

PATTERNS OF ACEHNESE REDUPLICATION IN EARLY LITERARY WORKS

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ABSTRACT

*Reduplication is a morphological operation in many Austronesian languages, including Acehnese. This process is very productive in Acehnese, and it occurs with many patterns. This study aims to find out the reduplication patterns in Acehnese based on nine literary works written in the 19th century or earlier. The study also focuses on reduplicated patterns and how affixation is treated in reduplication. The study was qualitative, and thus the data were analyzed qualitatively. The data collection and analysis included data extraction, data classification, data display, and data interpretation. The conclusion was verified by comparing the interpretation and tokens from the data. The results showed that reduplication in Acehnese appeared in total reduplication and partial reduplication. Each pattern involved rhythmic reduplications where vowel and some consonant alterations appeared in the reduplicants. In addition, some of those patterns were lexicalized reduplication, where the reduplication did not have any stem or non-reduplicated form. More than half of the lexicalized reduplicated words were onomatopoeia, words imitating sounds. Finally, only prefixes *meu-*, *peu-*, and *teu-* are found in Acehnese reduplication. These findings have provided comprehensive information regarding the patterns of Acehnese reduplication, which revealed that reduplication is a significant process of word formation in the language.*

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A. Introduction

Acehnese is an Austronesian language spoken in the northernmost province of Indonesia. It is a spoken language that is hardly found in writing except in letters and text messages. Durie

shows that this language is closely related to another Austronesian language, Chamic, which was originally spoken in Cambodia and Vietnam.¹ The correspondence of mid-vowels and diphthongs between the two languages

¹ Mark Durie, "Proto-Chamic and Acehnese Mid Vowels: Towards Proto-Aceh-Chamic," *Bulletin of the School of Oriental and African Studies* 53, no. 1

(1990): 100–114, <https://doi.org/10.1017/S0041977X00021297>.

indicates that both languages originated from a language which Durie specifically calls Proto-Aceh-Chamic.² One of the operations in Acehnese is reduplication.³ One example of this word repetition is presented in the following sentence.

- (1) ʔawaʔ nãn ʒi- mu-**let-let**
people that 3-pl INT run after-run after
'They are trying to catch each other'

Haspelmath and Sims state that reduplication is a morphological operation in which part of or an entire base is copied and reattached to the base, either before or after the base.⁴ Total reduplication occurs when the entire base is copied, whereas if part of the base is copied, this results in partial reduplication. Both patterns of reduplication have been found in Acehnese.⁵ The richness of reduplication in Acehnese is depicted by the availability of almost all lexical words for use in reduplicated forms to refer to repetition, plurality, mutuality, etc. In addition to words that can be reduplicated, many words in Acehnese only appear in a reduplicated form.

² Durie, 1.

³ Sharon Inkelas and Laura J. Downing, "What Is Reduplication? Typology and Analysis Part 1/2: The Typology of Reduplication," *Language and Linguistics Compass* 9, no. 12 (2015): 502–15, <https://doi.org/10.1111/lnc3.12166>.

⁴ Martin Haspelmath and Andrea D. Sims, *Understanding Morphology*, 2nd ed., Understanding Language Series (London: Hodder Education, 2010), 38.

⁵ Devi Pratiwy, "Morfologi Nomina Bahasa Aceh [Morphology of Acehnese Nouns]" (Thesis, Universitas Sumatera Utara, 2008), 38-39.

⁶ John McCarthy and Alan Prince, "The Emergence of the Unmarked: Optimality in Prosodic Morphology," in *Proceedings of the North East Linguistics Society* 24, ed. Mercè González (Amherst, MA, 1994), 333–79,

In terms of patterns of reduplication, McCarthy and Prince provided a method of analysis using Prosodic Morphology.⁶ It is a theory on the effect of prosodic structure on templatic morphology and encompasses reduplication. Therefore, this theory can be applied to represent reduplication. Moreover, Raimy suggests that providing surface patterns of reduplication is essential to any model of reduplication.⁷

There are many works on reduplication patterns in the world's languages. Most languages include reduplication; some languages have a large variety of reduplication patterns, but some do not. Siraya, an Austronesian language, has seven reduplication patterns⁸ and Mesquakie, an Algic language, has more than three reduplication patterns, although Dahlstrom identified two primary patterns.⁹ However, English does not exhibit rich reduplication. Most, if not all, reduplicants in English undergo total reduplication.¹⁰ In this section, I will discuss two main patterns of

https://scholarworks.umass.edu/linguist_faculty_publications/18.

