.POSS.SG 'stones of ours'

#### 4.1.1.2.5 Interrogative pronoun *ɬan*

The interrogative pronoun *ɬan* 'how many/ how much' only modifies plural nouns. It is introduced by the plural association marker *æ* (PL) as shown in 205. The head noun precedes the association marker, and the interrogative is in phrase final position i.e., ; NP= N AM *ɬan*.

205. Examples of a noun modified by *ɬan* 'how many/how much'

- a. *pololon-isi-e-k æ ɬan*  
bag-NAT-PS-PL AM.PL how  
'how many bags'
- b. *ce-ko æ ɬan*  
milk-PL-SE AM.PL how  
'how much milk'

#### 4.1.1.2.6 Noun

A noun that modifies another noun is introduced by the association marker *nɛ* (SG) or *æ* (PL) as shown in 206. Exceptionally, the kinship terms in 206(c-d) involve a juxtaposition of the head noun followed by the modifier without an association marker. The asymmetry in phrase structure as seen in relation those kinship term vs. other nouns modified by a noun is a distinctiveness of the Nessuit variety and is yet described in the other dialects.

206. Example of nouns modified by nouns

- a. *ko-jok-i-k æ ko-nto-i-k*  
NMLZ-heal-PS-PL AM.PL NMLZ-lead-PS-PL  
'the gatherers who are leaders'
- b. *ko-net-int-e-t nɛ tiɛps-a*  
NMLZ-teach-NMLZ-PS-SG AM.SG woman-PS  
'a teacher who is a woman'/ 'a female teacher'
- c. *tiep-to tupce*  
girl-SG relative  
'a sister'

- d.        *wer-o    tupce*  
             boy-PS    relative  
             'a brother'

#### 4.1.1.2.7 Participles

Participles agree in number with the noun they modify and the association marker that introduces them in the noun phrase as contrasted in the singular- plural examples in 207.

207.        Head nouns modified by participles

- |  |   |
|--|---|
| <p>(SG)</p> <p>a.    <i>ci-to    nε    nar-at</i><br/>             person-SG AM.SG lazy-PART<br/>             'someone who is lazy'</p> <p>b.    <i>ko-net-int-e-t    nε    ηερεk-at</i><br/>             NMLZ-teach-NMLZ-PS-SG AM.SG happy-PART<br/>             'a teacher who is pleased'</p> | <p>(PL)</p> <p>      <i>pi-k    æ    nor-ot-in</i><br/>             people-PL AM.PL lazy-PART-PL<br/>             ' people who are lazy'</p> <p>      <i>ko-net-i-k    æ    ηerek-ot-in</i><br/>             NMLZ-teach-PS-PL AM.PL happy-PART-PL<br/>             'teachers who are pleased'</p> |
|--|---|

#### 4.1.1.2.8 The genitive suffix *-a:p*

The genitive suffix *-a:p* is marked on the possessed noun. The suffix has three allomorphs i.e., the -ATR allomorph *-a:p* and the +ATR allomorph *-o:p* and the suffix *-p* attached to noun stems with a zero coda as shown in 208. The genitive constructions are realized via juxtaposition of the possessor noun following the possessed noun. The semantic characterizations of genitive constructions match the semantic relations proposed by Dixon (2010:262) and Dryer (2007:178) i.e., whole-part relationship (208a-c), kinship relationship, (208d) an attribute of the possessor (208e), association with the possessor (208f), and relating the possessed item to a location (208g).

208. Examples of genitive constructions

- a. *mukulelin-to-p tarɪt-ɪɛ-t*  
heart-SG- GEN bird-PS-SG  
'the heart of the bird'
- b. *lok-i-k-o:p ɪŋkaɪa-ɪ-t*  
tear-PL-GEN widow-PS-SG  
'the tears of the widow'
- c. *sarɪɪ-ɛ-t-a:p pel-io-t*  
tail-PS-SG-GEN elephant-PS-SG  
'the tail of the elephant'
- d. *sant-ɛ-t-a:p* Norah  
brother in law-PS-SG-GEN Norah  
'the brother in law of Nora'
- e. *ɾɛɾkut-ɪ-k-a:p Alvin*  
anger-PS-PL-GEN Alvin  
'the anger of Alvin'
- f. *ɔr-wɛ-t-a:p Gamora*  
friend-PS-SG-GEN Gamora  
'the friend of Gamora'

Other possessors in a genitive construction include cardinal numerals (209a) and interrogative pronoun *ŋɔ* 'who' (209b). Genitive constructions containing the interrogative pronoun *ŋɔ* 'who' serve as verbless clause subjects in the expression of Wh-questions as shown in section 4.2.1.2.5.

209. Examples of genitive constructions with non-nominal possessors

- a. Cardinal numerals as possessors
  - i. *salaut-a-p mut*  
voice-PS-GEN five  
'the fifth voice'



ii. *ko-jok-i-k-o:p* *low*  
 NMLZ-heal-PS-PL-GEN six  
 'the sixth healers'

iii. *joj-isie-t-o:p* *taman*  
 create-PS-SG-GEN ten  
 'the tenth creation'

b. Interrogative pronoun *ŋo* 'who' as possessor

i. *salaut-a-p* *ŋo*  
 voice-PS-GEN who  
 'whose voice?'

ii. *ko-sop-i-k-o:p* *ŋo*  
 NMLZ-heal-PS-PL-GEN who  
 'whose healers?'

iii. *joj-isie-t-o:p* *ŋo*  
 create-PS-SG-GEN who  
 'whose creation?'

In addition, genitive constructions are used to express statement of location as shown in 210 where a locational noun inflected by the genitive suffix is modified by another noun.

210. Examples of genitive constructions indicating a statement of location

a. *taj-I-t-a:p* *tul-ono-k*  
 ahead-PS-SG-GEN hill-PS-PL  
 'beyond the hills'

b. *kanas-wɛ-t-a:p* *kɔr*  
 beside-PS-SG-GEN house  
 'beside the house'

c. *kwen-e-t-o:p* *kor-i-k*  
 between-PS-SG-GEN house-PS-PL  
 'between the houses'

- d.        *orit-o:p*        *kər*  
              inside-GEN    house  
              'the inside of the house'
- e.        *let-i-t-o:p*        *mɛs-ɛ-t*  
              behind-PS-SG-GEN    table-PS-SG  
              'the behind of the table'
- f.        *səŋ-I-t-a:p*        *kər*  
              out-PS-SG-GEN    house  
              'the outside of the house'

More than one noun can modify the possessed noun yielding a complex genitive construction as shown in 211.

211.        Complex genitive construction

*ilorik-oi-t-o:p*        *ko-net-int-e-t*        *Kenya*  
              chair-PS-SG-GEN    NMLZ-teach-NMLZ-PS-SG    Kenya  
              'the chair of the President of Kenya'

#### 4.1.1.2.9 Relative clauses

Relative clauses serve as modifiers to the head noun in the noun phrase. The clause is indicated by either the association marker *nɛ* (SG) or *ɛ* (PL) followed by a verbal clause (4.2.1.1). The association marker must agree in number with the head noun as shown in 212.

212.        Association clauses modifying nouns

- a.        *kət-ɛ-t*        *nɛ*        *ol-ej*        *túr-ínt-è-t*  
              arrow-PS-SG    AM.SG    buy-PROG    hunt-NMLZ-PS-SG.NOM  
              'The arrow which the hunter is buying'
- b.        *pəɪn-ɛ-t*        *nɛ*        *ka-kə̀-sɜwa*        *ókóróm-ói-k*  
              antelope-PS-SG    AM.SG    PERF-3-see        lion-PS-PL  
              'The antelope which the lions have seen'

- c. *ki-e-t            nɛ    ki-ki-sik-cin*  
village-PS-SG AM.SG DPST-TF-give birth-DAT  
'The village where they were born'
- d. *tiepos-o-k    æ    kur-ej    ɲɛtət*  
woman-PS-PL AM.PL call-PROG man.NOM  
'The women that the man is calling'

#### 4.1.1.2.10 Headless NPs

Heads of nouns phrases modified through an association marker can be omitted yielding headless noun phrases as shown in the examples in 213. Ordinal numerals expressed as lexicalized headless noun phrases are described separately.

#### 213. Association phrases serving as heads of headless noun phrases

	NP containing Head noun	Headless NP
a.	<i>salaut-a nɛ    ɲɔn</i> voice-PS AM.SG 1SG.POSS.SG 'voice which is mine '	<i>nɛ    ɲɔn</i> AM.PL 1SG.POSS.SG 'which is mine '
b.	<i>teput-i-k    æ    u:su:s-en    ɛn tokol</i> question-PS-PL AM.PL easy-PL in all 'the easiest questions'	<i>æ    u:su:s-en    ɛn tokol</i> AM.PL easy-PL in all 'which are the easiest'

#### 4.1.1.3 Conjoined noun phrases

Conjoined noun phrases contain two syntactically independent noun phrases linked by the coordinating conjunction *ak* 'and' as shown in 214.

#### 214. Examples of conjoined NPs

- a. *kimoriok    ak    kimatɪan*  
'Kimoriok and Kimatian'

- b. *sok-io-t ak ɪʊnt-ai-t*  
 leaf-PS-SG and wall-PS-SG  
 'leaf and wall'
- c. *ol-i-k ak ol-to-i-k*  
 trader-PS-PL and trade-CF-PS-PL  
 'traders/buyers and sellers'

#### 4.1.1.4 Lexicalized genitive constructions

The genitive constructions in 215 are lexicalized noun phrases. They contain a noun modifying a noun marked by the genitive suffix.

##### 215. Lexicalized genitive constructions

- a. *ɲɔ-ɛ-t-a:p ka-t*  
 plea-PS-SG-GEN home-SG  
 'forgiveness'
- b. *kɛ-rat-a:p kɔŋ-ta*  
 INF-close-GEN eye-SG  
 'warning'
- c. *kɔŋ-ta-p pe:-k*  
 eye-SG-GEN water-PL  
 'spring/well'
- d. *ci-to-p lat-ɪɛ-t*  
 person-SG-GEN neighborhood  
 'a neighbor'
- e. *ɲɔp-ta-p koi-k*  
 rain-SG-GEN stone-PL  
 'hailstones'

## 4.1.2 Verb phrases

The Okiek verb phrase is a complex structure that combines core verbs, argument structures, TAM markers, auxiliaries, and agreement features to convey a range of grammatical meanings as described in verb derivation (3.2.2.5). The Okiek verb phrase (VP) consists of a core verb, which can be intransitive, transitive, or ditransitive, and is accompanied by noun phrases (NPs) or pronouns as arguments (subject). These arguments are syntactically arranged in a verb-initial order. Tense, aspect and mood particles precede the main verb while adverbs or adverbial phrases provide additional information on about the verb's action (e.g., manner, time, frequency). Reduplication and derivational affixes like causative or applicative markers alter the verb phrase, influencing the argument structure or aspectual interpretation. Verb phrases include simple-unmodified verb phrases (4.1.2.1), verbs modified by modal particles (4.1.2.2), the infinitive phrases (4.1.2.3), and lexicalized verb phrases (4.1.2.4). Syntactically, verb phrases serve as predicates in verbal clauses (4.2.1.1). Infinitive verb phrases serve as arguments in verbal clauses.

### 4.1.2.1 Simple verb phrase

A simple verb phrase consists of an obligatory head verb. The head verb is syntactically subcategorized into intransitive verbs (216a) that take no complement, transitive verbs (216b) which take one complement as shown in 216, and the copula *ko*.

216. The syntactic categorization of head verbs that constituent a VP

#### a. Intransitive verbs

i.	<i>ru</i>	'sleep'	vi.	<i>tɔk</i>	'visible'
ii.	<i>purtutɛn</i>	'fly'	vii.	<i>eso:</i>	'refuse'
iii.	<i>ɔt</i>	'flow'	viii.	<i>lapat</i>	'run'
iv.	<i>kutɔŋ</i>	'kneel'	ix.	<i>pɔt</i>	'fall'
v.	<i>kɪskɪs</i>	'shake'	x.	<i>mun</i>	'rest'

xi.	<i>ɾɿ</i>	'laugh'	xvii.	<i>ɬɿɿn</i>	'stand'
xii.	<i>tikɿ</i>	'smile'	xviii.	<i>pɛntaɪt</i>	'walk'
xiii.	<i>ɕɿnta</i>	'click'	xix.	<i>ɿr</i>	'cry'
xiv.	<i>pʊrkɛɪt</i>	'be hot'	xx.	<i>la/</i>	'cough'
xv.	<i>ɿalan</i>	'speak'	xxi.	<i>ɪtɛ</i>	'scream'
xvi.	<i>twa/</i>	'jump'	xxii.	<i>pɔ/</i>	'shout'

b. Transitive verbs

i.	<i>ɿɪɪt</i>	'pull'	xvi.	<i>ɿa/</i>	'waste'
ii.	<i>ɔp</i>	'take'	xvii.	<i>ɿɿ</i>	'explain'
iii.	<i>sʊt</i>	'lift'	xviii.	<i>la</i>	'carry'
iv.	<i>nɛn</i>	'put'	xix.	<i>æɾ</i>	'encourage'
v.	<i>ɿɪt</i>	'bore'	xx.	<i>ɪp</i>	'siphon'
vi.	<i>kas</i>	'hear'	xxi.	<i>rapac</i>	'slap'
vii.	<i>kʷɛ:r</i>	'hit'	xxii.	<i>ɿɔt</i>	'prick'
viii.	<i>par</i>	'kill'	xxiii.	<i>rat</i>	'close/tie'
ix.	<i>pir</i>	'beat'	xxiv.	<i>camcam</i>	'taste'
x.	<i>ɒs</i>	'praise'	xxv.	<i>sʊc</i>	'split/wipe'
xi.	<i>tɛp</i>	'question'			
xii.	<i>wɛc</i>	'hate'			
xiii.	<i>ʊrʊr</i>	'cool'			
xiv.	<i>ser</i>	'scatter'			
xv.	<i>tac</i>	'receive'			

#### 4.1.2.2 Modal particles in the VP

The head verb can constitute the entire VP on its own, or it may be preceded by TAM particles that do not accept inflections (future tense markers (3.2.6.7) e.g., *tos* 217a(i); habitual perfect aspect marker *tep* (3.2.6.1.3) 217a(ii); the hortative mood marker *nan* (3.2.6.3.1) 217a(iii); modal particles (3.26.3) e.g., auxiliary verbs *maktat* 'must' 217a(iv), *nolu* 'should' 217a(v) and *kaɪkaɪ* 'prefer') or by modal particle that can inflect for subject, negation, and tense i.e., the auxiliary *ɪmʊc* 'can/able to' 217b(i) and the adverbial auxiliary *ɛn* 'almost' 217b(ii).

##### 217. Modal particles in the VP

###### a. Morphologically unmarked modals in the VP

- i. *tos ké-camcam sùt-é-k ɛn cik-é-t*  
PFUT 1PL-taste soup-PS-PL.ACC in kitchen-PS-PL.ACC  
'We will taste the soup in the kitchen.'
- ii. *ko-tep kó-cer lòk-ó-k kó-nét-ì-k*  
MPST-HPERF 3-encourage child-PS-PL.ACC NMLZ-teach-PS-PL.NOM  
'The teachers have been encouraging the children.'
- iii. *nan ke-rat tɛɛ-t*  
HORT 1PL-close pot-SG.ACC  
'Let us close the pot.'
- iv. *maktat kò-morori-jo lók-ò-k*  
must 3-dance-PLUR.PROG child-PS-PL.NOM  
'The children must dance.'
- v. *nolu kò-rip ɪsɪkár-ɪ-k kò-ón*  
should 3-guard police-PS-PL.NOM house-DEM.MED.SG.ACC.IPFV  
'The police should guard that house.'
- vi. *kaɪkaɪ ɪ-sa*  
better 2SG-pray  
'You prefer to pray.'

b. Modals that accept inflections

- i.      *ke-muc-e*      *kɛ-sɪ:r*  
          1PL-can-ROG 1PL-write  
          'We can write.'
- ii.      *kɔ-ɪ̀/ɛn*                      *ì-iri*              *tɛ'ɛ-t*  
          MPST-2SG-be almost      2SG-break      pot-SG.ACC  
          'You almost broke the pot.'

The modal particle *ɪmuc* 'can/able to' modifies the verbal interrogative pronoun *ite* 'how' as shown 218.

218.      Modal modifying the verbal interrogative pronoun *ite*

- i.      *ke-muc-e*              *kè-ite*  
          1PL-can-PROG      1PL-how  
          'How can we?'
- ii.      *í-muc-e*              *ì-ite*  
          2SG-can-PROG      2SG-how  
          'How can you?'

### 4.1.2.3 Infinitive phrases

Infinitive phrases contain a verb root inflected by the infinitive prefix *kɛ-* (3.2.2.6.5). Infinitive phrases serve as subjects in verbal clauses (4.2.1.1). The infinitive phrase may contain an infinitive stem serving as the head of the phrase (219a), an infinitive and a complement (219b), an infinitive and an adjunct (219c), or an infinitive its complement and an adjunct (219d).

219.      Examples of infinitive phrases

- a.                      *kɛ-tɪ/*  
                          INF-cut  
                          'to cut'



- b. *kε-tɪ/ paŋ-ε-k*  
 INF-cut meat-PS-PL  
 'to cut the meat'
- c. *kε-tɪ/ ko-siŋoi*  
 INF-cut ADV-good  
 'to cut well'
- d. *kε-tɪ/ paŋ-ε-k ko-siŋoi*  
 INF-cut meat-PS-PL ADV-good  
 'to cut the meat well'

#### 4.1.2.4 Lexicalized VP

Lexicalized verb phrases contain a verb serving as the head of the verb phrase and a noun as shown in 220. The nouns used in a lexicalized verb phrases exhibit two properties of grammaticalization proposed by Heine and Narrog (2010: 405) i.e., Decategorialization - they cannot serve as head nouns in noun phrases, and erosion- the nouns lose their ability to be inflected for primary and secondary suffixes, in contrast to the full form of the noun in the right-side column. Exceptionally, the full form of the plural noun *pe:k* 'water' and the singular noun *ɪjɛt* 'place' are used as shown in 220a(vi) and 220b(iii). The same noun *ta:j* 'ahead' is used with different verbs to express the same semantic notion as shown in 220a(iv-v). Lexicalized verb phrases are either intransitive verbs (220a) or indefinite pronouns realized as negated form of the verb *mi* 'to be' and the nouns in 220(b).

