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Grammatical Tone Pattern in Ùhànmì

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Abstract:

This study explores the grammatical tone pattern in Ùhànmì, a speech form that belongs to a sub-group of Edoid language family spoken in Ìṣùà-Àkókó of Òǹdó State, Nigeria. The study employs qualitative research method. Data collection was carried out using Ibadan 400 word-list, and was also modified to include sentences in the speech form. The data was sourced from native speakers of the language whose ages range between 50 and 70. The informants were asked questions and their responses in the speech form were recorded, translated and transcribed for accuracy. The study adopts the framework of autosegmental-phonology for its analysis. In the study, specific areas are examined with a view to shed light on the tone system of the speech form. The areas that are investigated include the basic tones in the speech form, functions of tone, and tonal processes in the speech form. Findings from the study demonstrate that Ùhànmì operates four basic tone levels; these are high, mid, low and falling tones. Tone is a unique feature in Ùhànmì, quite distinct from segmental feature. The study reveals that these tones distinguish meaning of segmentally identical words. The study also shows that tones play a distinctive grammatical function in present and past tense. Tonal processes such as tone simplification, tone raising, tone elision, and tone polarization are observed in the speech form. The research is motivated by the need to prevent the speech form from extinction. The study also stems from the missing gap in the knowledge as there is a paucity of publication on the speech form. The research contributes to knowledge in the field of phonology.

Keywords:

Speech form, Lexical, Grammatical, Autosegmental phonology, Ùhànmì

I. Introduction

The subject of tone has been examined in many languages of the world. It pervasiveness in many languages makes it topical and an indisputable subject of language discourse among scholars. Tone simply refers to the variations in pitch. Roach (2010) says that tone is the use of pitch in language to distinguish lexical or grammatical meaning. Pitch is a factor that distinguishes tone languages from non-tonal languages. The variations in pitch must be capable to change lexical and grammatical meaning. Languages of the world are strictly classified as tonal languages and non-tonal languages. Pike (1948) sees a tonal language as any language, "having significant, contrastive, but relative pitch on each syllable. These criteria, according to Pike, are the basis on which a tone language is classified. His idea of lexically significant is that the pitch levels in any language must be capable of playing a semantic role that is contrastive. However some scholars have labelled his criteria for a tone language as too cumbersome for a language to merit.

Tone languages are generally classified into register tone system and contour tone system. According to Hyman (1975), a register tone language involves a tonal contrast that consists of different levels of steady pitch height, that is, perceptually, such tones neither rise or fall in their production. A pure contour tone consists of different levels of pitch height

that are not stable, that is, they fall and rise in their production. The tone system of Ùhànmì belongs to the typological classification of register tone system. That is, tones in the language consist of different levels of steady pitch heights. Based on Pike's (1948) typological classification of tone systems into register and contour, Welmers (1959) maintained and pointed out that differences occur in the typological classification of register system. Register tone system displays discrete and terrace tone levels. Ùhànmì operates a discrete tone system in which the tones maintain their pitch level. Generally, tones in tone languages perform lexical and grammatical function. A tone performs a lexical function when the meaning of segmentally identical words is distinguished on the account of tone. Grammatical function of tone is when a tone distinguishes meaning of identical phrases and sentences.

Hyman (2016) also says that, lexical tone is a situation where tonal contrasts are on morphophonemic roots. Grammatical tone, according to Hyman (2016), can mark inflectional categories (nouns, verbs, adjective etc.) as well as derivational processes such as deriving nouns from verbs. Yul (2008) also avers that tone plays a lot of grammatical function in indicating attitude and emotion of the speaker. It also reveals the difference between question and statement and between different types of question. This study is concerned with the grammatical tone patterns in Ùhànmì speech form, an Edoid language spoken in Ìṣùà-Àkókó of Òǹdó State.