⁷ Eric Raimy, *The Phonology and Morphology of Reduplication* (Berlin: De Gruyter Mouton, 2000), 96, <https://doi.org/10.1515/9783110825831>.

⁸ K. Alexander Adelaar, "Siraya Reduplication," *Oceanic Linguistics* 39, no. 1 (2000): 33–52, <https://doi.org/10.2307/3623216>.

⁹ Amy Dahlstrom, "Fox (Mesquakie) Reduplication," *International Journal of American Linguistics* 63, no. 2 (1997): 205–26.

¹⁰ Jila Ghomeshi et al., "Contrastive Focus Reduplication in English (the Salad-Salad Paper)," *Natural Language & Linguistic Theory* 22, no. 2 (2004): 307–57, <https://doi.org/10.1023/B:NALA.0000015789.98638.F9>.

reduplication which have been identified amongst the world's languages, i.e. total and partial reduplication.

Total reduplication has been found in almost all languages in the world, including English.¹¹ Moravcsik suspects that total reduplication occurs universally in all natural languages.¹² In terms of semantics, the properties of total reduplication are the same, even in unrelated languages. One example is the reduplication of verbs in Mesquakie¹³ and Kavalan.¹⁴ In both languages, verb reduplication refers to repeated action. Meanwhile, partial reduplication is generated when the base is not phonologically truncated; otherwise, partial reduplication is created. Sometimes truncation in a certain language follows a variety of patterns. These patterns determine the shape of partial reduplication in the given language.

Since this study aims to analyze the patterns of reduplications in Acehnese, an introduction to the morphology of Acehnese is essential. According to Durie, there are three morphological components in Acehnese, i.e. morpheme, word, and phrase.¹⁵ Unlike English, Acehnese does not have inflectional morphemes, but it has various kinds of affixes. A word in Acehnese may consist of a single root or a root and an affix, and a phrase consists of

a noun and a modifier. Words in Acehnese are formed by the attachments of these affixes.

Nouns in Acehnese can be formed by adding an affixed. According to Durie, only infix *-eun-* /*un-* can be used for this function.¹⁶ This infix is inserted into a syllable separating a single syllable into two syllables. The consonant of the initial syllable becomes the onset of the new first syllable, and the vowel of the initial syllable becomes a part of the new second syllable. This process is presented figure below.

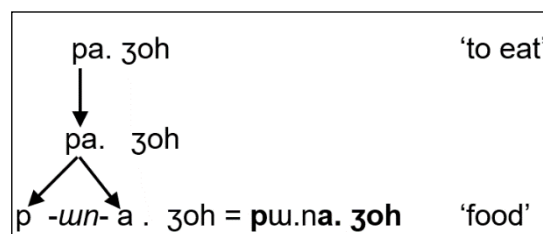


Fig. 1. Infixation process in Acehnese

Figure 1 shows the infixation process, where the infix *-un-*, spelled as *eun*, is inserted into the first syllable. As a result, the infix *eun* changes the syllable structure of the stem where *eu* becomes the code or nucleus of the first syllable and *n* is the onset of the following syllable. The exact process also applies to other words such as *keunarom* 'brooded over eggs' from *karom* 'to brood (eggs)' and *seuneume* 'seedling' from *seume* 'to seed.'

¹¹ Sharon Inkelas, "Reduplication," in *The Morphology and Phonology of Exponence*, ed. Jochen Trommer (Oxford: Oxford University Press, 2012), 355–78, <https://doi.org/10.1093/acprof:oso/9780199573721.003.0011>.

¹² Edith A. Moravcsik, "Reduplicative Constructions," in *Universals of Human Language*, ed. Joseph Harold Greenberg (Stanford: Stanford University Press, 1978), 297–334.

¹³ Dahlstrom, "Fox (Mesquakie) Reduplication." 222.

¹⁴ Amy Pei Jung Lee, "Kavalan Reduplication," *Oceanic Linguistics* 48, no. 1 (2009): 130–47, <https://doi.org/10.1353/OL.0.0028>.