#### 220. Lexicalized VPs

##### a. Intransitive verbs realized as lexicalized VPs

	VP	Full noun
i.	<i>kεr kɔŋ</i> close eye 'warn'	<i>kɔŋ-ta</i> eye-SG 'an eye'

ii.	<i>jɛp it</i> set ear 'listen'	<i>It-It</i> ear-SG 'an ear'
iii.	<i>no-nci ka</i> plea-DAT home 'forgive'	<i>ka-t</i> home-SG 'a home'
iii.	<i>tɛs ta:j</i> add ahead 'continue'	<i>ta:j-It</i> ahead-SG 'ahead'
iv.	<i>pa: ta:j</i> go ahead 'go forward/continue'	<i>ta:j-It</i> ahead-SG 'ahead'
v.	<i>pir pe:-k</i> beat water-PL 'swim'	<i>pe:-k</i> water-PL 'water'

b. Negated indefinite pronouns

	VP	Full noun
i.	<i>mo-mi ci</i> NEG-be person 'nobody'	<i>ci-to</i> person-SG 'a person'
ii.	<i>mo-mi kɛj</i> NEG-be thing 'nothing'	<i>kɛj-It</i> thing-SG 'a thing'
iii.	<i>mo-mi Ij-ɛ-t</i> NEG-be place-PS-SG 'nowhere'	<i>Ij-ɛ-t</i> place-PS-SG 'a place'

### 4.1.3 Adverb phrases

Adverb phrases can occur as a simple adverb phrase that contains the unmodified head adverb (221a), or a head adverb modified by the adverb of degree *otko* (221b-c). Adverb phrases serve as adjuncts in clauses (4.2.).

## 221. Examples of adjective phrases

- a. *ko-ja*  
ADV-bad  
'badly'
- b. *ko-ja*    *otko*  
ADV-bad    very  
'very badly'
- c. *ko-sorcin*    *otko*  
ADV-quick    very  
'very quickly'

#### 4.1.4 Prepositional phrases

Prepositional phrases contain prepositions and noun phrases that serves as their complement PP= P +NP as shown in 222. The phrases express different semantic concepts e.g. attributes as indicated by the preposition *ju* 'like' 222(a), or manner 222(b) or place and time (222c) as indicated by the polysemous preposition *en* 'in/at'. The form *ak* which serves as the conjunction 'and' also doubles up as head of preposition phrase as shown in 222b(vii).

## 222. Examples of prepositional phrases

- a. Attributes
- i. *ju ce-ko* like milk-PL

'milky'

- ii. *ju pe:-k*  
like water-PL  
'watery'

- iii. *ju wer-o*  
like boy-PS  
'boyish'

- iv. *ju ηεtat*  
like man  
'manly'

b. Manner

- i. *εn ηερεk-ε-t*  
in happy-PS-SG  
'happily'

in different-NMLZ-PS  
'differently'

- v. *εn οjep-int-o*  
in generous-NMLZ-PS  
'generously'

- ii. *εn ηaran-at-ε-t*  
in lazy-PART-PS-SG  
'lazily'

- vi. *εn panan*  
in sudden  
'suddenly'

- iii. *εn manηn-at-ε-t*  
in brave-PART-PS-SG  
'bravely'

- vii. *ak wer-o*  
with boy-PS  
'with the boy'

- iv. *εn ter-int-o*

c. Place and time

- i. *εn ακ-ε-t*  
in kitchen-PS-SG  
'in kitchen'

- ii *εn panan*  
in sudden  
'suddenly'

- iii *εn ηwoη*  
in earth  
'down'

iv. *ɛn sɔ-wɛ-t*  
in behind-PS-SG  
'behind'

v. *ɛn taʝ*  
in ahead  
'in front of'

Interjections expressed as lexicalized prepositional phrases contain the preposition *ju* 'like' and an interjection word as shown in 223.

223. Interjections realized as prepositional phrases.

interjection	Semantic notion
iii. <i>ju pokine!</i> 'like the one who shaves boys before initiation'	a swear phrase
iv. <i>ju ejo!</i> 'like mother'	a swear phrase

#### 4.1.5 Participle phrases

Participle phrases consist of the head participle as shown in 224. Participles phrases function as nominal modifiers in the noun phrase and as predicates in participle clauses (4.2.1.2.4).

224. Examples of participle phrases

	Participles	
	(SG)	(PL)
a.	<i>jat-at</i> open-PART 'opened'	<i>jot-ot-in</i> open-PART-PL 'opened'
b.	<i>jan-at</i> believe-PART 'believed'	<i>jon-ot-in</i> believed-PART-PL 'believed'
c.	<i>riŋ-at</i> short-PART 'shortened'	<i>riŋ-ot-in</i> short-PART-PL 'shortened'

#### 4.1.6 Ideophonic phrases

Ideophones are realized as lexicalized verb phrases that contain the verb of speaking /*e* 'say' which is invariably inflected by the third person bound subject pronoun allomorph *kò-* and selects an onomatopoeic word as its complement as shown in 225.

##### 225. Examples of ideophones

- a. *kò-le wer*  
3-say wer  
'appear suddenly!'
- b. *kò-le ser*  
3-say ser  
'disappears with a bang!'
- c. *kò-le pe:kek*  
3-say pe:kek  
'an infinite amount of time!'
- d. *kò-le cwer*  
3-say chwer  
'It appeared out of nowhere!'
- e. *kò-le mut*  
3-say mut  
'Boom/exact!'
- f. *kò-le cok*  
3-say chok  
'exact/exactly!'

## 4.2 Clauses

Section 4.2 describes the distribution and functions of constituents in main clauses (4.2.1), coordinated clauses (4.2.2) and subordinate clauses (4.2.3). Polar interrogative clauses are described separately in section 4.2.4.

### 4.2.1 Main clauses

Main clauses in the language are broadly categorized into two types based on the word class of the head element in their predicate: verbal clauses (Section 4.2.1.1) and non-verbal clauses (Section 4.2.1.2). The realization of grammatical functions within these clauses is achieved through a combination of case marking (4.2.1.3.1), subject indexation (4.2.1.3.2), and constituent order (4.2.1.3.3). The main grammatical functions include the subject (S), verbless clause subject (VCS), direct object (DO), indirect object (IO), copula subject (CS), copula complement (CC), verbless clause complement (VCC), and adjunct (Adjx). Predicate functions are fulfilled by various word classes such as verbs (V), nouns (N), adjectives (Adj), and participles (PART). These functions are explicitly labeled above each constituent throughout Section 4.2.1 for clarity and consistency. Apart from copula clauses, all other clause types exhibit a predicate-initial syntactic structure, where the predicate—whether verbal, nominal, adjectival, or participial—precedes the other constituents in the clause. The order of the remaining constituents is relatively flexible. In copula constructions, however, the copula is obligatorily positioned between the copula subject (CS) and the copula complement (CC), forming a fixed CS–COP–CC structure as detailed in Section 4.2.1.2.1.



### 4.2.1.1 Verbal clauses

Verbal clauses contain a verb as the head of the predicate. The categories of verbal clauses include intransitive clauses (4.2.1.1.1), transitive clauses (4.2.1.1.2), ditransitive clauses (4.2.1.1.3), and interrogative verb clause (4.2.1.1.4). Verbal clauses serve as copula complements in copula clauses (4.2.1.2.1).

#### 4.2.1.1.1 Intransitive clauses

Intransitive clauses contain two core constituents i.e., an intransitive verb serving as the head of the VP and an NP argument serving as the subject of the intransitive clause as shown in 226 (a-c). An optional adjunct may be included in the clauses as shown in 226(d).

226. Examples of intransitive clauses

- a.
- |                    |                 |          |                 |
|--------------------|-----------------|----------|-----------------|
| V                  | S               |          |                 |
| <i>sorokon-tos</i> | <i>lók-ò-k</i>  | <i>æ</i> | <i>siŋoi-en</i> |
| play-PLUR          | child-PS-PL.NOM | AM.PL    | good-PL         |
- 'The good children are playing.'
- b.
- |                 |           |                 |  |
|-----------------|-----------|-----------------|--|
| V               | S         |                 |  |
| <i>ko-tikij</i> | <i>nε</i> | <i>ɲɔ̀n</i>     |  |
| MPST-smile      | AM.SG     | 1SG.POSS.SG.NOM |  |
- 'Mine smiled.'
- c.
- |              |                    |           |                 |
|--------------|--------------------|-----------|-----------------|
| V            | S                  |           |                 |
| <i>tok-u</i> | <i>á:rá-wὲ-̀t</i> | <i>ak</i> | <i>tóp-ói-k</i> |
| visible-CP   | moon-PS-SG.NOM     | and       | star-PS-PL.NOM  |
- 'The moon and stars are visible.'
- d.
- |                |            |            |              |
|----------------|------------|------------|--------------|
| V              | S          | Adjx       |              |
| <i>rori-ej</i> | <i>íæk</i> | <i>εn</i>  | <i>pàni'</i> |
| laugh-PROG     | they.NOM   | in now.ACC |              |
- 'They are suddenly laughing.'

The NP subjects of intransitive clauses that contain the verbs of weather may be omitted in actual speech as shown in 227.

227. The omission of NP subjects of verbs of weather

Omitted NP subject	NP Subject included	
a. V <i>ropin-ij</i> rain-PROG 'It is raining'	V <i>ropin-ij</i> rain-PROG 'It is raining.'	S <i>ɾɔ́p-tà</i> rain-PS.NOM 'The rain is raining'
b. V <i>kut-ej</i> blow-PROG 'It is windy' (Lit; 'It is blowing)	V <i>kut-ej</i> blow-PROG 'the weather is windy' (Lit; 'The weather is blowing)	S <i>kóris-tò</i> weather-PS.NOM

#### 4.2.1.1.2 Transitive clauses

Transitive clauses contain three core constituents i.e., a VP headed by a transitive verb, and two NP arguments where one serves as the subject (S) and the other serves as the direct object (DO) of the clause as shown in 228(a-c). An adjunct can be included as shown in 228(d).

228. Examples of mono-transitive clauses

- a. V S DO  
*ƙɪ-ŋal wér-ò ɾɔ́p-ìsè-̀k-cík*  
 PST-waste boy-PS.NOM money-PS-PL-3SG.POSS.PL.ACC  
 'The boy wasted his money.'
- b. V DO S  
*ki-los Tóròr-é-t pí-k*  
 PST-praise God-PS-SG.ACC people-PL.NOM  
 'People praised God.'
- c. V S DO  
*wec-ej kí-rwók-ín-tè-t pí-k æ ɲori-ot-in*  
 hate-PROG NMLZ-chief-NMLZ-PS-SG.NOM people-PL.NOM AM.PL lazy-PART-PL  
 'The chief hates lazy people.'

- d.
- |                |                |                          |                  |
|----------------|----------------|--------------------------|------------------|
| V              | DO             | S                        | Adjx             |
| <i>ki-sɔwa</i> | <i>tùr-í-k</i> | <i>kó-riém-ín-tè-t</i>   | <i>ɛn tìm-tó</i> |
| DPST-saw       | hunt-PS-PL.ACC | NMLZ-farm-NMLZ-PS-SG.NOM | in forest-SG.ACC |
- 'The farmer saw the hunters in the forest.'

#### 4.2.1.1.3 Di-transitive clauses

Di-transitive clauses contain four core constituents i.e., a VP in the predicate function, an NP argument in the subject function (S), an NP argument in the gift/patient direct object function (DO), and an NP argument in the recipient (R) or instrument (INST) in the indirect object (IO) function as shown in the examples in 215. An optional adjunct may be added as shown in 215 (b).

##### 229. Examples of ditransitive clauses

- a.
- |                  |               |                |                  |
|------------------|---------------|----------------|------------------|
| V                | IO            | S              | DO               |
| <i>í-pie-cin</i> | <i>cì-tó</i>  | <i>kóm-è-k</i> | <i>ímùt-ú-t</i>  |
| CAUS-give-DAT    | person-SG.ACC | meat-PS-PL.NOM | energy-PS-SG.ACC |
- 'Honey gives a person energy.'
- b.
- |                     |               |                 |                   |             |
|---------------------|---------------|-----------------|-------------------|-------------|
| V                   | S             | IO              | DO                | Adjx        |
| <i>ki-jum-ci</i>    | <i>pì-k</i>   | <i>làk-wɛ-t</i> | <i>ɔ́p-ìsìɛ-k</i> | <i>omut</i> |
| DPST-contribute-DAT | people-PL.NOM | child-PS-SG.ACC | money-PS-PL.ACC   | yesterday   |
- 'People contributed money for the child yesterday.'
- c.
- |                      |                  |                  |                           |              |
|----------------------|------------------|------------------|---------------------------|--------------|
| V                    | DO               | IO               | IO                        | S            |
| <i>ko-sir-cin-en</i> | <i>párv-ɛ-t</i>  | <i>kálàm-ɛ-t</i> | <i>ɔ́r-wɛ-ɲín</i>         | <i>wér-ò</i> |
| DPST-write-DAT-INST  | letter-PS-SG.ACC | pen-PS-SG.ACC    | friend-PS-3SG.POSS.SG.ACC | boy-PS.NOM   |
- 'The boy wrote a letter to his friends with a pen.'

#### 4.2.1.1.4 Interrogative verb clause

The verbal interrogative *íte* 'do how' (230)

230. VP in VCS function in verbless clauses

- a. 

VCS		AM.SG		VCC	
<i>í-muc-e</i>	<i>í-íte</i>	<i>nɛ</i>		<i>í-lo-e</i>	<i>pólòlón</i>
2SG-can-PROG	2SG-how	AM.SG		2SG-carry-PROG	bag.ACC

  
 'How can you carry the bag?'
- b. 

VCS		AM.SG		VCC	
<i>ké-muc-e</i>	<i>ké-íte</i>	<i>nɛ</i>		<i>ké-lo-e</i>	<i>pólòlón</i>
2SG-can-PROG	2SG-how	AM.SG		2SG-carry-PROG	bag.ACC

  
 'How can we carry the bag?'

#### 4.2.1.2 Non-verbal clauses

Non-verbal clauses contain either copula particle *ko*, a noun, an adjective, or a participle as the head in the predicate. Non-verbal predicates are inflected for person, and past tense in the prefix i.e., PST-S-N/ADJ/PART. The structure for negation is described separately in section 5.0. Nonverbal clauses serve as copula complements in copula clauses (4.2.1.2.1). In all verbless clauses, with the exception of copular clauses, there is a nominal subject in post predicate position which is marked for nominative case by tone.

##### 4.2.1.2.1 Copula clauses

Copula clauses are coded by the copula *ko* and its two constituents i.e., a copula subject (CS) that precedes the copula and a copula complement (CC) that follows the copula verb i.e., CS+ COP +CC, as shown in 231. Verbal clauses (231a), nominal clauses (231b), or adjectival clauses (231c) and participle clauses (231d) can serve as copula complements. Copula clauses indicate semantic relations between CS and CC such as possession (231a), identity (231b), or attribute (231c).

## 231. Examples of copular clauses contrasted with other clause types.

	Copular clauses	Non-copular clauses
a.	<p>CS COP CC</p> <p><i>tóptò-cú ko kó-po: wèr-ó</i></p> <p>flower-DEM.PROX.PL.ACC.PROG COP 3-POSS boy-PS.ACC.IFV</p> <p>'These flowers, they belong to boy.'</p>	<p>V DO S</p> <p><i>po: wèr-ó tóptó-cù</i></p> <p>belong boy-PS.ACC flower-PL-DEM.PROX.PL.NOM.PROG</p> <p>'These flowers belong to the boy.'</p>
b.	<p>CS COP CC</p> <p><i>εḗk ko ke-tùr-í-k</i></p> <p>1PL.ACC COP 1PL-hunt-PS-PL.ACC</p> <p>'We, we are hunters.'</p>	<p>N S</p> <p><i>ke-tùr-í-k εḗk</i></p> <p>1PL-hunt-PS-PL.ACC 1PL.NOM</p> <p>'We are hunters.'</p>
c.	<p>CS COP CC</p> <p><i>ɔkwɛk ko o:-sɪŋoj-ec</i></p> <p>2PL.ACC COP 2PL-good-PL</p> <p>'You, you are good.'</p>	<p>ADJ S</p> <p><i>o:-sɪŋoj-ec ɔkwɛk</i></p> <p>2PL-good-PL 2PL.NOM</p> <p>'You are good.'</p>
d.	<p>CS COP CC</p> <p><i>εḗk ko ke-toc-ot-in</i></p> <p>1PL.ACC COP 1PL-invite-PART-PL</p> <p>'We, we are invited.'</p>	<p>PART S</p> <p><i>ke-toc-ot-in εḗk</i></p> <p>1PL-invite-PART-PL 1PL.NOM</p> <p>'we are invited.'</p>

### 4.2.1.2.2 Nominal clauses

Nominal clauses are intransitive clauses that contain a nominal predicate and one NP argument in the subject (S) function as shown in 232. Nominal predicates state the attributes of the referent in the subject function.

## 232. Example of nominal clauses

a.	<p>N S</p> <p><i>ki-sòṁ-ε-t íḗk</i></p> <p>DPST-buffalo-PS-SG.ACC 3PL.NOM</p> <p>'They were buffaloes.'</p>
----	---

- b.                    N                    S  
*lòk-ó-k                    Márià      ak   Pámelà*  
 child-PS-PL.ACC   Maria.NOM and Pamela.NOM  
 'Maria and Pamela are children.'

- c.                    N                    S  
*ko-ke-tópò-í-k                    εἶεκ*  
 MPST-1PL-star-PS-PL.ACC   1PL.NOM  
 'We were stars.'

#### 4.2.1.2.3 Adjectival clauses

Adjectival clauses are intransitive clauses that contain an adjective predicate and an NP argument in the subject function as shown in 233. The adjective predicate provides information about the attributes of the subject. The lexicalized adjectival clause in 233(d) is used as a subordinate conjunction in adverbial clauses of manner (4.2.3.2.3).

#### 233.        Examples of adjectival clauses

- a.                    ADJ                    S  
*κῶ-ηθεν                    μόι-τὰ*  
 MPST-fast                    calf-SG.NOM  
 'The calf was fast.'
- b.                    ADJ                    S  
*σίηοι-εσ                    κόρ-όνò-k*  
 good-PL                    friend-PS-PL.NOM  
 'Friends are good.'
- c.                    ADJ                    S  
*ki-ke-ow-ec                    εἶεκ*  
 DPST-1PL-big-PL                    1PL.NOM  
 'We were big.'
- d.                    ADJ                    S  
*ko-ju                    ἰ'ἔ`*  
 3-same                    place.ACC  
 'The place is the same'



- d. VCS AM.SG VCC  
*né nɛ i-joj-u*  
 what.ACC AM.SG 2SG-make-CP  
 'What did you make?'
- e. VCS AM.SG VCC  
*né nɛ ko-i-kur-e lək-wɛ-ɲɔ́n*  
 what.ACC AM.SG MPTS-2SG-call-PROG child-PS-1SG.POSS.SG.ACC  
 'What did you call my child?'
- f. VCS AM.PL VCC  
*àno' ɛ ké-mɛn-e*  
 where.ACC AM.PL 1PL-live-PROG  
 'Where do we live?'
- g. VCS AM.SG VCC  
*áɪɔ́n nɛ tɛ-tá*  
 which.ACC AM.SG COW-SG.ACC  
 'Which is a cow?'
- h. VCS AM.PL VCC  
*áɪɔ́n ɛ ja-ɛc*  
 which.ACC AM.PL bad-PL  
 'Which are bad?'
- i. VCS AM.PL VCC  
*áɪɔ́n ɛ jot-ot-in*  
 which.ACC AM.PL open-PART-PL  
 'Which are opened?'
- j. VCS AM.PL VCC  
*pólòlòn-ìsì-é-k ɛ tɪan ɛ í-muc-e ɪ-lá*  
 bag-ANTP-PS-PL.ACC AM.PL how AM.PL 2SG-can-PROG 2SG-carry  
 'How many bags can you carry?'