1.1 Linguistic profile of Ùhànmì

Ùhànmì is a speech form spoken in Ìṣùà-Àkókó of Òǹdó State, Nigeria. Contentions of language scholars such as Owoyele (2016) reveal that Ùhànmì bears affinity to those languages spoken in Edo State. Elugbe (1989) also posits an Edoid language family tree that contains Ùhànmì. However, Lewis (2013) reviews the classification of the Edoid language family posited in Elugbe (1989), limiting his study on the North Western Edoid. He opines that Elugbe's classification is basically on reconstruction. Afeez (2024) also traces Ùhànmì to Edoid language family, comparing it with three small languages (Epie, Engenni and Degema) which are spoken in Delta-Ẹdó. He compares Ùhànmì with the word list of Delta Ẹdó languages provided by Williamson (1967). The result of the correspondence of the cognate words in Ùhànmì with the three languages justifies the contention that Ùhànmì belongs to Edoid language family. The cognates are cited below:

	Ùhànmì	**Epie**	**Engenni**	**Degema**
One (1)	ọ́dá	ọ́vụ	ávụ	ọvú
Two (2)	evá	íva	íva	íva
Three (3)	esà	ịsàa	ẹ́saa	ịsáá
Four (4)	enì	inií	ínii	iní
Eight (8)	iníeni	nií	ẹmụmanị	imúmaní
Ten (10)	ìgbé	gbe	ígbei	agbéín, igbéín
Twelve (12)	gbéreva	gbenivẹ́	igbeinivá	igbéín niva
Thirteen(13)	gbéresa	gbe nisáa	igbeinẹsaa	igbéín nisái
Fourteen (14)	gbéreni	gbe ninií	ígbei ninií	igbein niní
Twenty (20)	ùyè	iyée, yée	íyei	iyéú
Twenty one (21)	yereọ́dá	ye nọvú	íyeinavú	iyéú nọvụ
Fourty (40)	egbérevá	ụvan	ọvụa	ụvá
Fifty (50)	egbẹ̀rèváigbe	ụvan nigbée	ọvụa nigbeí	ụva nigbeín
Sixty (60)	ẹgberesá	ẹfẹ́lẹ́ sáa	ọ́saa	ítáín Isai
Nighty (90)	égbò niẹ	ẹfẹ́lẹ́ níi	únii nigbeí	ítaín Ini nigbeín

Other words

	Ùhànmí	**Epie.**	**Engenni**	**Degema**
Sky	okùnù	okunu	ekunu	ekun
Hand	ọbọ	ụbọ	ọbọ	ụbọ́
Boy	ọmọsi	ọmọ́ mosíọ	ámọ́ mọshi	ọ́mọ́ mọsí
Buy	dẹ̀	dẹ	dú	dẹ
Finger	ẹvìè	ivíìbọ̀	ámésiiọbọ	úsrùbo

II. Review of Literature

There have been a considerable number of research works on tone in languages of the world especially on Nigerian languages. Maduagwu (2013) examined the Ikaram tone system, one of the dialects of Akpes language that is spoken in Akoko North West Local Government Area of Ondo State, Nigeria. He demonstrates in his study that Ikaram tone system consists of three basic tones which are High (H), Low (L) and Mid (M). Ikaram language also has contour tones that include high-falling and low-rising which are said to be phonetically realized in Ikaram. Tones in Ikaram are also used to perform lexical and grammatical functions such as negation marker, relative clause marker, subject-verb agreement, tense marker, imperative markers as well as associative marker.

Elena (2021) explored "Grammatical functions of tone in San Maka". San Maka is a language spoken in Burkina Faso. It is a language of San/Samo cluster. San Maka is tonal language that has three level tones; these include high tone that is designated with (ˊ), mid tone(-) designated with a macron, and low tone designated with (̀). There are minimal pairs of words present in the language which illustrate the lexical function of tone. The language also demonstrates grammatical function of tone in neutral and perfective forms, in compound nouns, genitive constructions, and tone as an allomorph of a segmental morpheme. Daniel and Christie (2024) examined "Tone as trigger to semantic variation in Wapan". Wapan is a dialect of Jukun language spoken in Wukari Local Government Area of Taraba State, Nigeria.