¹⁵ Mark Durie, *A Grammar of Acehnese on the Basis of a Dialect of North Aceh* (New Jersey: Foris Publications U.S.A., 1985), 29, [https://doi.org/10.1016/0024-3841\(90\)90070-2](https://doi.org/10.1016/0024-3841(90)90070-2).

¹⁶ Durie, 145.

Asyik proposes another affix, i.e., the prefix *beurangka-* /*buraŋka-* which forms nouns.¹⁷ However, this prefix, which means 'any-', is not very productive. It only attaches to some stems, which do not

belong to the same category, so that it can hardly be regarded as an affix. The derived words are most likely to be considered lexicalized. Some of those words are given in Table 1.

Table 1.
Stems for prefix *buraŋka-*

| Stems | Category | Gloss | Derived Words | Meaning |
|--------|--------------|-------------|-------------------|---------------------|
| a) soə | pronoun | 'who' | <i>buraŋkasoe</i> | 'whoever' |
| b) puə | pronoun/det. | 'what' | <i>buraŋkapue</i> | 'whatever' |
| c) tɬh | pronoun/det. | 'which' | <i>buraŋkatɬh</i> | 'whichever' |
| d) ri | quantifier | 'any' | <i>buraŋkari</i> | 'whoever, whatever' |
| e) dit | pronoun/det. | 'a little' | <i>buraŋkadit</i> | 'any amount/number' |
| f) be | adverb | 'as big as' | <i>buraŋkabe</i> | 'any size' |
| g) pɔ | noun | 'owner' | <i>buraŋkapɔ</i> | 'anybody's' |
| h) dum | det. | 'many' | <i>buraŋkadum</i> | 'whatever amount' |

Unlike noun forming affixes, verbs are derived by attaching one of the six affixes to the , i.e. *meu-* /*mũ-*, *peu-* /*pu-*, *teu-* /*tu-*, *tu-* /*tu-*, *eum-* /*um-*, and a pronominal pronoun.¹⁸ However, not all six affixes form verbs from other specific word classes. To form verbs from nouns and adjectives, the prefixes *meu-* /*mũ-*, *peu-* /*pu-*, and pronominal affixes are used. These affixes add various kinds of meaning to the derived words.

There are nineteen words in Acehnese which can be attached to the prefix *tu-*, which adds the meaning 'to know' to the stem, and they are known as *tu-words*.¹⁹ Five of the stems are question words and the others vary. Those words are presented in the following table.

Table 2.
List of *tu-words*

| Stems | Gloss | Stems | Gloss |
|---------|------------------|---------|-------------|
| a) soə | 'who' | k) kri | 'as' |
| b) puə | 'what' | l) ban | 'as' |
| c) tɬh | 'which' | m) ʔɔh | 'time' |
| d) pat | '(in) where' | n) dit | 'a little' |
| e) hɔ | '(to) where' | o) dum | 'all' |
| f) -nɛ̃ | '(from) where' | p) ʔɛ̃t | 'short' |
| g) ʒan | 'time' | q) be | 'as big as' |
| h) -kɬn | 'not' | r) pɔ | 'owner' |
| i) ri | 'any' | s) bɛə | 'smell' |
| j) nũm | 'taste, feeling' | | |

The derived word in (g) in Table 2 also suggests that the prefix *beurangka-* /*buraŋka-*, if it is a prefix at all, does not

¹⁷ Abdul Gani Asyik, "A Contextual Grammar of Acehnese Sentences" (Dissertation, The University of Michigan, 1987), 54.

¹⁸ Asyik, 66.

¹⁹ Asyik, 96.

only form nouns. Instead, it changes a noun into a possessive pronoun. Therefore, *beurangka* /buranʒka-/ should not be considered as an only-noun-forming prefix.

Furthermore, some adjectives in Acehese are derived from nouns, verbs and *tu*-words. Adjectives can be formed from verbs using the prefixes *meu-* /mũ/ and *teu-* /tu/. Adding the prefix *meu-* /mũ/

to a verb adds the meaning of 'can be done, in progress, or the result of an action' to the stem, and the prefix *teu-* /tu/ only adds the meaning of 'can be done.' Adding the prefix *meu-* /mũ/ to a noun adds the meaning of 'having the nature of X.' Attached to *tu*-words, the prefix *meu-* /mũ/ adds the meaning of '(which) has been known' to the stem.