The association marker *nɛ* is omitted when the complement is a noun modified by possessive suffix as contrasted between 236(a) vs 236(b).



### 236. Deletion of the association marker in nominal modification

- a.
- |                 |       |            |
|-----------------|-------|------------|
| VCS             | AM.SG | VCC        |
| áɪɔ́h           | nɛ    | tɛ-tá      |
| which           | AM.SG | COW-SG.ACC |
| 'Which is cow?' |       |            |
- b.
- |                         |                        |
|-------------------------|------------------------|
| VCS                     | VCC                    |
| áɪɔ́h                   | tɛ-tà-ɲún              |
| which.ACC               | COW-SG-2SG.POSS.SG.ACC |
| 'Which house is yours?' |                        |

The interrogative pronoun *ʔan* 'how' is used in the modification of adjectives as shown in 237.

237. ADJP serving as VCS in Verbless clauses

- a. VCS VCC  
*sinɔj nɛ tɪan òm-tí-t*  
 good AM.SG how food-PS-SG.ACC  
 'How good is the food?'
- b. VCS VCC  
*ja-ɛc æ tɪan wèr-í-k*  
 bad-PL AM.PL how boy-PS-PL.ACC  
 'How bad are the boys?'

#### 4.2.1.3 Grammatical Relations

#### 4.2.1.3.1 Case marking

Okiek has a nominative-absolutive case system which marks nouns by dedicated tone patterns for their syntactic functions in clauses and in phrases. The nominative case tone pattern consists of a terminal low tone, initial and intermediary high tones regardless of the number of syllables that make up the noun stem i.e., (H°)L while the absolutive case tone pattern consists of a terminal high tone, intermediary low tone(s), and an initial high tone i.e., ((H)L°)H. Disyllabic nouns have an initial low tone in the absolutive form. When

noun phrases are used in core-predication, NP subjects in postverbal position occur in the nominative case while NP objects occur in the absolutive case as illustrated in 238(a-g) by the nouns 'water', 'hunters', 'an antelope', 'butterflies,' and 'lions' marked for the nominative case i.e., *pè:k*(L), *túrik* (HL), *ɔɪ́ɪ̃ɛt* (HHL), *táɔ̀ɪ̀ɪ̀ɪ̀ɪ̀k* (HHHL) and *ókóró móík* (HHHHL) in contrast to their absolutive case forms i.e., *pé:k* (H ), *tùrík* (LH), *ɔɪ́ɪ̃ɛt* (HLH), *táɔ̀ɪ̀ɪ̀ɪ̀ɪ̀k* (HLLH) and *ókòròmòík* (HLLLH), respectively.

238. The tonal coding of the nominative and accusative case in clauses

- a. V S  
*ki-pulpul-eso pè:-k*  
 DST-boil-PLUR water-PL.NOM  
 'The water boiled.'
- b. V DO S  
*je-ej pé:-k pɔ́ín-ɛ̀t*  
 drink-PROG water-PL.ACC antelope-PS-SG.NOM  
 'The antelope is drinking water.'
- c. V DO S  
*ɪnka-kwɛ:r pɔ́ín-ɛ̀t túr-ì-k*  
 PPST-hit antelope-PS-SG.ACC hunt-PS-PL.NOM  
 'The hunters hit the antelope.'
- d. V S  
*toku tápúrɔ́r-ɪ̀k*  
 visible butterfly-PS-PL.NOM  
 'The butterflies are visible.'
- e. V S DO  
*ɪ-suwa ókóróm-òí-k túr-í-k*  
 DPST-see lion-PS-PL.NOM hunt-PS-PL.ACC  
 'The lions saw the hunters.'
- f. V S DO  
*mu-ej pɔ́ín-ɛ̀t ókòròm-òí-k*  
 fear-PROG antelope-PS-SG.NOM lion-PS-PL.ACC  
 'The antelope fears the lions.'

- g.
- | V  | DO                  | S              |
|--|---------------------|----------------|
| <i>kɪ-æŋ</i>                               | <i>tápuṛpuṛ-i-k</i> | <i>túr-i-k</i> |
| DPST-look for                              | butterfly-PS-PLACC  | hunt-PS-PL.NOM |
| 'The hunters are looking for butterflies.' |                     |                |

The terminal high tone in the accusative case forms and the terminal low tone in the nominative case forms spread to bound nominal modifiers (possessive suffixes, demonstrative suffixes, and the genitive suffix) yielding ((H)L°)H(-H°) vs. (H°)H(-L°) tone patterns for the accusative and nominative case forms respectively as shown in 239 by noun *a:rtet* 'a sheep'. In the genitive construction, the possessor noun invariably occurs in the accusative case form in both the subject and object functions.

239. Tonal coding in a noun modified by bound nominal modifiers

a. Modification by a possessive suffix

- i.                    V                    S  
*put-ij á:r-tɛ-ʃɔ́n*  
 fall-PROG sheep-PS-1SG.POSS.SG.NOM  
 'My sheep is falling.'
- ii.                    V                    DO  
*ɬ-à-par á:r-tɛ-ʃɔ́n*  
 DPST-1SG-kill sheep-PS-1SG.POSS.SG.ACC  
 'I killed my sheep.'

b. Modification by a demonstrative suffix

- i.                    V                    S  
*lopot-ej á:r-tɛ-nɪ`*  
 run-PROG    sheep-PS-DEM.PROX.SG.IPFV.NOM  
 'This sheep is running.'
- ii.                    V                    DO  
*í-ol-e á:r-tɛ-nɪ`*  
 2SG-buy-PROG    sheep-PS-1SG.POSS.SG.ACC  
 'You are buying this sheep.'

i.           V           S  
*lopot-ej á:r-tɛ́-t-à:p wèr-ó*  
 run-PROG sheep-PS-SG-GEN.NOM boy-PS.ACC  
 'The boy's sheep is running.'

Only independent NP subjects are obligatorily indexed on the predicate via bound subject pronouns (3.2.6.1.1) as shown in 241(a). The bound subject pronoun can occur as a zero morph as shown in 241(b).

a.  $\begin{matrix} V & & S & & O \\ \text{tos} & \acute{o}\text{-ker-}ej & \acute{a}n\epsilon & & \acute{o}k\grave{o}r\grave{o}m\text{-}w\acute{e}\text{-}t \end{matrix}$   
 PFUT 1SG-see-PROG 1SG.NOM lion-PS-SG.ACC  
 'I, I will see the lion.'

b.  $\begin{matrix} V & & O & & S \\ \text{ker-}ej & \acute{o}k\grave{o}r\grave{o}m\text{-}w\acute{e}\text{-}t & & & p\acute{o}in\text{-}\epsilon\text{-}t \end{matrix}$   
 see-PROG lion-PS-SG.ACC antelope-PS-SG.NOM  
 'The antelope is seeing the lion.'

As mentioned earlier in section 4.2.1, Okiek has a predicate initial syntax (VS/O) with free constituent order amongst constituents that follow the predicate as contrasted in 242(a-b) where the change in the position of the constituents in post verbal position does not alter its syntactic function. On the contrary, the position of the primary agent subject in a causative-constructions is restricted to clause final position while the secondary agent object regularly precedes the verb as shown in 242(c).

a.	V	IO	DO	S
	<i>ko-mwo-ci</i>	<i>lòk-ó-k</i>	<i>tónòcò</i>	<i>ól-ì-k</i>
	MPST-tell-DAT	child-PS-PLACC	story.ACC	trade-PS-PL.NOM
	'The buyers told the children a story.'			

- b.           V                   DO                   IO                   S  
*ko-mwo-ci      tónòcò      lòk-ó-k      ól-ì-k*  
 MPST-tell-DAT    story.ACC    child-PS-PL.ACC    trade-PS-PL.NOM  
 'The buyers told the children a story.'
- c.           V                                   DO                   IO                   S  
*kɔ-I-rat-is                   òl-ì-k                   íntòpó                   sérékál-t*  
 MPST-CAUS-close-CAUS    trade-PS-PL.ACC    market.ACC    government-SG.NOM  
 'The government caused the buyers to close the market'

## 4.2.2 Coordinated clauses

These are clauses that contain two or more main clauses linked together by a coordinating conjunction (3.6.1). The clauses exhibit a monosyndetic coordination i.e., only one coordinator is used (Haspelmath 2004). The two clauses are of equal syntactic status such that no clause serves as a dependent of the other. The coordinating conjunction regularly occur in between the main clauses as indicated in the examples in 243(b) vis a vis the main clauses provided in 243(a). The three semantic types of coordination include conjunctive coordination 243b(i), disjunctive coordination 243b(ii), and adversative coordination 243c(iii). When the subjects of the main clauses are identical, only one subject is used in the resulting coordinated clause.

### 243. Illustrations of coordination of main clauses

- a. Main clauses
- i.           V                   S                   DO                   Adjx  
*ki-sɔwa      lók-ò-k                   árà-wɛ-t                   omut*  
 DPST-see    child-PS-PL.NOM    moon-PS-SG.ACC    yesterday  
 'The children saw the moon yesterday.'
- ii.           V                   Adjx                   S  
*ki-ru           en      ηεῖεκ-ε-t                   lók-ò-k*  
 DPST-sleep    in    happy-PS-SG.ACC    child-PS-PL.NOM  
 'The children slept happily.'

- iii. V DO S  
*i-ner-is-ij* *cì-tó* *pén-tò*  
 CAUS-fat-CAUS-PROG person-SG.ACC meat-SG.NOM  
 'Meat fattens a person.'

- iv. V IO S DO  
*i-ko-cin* *cì-tó* *kóm-è-k* *ímùt-ú-t*  
 CAUS-give-DAT person-SG.ACC honey-PS-PL.NOM energy-PS-SG.ACC  
 'Honey gives a person energy.'

#### b. Coordinated clauses

- i. *kɛ-sɯwa* *lók-ò-k* *ára-wɛ́t* *omut* *isko* *ki-ru* *ɛn* *ɛ́ɛk-ɛ́t*  
 DPST-see child-PS-PL.NOM moon-PS-SG.ACC yesterday and then DPST-sleep in happy-PS-SG.ACC  
 'The children saw the moon yesterday and then they slept happily.'
- ii. *kɛ-sɯwa* *lók-ò-k* *ára-wɛ́t* *omut* *onon* *ki-ru* *ɛn* *ɛ́ɛk-ɛ́t*  
 DPST-see child-PS-PL.NOM moon-PS-SG.ACC yesterday or DPST-sleep in happy-PS-SG.ACC  
 'The children saw the moon yesterday or they slept happily.'
- iii. *i-ner-is-ij* *cì-tó* *pén-tó* *pe:ko* *i-ko-cin* *cì-tó* *kóm-è-k* *ímùt-ú-t*  
 CAUS-fat-CAUS-PROG person-SG.ACC meat-SG.NOM but CAUS-give-DAT person-SG.ACC honey-PS-PL.NOM energy-PS-SG.ACC  
 'Meat fattens a person, but honey gives a person energy.'

### 4.2.3 Subordinate clauses

Section 4.2.3 describes the internal structure and functions of subordinate clauses (SubC). A subordinate clause is a clause that is syntactically dependent on a main clause (MC). They include complement clauses (4.2.3.1) and adverbial clauses (4.2.3.2). Syntactically, subordinate clauses can precede or follow main clauses. Subordinate clauses are indicated in square brackets in section 4.2.3.

### 4.2.3.1 Complement clauses

A complement clause (CompC) is sentence that serves as an obligatory argument of a predicate (Noonan 2007:52). Verbal clauses (4.2.1.1), with the exception of copula clauses (4.2.1.1.4) function as complement clauses.

Frist, complement clauses of the verb *mac* 'want' are juxtaposed to the main clauses as shown in 244.

#### 244. Examples of complement clauses indicated via juxtaposition

- a. MC CompC  
*ki-moc-e lók-ò-k [kə̀-ɸɪr pé:-k]*  
 DPST-want-PROG child-PS-PL.NOM 3-beat water-PL.ACC  
 'The children wanted to swim.'
- b. MC CompC  
*moc-ej ηεtət [kə̀-ɸɪr ròpót]*  
 want-PROG man.NOM 3-write report.ACC  
 'The man wants to write the report.'

Second, complement clauses are introduced by the verb of speaking *le* 'tell.' The verb *le* 'tell' is marked for person by bound subject pronouns that agree in person with the subject in the main clause. The complement clauses serve distinct functions e.g., the direct object function (245a); the direct object function following an indirect object (245b); the object complement (245c); or the complement to the copula subject in (245d). 245a shows that more than one clause can be embedded in subordination.

#### 245. Examples of complement clauses introduced by *le* 'tell.'

- a. MC CompC  
*kɪ-kɛ̀-ηkɛn [kè-le kɪ-kɛ̀-mac [kɪ-kɛ̀-tɪ/ pàŋ-é-k]]*  
 DPST-1PL-know 1PL-tell DPST-1PL-want DPST-1PL-cut-IPFV meat-PS-PL.ACC  
 'We knew that we wanted to cut the meat.'



- b. MC CompC  
*ki-mwo-ci kó-nèt-í-k wér-ò [kò-le kɔ-ka-kɔ̀-ɪ:t lók-ò-k]*  
 DPST-tell-DAT NMLZ-teach-PS-PL.ACC boy-PS.NOM 3-tell MPST-PERF-3-arrive child-PS-PL.NOM  
 'The boy told the teachers that the children had arrived.'
- c. MC CompC  
*ké-tɪŋ-e ɪmàn-tá [kè-le ko-sic té-tà sáràm-ɛ́-k]*  
 1PL-have-PROG true-SG-PS.ACC 1PL-tell MPTS-give birth cow-SG-NOM twin-PS-PL.ACC  
 'We have the truth that the cow gave birth to twins.'
- d. MC CompC  
*ɲól-iò-t-óp sɛ́ɛkàɪ-t [kó-le ɲolu kè-piɛ-ci ɪmpàr-ɛ́-t tɛ́pɔ̀s-à] ko siŋoj*  
 word-PS-SG-GEN.NOM government-SG.ACC 3-tell should 1PL-give-DAT farm-PS-SG.ACC woman-PS.ACC COP good  
 'The word of the government that we should give the woman the land is good.'

Third, complement clauses introduced by the complementizer *ɪŋkɔ* 'whether' serve as direct object selected by the verb in the main clause as shown in 246.

246. Complement clauses introduced by *ɪŋkɔ* 'whether'

- a. MC CompC  
*ó-ŋken-e [ɪŋkɔ kó-mi pé:-k]*  
 1SG-know-PROG whether 3-be water-PL.ACC  
 'I know whether there is water.'
- b. MC CompC  
*kɪ-kɛ̀-ɪpɛ ɪnɛ́ [ɪŋkɔ ka-kò-yo-isi ɪɛ́k]*  
 DPST-1PL-ask 3SG.ACC whether PERF-3-COOK-ANTP 3PL.NOM  
 'We asked him whether they have cooked.'

### 4.2.3.2 Adverbial clauses

An adverbial Clause (AC) is an optional clauses i.e., not selected by the verb in the main clause but used to provide information about time (4.2.3.2.1), location (4.2.3.2.2), manner (4.2.3.2.3), cause or purpose (4.2.3.2.4), concession (4.2.3.2.5), conditions (4.2.3.2.6), and comparison (4.2.3.2.7). With the exception of adverbial clauses used indication comparison, other adverbial clauses are introduced by subordinate conjunctions.

#### 4.2.3.2.1 Time

Temporal adverbial clauses are indicated by subordinate conjunctions of time e.g., *kotom* 'before,' *koten* 'while,' *ot* 'until,' or *ne* 'after/when' as shown in 247, respectively.

247. Examples of adverbial clauses adding information about time

- a. MC AC  
*pír-u-on* [ *kotom* *ì-ru* ]  
call-CP-1SG before 2SG-sleep  
'Call me before you sleep.'
- b. MC AC  
*tec-ej* *ηétót-ì-k* *kó* [ *koten* *kó-rom-ey* *pé:-k* *tíépós-ò-k* ]  
build-PROG man-PS-PL.NOM house.ACC while 3-fetch-PROG water-PL.ACC woman-PS-PL.NOM  
'The men are building the house while the women are fetching water.'
- c. MC AC  
*κί-ιιr* [ *ot* *kò-ru* ]  
DPST-cry until 3-sleep  
'(s)he cried until (s)he slept.'
- d. MC AC  
*κί-nam* *kò-jo-isi* *τιέρός-à* [ *ne* *κί-ka-κε-ῖε* ]  
DPST-start 3-cook-ANTP woman-PS.NOM after DPST-PERF-1PL-return  
'The woman started cooking after we had returned.'

Adverbial clause adding information about time can also be indicated by the combination of the distal past tense marker (DPST) *kɪ-* and the proximal past tense marker (PPST) *ɪŋka-* preceding a subject pronoun in the verb prefix i.e., DPST-PPST-S-V as shown in 248.

248. Subordination indicated via combination of tense prefixes

- a. MC AC  
*kɪ-ɪ:t tó-è-k [ki-ɪŋko-sorokon-tos lók-ò-k]*  
 DPST-arrive visitor-PS-PL.NOM DPST-PPST-play-PLUR child-PS-PL.NOM  
 'The visitors arrived while the children were playing.'
- b. MC AC  
*ki-i-jo-isie-j tiép-tò [ki-ɪŋko-tes-ej taj wér-ì-k ko-tur-isie-j]*  
 DPST-CAUS-COOK-ANTP-PROG girl-SG.NOM DPST-PPST-add-PROG ahead boy-PS-PL.NOM MPTS-hunt-ANTP-1PROG  
 'The girls were cooking while the boys continued hunting.'

#### 4.2.3.2.2 Locations

Adverbial clauses that add information about location are introduced by the subordinating conjunction realized as the prepositional phrase *ɛn ɪjɛ* 'in place' as shown in the examples in 249.

249. Subordination indicated via prepositional phrase *ɛn ɪjɛ* 'in place.'

- a. MC AC  
*kɪ-al ɲɛtət ɪmpàr-ɛ-t [ɛn ɪjɛ ki-ke-siken]*  
 DPST-trade man.NOM farm-PS-SG.ACC in place.ACC DPST-TF-born  
 'The man bought a farm where he was born.'
- b. MC AC  
*ko-ò-ker kó [ɛn ɪjɛ mɛŋ-ej wér-ò]*  
 MPST-1SG-see house.ACC in place.ACC live-PROG boy-PS.NOM  
 'I saw the house where the boy lives.'
- c. MC AC  
*ki-ru ɪŋɪhéɪ-t [ɛn ɪjɛ kɪ-tɔnɔn tɔ-kā]*  
 DPST-sleep goat-SG.NOM in place.ACC DPST-stand COW-SG.NOM  
 'The goat slept where the cows stood.'