The objective of his study is to determine tonality in relation to the semantic variations in lexical items. Data of lexical items with similar segments but different tones reveal contrasts in meaning. The existing work on the speech form under analysis is Owoyele (2016). Owoyele (2016) worked on "a comparative analysis of the phonological systems of Ùhànmì and Ukue languages spoken in Akoko South-East of Ondo State. He compared the sound system of the speech forms, revealing and identifying the number of consonant, vowels, and the phonological processes that are present in the phonological systems of the forms. His research revealed that Ùhànmì has twenty three (23) consonant sounds that include [b, t, d, k, g, kp, gb, k^w, g^w, m, n, f, v, s, z, ʃ, h, tʃ, dʒ, l, ɾ, j, w] and seven (7) oral vowels and five nasal vowels; these are [i, u, e, o, ɛ, ɔ, a, ĩ, ũ, ɛ̃, ɔ̃, ã]. However, he did not provide a detailed explanation of the tone system of the speech form. Afeez (2024) also worked on "Tone in the lexicon and grammar of Ùhànmì" using Praat software for the analysis. Despite these attempts, the research on Ùhànmì tone system still remains largely underexplored, and the studies that are likely to have existed are assumed to be unpublished. The unpublished research thesis on the speech form is Owoyele (2016) at Ekiti State University. As of now, the recent existing publication on the speech is
https://www.researchgate.net/publication/387295444_TONE_IN_THE_LEXICON_AND_GRAMMAR_OF_ÙHÀNMÌ_A_LANGUAGE_SPOKEN_IN_ISUA_AKOKO_O

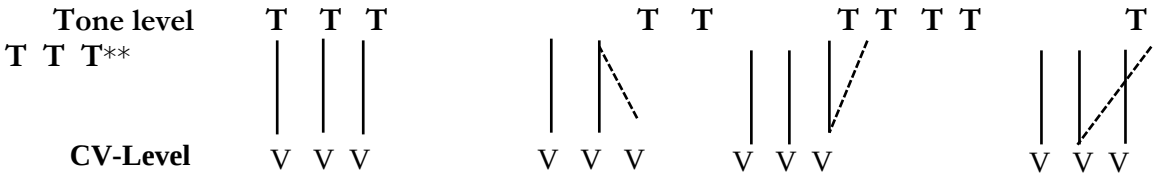
NDO_STATE?channel=doi&linkId=676688dae74ca64e1f2402a9&showFulltext=true. This research work is therefore an attempt to fill the gap in the literature.

2.1 Theoretical framework

The theory of Non-linear phonology popularly known by the term "Autosegmental Phonology" is a theory developed as a result of some of the inadequacies in Linear Phonology (Generative Phonology). The Linear Phonology dichotomously approached the study of languages through the levels of underlying level and phonetic level. The relevance of the two levels is elaborately discussed in Chomsky and Halle (1968). The theory maintains these two levels are mediated by phonological rules i.e phonological rules map these two levels for the organization of speech. The theory partly failed because it strictly accounts for some phonological phenomena. The theory left out some phonological phenomena dealing with suprasegmental features such as tone, nasality, and vowel harmony. This led Leben in (1973) to develop a theory that would adequately capture and account for the suprasegmental aspects of languages. Autosegmental phonology was later popularised after the publication of the work of Goldsmith (1976) titled *Autosegmental Phonology*. The principle that underpins the theory is that it allows for independent tiers. The theory addressed the issue of the synchronization of levels. Different levels must be associated for co-articulation purpose. The linking process is subjected to a set of well formedness condition (WFC) that are presented below:

1. Link autosegment to tone bearing unit left-to-right or right-to-left one-to-one,
2. Link leftover autosegment bearing unit with the last autosegment,
3. Link leftover autosegment to the last autosegment bearing unit,
4. Association lines do not cross. (See Durand, 1990:249)

The diagram below reveals how the different levels are linked in the theory.



Autosegmental phonology is then adopted for this study because of its problem solving advantage over other phonological theories.

III. Research Methods

3.1 Data presentation and analysis

a. Basic tones in Ùhànmì

Ùhànmì speech form has four basic tone levels; these are high, mid low and falling tones. These tone levels are designated with diacritical markers; high tone is designated with (◌́), mid tone is designated with a macron (-), low tone with (◌̀), and falling tone with (◌̂). All tone bearing units in Ùhànmì can bear any of these tone levels (high, low, mid and falling). The examples for each tone level are exemplified below:

	High tone		
	Phonetic	**Tone**	**Gloss**
1a.	[ɔ́dá]	HH	'one'

b.	[ìgbé]	LH	'ten'
c.	[bá]	H	'vomit (V)'
d.	[lótè]	HL	'stir'
e.	[opotó]	MMH	'frog'
f.	[odé]	MH	'house'
g.	[ogúlù]	MHL	'vulture'
h.	[ɪkpákí]	MHH	'cassava'