Table 3.
Adjective formation in Acehese

| Stems | Class | Gloss | Derived words | Meaning |
|----------|-----------------|-----------------|---------------|---|
| a) graʔ | verb | 'to move' | mũgraʔ | 'movable' |
| b) puta | verb | 'to turn' | mũputa | 'turning' |
| c) ʔuke | verb | 'to carve' | mũʔuke | 'carved' |
| d) ʔawan | noun | 'cloud' | mũ(?)awan | 'cloudy' |
| e) glaŋ | noun | 'worm' | mũglaŋ | 'wormy' |
| f) læt | verb | 'to pull out' | tũlæt | 'to be pulled out' |
| g) hah | verb | 'to open' | tũhah | 'open (adj)' |
| h) bʌh | verb | 'to throw away' | tũbʌh | 'useless' |
| i) hɔ | <i>tu</i> -word | 'where' | mũhɔ | '(which) has been known where it is' |
| j) pɔ | <i>tu</i> -word | 'owner' | mũpɔ | '(which) has been known who the owner is' |

Previous works on Acehese have addressed word formation process including reduplications. Durie presents a short introduction to reduplication, with some examples of reduplication offered in his work on the Grammar of Acehese and acknowledges that words can be reduplicated in full or partially.²⁰ The same

conclusion was also made by Devi, Yakop, and Effendi.²¹ Muliawati and Yusnida conducted another recent study to investigate the use of onomatopoeia in Acehese and revealed that onomatopoeic words are frequently fully and partially reduplicated.²² In addition, Asyik, in another work on grammar in Acehese,

²⁰ Durie, *A Grammar of Acehese on the Basis of a Dialect of North Aceh*, 38-44.

²¹ Sarmila Devi, Muhammad Yakob, and Desi Irafadillah Effendi, "Morfologi Bahasa Aceh Gampong Leuge Peureulak dengan Gampong Keude Peureulak Tahun 2021 [Morphology of Acehese Used in Gampong Leuge Peureulak and

Gampong Keude Peureulak in 2021]," *Jurnal Samudra Bahasa* 4, no. 2 (2021): 53–62, <https://doi.org/10.33059/JSB.V4I2.4197>.

²² Ida Muliawati and Dara Yusnida, "Acehese Onomatopoeias: Investigating, Listing, and Interpreting Their Meanings," *Englisia Journal* 7, no.

has shown that reduplication is one of the plural markings in the language.²³ However, the patterns of reduplication in the aforementioned works were not as comprehensive because reduplication was not the primary focus of the works. In addition, the data used in some of the previous studies above were not clearly stated. Therefore, the current study utilized data of more than 1,000 tokens from early Acehese *hikayats*, one type of popular fiction literature in Aceh, to analyse patterns of reduplication in Acehese. The results of the study have revealed a comprehensive number of reduplication patterns in the language.

B. Method

This research was approached quantitatively, and the data used in this

research were qualitative data extracted from the data source, i.e. literary works in Acehese, best known as *hikayats*. It is a fiction narrative written in the form of poetry. Since this study focuses on early literary works, only *hikayats* published before 2000 were selected as the data source, i.e. nine *hikayats*. The dates of the original unofficial publication are mostly unknown.

The preface in some of these *hikayats* predicts that these *hikayats* were written in the nineteenth century or earlier, as they referred to them as “ancient manuscript.” Previous research has also used *hikayats* as a source of data in a linguistics study.²⁴ The following table lists the title of the *hikayats* used as the data source in this study.

Table 4.
Hikayats used as the data source

| No | Title | Publication Date | Originally Written Date | Publishing Author | Original Author |
|----|----------------------|------------------|-------------------------|----------------------------|----------------------------|
| 1. | Abu Sammah | 1995 | Unknown | M. Alamsyah B | Unknown |
| 2. | Aulia Tujoh | 1992 | Unknown | Muhammad Usman | Unknown |
| 3. | Indra Bangsawan 1 | 1982 | Unknown | Ramli Harun | Unknown |
| 4. | Indra Bangsawan 2 | 1986 | unknown | Ramli Harun | Tgk. Nyak Tihawa Arsyady |
| 5. | Indra Bangsawan 3 | 1986 | Unknown | Ramli Harun | Tgk. Nyak Tihawa Arsyady |
| 6. | Meukuta Alam | 1891 | Unknown | H.K.J. Cowan | Unknown |
| 7. | Prang Cut Ali | 1982 | After 1930 | Ramli Harun | Tgk. Syekh Hasan |
| 8. | Kissah Indra Budiman | 1967 | 1967 | Tgk. Nyak Tihawa Arsyady | Tgk. Nyak Tihawa Arsyady |
| 9. | Rugoe Meubahra | 1961 | 1961 | Moehammad el-Abdulmuthalib | Moehammad el-Abdulmuthalib |

1 (2019): 82–101, <https://doi.org/10.22373/ej.v7i1.5184>.