#### 4.2.3.2.3 Manner clauses

Adverbial clauses adding information about manner are introduced by the lexicalized adjectival clause *koju ɪʒɛ* ‘The place is the same’ as shown in 250.

250. Subordination indicated by lexicalized adjectival clause .

- a. MC AC  
*i-jo-isie-j tíép-tò [ko-ju ɪʒɛ` [kɪ-suwa ɛn íntòɲó]]*  
 CAUS-cook-ANTP-PROG girl-SG.NOM 3-same place.NOM DPST-see in market.ACC  
 ‘The girl cooks how she saw in the market.’
- b. MC AC  
*ki-moror-jo lók-ò-k [ko-ju ɪʒɛ` [kɪ-ka-ɪ-nɛt kó-nét-ì-k ɪɕɛk]]*  
 DPST-dance-PLUR child-PS-PL.NOM 3-same place.NOM DPST-PERF-CAUS-teach NMLZ-teach-PS-PL.NOM 3PLACC  
 ‘The children danced how the teachers have taught them.’

#### 4.2.3.2.4 Cause or purpose

Adverbial clauses that add information about cause or purpose are introduced by the subordinate conjunctions *omu* ‘because,’ *osi* ‘so that’ or *ɪntan* ‘so that.’ The subordinate conjunctions *osi* ‘so that’ and *ɪntan* ‘so that’ can be used interchangeably as contrasted in 251(c) vs. 251(d).

251. Cause and purpose adverbial clauses

- a. MC AC  
*ki-i-twol-ci ɲɛtət ɔ̀lɲ-ɛ-t [omu ki-moc-ej kɔ̀-pɪr pé:-k]*  
 DPST-CAUS-jump-DAT man.NOM river-PS-SG.ACC because DPST-want-PROG 3-beat water-PLACC  
 ‘The man jumped into the river because he wanted to swim.’
- b. MC AC  
*ki-kɛ-pwɛ sùkúl [omu ki-ke-le-nci-ec kɛ-pwɛ sùkúl]*  
 DPST-1PL-go to school.ACC because DPST-ImP-tell-DAT-1PL 1PL-go to school.ACC  
 ‘We went to school because we were told to go to school.’
- c. MC AC  
*ki-kon-on rópìn-í-k kó-ntó-ì-k [ɪntan ò-pir-ci kɪrà ɪɕɛk]*  
 DPST-give-1SG money-PS-PLACC NMLZ-lead-PS-PL.NOM so that 1SG-beat-DAT vote.ACC 3PLACC  
 ‘The leaders gave me money so that I vote for them.’

- d. MC AC  
*ki-kon-on rópìn-í-k kó-ntó-ì-k [osi ò-pir-ci kùrà ɪ̀ɛ̀k]*  
 DPST-give-1SG money-PS-PL.ACC NMLZ-lead-PS-PL.NOM so that 1SG-beat-DAT vote.ACC 3PL.ACC  
 'The leaders gave me money so that I vote for them.'

#### 4.2.3.2.5 Concessions

Adverbial clauses that provide information about the recognition of some facts are indicated by the subordinating conjunction *ɪ̀nkantan* 'even though' as shown in 252.

252. Example of adverbial clauses indicating concession.

- a. MC AC  
*ki-oti: kípòhì kò-lopot-jo ókóróm-óì-k [ɪ̀nkantan ko-moc-ej ko-ɛ̀j pé:-k]*  
 DPST-make monkey.ACC 3-run-PLUR lion-PS-PL.NOM even though MPTS-want-PROG 3-drink water-PL.ACC  
 'The lions made the monkey run even though it wanted to drink water.'
- b. MC AC  
*ko-nom-ci ɲɛ̀tə̀t cór-òno-k-ɔ̀k sámàkì-á-t [ɪ̀nkantan ko-ru-ej ɪ̀ɛ̀k]*  
 MPTS-catch-DAT man.NOM friend-PS-PL-3SG.POSS.PL.ACC fish-PS-SG.ACC even though MPST-sleep-PROG 3PL.NOM  
 'The man caught a fish for his friends even though they were sleeping.'

Adverbial clauses of concessive conditions indicate an idea that is contrary to the idea in the main clause. They are indicated by the subordinating conjunction *akɜ̀t into* 'even if' and are juxtaposed to a negated verbal clause as shown in 253. The verb in the adverbial clause occurs in the perfective aspect.

253. Examples of adverbial clauses indicating concessive conditions

- a. MC AC  
*mo-ɲit pɔ́ííóh-ɪ̀-ɔ̀k ɪ̀ɲɛ̀ [akɜ̀t into kur kí-rwòk-í-k ɲɛ̀tət]*  
 NEG-recognize elder-PS-PL.NOM 3SG.ACC even if call AGP-chief-PS-PL.ACC man.NOM  
 'The elders will not recognize him, even if the man calls the chief.'
- b. AC MC  
*[akɜ̀t into ke-min pà̀n-tɛ̀-ɔ̀k] tos ko-mo-toret-ec sɛ̀ɛ̀kál-ɪ̀-ɔ̀t*  
 even if 1PL-plant maize-PS-PL.ACC PFUT 3-NEG-help-1PL government-PS-SG.NOM  
 'Even if we plant maize, the government will not help us.'

#### 4.2.3.2.6 Conditions

Adverbial clauses adding information about condition contrast two situations in which one is contingent on the other. The added information can be a simple condition (4.2.3.2.6.1), a counterfactual condition (4.2.3.2.6.2), or a negative conditional clause.

##### 4.2.3.2.6.1 Simple conditions

Simple conditions are introduced by the subordinate conjunctions *otos* 'if,' *kɔpatɛn* 'only that,' *tan kitjo ko* 'provided that/as long as' as shown in 254.

#### 254. Examples of adverbial clauses indicating simple conditions

- a. MC AC  
*tos kó-lukui:-j ɲók-tò kòt-wé-t [otos kó-om-ej ɪɲɛ]*  
 PFUT 3-swallow-PROG dog-SG.NOM bone-PS-SG.ACC if 3-eat-PROG 3SG.ACC  
 'The dog will swallow the bone if it can eat it.'
- b. MC AC  
*ek-u wér-ò ɲɛtát [tan kitjo ko ka-kɛ-ɔnta]*  
 become-CP boy-PS.NOM man.ACC provided that PERF-TF-initiate  
 'The boy will become a man provided that he has been initiated.'

##### 4.2.3.2.6.2 Counterfactual conditions

Counterfactual conditions are imagined or unreal conditions. They are introduced by the subordinate conjunction *into* 'if.' The main clauses are exceptionally marked by the future tense particle *tos*, and the verb stem is inflected for the past tense as shown in 255. The subordinate clauses in 255(b) serves as the copula subject and the main clause serves as the copula complement.

#### 255. Examples of counterfactual clauses

- a. MC AC  
*tos ɲka-à-al kòm-é-k [into ɲko-ò-tin róp-isɛ-k]*  
 PFUT PPST-1SG-trade honey-PS-PL.ACC if PPST-1SG-have money-PS-PL.ACC  
 'If I had money, I would have bought honey.'

- b. AC COP MC  
 [into ko-kè-tin ηòk-tô] ko tos ko-kè-kur Bòskó  
 if MPST-1PL-have dog-SG.ACC COP PFUT MPST-1-PL-call BOSCO.ACC  
 'If we had a dog, we would have called it Bosco.'

#### 4.2.3.2.7 Comparison

An adverbial clause indicating comparison is juxtaposed to the main clause as shown in 243. The comparison clause is marked by the verbal predicate *ɛr* 'surpass' (256a) or the adjectival predicate *ju* 'same' (256b). The predicates are invariably marked by third person bound subject pronoun. The comparison clauses display the prototypical comparative scheme described by (Aikhenvald 2015). That is, the clauses contain: a comparee i.e., an entity being compared (NP *omtít* 'food' (256a), verbal clause *kaɪkaɪ alapat* 'I would rather run' (256b), and the adverb *ra* 'today' (256c) in the main clauses; the parameter of comparison i.e., NP *komek* 'honey' (256a), verbal clause *oru* 'I sleep' (256b), and *omut* 'yesterday' (256c) in the subordinate clauses; the standard of comparison and marker of comparisons i.e., '*sir*'surpass' and *ju* 'same as'.

#### 256. Examples of adverbial clauses indicating comparison

##### a. Degree of difference

- i. MC AC  
*ɔɲɲ ó:m-tì-t* [*kɔ-ɛr kòm-é-k*]  
 sweet food-PS-SG.NOM 3-surpass honey-PS-PL.ACC  
 'The food is sweeter than honey.'
- ii. MC AC  
*kaɪkaɪ a-lapat* [*kɔ-ɛr [ò-ru]*]  
 better 1SG-run 3-surpass 1SG-sleep  
 'I would rather eat than sleep.'
- iii. MC AC  
*ɔɲɲ ó:m-tì-t ra* [*kɔ-ɛr omut*]  
 sweet food-PS-SG.NOM today 3-surpass yesterday  
 'The food is sweet today. It surpasses yesterday.'

i. MC AC  
*onɪn ó:m-tì-t* [ *ko-ju kòm-é-k* ]  
 sweet food-PS-SG.NOM 3-same as honey-PS-PL.ACC  
 'The food is as sweet as honey.'

i. MC AC<sub>1</sub> AC<sub>2</sub>  
*kaɪkaɪ ò-o:m-is* [ *ko-ju* [ *ò-ru* ] ]  
 better 1SG-eat-ANTP 3-same as 1SG-sleep  
 'I would rather eat. It is the same as I sleep.'

i. MC AC  
*onɪn ó:m-tì-t ra* [ *ko-ju omut* ]  
 sweet food-PS-SG.NOM today 3-same as yesterday  
 'The food is as sweet today as it was yesterday.'

#### 4.2.4 Polar interrogative clauses

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## 257. Example of polar interrogative clauses

- a. *asa i-ajɛp i*  
 YES.NO 2SG-generous YES.NO  
 'Are you generous?'
- b. *asa í-ol-e kòm-é-k ɛn íntòńó i*  
 YES.NO 2SG-trade-PROG honey-PS-PL.ACC in market.ACC YES.NO  
 'Are you buying honey in the market?'
- c. *κi-mwa kó-ńó-ì-k kò-le ka-kò-je túr-ì-k i*  
 DPST-say NMLZ-heal-PS-PL.NOM 3-tell PERF-3-return hunt-PS-PL.NOM YES.NO  
 'Did the healers say that the hunters have returned?'
- d. *i-muc-ej kò-walwal òm-tí-t tíépós-ò-k i*  
 CAUS-can-PROG 3-exchange eat-PS-SG.ACC woman-PS-PL.NOM YES.NO  
 'Can the women exchange the food?'
- e. *asa mo-murmur-ij túr-ì-k pèn-tó e*  
 YES.NO NEG-cut into pieces-PROG hunt-PS-PL.NOM meat-SG.ACC YES.NO  
 'Are the hunters cutting the meat?'

Tag questions are indicated by the negated tag particle *e* in clause final position as shown in 258.

## 258. Examples of tag questions

- a. *κi-mwa tóńòcó pápà mo-e*  
 DPST-tell story.ACC father.NOM NEG-TAG  
 'My father told a story, didn't he?'
- b. *tos kó-op-ej tɛr-ɛ-t tíép-tò mo-e*  
 PFUT 3-take-PROG pot-PS-SG.ACC girl-SG.NOM NEG-YES.NO  
 'The girl will take the pot, won't she?'
- c. *mɛn-ej ɔ́r-wɛ-ńuń ɛn Náíròpɪ mo-e*  
 live-PROG friend-PS-2SG.POSS.SG.NOM in Nairobi.ACC NEG-TAG  
 'Your friend lives in Nairobi, doesn't he?'

- d. *murmur-ij*      *pèn-tó*      *túr-ì-k*      *mo-e*  
 cut into pieces-PROG meat-SG.ACC hunt-PS-PL.NOM NEG-TAG  
 'The hunters are cutting the meat into pieces, aren't they?'
- e. *ɲolu i-ɟat*      *kurk-ɛ-í-t*      *mo-e*  
 should 2SG-open door-PS-SG.ACC NEG-TAG  
 'You should open the door, shouldn't you?'

### 4.3 Conclusion

The syntax of Okiek reveals a consistently head-initial phrase structure, with noun phrases allowing for a wide range of modifiers, including quantifiers, numerals, adjectives, genitives, and relative clauses. Modifiers are introduced by association markers (*nɛ* for singular, *æ* for plural), and their sequence reflects a fixed morphosyntactic order. Verb phrases are predicate-initial and may include modal or TAM particles, derivational affixes, and adverbial modifiers. Infinitive and lexicalized verb phrases also function as argument structures.

At the clause level, Okiek distinguishes between verbal and non-verbal clauses, with the former categorized as intransitive, transitive, and ditransitive. Non-verbal clauses include copula, nominal, adjectival, and participial types, all of which display predicate-initial syntax, except copular constructions which follow a CS–COP–CC order. Clause linking strategies include coordination (via *ak*) and subordination, often introduced through verbs of speech (*/e* 'say/tell') or embedded directly by juxtaposition. Grammatical relations are expressed through a tone-based case system (nominative vs. absolutive), subject indexing via bound pronouns, and flexible constituent order. Morphological markers such as causatives and applicative interact with syntactic structure by increasing valency and introducing new arguments.

Typologically, Okiek aligns with other Southern Nilotic languages through its tonal case system, predicate-initial structure, and extensive NP modification, yet stands out for its robust use of lexicalized verb phrases and modal constructions.

## 5.0 Negation

### 5.1. Introduction

Section 5.0 describes the morphological, morphosyntactic, semantic, and morphophonological effects of the allomorphs of the negation marker *ma-* listed in 259, and the adverbial negation marker *ɔ/takaj* 'ever'. Negation is an allomorphically rich and complex system that interacts with multiple grammatical domains including person, TAM, and clause type. The negative prefix *ma-* is realized as a series of allomorphs such as *mo-*, *mac-*, *maj-*, *man-*, *meko-*, *imo-*, and *omo-*. From a morphophonological point of view, the negative prefixes do not only reflect ATR harmony but also block harmony in preceding tense/aspect morphemes and display distinct distributions based on subject agreement, TAM categories, and clause structure. Syntactically, negation operates within verbal domains and also targets non-verbal predicates (nominal, adjectival, participles), conjoined noun phrases, and imperative constructions. From a morphotactic perspective, negation markers employ a prefixal architecture that embeds them within predictable sequences that allow for tense/aspect layering and the interposing of a negation marker within tense-aspect prefixes (e.g., DPST-PERF-CON-SUBJ-V-PROG = NEG verbal vs. DPST-*man*-MPST-SUBJ-N/ADJ =NEG nonverbal). Coordinated noun phrases (NP<sub>1</sub> ak NP<sub>2</sub>) undergo symmetrical negation restructuring in which the conjunction *ak* 'and' is deleted and replaced by paired negative prefixes (i.e., *mo*-NP<sub>1</sub> *omo*-NP<sub>2</sub>). Additional negation strategies include the formation of negated intensified prohibitive via the combination of the +ATR marker *imo-* with the adverbial negation particle *ɔ/takaj* 'ever'. Furthermore, negation interacts with the interrogative domains, such as in negative tag questions and indefinite pronominal expressions yielding a complex allomorphic system that exemplifies a rich head-marking strategy that is sensitive to hierarchical phrase and clause-internal features.

## 259. Negation markers and their properties

	Neg marker	TAM/SUBJ agreement/ clause type	Description	Morphotactics
i.	<i>mo-</i>	1/2/3 SG/PL Perfect, Future Verbal/non verbal	Negates participle/adjective/nominal clauses; works with conjoined NPs; + ATR harmony insensitive.	-Non-verbal root: <i>mo</i> -SUBJ-ROOT -Verbal root: CON- <i>mo</i> -SUBJ-V <i>mo</i> -SUBJ-V-PROG <i>mo</i> -NP <sub>1</sub> <i>omo</i> -NP <sub>2</sub>
ii.	<i>mac-</i>	1/2 SG/PL Verbal/Past	Blocks ATR harmony in tense prefix; sensitive to topic focus ( <i>kɛ-</i> ) marker	PST- <i>mac</i> -1/2SUBJ-V PST- <i>mac</i> -TF-V
iii.	<i>maj-</i>	3 SG/PL Verbal/Past	Blocks ATR harmony; interacts with dative suffixes	PST- <i>mac</i> -3SUBJ-V
iv.	<i>man-</i>	1/2/3 SG/PL Verbal/Perfect progressive; nonverbal past clauses	Interposed between tense/aspect prefixes;	None-verbal: DPST- <i>man</i> -MPST-SUBJ-N/ADJ Verbal: DPST-PERF-CON-SUBJ-V-PROG
v.	<i>imo-</i>	2SG/PL Imperative	Marks negative imperatives; used with suppletive verb <i>pa:</i> 'go'.	<i>imo</i> -2SG/PL-V
vi.	<i>meko-</i>	1/2/3 SG/PL Verbal/Perfect Progressive	Blocks ATR harmony on <i>ta-</i>	<i>meko-ta</i> -SUBJ-V-PROG

vii.	<i>omo-</i>	Nominal coordination	Negates second NP after conjunction <i>ak</i> is deleted	<i>mo</i> -NP <sub>1</sub> <i>omo</i> -NP <sub>2</sub>
viii.	<i>ma-</i>	2SG/PL Imperative	Prefix + final adverb; Indicates intensified prohibitive: 'Never!'	Often used with adverb <i>ɔltakaj</i> 'ever' in strong prohibitive

## 5.2 Negation markers

### 5.2.1 The allomorph *mo-*

The negation marker *mo-* is a +ATR allomorph of the negation marker *ma-*. It is used to negate verbal and nonverbal clauses with 1/2/3 SG/PL subjects, conjoined noun phrases, the tag particle *e*, and in the formation of indefinite. The allomorph negates nominal clauses (260a), participle clauses (260b), and adjectival clauses (260b) in the morphologically unmarked present tense. It is attached to the prefix slot in the nonverbal predicate. It combines with the +ATR stems in 260(a-b) and the -ATR stem in 260(c).

#### 260. Examples of negative nonverbal clauses in unmarked present tense

- a. *mo-lòk-ó-k wér-ò ak tiép-tò*  
 NEG-child-PS-PLACC boy-PS.NOM and girl-PS.NOM  
 'The boy and the girl are not children.'
- b. *mo-ɲerek-ot-in otko kó-júm-ì-k*  
 NEG-happy-PART-PL very NMLZ-gather-PS-PL.NOM  
 'The gatherers are not very pleased.'
- c. *mo-aǽp otko kó-júm-ín-tè-t*  
 NEG-generous very NMLZ-gather-NMLZ-PS-SG.NOM  
 'The gatherer is not very generous.'