Mid tone

	Phonetic	**Tone**	**Gloss**
2a.	[dèdè]	LL	'stand'
b.	[akè] ML		'lake'
c.	[ɛgɪ̀]	LL	'body'
d.	[ikpɛ̀tɛ̀]	MLL	'mud'
e.	[egbà]	ML	'stone'
f.	[ɛgbaní]	MMH	'antelope"
g.	[ɪdìmì]	MLL	'pit'
h.	[erinmi]	MMM	'hippopotamous'

Low Tone

	Phonetic	**Tone**	**Gloss**
3a	[ùkʷùà]	LLL	'beak'
b.	[gʷà]	L	'dig'
c.	[ɔ̀sàmɪ̀]	LML	'sheep'
d.	[mɔ̀nà]	LL	'dance'
e.	[ɔvɛ́vɛ̀]	MHL	'red'
f.	[fi]	L	'cook'
g.	[ɔvɔ̀]	ML	'sun'
h.	[ɪgámì]	MHL	'big'

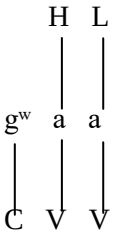
Falling tone

	Phonetic	**Tone**	**Gloss**
4a.	[gʷâ]	HL	'die'
b.	[gʷɛ̂]	HL	'call'
c.	[hɔ̂]	HL	'grind'
d.	[ɛ̀vɛ̂]	L-HL	'cloth'
e.	[jɔ̂]	HL	'go'
f.	[vɔ̂]	HL	'full'
g.	[wɛ̂]	HL	'say'
h.	[dʒɛ̂]	HL	'take off (clothes)'

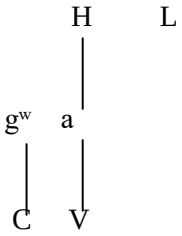
It is worth mentioning that the contour tones in African languages typically the falling tone in Ùhànmì are the result of deletion of a tone bearing unit, with its tone undeleted. The tone however docks on the tone bearing unit that is opposite to it as it is obtained in the principles of autosegmental phonology that "no tone is left unassigned" Ezewanfor (2014). In Ùhànmì, it follows that the falling tone in the language can be said to be the result of the deletion of a tone bearing unit. The theoretical framework of autosegmental phonology is used to capture the deletion process below:

a. g^wâ ‘die’

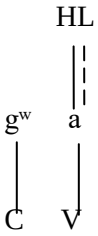
Underlying level



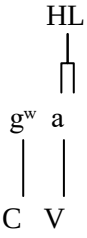
(Last Segment) deletion rule



low tone linking

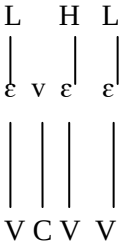


Final/Phonetic Representation



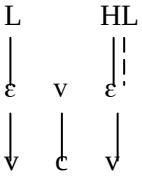
b. ɛ̀vɛ̂ ‘cloth’

Underlying form

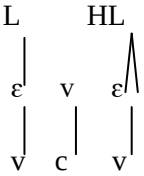


Deletion Rule

Low tone linking



Phonetic Representation



It is observed in the framework employed above that the number of the syllables in the underlying form is reduced at the surface form after the application of deletion rule and linking rule in the language. The structural level of the syllables is reduced from CVV to CV and VCVV to VCV, respectively.

3.2 Functions of tone

Tones have been established to perform lexical and grammatical functions. Lexical function occurs when tones distinctively contrast meanings of lexical items (words) that are composed of identical segments. Similarly to other tone languages, Ùhànmì has many lexical items that demonstrate contrasts in meanings due to tone difference. See the examples below:

a. **Lexical Function**

5a. fó ‘jump’
b. fo ‘finish’
6a. ʃi ‘peel’
b. ʃi ‘pull’

7a. tì 'wash (body)'
b. ti 'push'
8a. kɛ̀ 'divide'
b. kɛ 'be rotten'
9a. ɡbê 'kill'
b. gbe 'break
10a. g^{w}à 'to dig'
c. $ɡ^{w}$â 'die"

b. Grammatical function

Tone performs a grammatical function when meaning is distinguished in similar constituents that are larger than lexical items. Yul (2008) asserts that grammatical function of tone can also reveal the difference between question and statement, and between different types of questions. Grammatical function of tone in Ùhànmì is used to change a positive structure to a negative form. The data below evince:

11a. Adé ri ɔtʃɛ̀ 'Ade ate yam'
b. Adé rí ɔtʃɛ̀ 'Ade didn't eat yam'
12a. Ìʃɛ́ɡun mɛ ɛda 'Segun carried money'
b. Ìʃɛ́ɡun mɛ́ ɛda 'Segun didn't carry the money'
13a. Ìʃɛ́ɡun ze evìrì 'Segun bought palm oil'
b. Ìʃɛ́ɡun zé evìrì 'Segun didn't buy palm oil'
14a. Ìʃɛ́ɡun ɡbɔ ɔfi 'Segun killed rat'
b. Ìʃɛ́ɡun ɡbɔ́ ɔfi 'Segun didn't kill rat'

It will be observed in the examples provided above that the sentences in (a &b in item 11, 12, 13 and 14) are respectively composed of segmentally identical words. Looking at these sentences one supposes they have the same meaning because of their identical make-up. However there are contrasts in the meanings that are given in the gloss. The contrast in the meanings is due to the non-correspondence of the tones of the verbs in the sentences. While the verbs "ri" and "mɛ" carry mid tone in (9a and 10a), they carry high tone in 9b and 10b, respectively. One argues then that the difference in the meanings of the sentences (from positive to negative), is the result of the changes in the tones of the verbs.

3.3 Tonal Process

It is possible for sounds to undergo certain changes due to rapid speech. As a result, sounds often get deleted, merged, or coalesce to become a new one, or copy some of the features of the neighbouring segments. However in tone languages, tones also undergo similar changes; a tone may be raised, lowered, get deleted or stranded without a tone bearing unit; and two tones may merge to become one. These tonal phenomena which include tone raising, tone lowering, tone simplification, tone floating and tone elision are termed tonal processes. The speech form under analysis operates tone simplification, tone elision, tone raising and tone polarization. They are exemplified below:

a. Tone simplification

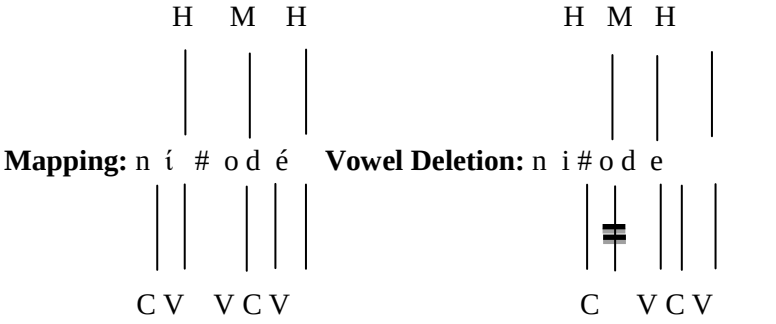
Tone simplification is a tonal process whereby a contour tone is simplified into tonemes such that we have HL →H, LH→H or LM→ L. The examples below evince:

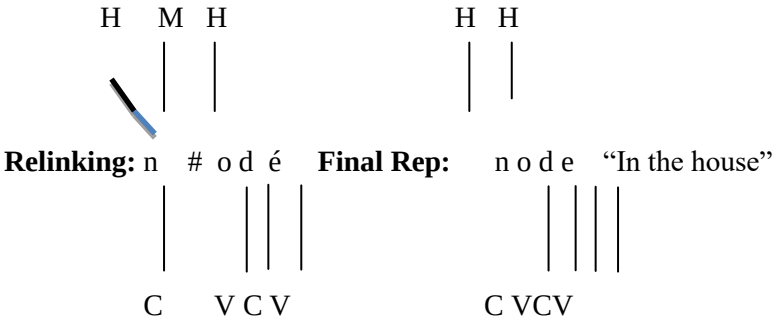
15a. odé # oviè → odóvie 'king's palace'
House king

b. odé # ɪʃa̰ → odíʃa̰ 'toilet'
House feaces
c. burú # eʃâ → búréʃâ 'cut tree'
cut. tree
d. ní # umìànì → númìànï 'in the village'
in village
e. ní # odé → nódé 'in the house'
in house

If we have a careful look at the examples above, they show the deletion of the vowels before the morpheme boundary with their high tone surviving thereby re-linking with the mid tone of the initial vowel of the nouns. The contour tone is later simplified to High. Hence we have HM becomes H as the examples exemplify. This tonal phenomenon is captured through autosegmental framework below:

. v. ní # odé → nódé 'in the house'
in house





a. Tone Rising

Abiodun (2010) says that 'tone raising occurs when tone rises in pitch in the course of derivation. Raising may be phonologically or syntactically motivated, and it is manifested in the forms: L → H, L→ M, M → H." This tonal process is found in Ùhànmì and the examples below evince:

16a. Adé rì ɔ́rì
Ade ate food
b. Adé sé rī ɔ́rì
Adé didn't eat food
17a. Ìsɛ́gu̱ dɔ̀ ɔtʃɛ̀
Segun bought yam

19a. Ìsɛ́gun mu ɛda
Segun carried money.
b. Ìsɛ́gun mú ɛda
Segun didn't carry money
20a. Ìsɛ́gun gbɛ ɔfi
Segun killed rat.

b. Ìsɛ́gun dɔ̄ ɔtʃɛ̀
Segun didn't buy yam

18a. Ìsɛ́gun zɛ evìrì
Segun sold palm-oil

b. Ìsɛ́gun zɛ́ evìrì
Segun didn't sell palm-oil

b. Ìsɛ́gun gbɛ́ ɔfi
Segun didn't kill rat

Given the data above, it is evident that tone raising occurs in Ùhànmì. This is obvious when we observe the mid tone verbs becoming high tone verbs. The tone raising pattern occurs when a declarative sentence is turned to a negative structure.

b. Tone Elision

Tone elision is tonal process whereby the tone of a bearing unit gets deleted when two words are juxtaposed across morpheme boundary and the initial vowel of the second word gets elided. Tone elision is observed in Ùhànmì. Any of the tone of the vowel of the words across morpheme boundary may get deleted, but it is often the tone of the last vowel of the first word across morpheme boundary that gets deleted, as the following examples show:

1a. dɛ̀ # ɔ̀tʃɛ̀ → dɔ̀tʃɛ̀ 'buy yam'
buy yam

b. rí # esenì → resenì 'eat fish'
eat fish

c. ku # ɛda → kʷɛda 'carry money'
carry money

d. zo # ɔ̀dʒì → zɔ̀dʒì 'steal something'
steal thief

e. borí # ifì → borifi 'tell a lie'
kill lie

The underlying levels show that vowels of the first words across morpheme boundary carry low, mid and high tone. But at the phonetic level, the deletion of their tone bearing units also causes their tonemes to get deleted. This obviously confirms that the tones of the tone bearing units have undergone the process of tone deletion in the surface level because of the deletion of their tone bearing units.

c. Tone Polarization

Abiodun (2007) defines tone polarization as 'when a toneless morpheme takes a tone that is opposite to the tone of a preceding or following morpheme or syllable. In Ùhànmì language, the object pronoun (it) at the object position takes a tone that is opposite to the tone of the monosyllabic verb that governs it. Consider the following instances in the language:

I. dɛ ɛ̀ 'buy it'
ii. ré ɛ̀ 'eat it'
iii. mú è 'carry it or take it'
iv. dí ɛ̀ 'do it'
v. gba ɛ̀ 'kill it'
vi. zá ɛ̀ 'sell it'

It is observed that the object pronoun (it) in the language can either be (e, a and ɛ). The markers seem to have no tone of their own. The tones on any of these markers are however determined by the tones of the monosyllabic verbs before them. The different manifestations

of the tone markers of the pronominal object (it) are in opposite to the tones of the monosyllabic verbs that govern them. This tonal phenomenon is quite common to many other Nigerian languages, Yoruba for instance.

IV. Conclusion

We have been able to establish the grammatical tone pattern in Ùhànmì, an Edoid speech form spoken in Isua-Akoko of Ondo State, Nigeria. It has been stated earlier that little is known about the tone system of the speech form. The available research works are assumed to be unpublished, and likely to be unavailable. Thus, in this study, we demonstrate that the tone system of the speech form operates four significant basic tone levels which are (High, Low, Mid and Falling). The tones are contrastive, i.e. capable of changing meanings. The study also reveals that lexical and grammatical functions of tone are in operation in the speech form. The grammatical function of tone is also reflected in positive and negative structures. Four tonal processes that include tone simplification, tone raising, tone elision and tone polarization are also observed in the speech form. Finally, this research has contributed to existing knowledge in the field of phonology.

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