When used to negate verbal clauses, the marker distinguishes between negation of verbal clauses in the progressive aspect (3.2.2.6.3.1) in 261(a) vs. the perfect aspect (3.2.2.6.3.2.1) in 261(b). Morphotactically, the allomorph combines with the +ATR allomorph of the progressive perfect marker *ta-* instead of the present perfect aspect marker *kar-* as shown in 261(b).

261. Negated verbal clauses

a. Examples of negated verbal clauses in the progressive aspect

- i. *mo-meḡ-ej Náiròpɪ́ ɔ́r-w-ε-ḡɔ̀n*  
NEG-live-PROG Nairobi.ACC friend-PS-1SG.POSS.SG.NOM  
'My friend doesn't live in Nairobi.'
- ii. *mo-totun kó-kwer-ej en kɔ́t-ε-t ɔ́ɪ̀n-ε-t túr-ì-k*  
NEG-MFUT 3-hit-PROG in arrow-PS-SG.ACC antelope-PS-SG.ACC hunt-PS-PL.NOM  
'The hunters will not hit antelope with an arrow.'
- iii. *mo-ḡolu kó-lo-ej en meṭ-ɪ-t teṭr-ε-t tiéṗóś-ɔ̀*  
NEG-should 3-carry-PROG on head-PS-SG.ACC pot-PS-SG.ACC woman-PS.NOM  
'The woman shouldn't carry pot on head.'

b. Examples of negated verbal clauses in the present perfect aspect

- |     | Present perfect aspect   | Negated forms  |
|-----|--|--|
| i.  | <i>kar-ɪ-ṗɪr ḡòk-tó</i><br>PERF-2SG-beat dog-PS.ACC<br>'You have beaten the dog.'              | <i>to-mo-ì-ṗɪr ḡòk-tó</i><br>PPERF-NEG-2SG-beat dog-PS.ACC<br>'You haven't been beating the dog.'            |
| ii. | <i>kar-ɪ-ḡal ɪ́ṗ-ɪ̀ɪ̀é-k</i><br>PERF-2SG-waste money-PS-PL.ACC<br>'You have wasted the money.' | <i>to-mo-ì-ḡol ɪ́ṗ-ɪ̀ɪ̀é-k</i><br>CON-NEG-2SG-waste money-PS-PL.ACC<br>'You haven't been wasting the money.' |

The indefinite pronouns formed in 262 are used as verbless clause subjects in verbless clause.

262. Formation of indefinite pronouns

	Non-negated nouns	Negated nouns
a.	<i>ci</i> person 'someone/a person'	<i>mo-ci</i> NEG-person 'no one'
b.	<i>kej</i> thing 'something'	<i>mo-kej</i> NEG-thing 'nothing'
c.	<i>oj</i> place 'somewhere'	<i>mo-oj</i> NEG-place 'nowhere'

### 5.2.2 The allomorph *mac-*

The allomorph *mac-* is a -ATR allomorph of the negation marker *ma-*. It is exclusively used to negate verbal clauses in the past tense with 1/2 SG/PL subjects (263a-c), or with verb stems marked by the allomorph *kɪ-* of the topic focus (TF) marker. Morphotactically, the allomorph *mac-* precedes the subject marker i.e., PST-*mac*-1/2S-V or the impersonal passive prefix i.e., PST-*mac*-TF-V. The allomorph *mac-* blocks the past tense prefix from undergoing ATR vowel harmony in the presence of a +ATR morpheme in the predicate stem (263b). Verbal clauses with 3 SG/PL subjects are negated by the allomorph *maj-* (5.2.3).

263. Negated verbal clauses in the past tense with 1/2 SG/PL subjects

- a. *kɪ-mac-à-pɪt*      *ɛn ɲwɔŋ*  
 DPST-NEG-1SG-fall      in down.ACC  
 'I didn't fall down.'



- b. *ɪŋka-mac-ì-ko-ci*      *ɪmpàr-ɛ-ʔt*      *ʂɛ́ɛkàl-ɪ-ʔt*  
 PPST-NEG-2SG-give-DAT    farm-PS-SG.ACC    government-PS-SG.ACC  
 'You didn't give the government land.'
- c. *kɪ-mac-kɛ-ʔpɛ*      *sùkúl*  
 DPST-NEG-1PL-go to    school.ACC  
 'We didn't go to school.'
- d. *kɪ-mac-kɪ-pɪr-ta*      *tɔ-ʔká*      *ɔɪ̀n-ɛ-ʔt*  
 DPST-NEG-TP-beat-CF    COW-PL.ACC    river-PS-SG.ACC  
 'The cows were not beaten to the river.'

### 5.2.3 The allomorph *maj-*

The allomorph *maj-* is a -ATR morpheme. It is used to negate verbal clauses in past tense with 3SG/PL referents as shown in 264. The allomorph blocks the past tense prefix from undergoing ATR harmony in the presence of the +ATR dative suffix in 264(a).

264.      Examples of negated verbal clauses in past tense with 3 SG/PL subject

- a. *ɪŋka-maj-ko-ci*      *ɪmpàr-ɛ-ʔt*      *ʂɛ́ɛkàl-ɪ-ʔt*      *kó-nét-ì-k*  
 PPST-NEG-give-DAT    farm-PS-SG.ACC    government-PS-SG.ACC    NMLZ-teach-PS-PL.NOM  
 'The teachers didn't give the government land.'
- b. *kɪ-maj-ɲat*      *ɔɪ́jɔ̀n*      *wèr-ó*  
 DPST-NEG-advise    elder.NOM    boy-PS.ACC  
 'The elder did not advise the boy.'

### 5.2.4 The allomorph *man-*

The allomorph *man-* is a-ATR morpheme. It is used to negate non-verbal clauses (4.2.1.2) in the past tense (e.g., in 265) and verbal clauses in the past perfect progressive aspect (3.2.2.6.3.2.2) with 1/2/3 SG/PL subjects (e.g., in 266). The allomorph is positioned between the distal past tense marker *kɪ-* and the medial past tense marker *kɔ-* in the negation of non-verbal clauses i.e., *kɪ-man-kɔ-*1/2/3S-N/ADJ/PART, but it is positioned between the

distal past tense prefix *kɪ-* and the present perfect marker *ka-* in the negated past perfect progressive aspect i.e., *kɪ-man-ka-ta-SUBJ-V*.

## 265. Negation of non-verbal clauses in the past tense

- a. *kɪ-man-kɔ-ke-tùr-ì-k*  
DPST-NEG-MPTS-1PL-hunt-PS-PLACC  
'We were not hunters.'
- b. *kɪ-man-kɔ-ke-siŋoj-ec*  
DPST-NEG-MPTS-1PL-good-PL  
'We were not good.'
- c. *kɪ-man-kɔ-ɲerek-ot-in*      *otko*      *kó-júm-ì-k*  
DPST-NEG-MPST-happy-PART-PL    very    NMLZ-gather-PS-PL.NOM  
'The gatherer are not very pleased.'

## 266. Examples of negated past perfect progressive aspect constructions

Past perfect progressive aspect	Negated forms
<p>a. <i>kɪ-ka-ta-ko-je-ej</i>      <i>pé:-k</i>      <i>pél-è-k</i> DPST-PERF-PPERF-3-drink-PROG    water-PLACC    elephant-PS-PL.NOM 'The elephants had been drinking water.'</p>	<p><i>kɪ-man-ka-ta-ko-je-ej</i>      <i>pé:-k</i>      <i>pél-è-k</i> DPST-NEG-PERF-CON-3-drink-PROG    water-PLACC    elephant-PS-PL.NOM 'The elephants hadn't been drinking water.'</p>
<p>b. <i>kɪ-ka-ta-ko-ké-min-e</i>      <i>pàn-tɛ'-k</i> DPST-PERF-PPERF-1PL-farm-PROG    maize-PS-PLACC 'We had been growing maize.'</p>	<p><i>kɪ-man-ka-ta-ko-ké-min-e</i>      <i>pà-tɛ'-k</i> DPST-PERF-PPERF-1PL-farm-PROG    maize-PS-PLACC 'We hadn't been growing maize.'</p>

### 5.2.5 The allomorph imo-

The prefix *imo-* is a +ATR morpheme. It is used to negate imperative constructions with 2SG/PL subjects (3.2.6.3.2) as shown in 267. The marker is attached in the prefix of the imperative verb form (267a) or on the predicate *pa:* 'go' in the main clause (267b). The verb *pa:* 'go' indicates subject plurality via suppletion as described in section (3.2.6.1.3).

267. Negated verbal clauses

a. Examples of negated imperative constructions

	Simple imperatives	Negated imperative constructions
i.	<i>om-isie-n</i> eat-ANTP-IMP 'Eat!'	<i>imo-ì-om-isie-n</i> NEG-2SG-eat-ANTP-IMP 'Don't eat!'
ii.	<i>o:-tor-t-en</i> 2PL-push-CF-IMP 'Push!'	<i>imo-ò:-tor-t-en</i> NEG-2PL-push-CF-IMP 'Don't push!'

b. Examples of negated main clause for instructions

i.	MC <i>imo-ì-we:</i> NEG-2SG-go	AC [ <i>ot</i> <i>ì-ru</i> <i>εn tìm-tô</i> ] until 2SG-sleep in forest-SG.ACC
	'Don't you ever sleep in the forest.'	
ii.	MC <i>imo-ò:-pe:</i> NEG-2PL-go	AC [ <i>ot</i> <i>ò:-ru</i> <i>εn tìm-tô</i> ] until 2PL-sleep in forest-SG.ACC
	'Don't you ever sleep in the forest.'	

Imperative constructions may also be negated by the negation marker *ma-* in combination with the adverb *ɔ/takaj* 'ever' as shown in 5.2.8.

### 5.2.6 The negation marker meko-

The allomorph *meko-* is a +ATR allomorph. It is used to negate verbal clauses in the perfect progressive aspect 1/2/3 SG/PL subjects. It morphotactically precedes the present perfect progressive prefix *ta-* i.e., *meko-ta-1/2/3S-V*. Morphophonemically, in this aspect, the -ATR vowel in the still progressive aspect marker *ta-* is not subjected to ATR vowel harmony even in the presence of the +ATR dative suffix in 268(b).

## 268. Negated verbal clauses in present perfect progressive aspect

### present perfect progressive constructions

- a. *ta-je-ej pé:-k pél-è-k*  
 CON-drink-PROG water-PL.ACC elephant-PS-PL.NOM  
 'The elephants have been drinking water.'
- b. *ta-kè-omu-ncin-i pàn-tɛ́-k wèr-ó*  
 PPERF-1PL-harvest-DAT-PROG maize-PS-PL.ACC boy-PS.ACC  
 'We have been harvesting maize for the boy.'

### Negated forms

- meko-ta-ke-ej pé:-k pél-è-k*  
 NEG-CON-drink-PROG water-PL.ACC elephant-PS-PL.NOM  
 'The elephants haven't been drinking water.'
- meko-ta-kè-omu-ncin-i pàn-tɛ́-k wèr-ó*  
 NEG-PPERF-1PL-harvest-DAT-PROG maize-PS-PL.ACC boy-PS.NOM  
 'We haven't been harvesting maize for the boy.'

## 5.2.7 The negation marker *omo-*

The allomorph *omo-* is a +ATR morpheme. It is used in the negation of a conjoined noun phrase in combination with the allomorph *mo-* (5.2.1). The prefix *omo-* is attached to the NP that follows the conjunction *ak* 'and.' The negation triggers the deletion of the conjunction as shown in 269.

## 269. Negated conjoined Noun phrases

- |    | Conjoined NPs   | Negated conjoined NPs  |
|----|---|--|
| a. | <i>wer-o ak tiep-to</i><br>boy-PS CONJ girl-PS<br>'a boy and a girl.'                 | <i>mo-wer-o omo-tiep-to</i><br>NEG-boy-PS NEG-girl-PS<br>'neither the boy nor the girl.'             |
| b. | <i>mɔ-ta ak pɔn-ɛ-t</i><br>calf-SG CONJ antelope-PS-SG<br>'the calf and the antelope' | <i>mo-mɔ-ta omo-pɔn-ɛ-t</i><br>NEG-calf-SG NEG-antelope-PS-SG<br>'neither the calf nor the antelope' |

## 5.2.8 The negation allomorph *ma-*

The allomorph *ma-* is a -ATR morpheme. It is used in combination with the adverbial particle *ɔ/takaj* 'ever' in the negation of imperatives. The adverbial particle occurs in clause final position to indicate intensified prohibitive: 'Never!' as shown in 270.

## 270. Negated verbal clauses in the imperative with 2SG/PL subjects

	Verbal clauses	Negated attenuation
a.	<i>i-pir-u-on</i> NEG-call-CP-1SG 'Don't call me!'	<i>ma-i-pir-u-on ɔltakaj</i> NEG-2SG-call-CP-1SG ever 'Never call me!'
b.	<i>ɪ-ɪat pɔ́ɪʒɪn</i> NEG-2SG-advise elder.ACC 'Don't' advise an elder.'	<i>ma-ɪ-ɪat pɔ́ɪʒɪn ɔltakaj</i> NEG-2SG-advise elder.ACC never 'Never advise an elder.'

### 5.3. Conclusion

Negation in Okiek is a structurally intricate system integrated across morphology, syntax, phonology, and semantics. It involves a range of negative allomorphs—such as *ma-*, *mo-*, *mac-*, *maj-*, *man-*, *meko-*, *imo-*, and *omo-*—each conditioned by tense, aspect, subject agreement, clause type, and syntactic position. These negators occur within templatic prefix slots, often between tense/aspect and subject markers, and differ across verbal and nonverbal predicates. Morphotactically, negation is tightly embedded within verbal templates, while morphophonologically, many forms interact with the [+/-ATR] vowel harmony system—some blocking it (e.g., *mac-*, *maj-*), others reinforcing it (*mo-*). Imperatives use *imo-* and *ma-*, often with the intensifier *ɔltakaj* to create strong prohibitive constructions. Syntactically, negation targets verbal, nonverbal, and participial predicates, and also affects coordinated noun phrases through symmetrical negation, replacing the conjunction *ak* 'and' with *mo-* and *omo-* (e.g., *mo-wer-o omo-tiep-to* 'neither the boy nor the girl'). Semantically, negation interacts with focus, polarity, and interrogativity, forming negative questions, indefinites (e.g., *mo-ci* 'no one'), and contrastive expressions. It also expresses modal nuance and speaker stance, showing that negation in Okiek is a central grammatical process with rich typological significance among Southern Nilotic languages.

## 6.0 Appendix

Section 6.0 provides a list of Okiek consonant phonemes and their correspondences across Southern Nilotic in various cognate lexical items (6.1), a specimen of an Okiek narrative with full glossing (6.2), and an Okiek-English vocabulary list (6.3).

### 6.1 A List of Consonant Phonemes and Their Correspondences in PSN

The analysis of the reflexes of consonant phonemes in Okiek to those in Proto-Kalenjin (PK) and Proto-Southern Nilotic (PSN) forms reveals similarities at the phonemic level. The similarities suggest a possible genetic affiliation of Okiek to the Kalenjin language cluster in the Southern Nilotic subdivision of the Nilo-Saharan phylum. No reflexes are attested for the palatal fricative /ʃ/ and the loan phoneme /f/ as shown in 271

#### 271. A list of Okiek consonant phonemes and their correspondences in PSN

Phonemes	Okiek	PK	PSN	Gloss
/m/	<i>mɔrɲɛt</i>	* <i>mɔ:rin</i>	* <i>mɔ:rin</i>	'a finger'
/n/	<i>taman</i>	* <i>taman</i>	* <i>taman</i>	'ten'
/ɲ/	<i>pajɲɛk</i>	* <i>pajɲ</i>	* <i>pajɲ</i>	'portions of meat'
/ŋ/	<i>kɔŋnta</i>	* <i>kɔ.ŋ</i>	* <i>kɔ.ŋ</i>	'an eye'
/p/	<i>pɔtɔk</i>	* <i>pu:t</i>	* <i>pu:t</i>	'hair'
/f/	-	-	-	-
/t/	<i>ra:t</i>	* <i>rat</i>	* <i>rat</i>	'blind'
/c/	<i>cito</i>	* <i>ci:</i>	* <i>ci:</i>	'a person'
/k/	<i>kɛlta</i>	* <i>kɛ:l</i>	* <i>kɛ:L</i>	'a leg'
/l/	<i>tɔlwɛt</i>	* <i>tul-wa</i>	* <i>tul-wa</i>	'a hill'
/r/	<i>ɾr</i>	* <i>ra:r</i>	* <i>ra:r</i>	'laugh'
/s/	<i>sɛrɔt</i>	* <i>ser</i>	* <i>ser</i>	'a nose'
/ʃ/	-	-	-	-
/j/	<i>ja:t</i>	* <i>ja:t</i>	* <i>ja:t</i>	'open'
/w/	<i>kwenik</i>	* <i>kwɛ:n</i>	* <i>kwɛ:n</i>	'a firewood'

## 6.2 Narrative

a specimen of an Okiek narrative with full glossing is presented in 272.

272. Narrative

- a. *ki-mi tíép-tò nè ki-kos kò-le-nci sík-ì-k-cík*  
 DPST-be girl-SG.NOM AM.SG DPST-happen 3-tell-DAT parent-PS-PL-3SG.POSS.PL.ACC  
 'There was a girl whose parents happened to tell her.'
- b. *si inko-wo kɔ̀-ɾiam hânàɛ-ɾiɿ́ nè ki-mɛɾ-ej ɪj-ɛ́ nè lo:w*  
 that MPST-go 3-visit cousin-3SG.POSS.SG.ACC AM.SG DPST-live-PROG place-PS.ACC AM.SG far  
 'That she goes to visit her cousin who lived at a far place.'
- c. *ko-kos pétù-t nè ki-wen-tin tíép-ì-ká:n*  
 MPST-happen day-SG.NOM AM.SG DPST-go-CF.PROG girl-PS-DEM.PST.ACC  
 'It happened that the day that girl was going.'
- d. *ki-rot-i kàm-ɛ́-t kɔ̀p-ɛ́-t*  
 DPST-tie-PROG mother-PS-SG.ACC staff-PS-SG.ACC  
 'she was tying her mother's staff.'
- e. *ko-tite-ci hânàɛ-ɾiɿ́*  
 MPST-take-DAT cousin-3SG.POSS.SG.ACC  
 'She took (them) for her cousin.'
- f. *ki-ko-tes-e ta:j ɛn sápaɾi-ɾiɿ́ kɔ-wal wàk-tá*  
 DPST-MPST-add-PROG ahead in journey-3SG.POSS.SG.ACC MPST-change road-SG.ACC  
 'While going ahead in her journey, she changed the road'
- g. *so pɯn nè po: tím-tó omu ki-ker kɔ-ɾiŋ-at*  
 and pass AM.SG belong forest-PS.ACC because DPST-see 3-short-PART  
 'and passed which belongs to the forest because she saw it was shortened.'
- h. *kɔ-tɛs ta:j kò-wo ot kɔ̀-ɪ:t ɪj-ɛ́*  
 MPST-add ahead 3-go until 3-arrive place-PS.ACC  
 'She continued to go ahead until she arrived at the place.'
- i. *ki-mɯɾ ɛn tɛkɛt kɛɪ́-t*  
 DPST-rest in near tree-SG.ACC  
 'She rested near a tree.'

- j. *kipone ko-muŋ-ej ko-ŋo púŋ-ò-t*  
 shortly MPST-rest-PROG MPST-come forest dweller-PS-SG.NOM  
 'Shortly resting, the forest dweller came.'
- k. *kɔ-nam so mut kò-ŋín*  
 MPST-catch and take house-3SG.POSS.SG.ACC  
 'He caught and took her to his house.'
- l. *ko-wo*  
 MPST-go  
 'He went.'
- m. *ko-kur-ej cór-òno-k-cík púŋó-nì si inka-pwa kɔ-am tièp-tó*  
 MPST-call-PROG friend-PS-PL-3SG.POSS.PL.ACC forest dweller-SG.DEM.PROX.PROG.NOM that PPST-come 3-eat girl-DEM.MED.SG.ACC  
 'This forest dweller called his friends so that they came to eat the girl.'
- n. *koiniej ki-mi muíē-ɪ-k-à:p ká-ɪ-ŋuʋán æ ki-mi tur-ej*  
 coincidentally DPST-be initiate-PS-PL-GEN.NOM home-PS-3SG.POSS.SG.ACC AM.PL DPST-be hunt-PROG  
 'Coincidentally there were initiates from her home who were hunting'
- o. *kɔ-kas ci-tó nɛ ki-ite-ej*  
 MPST-hear person-SG.ACC AM.SG DPST-scream-PROG  
 '[They] heard a person who was screaming.'
- p. *ko-pa: ko-jot tièp-ì-ká:n*  
 MPST-go MPST-untie girl-PS-DEM.PST.ACC  
 '[They] went to untie that girl.'
- q. *ki-inko-je-ij púŋ-ò-t ak cór-ónó-k-cík ko-ì:t-u*  
 DPST-PPST-return-PROG forest dweller-PS-SG.NOM and friend-PS-PL-3SG.POSS.PL.NOM MPST-arrive-CP  
 'While the forest dweller and his friends arrived towards the speaker.'
- r. *inka-kɛ-pa:*  
 PST-TF-go  
 'someone left' (The girl was gone)
- s. *ko-jac ko-a:m cór-òno-k-cík pùŋ-ó-t*  
 MPST-allow 3-eat friends-PS-PL-3SG.POSS.PL.ACC forest dweller-PS-SG.ACC  
 'It allowed the forest dweller to eat his friends.'



- t.    *omu*      *ka-kɔ-ɬɪl*      *tiép-í-kà:n*  
because PERF-3-escape    girl-DEM.PST  
'because that girl has escaped.'

## 6.3 Okiek-English vocabulary list

### A

<i>a:</i>	N.SG	'mother'	<i>anɛkɛy</i>	PR	'myself'
<i>ak</i>	CONJ	'with'	<i>anɛtɛt</i>	N	I as me
<i>akɔpɔ</i>	PREP	'about'	<i>anɪŋ</i>	ADJ	'sweet'
<i>akɛ</i>	QUAN	'any/another'	<i>ano</i>	PR	'where'
<i>akɛnkɛ</i>	NUM	'one'	<i>anwɛt</i>	N.SG	'a rope'
<i>al</i>	V.1	'trade'	<i>anwan</i>	Num	'four'
<i>alak</i>	QUAN	some (PL)	<i>ap</i>	V.1	'cool down'
<i>alamalɛt</i>	N.SG	'a student'	<i>arar</i>	N.SG	'a stench'
<i>A:m</i>	V.1	'eat'	<i>arawɛt</i>	N.SG	'a month/' 'the moon'
<i>aɪɔn</i>	PR	'which'	<i>a:rtɛt</i>	N.SG	'a sheep'
<i>amta</i>	N.SG	'preacher'	<i>asɪsta</i>	N.SG	'the sun'
<i>anɛ</i>	PR	'I'	<i>ayɛp</i>	ADJ	'generous'

### C

<i>ca:m</i>	V.1	'gossip'	<i>cok</i>	V.1	'peel'
<i>ca.ŋ</i>	QUAN	'a lot/many'	<i>cok</i>	PR	'our'
<i>cahta</i>	V.1	'be silent'	<i>comotin</i>	PART	'loved'
<i>cam</i>	V.1	'love'	<i>con</i>	DEM.MED.IPFV	'that'
<i>camcam</i>	V.1	taste	<i>co.ŋinto</i>	N.SG	'an amount'
<i>capatɪ</i>	N.SG	'chapati'	<i>cor</i>	V.1	'rise'
<i>car</i>	V.1	'strike'	<i>cor</i>	V.1	'steal'
<i>carcar</i>	ADJ	'slender' 'thin'	<i>coronok</i>	N.PL	'friends'
<i>carcarɛt</i>	N.SG	'a narrow place'	<i>cu</i>	PROX.DEM.IPFV	'this'
<i>ɔ:r</i>	V.1	'prick'	<i>cu:t</i>	V.1	'pull'
<i>ɔr</i>	V.1	'steal'	<i>cucut</i>	N.SG	'a penis'
<i>ɔrwɛt</i>	N.SG	'a friend'	<i>cumpaɪk</i>	N.PL	'salt'
<i>ceko</i>	N.PL	'milk'	<i>cun</i>	DIS.DEM.IPFV	'that'
<i>ɛmɛm</i>	V.1	'a sliding game'	<i>cup</i>	V.1	'curse'
<i>ɛŋ</i>	V.1	'look for'	<i>ɔp</i>	V.1	'curse'
<i>ɛr</i>	V.1	'encourage'	<i>cupet</i>	N.SG	'a curse'
<i>ɪk</i>	PR	'his/her'	<i>cur</i>	V.1	'expose the truth'
<i>ɪɪl</i>	V.1	'escape'	<i>cur</i>	V.1	expose/borrow
<i>ɪŋta</i>	V.1	'click'	<i>ɔr</i>	V.1	'ask for money'
<i>cito</i>	N.SG	'a person'			

<i>cus</i>	V.1	'deflate'	<i>cɔwak</i>	PR	'their'
<i>cut</i>	V.1	'enter'	<i>cwer</i>	IDEO	'appearance'

## E

<i>e:</i>	V.1	'take'	<i>ento</i>	V.1	'supervise'
<i>εæk</i>	PR	'we/us'	<i>ηu</i>	V.1	'sweep'
<i>εækey</i>	PR	'ourselves'	<i>ε:p</i>	V.1	'sway'
<i>εIta</i>	N.SG	'an ox'	<i>ε:r</i>	V.1	'choke'
<i>eik</i>	N.PL	'oxen'	<i>εɔ:</i>	V.1	'refuse'
<i>ε/ε/εIt</i>	N.SG	'a baboon'	<i>eunek</i>	N.PL	'hands'
<i>εn</i>	PREP	'in/at'	<i>eut</i>	N.SG	'a hand'

## F

<i>fom</i>	N.SG	'a form'
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## I

<i>I:t</i>	V.1	'arrive'	<i>ImpIraIk</i>	N.PL	'balls'
<i>IIt</i>	N.SG	'an ear'	<i>ImpIret</i>	N.SG	'a ball'
<i>Iæk</i>	PR	'they'	<i>impotoet</i>	N.SG	'a spoon'
<i>Iækey</i>	PR	'themselves'	<i>impurit</i>	N.SG	'a lizard'
<i>Icɔtɔt</i>	ADJ	'slow'	<i>Imuc</i>	V.2	'cause to be able/can'
<i>Ikurta</i>	N.SG	'an ear'	<i>imumit</i>	N.SG	'energy'
<i>ikurwek</i>	N.PL	'ears'	<i>Imut</i>	V.2	'cause to marry'
<i>Ikwɔl</i>	V.2	'cause to bend'	<i>Iɲal</i>	V.2	'cause to destroy'
<i>IlaI</i>	V.2	'light'	<i>Inɔc</i>	V.2	'trip'
<i>IlaIaIæk</i>	N.PL	'weeds'	<i>Inε</i>	PR	'(s)he/it'
<i>IlaIaIt</i>	N.SG	'weed'	<i>Iɲε</i>	PR	'you'
<i>Ibt</i>	V.1	'go through'	<i>Inεkey</i>	PR	'himself/herself'
<i>iloloit</i>	N.SG	'luggage'	<i>Inεt</i>	V.2	'cause to teach'
<i>Iman</i>	ADJ	'true'	<i>Inεtεt</i>	PR	'he as himself / she as herself'
<i>Imanta</i>	N.SG	'truth'	<i>Iɲεtεt</i>	PR	'you as you'
<i>Imoksey</i>	V.1	'possible'	<i>Inεtkεy</i>	V.2	'cause to learn'
<i>ImpanasIt</i>	N.SG	'a hare'			
<i>ImpareIt</i>	N.SG	'a farm'			

<i>ɨnɨt</i>	V.1	'realize'
<i>ɨnɨt</i>	V.2	'cause to fill'
<i>ɨnkatan</i>	CON	'even though'
<i>ɨnɨɛy</i>	PR	'yourself'
<i>ɨntanaɨt</i>	N.SG	'a root'
<i>ɨntaɛt</i>	N.SG	'snake'
<i>ɨntasat</i>	N.SG	'an elderly woman'
<i>ɨntɔ</i>	V.2	'lead'
<i>ɨntɔnɨkɨɨt</i>	N.SG	'old woman'
<i>ɨntɔɛt</i>	V.2	'escort'
<i>ɨnterit</i>	N.SG	'a hyrax'
<i>ɨntɨsɨt</i>	N.SG	'a banana'
<i>ɨnto</i>	CONJ	'if'
<i>ɨntomolot</i>	ADJ	'freeze'
<i>ɨnɔɨaɨt</i>	N.SG	'a widow'
<i>ɨnɨnɨɨt</i>	N.SG	'a goat'
<i>ɨnɨyaɨsɨɛk</i>	NPL	'aborted fetuses'
<i>ɨnɨkalɨt</i>	N.SG	'a joke'
<i>ɨnɨkanaɔsɨɛk</i>	N.PL	'towns'
<i>ɨnɨkanasɛt</i>	N.SG	'a town'
<i>ɨnɨkayaɨt</i>	N.SG	'a gizzard'

<i>ɨnɨkɨnalaɨt</i>	N.SG	'a commotion'
<i>ɨnɨkirikoit</i>	N.SG	'a bachelor'
<i>ɨnɨkiyoit</i>	N.SG	'an aborted fetus'
<i>ɨnɔtioit</i>	N.SG	'a feather'
<i>ɨpɔn</i>	V.2	'peel'
<i>ɨri</i>	V.1	'break'
<i>ɨruɨn</i>	V.2	'squeeze'
<i>ɨsɨp</i>	V.2	'cause to follow'
<i>ɨsko</i>	CONJ	'and also'
<i>ɨsuntɨt</i>	N.SG	'a wall'
<i>ɨte</i>	V.1	'how'
<i>ɨtɛ</i>	V.2	'cause to scream'
<i>ɨtɨtat</i>	ADJ	'perfect'
<i>ɨtutun</i>	V.2	'cause to resurrect'
<i>ɨyɔ</i>	V.2	'cause to cook'
<i>ɨyɔkɨn</i>	V.2	'cause to send'
<i>ɨyɛt</i>	N.SG	'place'
<i>ɨyɛy</i>	V.2	'cause to return'
<i>ɨyɛy</i>	V.2	'copy /pretend'
<i>ɨyon</i>	N.SG	'there'
<i>ɨyɨm</i>	V.2	'cause to gather'

## K

<i>ka:n</i>	DEM.PFV	'that'
<i>kaɨkaɨ</i>	particle	'prefer'
<i>kaɨɨt</i>	ADJ	'cold'
<i>kaɨɨɨt</i>	PART	'make cold'
<i>kamɨkɛt</i>	N.SG	'power'
<i>kaɨn</i>	V.1	'wait'
<i>karaɨan</i>	V.1	'fry'
<i>kas</i>	V.1	'hear'
<i>kasan</i>	V.1	'take from'
<i>kasarta</i>	N.SG	'time'
<i>kat</i>	V.1	'greet'
<i>katam</i>	ADJ	'left'
<i>katwaɨt</i>	N.SG	'a jump'
<i>kɔ:r</i>	V.1	'deworm'
<i>kɔɨta</i>	N.SG	'a stone'
<i>kɔɨta</i>	N.SG	'stone'

<i>kɔɨta</i>	N.SG	'eye'
<i>kɔɔɨɨkap</i>	N.PL	'honey wine'
<i>komek</i>		
<i>kɔtɛt</i>	N.SG	'an arrow'
<i>kɔyɛt</i>	N.SG	'liver'
<i>kechikoik</i>	N.PL	'spoons'
<i>keciket</i>	N.SG	'a spoon'
<i>keliek</i>	N.PL	'legs'
<i>kelto</i>	N.SG	'a leg'
<i>kemeut</i>	N.SG	'a dry season'
<i>kenisiet</i>	N.SG	'a deception'
<i>kerkeinto</i>	N.SG	'a shape'
<i>kɛɨ</i>	V.1	'fry'
<i>kɛɨ(ɨt)</i>	N.SG	'beneath'
<i>kɛɛwat</i>	N.SG	'a seed'
<i>kɛn</i>	V.1	'cheat'

<i>kɛnyɪt</i>	N.SG	'year'	<i>kontoik</i>	N.PL	'leaders'
<i>kɛr</i>	V.1	'close'	<i>kontointet</i>	N.SG	'a leader'
<i>kɛrkɛy</i>	ADJ	'similar'	<i>koŋɛk</i>	N.PL	'eyes'
<i>kɛt</i>	V.1	'return/drive'	<i>koŋolik</i>	NPL	'destroyers'
<i>kɛtapafak</i>	V.1	'flatten'	<i>koŋolintet</i>	N.SG	'a destroyer'
<i>kɛɪt</i>	N.SG	'tree'	<i>koŋeten</i>	CONJ	'since'
<i>kɛy</i>	V.1	'milk'	<i>koŋta</i>	N.SG	eye
<i>kɪkompaiɪk</i>	N.PL	'cups'	<i>kopaten</i>	CONJ	'only that'
<i>kɪkompaiɪk</i>	N.SG	'cups'	<i>kopoto</i>	PREP	together with
<i>kɪkompɛt</i>	N.SG	'a cup'	<i>kopwotutiet</i>	N.SG	'a memory'
<i>kɪlkɪl</i>	V.1	'tickle'			/'thought'
<i>kim</i>	ADJ	'strong'	<i>kɔr</i>	V.1	'go blind'
<i>kɪmɪt</i>	PART	'strengthen'	<i>kor</i>	N.SG	'a house'
<i>kimnot</i>	PART	'strong'	<i>korik</i>	N.PL	'houses'
<i>kimnotet</i>	N.SG	'strength'	<i>koriomokeci</i>	N.SG	'a coincidence'
<i>kɪpananɪat</i>	N.SG	'a poor person'	<i>korotik</i>	N.PL	'blood'
<i>kipokoyet</i>	N.SG	'ice'	<i>korun</i>	ADV	'morning'
<i>kiporetiet</i>	N.SG	'first initiate'	<i>korwotitiet</i>	N.SG	'a dream'
<i>kɪprɔrɔkɛt</i>	N.SG	'an insect'	<i>kosɪŋoi</i>	ADV	'well'
<i>kiprorokosiek</i>	N.PL	'insects'	<i>kosioruniet</i>	N.SG	'a discovery'
<i>kɪpsɔmanɪɛk</i>	N.PL	'students'	<i>kosipintet</i>	N.SG	'a follower'
<i>kipsengewet</i>	N.SG	'Heaven'	<i>kosipik</i>	N.SG	'followers'
<i>kɪpsomanɪat</i>	N.SG	'a reader'	<i>kosopik</i>	N.PL	'followers'
<i>kɪpsomanɪɛk</i>	N.PL	'readers'	<i>kosopintet</i>	N.SG	'a healer'
<i>kiptɛŋekiot</i>	N.SG	'a sinner'	<i>kosorcin</i>	ADV	'quickly'
<i>kirwokik</i>	N.SG	'chiefs'	<i>kosorkwek</i>	N.PL	'time'
<i>kirwokintet</i>	N.SG	'a chief' /dispenser of justice	<i>kot</i>	N.SG	house
<i>kit</i>	ADJ	'next to'	<i>kɔtɛt</i>	N.SG	'an arrow'
<i>ko</i>	COPULAR	copular	<i>kotom</i>	PREP	'before'
<i>iko</i>	V.2	'give'	<i>kowɛt</i>	N.SG	'bone'
<i>koik</i>	N.PL	'stones'	<i>koy</i>	ADJ	'long'
<i>kointo</i>	N.SG	'length'	<i>koya</i>	ADV	'badly'
<i>koit</i>	V.1	lengthen	<i>koyet</i>	N.SG	'liver'
<i>kokotet</i>	N.SG	'a greeting'	<i>koyoik</i>	N.PL	'cooks'
<i>komek</i>	N.PL	'honey'	<i>koyointet</i>	N.SG	'a cook'
<i>komolo:w</i>	ADV	'soon'	<i>koyokik</i>	N.PL	'senders'
<i>komuŋet</i>	N.SG	'a relaxation'	<i>koyokintet</i>	N.SG	'a sender'
<i>konetik</i>	N.PL	'teachers'	<i>koyumik</i>	N.PL	'gatherers'
<i>konetik</i>	N.PL	'teachers'	<i>koyumintet</i>	N.SG	'a gatherer'
<i>konetintet</i>	N.SG	'a teacher'	<i>ku:rset</i>	N.SG	'a call'
<i>koŋtit</i>	N.SG	'obedience'	<i>kɔk</i>	PR	'your'
<i>koŋolik</i>	N.PL	'destroyers'	<i>kɔlkɔl</i>	V.1	'dig with hands'
<i>koŋolintet</i>	N.SG	'a destroyer'	<i>kunɪt</i>	N.SG	'a brain'
			<i>kɔr</i>	V.1	'scratch'

<i>kur</i>	V.1	'call'	<i>kuyaŋta</i>	N.SG	'a bow'
<i>kurket</i>	N.SG	'a door'	<i>kuyonwek</i>	N.PL	'bows'
<i>kurkur</i>	V.1	'write illegibly'	<i>kwemoy</i>	ADV	'nighttime'
<i>kus kɔŋ</i>	V.1	'give a look'	<i>kwenik</i>	N.PL	'firewood'
<i>kut</i>	V.1	'blow'	<i>kwɛmɔɪ</i>	ADV	'night'
<i>kutɔnɛt</i>	N.SG	'the wind'	<i>kwɛr</i>	V.1	'hit'
<i>kutujɲ</i>	V.1	'kneel'	<i>kworun</i>	V.1	'bark'

## L

<i>la:l</i>	V.1	'cough'	<i>ɪpan</i>	V.1	'pay'
<i>lac</i>	V.1	'wear'	<i>lokok</i>	N.PL	'children'
<i>lakwantɪt</i>	N.SG	'childhood'	<i>lo:w</i>	ADJ	'deep/far'
<i>lakwɛt</i>	N.SG	'a child'	<i>lo:wit</i>	V.1	'deepen'
<i>lal</i>	V.2	'light'	<i>lɔc</i>	V.1	'punch'
<i>laɲ</i>	V.1	'climb'	<i>lukui:</i>	V.1	'swallow'
<i>lapat</i>	V.1	'run'	<i>lukumek</i>	N.PL	'honey water'
<i>lelinto</i>	N.SG	'whiteness'	<i>lɔl</i>	V.1	'fall'
<i>ɛl</i>	ADJ	'white'	<i>lum</i>	V.1	'stab'
<i>li:l</i>	V.1	'annoy'	<i>lɔm</i>	V.1	'press'
<i>li:p</i>	V.1	'siphon'	<i>lumta</i>	V.1	'press permanently'
<i>llanaɸɛ</i>	N.SG	'a cousin'			
<i>lll</i>	V.1	'take a picture'			

## M

<i>mac</i>	V.1	'want'	<i>maɪC</i>	ADJ	'narrow'
<i>makatɛt</i>	N.SG	'skin'	<i>marmar</i>	ADJ	'dotted'
<i>maktat</i>	modal	'must'	<i>mat</i>	N.SG	'fire'
<i>mama</i>	N.SG	'an uncle'	<i>mɔɛt</i>	N.SG	'a wound'
<i>mamaɪsɪɛk</i>	N.pl	'uncles'	<i>mɔɪta</i>	N.SG	'a calf'
<i>maɲ</i>	ADJ	brave	<i>mɔɔkɛt</i>	N.SG	'a fruit'
<i>manac</i>	V.1	'commit adultery'	<i>mɔɔɔr</i>	V.1	'prepare'
<i>maɲnatɛt</i>	N.SG	'bravery'	<i>mɔŋ</i>	V.1	'hope'
<i>marar</i>	V.1	'dance'	<i>melto</i>	N.SG	'a nerve'
<i>maɪan</i>	V.1	'whistle'	<i>meset</i>	N.SG	'a table'

<i>mɛ</i>	V.1	'die'	
<i>mɛŋ</i>	V.1	'live'	
<i>mɛncɛt</i>	N.SG	'a seclusion'	
<i>mɛɪt</i>	N.SG	'a head'	
<i>mintilil</i>	ADJ	'sour'	
<i>mioniy</i>	ADJ	'sick'	
<i>mɪt</i>	V.1	'suck'	
<i>mi(ten)</i>	V.1	'be'	
<i>moet</i>	N.SG	'stomach'	
<i>moimoksey</i>	V.2	'impossible'	
<i>mokoriot</i>	N.SG	'an employer'	
<i>momi</i>	PR	'none'	
<i>montoit</i>	N.SG	'a bag'	
<i>monkiot</i>	N.SG	'a lie'	
<i>motirenik</i>	N.PL	'teachers	of
		culture'	
<i>motiriot</i>	N.SG	'a teacher	of
		culture'	

<i>mpɪr</i>	V.1	'perforate'	
<i>mɔc</i>	V.1	'may'	
<i>mucelek</i>	N.PL	'rice'	
<i>mɔkatɔnik</i>	N.PL	'loaves of bread'	
<i>mɔkatɛt</i>	N.SG	'a loaf of bread'	
<i>mukulelinto</i>	N.SG	'a heart'	
<i>mɔŋ</i>	V.1	'dirty'	
<i>mɔŋ</i>	V.1	'rest'	
<i>mɔr</i>	V.1	'initiate/cut'	
<i>muren</i>	N.SG	'an initiate'	
<i>murenik</i>	N.PL	'initiates'	
<i>mɔrmɔr</i>	V.1	'cut into pieces'	
<i>mut</i>	NUM	'five'	
<i>mutyo</i>	ADJ	'slow'	
<i>mutuŋ</i>	ADJ	'blunt'	
<i>mwa:</i>	V.1	'say'	
<i>mɔɔk</i>	V.1	'hit'	

## N

<i>na:m</i>	V.1	'start'	
<i>nakɪsta</i>	V.1	'remove'	
<i>nam</i>	V.1	'hold/catch'	
<i>nan</i>	DEM.IPFV	'that'	
<i>nap</i>	V.1	'sew'	
<i>nay</i>	V.1	'know'	
<i>nɔm</i>	V.1	'manage'	
<i>ncot</i>	V.1	'prick'	
<i>ne</i>	PR	'what'	

<i>nesiot</i>	N.SG	'soot'	
<i>nɛ</i>	AM.SG	AM.SG	
<i>nɪ</i>	DEM	'this'	
<i>nɪn</i>	DEM	'that'	
<i>non</i>	DEM	'that'	
<i>norioit</i>	N.SG	'root'	
<i>ntɛn</i>	V.1	'put'	
<i>ntɛw</i>	V.1	'dare'	

## NG'

<i>ŋalan</i>	V.1	'speak'	
<i>ŋaŋ</i>	V.1	'uncover'	
<i>ŋaŋ</i>	V.1	'uncover'	
<i>ŋap</i>	V.1	'hang'	
<i>ŋaɪat</i>	ADJ	'raw'	
<i>ŋaŋar</i>	ADJ	'soft'	
<i>ŋat</i>	V.1	'advise/warn'	
<i>ŋatɪpt</i>	V.2	'sharpen'	
<i>ŋɔl</i>	V.1	'mix/shuffle'	
<i>ŋɔt</i>	V.1	'fence'	
<i>ŋɛtat</i>	N.SG	'a man'	
<i>ŋetkoŋet</i>	ADJ	'jealousy'	

<i>ŋetotik</i>	N.PL	'men'	
<i>ŋɛɛc</i>	ADJ	'happy'	
<i>ŋɛɛkɛt</i>	N.SG	'happiness'	
<i>ŋir</i>	V.1	'descend from a hill'	
<i>ŋɪɪt</i>	V.1	'pull'	
<i>ŋɪɪta</i>	V.1	'descend'	
<i>ŋken</i>	V.1	'count'	
<i>ŋkɛn</i>	V.1	'know'	
<i>ŋo</i>	PR	'who'	
<i>ŋo:m</i>	ADJ	'clever'	
<i>ŋokik</i>	N.PL	'dogs'	

<i>ηokto</i>	N.SG	'a dog'
<i>ηolonintet</i>	N.SG	'a speaker'
<i>ηomnotet</i>	N.SG	'wisdom'
<i>ηor</i>	V.1	'scrab'
<i>ηom̩or</i>	V.1	'step repeatedly'
<i>ηotutiek</i>	N.PL	'rules'
<i>ηotwet</i>	N.SG	'a fence'
<i>ηυ</i>	V.1	'smell'
<i>ηulek</i>	N.PL	'saliva'

<i>ηυη</i>	PR	'your'
<i>ηυη</i>	V.1	'vomit'
<i>ηυt</i>	V.1	'spit'
<i>ηυy</i>	V.1	'sweep'
<i>ηwan</i>	ADJ	'bitter'
<i>ηwɛn</i>	ADJ	'fast'
<i>ηwɛnɪt</i>	V.2	'hasten'
<i>ηwoɲ</i>	N.SG	'soil/earth' /'the earth'
<i>ηwoɲtit</i>	N.SG	'the world'

## η

<i>ηal</i>	V.1	'waste'
<i>ηalll</i>	ADJ	green
<i>ηaran</i>	ADJ	'lazy'
<i>ηaranat</i>	PART	'be lazy'
<i>ηaranatɛt</i>	N	'laziness'
<i>ηam̩ar</i>	V.1	'smash continuously'
<i>ηɔr</i>	V.1	'find'
<i>ηcurur</i>	V.1	'stare'

<i>ηɛ</i>	V.1	chew
<i>ηɪn</i>	POSS	his/hers
<i>ηɪnɪɛt</i>	N.SG	'a chameleon'
<i>ηolu</i>	MODAL	'should'
<i>ηon</i>	V.1	'come'
<i>ηon</i>	POSS	'my'
<i>ηonci kat</i>	V.1	'forgive'
<i>ηɔwan</i>	POSS	his/hers

## o

<i>oɪnɛt</i>	N.SG	a river
<i>oɔwɛk</i>	PR	'you'
<i>oɔwɛkɛy</i>	PR	'yourselves'
<i>oɔɔɛn</i>	V.1	'fear'
<i>oɔr</i>	V.1	'describe'
<i>ocej</i>	ADV	'always'
<i>oɛɲ</i>	NUM	'two'
<i>oiyo</i>	PR	when
<i>Okiek</i>	N.PL	'Okiek'
<i>Okiot</i>	N.SG	'Okiek'
<i>okoromoik</i>	N.PL	'lions'
<i>okoromwet</i>	N.SG	'a lion'
<i>olintet</i>	N.SG	'trader' , 'buyer'

<i>omtit</i>	N.SG	'food,' 'a meal'
<i>omtoik</i>	N.PL	'preachers'
<i>omu</i>	CONJ	'because'
<i>on</i>	V.1	'chase'
<i>onon</i>	CONJ	'or'
<i>op</i>	V.1	'bring'
<i>orek</i>	N.PL	'ashes'
<i>orkoyok</i>	N.PL	'sorcerers'
<i>orkoyot</i>	N.SG	'a sorcerer'
<i>o:rtok</i>	N.PL	'sheep'
<i>os</i>	ADV	'later'
<i>oɔtaɪmɪt</i>	INT	'disagree/boast'
<i>otepto</i>	N.SG	'environment/culture'



<i>otepto:p</i>	N.SG	'common'
<i>petusiek</i>		
<i>oti:</i>	V.1	'cause/make'
<i>otko</i>	QUAN	'very'

## P

<i>pa:</i>	V.1	'go (to)'
<i>pa:l</i>	V.1	'split'
<i>pac</i>	V.1	'peel bark of tree'
<i>pakac</i>	V.1	'leave'
<i>pakasɪat</i>	N.SG	'a worker'
<i>pal</i>	V.1	'dig'
<i>palta</i>	V.1	burry
<i>pamunjo</i>	N.SG	'father in law'
<i>pamunjoɪsɪɛk</i>	N.PL	'fathers in law'
<i>panan</i>	V.1	'be poor'
<i>pananta</i>	N.SG	'poverty'
<i>paɲɛk</i>	N.PL	'portions of meat'
<i>paɲan</i>	V.1	'arrange'
<i>panɪ</i>	ADV	'now'
<i>papa</i>	N.SG	'father'
<i>par</i>	V.1	kill
<i>para</i>	ADJ	wide
<i>paraɪt</i>	V.1	'widen'
<i>parpar</i>	V.1	'perforate'
<i>parta</i>	V.1	'present'
<i>parɜɛt</i>	N.SG	'a letter'
<i>pataj</i>	PREP	'above'
<i>patɪɛp</i>	N.SG	'a partner'
<i>paj</i>	V.1	'feed'
<i>pcey</i>	V.1	share
<i>pɛɛkej</i>	V.1	'separate'
<i>pɛɛjta</i>	V.1	donate
<i>pcejsiet</i>	N.SG	'a donation'
<i>pɔɪnɛt</i>	N.SG	'an antelope'
<i>pɔl</i>	V.1	'shout'
<i>pe</i>	V.1	'chock'
<i>pekek</i>	IDEO	'infinite time'
<i>pe:k</i>	N.PL	'water'
<i>pe:ko</i>	CONJ	'but'
<i>pe:t</i>	V.1	'lost'
<i>pel</i>	V.1	'burn'
<i>pentaɪt</i>	V.1	'walk'
<i>pento</i>	N.SG	meat

<i>ow</i>	ADJ	'big'
<i>ojei!</i>	INT	'undermine something'

<i>perperinto</i>	N.SG	'foolishness'
<i>perur</i>	V.1	'bless'
<i>pesento</i>	V.1	'lend'
<i>petu</i>	N.SG	'daytime'
<i>petusiek</i>	N.PL	'everyday' / 'days'
<i>petut</i>	N.SG	'a day'
<i>pɛ</i>	V.1	'spare'
<i>pɛl</i>	V.1	burn/ sunburn
<i>pɪ:l</i>	V.1	'increase'
<i>picij</i>	ADJ	'mean'
<i>pɪɛ</i>	V.1	'give'
<i>pik</i>	N.PL	'people'
<i>pɪlpɪl</i>	V.1	'percolate'
<i>pɪr</i>	V.1	'beat'
<i>pɪr pe:k</i>	V.1	'swim'
<i>pirir</i>	ADJ	'red'
<i>piririt</i>	V.1	'redden'
<i>plt</i>	V.1	'spray'
<i>pit</i>	V.1	'grow'
<i>pɪɪr</i>	ADJ	heavy
<i>pitirinto</i>	N.SG	'a heavy load'
<i>piu!</i>	INTER	'eternity'
<i>pijonijon</i>	V.1	satisfy
<i>po</i>	V.1	boil
<i>po:</i>	V.1	belong to
<i>pois</i>	V.1	work
<i>pɔɪsɔɪk</i>	N.PL	'elders'
<i>pokit</i>	V.1	'intoxicated/drunk'
<i>polejwek</i>	N.PL	'honey bags'
<i>pololon</i>	N.SG	'a bag for carrying honey'
<i>polot</i>	N.SG	'argument'
<i>poltoisiet</i>	N.SG	'a burial'
<i>porik</i>	N.PL	'killers'
<i>porintet</i>	N.SG	'a killer'
<i>porto</i>	N.SG	'a body'
<i>pɔjɔn</i>	N.SG	'an elder'
<i>pul</i>	V.1	'mob-attack'

<i>pulpul</i>	V.1	'bubble up'
<i>purkej</i>	ADJ	'hot'
<i>purtutɛn</i>	V.1	'fly'
<i>pus</i>	V.1	'breathe'
<i>pusot</i>	PART	'rotten'
<i>put</i>	V.1	'fall'

<i>putek</i>	N.PL	'hairs'
<i>putek</i>	N.PL	hair
<i>putiot</i>	N.SG	'hair'
<i>pwa</i>	V.1	come
<i>pwa:</i>	V.1.	'swell'
<i>pwɔn</i>	V.1	come'

## R

<i>ra:</i>	ADV	'today'
<i>ram</i>	V.1	'fetch'
<i>rapac</i>	V.1	'slap'
<i>rat</i>	V.1	'close'
<i>ɾɔɔn</i>	V.1	'rain'
<i>ɾɔɔn koik</i>	N.PL	'hailstones'
<i>ɾpta</i>	V.1	'rain'
<i>ɾɪ</i>	V.1	'laugh'
<i>rek</i>	V.1	'descend'
<i>raŋta</i>	V.1	'spill'
<i>ɾʃɪt</i>	V.1	'an example'
<i>ɾt</i>	V.1	'flow'
<i>ropisiek</i>	N.PL	'money'
<i>rektot</i>	ADJ	'down'

<i>ri:p</i>	V.1	'guard'
<i>ɾɔn</i>	V.1	'sneez'
<i>ɾɛm</i>	V.1	'dig'
<i>ɾŋat</i>	ADJ	'short'
<i>ɾɪr</i>	V.1	'cry'
<i>ririw</i>	V.1	'explain'
<i>rop</i>	V.1	'feed'
<i>ropɔŋ</i>	V.1	'smash'
<i>rorok</i>	V.1	'fall'
<i>ɾu</i>	V.1	'sleep'
<i>rwɔc</i>	V.1	'dispense justice'
<i>rwɔɪt</i>	V.1	'a dream'
<i>rwɔɪt</i>	N.SG	'dream'

## S

<i>sa</i>	V.1	pray
<i>sa:c</i>	V.1	'shake'
<i>sac</i>	V.1	'split'
<i>salausta</i>	N.SG	'a voice'
<i>salaɪtwɛk</i>	N.PL	'voices'
<i>samakɪat</i>	N.SG	'fish'
<i>sapulek</i>	N.PL	'hairy'
<i>sarɪsarɪ</i>	V.1	'hurry'
<i>sɔman</i>	V.1	'read'
<i>sɔɔkɔn</i>	V.1	'play'
<i>sɔwɛt</i>	N.SG	'a back'
<i>sɛɛkalɪsɛk</i>	N.PL	'governments'
<i>sɛ</i>	V.1	'separate'
<i>sɛ:r</i>	V.1	'scream'
<i>sɛ:kɛ:k</i>	V.1	'scrab with a spoon'

<i>sɛr</i>	V.1	'spill'
<i>sɛɛkalɪt</i>	N.SG	'a government'
<i>sɛɛt</i>	V.1	'suffer'
<i>sɛɾpɛn</i>	ADJ	'small/young'
<i>sɛɾta</i>	N.SG	'a termite'
<i>sɛɾst</i>	N.SG	'nose'
<i>si:t</i>	V.1	'rub'
<i>sɪc</i>	V.1	'find'
<i>sɪɔr</i>	V.1	discover'
<i>sikoniet</i>	N.SG	'a stick'
<i>sɪɪŋta</i>	V.1	'spit'
<i>sɪm</i>	V.1	'force'
<i>sɪmta</i>	V.1	'force'
<i>sing'ololiet</i>	N.SG	'a sliding game'
<i>sɪntɛt</i>	N.SG	'brother in law'

<i>sintosiek</i>	N.PL	'brothers in law'
<i>sinɔj</i>	ADJ	'good'
<i>sɪr</i>	V.1	'surpass'
<i>sɪ:r</i>	V.1	'write/employ'
<i>sirkonik</i>	N.PL	'dried meat'
<i>sokiot</i>	N.SG	'leaf'
<i>sokosek</i>	N.PL	'urine'
<i>som</i>	V.	borrow
<i>sopet</i>	N.SG	'life'
<i>sopusiek</i>	N.PL	'lives'

<i>sor</i>	V.1	'go for something'
<i>sorcin</i>	ADJ	quick
<i>sorunintet</i>	N.SG	'a savior'
<i>sowewek</i>	N.SG	'backs'
<i>sɔc</i>	V.1	'wipe'
<i>sukta</i>	V.1	'wipe out'
<i>sukutwek</i>	N.PL	'buttocks'
<i>sɔs</i>	V.1	'bite'
<i>suswek</i>	N.SG	'grass'
<i>sɔt</i>	V.1	'lift'
<i>sutek</i>	V.1	'soup'
<i>suwa</i>	V.1	'see'

J

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T

<i>tac</i>	V.1	'receive'
<i>tac</i>	V.1	'invite'
<i>takɪkɪɛt</i>	N.SG	'a jawbone'
<i>taktakɔnik</i>	N.PL	'wild berries'
<i>taman</i>	NUM	'ten'
<i>tamɪrmɪɛt</i>	N.SG	'heart'
<i>taptɛt</i>	N.SG	'a flower'
<i>tapɔrpɔɪk</i>	N.SG	'butterflies'
<i>tar</i>	V.1	'finish'
<i>tarɪɛt</i>	N.SG	'a bird'
<i>taj(-it)</i>	N.SG	right/ahead
<i>ɔkɔl</i>	QUAN	all
<i>ɔkɔjta</i>	N.SG	'a forehead'
<i>tapɔjat</i>	N.SG	'star'
<i>ɔr</i>	V.1	'push'
<i>ɔɔc</i>	V.1	'embrace'
<i>tec</i>	V.1	'build'
<i>tɛc</i>	V.1	'defend'
<i>tenek</i>	V.1	'sin'
<i>tepesinto</i>	N.SG	'width'
<i>ter</i>	ADJ	different
<i>tɛɛt</i>	N.SG	'a pot'

<i>tɛɛnik</i>	N.PL	'pots'
<i>teset</i>	N.SG	'an addition'
<i>tɛkɛl</i>	V.1	'choose'
<i>tɛɛr</i>	V.1	'tear'
<i>tɛɛt</i>	N.SG	'a spear'
<i>tɛp</i>	V.1	'ask'
<i>tɛpɛn</i>	V.1	'sit (on)'
<i>tɛpɛs</i>	ADJ	'wide'
<i>tɛptɔ</i>	V.1	'keep'
<i>tɛɪt</i>	N.SG	'dust'
<i>tɛs</i>	V.1	'add/join'
<i>tɛs taj</i>	V.1	'continue'
<i>tɛseta:p taj</i>	N.SG	'successful'
<i>tɛʃɛr</i>	INT	ululation by men
<i>tɛta</i>	N.SG	'a cow'
<i>tien</i>	V.1	'sing'
<i>tiento</i>	N.SG	'a song'
<i>tienwek</i>	N.PL	'songs'
<i>tiepto</i>	N.SG	'a girl'
<i>tɛpɔsa</i>	N.SG	'a woman'
<i>tikikwot</i>	N.SG	'a shoulder'
<i>tɪkɪɲ</i>	V.1	'smile'

<i>tɪ/</i>	V.1	'cut'
<i>tɪɪ/</i>	ADJ	'clean'
<i>timto</i>	N.SG	'a forest'
<i>timwek</i>	N.PL	'forests'
<i>tɪnɪmanta</i>	V.1	certain/sure
<i>tɪŋɛ</i>	V.1	'have'
<i>tionjot</i>	N.SG	'an animal'
<i>tionjik</i>	N.SG	'animals'
<i>tɪsɛt</i>	N.SG	'monkey'
<i>tisiok</i>	N.PL	'monkeys'
<i>tɪʃɪr</i>	V.1	'separate from fighting'
<i>toek</i>	N.PL	'visitors'
<i>tok</i>	V.1	visible
<i>tokcin</i>	V.1	'aim'
<i>tokcinet</i>	N.SG	'focus/an aim'
<i>tokocik</i>	N.PL	'foreheads'
<i>tokol</i>	QUAN	'all'
<i>tokset</i>	N.SG	'reception'
<i>tolonjik</i>	N.PL	'an assistant to the initiates'
<i>tolonjot</i>	N.SG	'an assistant'
<i>tɔnɔn</i>	V.1	'stand'
<i>tonoco</i>	N.SG	'a story'
<i>toptok</i>	N.PL	'flowers'
<i>toptok</i>	N.SG	'flowers'
<i>topurpuroninto</i>	N.SG	'a circle'
<i>tor</i>	V.1	'hit with a javelin'
<i>tɔɛt</i>	V.1	'help'
<i>toror</i>	ADJ	'high'
<i>Tororet</i>	N.SG	'God'

<i>tororinto</i>	N.SG	'height'
<i>tos</i>	PFUT	'will'
<i>totun</i>	MFUT	'will'
<i>tɔːj</i>	Adj	'black'
<i>tuc</i>	V.1	'retain/cover'
<i>tucupo</i>	QUAN	'some'
<i>tucupone</i>	QUAN	a little/a few
<i>tuinto</i>	N.SG	'blackness'
<i>tɔɪt</i>	PART	blacken
<i>tuka</i>	N.PL	'cows'
<i>tɔka</i>	N.PL	'cows'
<i>tukur</i>	V.1	'mix'
<i>tul</i>	V.1	'thunder'
<i>tulwɛt</i>	N.SG	'hill/mountain'
<i>tɔmtɔman</i>	V.1	'nosebleed'
<i>tun</i>	ADV	'tomorrow'
<i>tupce</i>	N.SG	'relative'
<i>tupcontit</i>	N.SG	'brotherhood'
<i>tur</i>	V.1	'hunt'
<i>turik</i>	N.PL	'hunters'
<i>turintet</i>	N.SG	'a hunter'
<i>tɔɔɛt</i>	N.SG	'the sky'
<i>tɔwaɪj</i>	ADV	'together'
<i>tuj</i>	V.1	'meet'
<i>tuyo</i>	V.1	'join'
<i>twa</i>	V.1	'touch'
<i>twal</i>	V.1	'jump'
<i>twaltwal</i>	V.1	'jump repeatedly'
<i>twoliot</i>	N.SG	'a bell'
<i>twon</i>	ADJ	'wet'

## U

<i>ɔːn</i>	V.1	'wash'
<i>uːjuːj</i>	ADJ	'difficult'
<i>ɔɔɛt</i>	N.SG	'darkness'
<i>us</i>	V.1	'lean'
<i>ufo</i>	INTER	'disbelief!'
<i>uːsuːs</i>	ADJ	'light/easy'
<i>uːsuːsinto</i>	N.SG	'easiness'
<i>ujan</i>	ADV	somewhere
<i>uːjuːjinto</i>	N.SG	'strength/difficulty'
<i>uːjuːjit</i>	PART	'harden'

## W

<i>wakta</i>	N.SG	'road'
<i>wal</i>	V.1	'change'
<i>walɛt</i>	N.SG	'a change'
<i>walwal</i>	V.1	'exchange'

<i>walwalta</i>	V.1	'substitute'
<i>war</i>	V.1	'kick'
<i>wataɪsɔɕɛj</i>	INT	'amazement'
<i>wer</i>	IDEO	'appear suddenly'
<i>werik</i>	N.PL	'boys'
<i>wero</i>	N.SG	'boy'
<i>wɛ</i>	V.1	'go'

<i>wɛc</i>	V.1	'hate'
<i>wɛkɪsɛt</i>	N.SG	'a hatred'
<i>wɛntɪn</i>	V.1	'going'
<i>wir</i>	V.1	'throw'
<i>wol</i>	V.1	'answer'
<i>wolutiet</i>	N.SG	'an answer'
<i>wolutik</i>	N.PL	'answers'

## j

<i>ja:</i>	ADJ	'bad/cruel'
<i>jac</i>	V.1	'ow'
<i>jaɪt</i>	V.1	'worsen'
<i>jakta</i>	V.1	'pay'
<i>jam</i>	V.1	'dry'
<i>jan</i>	V.1	'agree/accept/believe'
<i>janɛt</i>	N.SG	'a belief'
<i>jat</i>	V.1	'open'
<i>jaj</i>	V.1	'work/do/use'
<i>jajak</i>	V.1	'happen/occur'
<i>jɛ:</i>	V.1	'drink'
<i>'jet</i>	V.1	'prevent'
<i>jɛm</i>	V.1	'surround'
<i>jɛpɪt</i>	V.1	'listen'
<i>jɛstal</i>	N.SG	'flood'
<i>jɛtɪta</i>	V.1	'protect'
<i>jokto</i>	V.1	'send'
<i>jomej</i>	ADJ	'enough'
<i>jonci</i>	V.1	'allow'
<i>jonɪjonɪ</i>	V.1	'speak inarticulately'
<i>jos</i>	ADJ	'old'
<i>jot</i>	V.1	'try'
<i>jojik</i>	N.PL	'creators'
<i>jojintet</i>	N.SG	'a creator'
<i>jojisiet</i>	N.SG	'a job'/a creation'
<i>ju:</i>	V.1	'sit by the fire'
<i>julo!</i>	INT	'joy. By women.'
<i>jum</i>	V.1	'gather'
<i>jut</i>	V.1	'forget'

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## Summary (English)

This dissertation presents a descriptive account of Okiek grammar with a focus on its phonology, morphology, syntax, and negation. Okiek is a Kalenjin language in the Southern-Nilotic subdivision of the Nilo-Saharan phylum (Rottland 1982/1983). It is the language of approximately 52,596 Okieks living in Kenya (Republic of Kenya 2019). Primary data used in the study include wordlists, phrases, sentences, and narratives collected during annual fieldwork conducted between 2019-2022 with native consultants from the Ka:p Shoi clan in Nessuit town, in Nakuru County, in Kenya. The study adopts the tenets of Dixon's (2010) Basic Linguistic Theory which regard the characterization of the grammar of a language as the analysis and explanation of forms, their distribution, and functions in grammatical structures with less recourse to formalist theories of linguistic analysis.

The study is organized in five chapters. The first one, i.e. the introduction, sketches the general context of the Okiek language and the sociocultural background of its speakers and outlines the methodology and structure of the study. Chapters 2 to 5 form the core of the study, providing a description of grammatical structures of Okiek, cast in the form of a classical descriptive study: Chapter 2 is dedicated to the segmental and suprasegmental phonology and phonotactics. Chapter 3 discusses the morphology of major word classes both derivational and inflectional. Chapter 4 is on syntax providing a description of Okiek phrase and clause structures. Finally, chapter 5 singles out the expression of negation. An Appendix provides a list of Okiek consonant phonemes and their correspondences across Southern Nilotic in various cognate lexical items, a specimen of an Okiek narrative with full glossing and an Okiek-English vocabulary list. A section of references is followed by two extensive summaries of the entire thesis, one in English, the other one in German, and the obligatory declaration on oath.

The phonotactic analysis of the data shows that: there are fifteen consonant phonemes and eighteen vowel phonemes; places of articulation of consonants include bilabial, labiodental, alveolar, palatal, and velar; manners of articulation include nasals, stops, fricatives, trill, liquid, and semivowels; vowels are categorized for length and quality by tongue root (ATR) harmony; the categorization of vowels by quality is asymmetric with 10 -ATR vowels and 9 +ATR vowels; the +ATR [o(:)] is the harmonic counterpart of the -ATR vowels /ɔ(:)/ and /a(:)/; there are two tone patterns that indicate case in phrases and clauses; the basic syllable structure consists of a maximum of two optional consonants in the onset, an obligatory nucleus, and an optional coda (C<sub>1</sub>)(C<sub>2</sub>)V(C<sub>3</sub>); syllable shapes range from monosyllabic to hexasyllabic structures; and phonological process are morphologically conditioned.

The analysis of morphosyntactic, semantic and morphophonological effects of stems and affixes in the data shows that word classes include nouns, verbs, adjectives, adverbs, pronouns, participles, and particles- e.g., numerals, quantifiers, association markers, and the copula *kɔ*; members of a word class can occur as independent items or as phrasemes (lexicalized phrases); the distribution of morphemes that code tense, person, aspect, deixis and negation depends on the morphotactic relations amongst morphemes indicating the grammatical categories and derivational affixes; the categories of person, number, tense, and negation cut across word classes including nouns, verbs, adjectives, pronouns, and participles; grammatical categories are coded morphologically via affixation or syntactically by independent morphemes; morphophonemically, both stem and affix vowels can trigger or be subjected to +ATR vowel harmony; the ATR status of morphemes include neutral morphemes that are not subjected to and do not trigger vowel harmony, and opaque morphemes that are subjected to or trigger vowel harmony in one grammatical construction but fail to be subjected or trigger vowel harmony in other constructions.

Syntactic analysis of the data indicates that: phrases and clauses exhibit head and predicate initial structures respectively; exceptionally, the copula *ko* occurs in the intermediary position in copula clauses; nouns, verbs, adjectives, and participles serve as modifiers in the noun phrase and as predicates in their respective verbal and nonverbal clauses; heads of phrases select and govern the morphosyntactic properties of their dependents; noun phrases exhibit head marking while main clauses exhibit dependent marking indicated by case; case is coded by a nominative accusative case system indicated by tone; the case system is unique in relation to the marked nominative case attested in Southern Nilotic languages; negation is indicated by the allomorphs of the negation marker *ma-*; the distribution of the allomorphs of *ma-* depends on its combination with markers of tense, person, number, and aspect categories as well as clause and phrase types.

The grammatical typology of Okiek is comparable to that of Southern Nilotic languages. This thesis places special attention to the description of the distribution and functions of allophones and allomorphs with the aim of establishing the distinctiveness of Okiek grammar within the Kalenjin languages.

## Summary (German)

In dieser Dissertation wird die Grammatik des Okiek mit Schwerpunkt auf Phonologie, Morphologie, Syntax und Negation beschrieben. Okiek ist eine Kalenjin-Sprache in der südnilotischen Unterabteilung des Nilo-Saharan-Stammes (Rottland 1982/1983). Es ist die Sprache von etwa 52.596 Okieks, die in Kenia leben (Republic of Kenya 2019). Die in der Studie verwendeten Primärdaten umfassen Wortlisten, Phrasen, Sätze und Erzählungen, die während der jährlichen Feldforschung zwischen 2019 und 2022 mit einheimischen Beratern des Ka:p Shoi-Clans in der Stadt Nessuit im Nakuru County in Kenia gesammelt wurden. Die Studie folgt den Grundsätzen von Dixons (2010) grundlegender linguistischer Theorie, die die Charakterisierung der Grammatik einer Sprache als Analyse und Erklärung von Formen, ihrer Verteilung und Funktionen in grammatischen Strukturen betrachtet, ohne dabei auf formalistische Theorien der Sprachanalyse zurückzugreifen.

Die Studie ist in fünf Kapitel gegliedert. Das erste, die Einleitung, skizziert den allgemeinen Kontext der Okiek-Sprache und den soziokulturellen Hintergrund ihrer Sprecher und umreißt die Methodik und Struktur der Studie. Die Kapitel 2 bis 5 bilden das Kernstück der Studie und liefern eine Beschreibung der grammatischen Strukturen des Okiek, die in Form einer klassischen deskriptiven Studie durchgeführt wird: Kapitel 2 ist der segmentalen und suprasegmentalen Phonologie und Phonotaktik gewidmet. Kapitel 3 befasst sich mit der Morphologie der wichtigsten Wortklassen, sowohl der derivativen als auch der flektierenden. Kapitel 4 ist der Syntax gewidmet und enthält eine Beschreibung der Phrasen- und Satzstrukturen des Okiek. Schließlich wird in Kapitel 5 der Ausdruck der Negation behandelt. Ein Anhang enthält eine Liste der Konsonantenphoneme des Okiek und ihre Entsprechungen im Südnilotischen in verschiedenen verwandten lexikalischen Elementen, ein Muster einer okiekischen Erzählung mit vollständiger Glosse und eine okiekisch-englische Vokabelliste. Einem Abschnitt mit Referenzen folgen zwei ausführliche Zusammenfassungen der gesamten Arbeit, eine auf Englisch, die andere auf Deutsch, und die obligatorische eidesstattliche Erklärung.

Die phonotaktische Analyse der Daten zeigt, dass: Es gibt fünfzehn Konsonantenphoneme und achtzehn Vokalphoneme; die Artikulationsorte der Konsonanten umfassen bilabial, labiodental, alveolar, palatal und velar; die Artikulationsarten umfassen Nasale, Register, Frikative, Triller, Liquid und Semivokale; Vokale werden nach Länge und Qualität durch Zungenwurzelharmonie (ATR) kategorisiert; die Kategorisierung der Vokale nach Qualität ist asymmetrisch mit 10 -ATR-Vokalen und 9 +ATR-Vokalen; das +ATR [o(:)] ist das harmonische Gegenstück zu den -ATR-Vokalen /ɔ(:)/ und /a(:)/; es gibt zwei Tonmuster, die den Kasus in Phrasen und Klauseln anzeigen; die grundlegende Silbenstruktur besteht aus maximal zwei fakultativen Konsonanten im Onset, einem obligatorischen Nukleus und einer fakultativen Coda (C1)(C2)V(C3); die Silbenformen reichen von einsilbigen bis zu sechssilbigen Strukturen; und phonologische Prozesse sind morphologisch bedingt.

Die Analyse der morphosyntaktischen, semantischen und morphophonologischen Effekte von Stämmen und Affixen in den Daten zeigt, dass Wortklassen Substantive, Verben, Adjektive, Adverbien, Pronomen, Partizipien und Partikel umfassen - z.B., Die Verteilung der Morpheme, die Zeit, Person, Aspekt, Deixis und Negation kodieren, hängt von den morphotaktischen Beziehungen zwischen den Morphemen ab, die die grammatikalischen Kategorien und die Derivationsaffixe angeben; die Kategorien Person, Zahl, Zeit und Negation erstrecken sich über alle Wortklassen, einschließlich Substantive, Verben, Adjektive, Pronomen und Partizipien; grammatische Kategorien werden morphologisch durch Affixierung oder syntaktisch durch unabhängige Morpheme kodiert; morphophonemisch können sowohl Stamm- als auch Affixvokale +ATR-Vokalharmonie auslösen oder unterworfen sein; der ATR-Status von Morphemen umfasst neutrale Morpheme, die nicht unterworfen sind und keine Vokalharmonie auslösen, und undurchsichtige Morpheme, die in einer grammatischen Konstruktion unterworfen sind oder Vokalharmonie auslösen, aber in anderen Konstruktionen nicht unterworfen sind oder Vokalharmonie auslösen.

Die grammatische Typologie des Okiek ist mit der der südnilotischen Sprachen vergleichbar. In dieser Arbeit wird besonderes Augenmerk auf die Beschreibung der Verteilung und der Funktionen von Allophonen und Allomorphen gelegt, um die Besonderheit der Okiek-Grammatik innerhalb der Kalenjin-Sprachen zu ermitteln.

## Declaration of oath

I Robert Joseph Ochieng hereby affirm that I have read and understood the doctoral regulations for the Faculty of Humanities at Universität Hamburg and declare that this dissertation entitled '*A Descriptive Study of Okiek Grammar*' is a product of my own original research under the supervision of Prof. Dr. Roland Kießling. I also hereby declare that the resources which have been mentioned in this thesis have been acknowledged accordingly. A similar dissertation has hitherto not been presented to another examining authority in Germany or abroad, nor has it been published.

Place: Hamburg

Signature: *Rjosocho*

Date: 04.08.2025