²³ Asyik, “A Contextual Grammar of Acehese Sentences,” 204-12.

²⁴ Zulfadli Abdul Aziz et al., “Acehnese Archaic Words in Hikayat: An Early Influential Literary Work,” *Lingua Cultura* 14, no. 2 (2020): 161–69, <https://doi.org/10.21512/lc.v14i2.6498>.

The data were the reduplicated words in the *hikayats*, extracted by reading each line carefully. The data extraction was done by a well-educated native speaker of Acehnese who have a knowledge of Acehnese archaic words. The meaning of each reduplicated words was determined by the researchers, with a support from an Acehnese language expert. The extracted reduplicated words were listed along with the meaning and the location where the words can be found in the *hikayats*.

A qualitative data analysis technique proposed by Wellington was used to analyze the collected data. The steps include "dividing up the data, taking apart the data, selecting and filtering the data, classifying the data, and categorizing the data."²⁵ In this research, the data was divided into patterns of reduplication. The patterns were divided into two broad categories, i.e. total reduplication and partial reduplications. Afterward, each category was taken apart to look closely at what types of reduplication were involved. Later, all types of reduplication in each

category were classified, and the types which show similar nature were categorized into other less broad categories. Finally, the conclusion was made by interpreting the results of the data analysis. Acehnese uses Latin alphabets with some diacritics to differentiate the sounds of /e/, /ɛ/, and /ə/ although these diacritics are not common in nonformal settings. However, in presenting the data in the results section, IPA transcription was used to represent how a native speaker of Acehnese pronounces the words. North Acehnese dialect was used for this purpose.

C. Results

After the data were collected, 1032 tokens were extracted. After removing duplicates, the number of unique reduplicated words was 360. Total reduplications were more common in *hikayats* compared to partial reduplications. The detail of the patterns of reduplication found in Acehnese *hikayats* is presented in Table 5 below.

Table 5.
Patterns of reduplication in Acehnese *hikayats*

| No | Pattern of Reduplication | Frequency | Percentage |
|----|--------------------------|-----------|------------|
| 1. | Total reduplication | 347 | 92% |
| | Rhythmic reduplication | 23 | 7% |
| | Others | 314 | 90% |
| 2. | Partial reduplication | 31 | 8% |
| | Rhythmic reduplication | 22 | 71% |
| | Others | 9 | 41% |

²⁵ Jerry Wellington, *Educational Research: Contemporary Issues and Practical Approaches*, 2nd ed. (New York: Bloomsbury, 2015), 261-63.

| | | | |
|----|---------------------------|----|-----|
| 3. | Lexicalized reduplication | 41 | 11% |
| | Onomatopoeia | 23 | 56% |
| | Others | 18 | 44% |

The finding presented in Table 5 above shows three major findings. First, total reduplication is the most common pattern of reduplication in Acehese *hikayats*. Out of 360 tokens found in the *hikayats*, 7 percent of them are rhythmic reduplication. Second, most partial reduplicated words in Acehese *hikayats* are rhythmic reduplication, totaling 71 percent of the total occurrence. Third, many reduplicated words in Acehese

hikayats are lexicalized, the reduplicated words without a stem. More than half of these words are the imitation of sounds, onomatopoeia, such as sounds of animal, human, and other inanimate objects such as sound of swords or other weapons.

In addition, some lexicalized reduplications are totally reduplicated, and the others are partial reduplication. The detail is presented in Table 6.

Table 6.
Patterns of lexicalized reduplication in Acehese *hikayats*

| No. | Pattern of Reduplication | Frequency | Percentage |
|-----|------------------------------------|-----------|------------|
| 1. | Lexicalized total reduplication | 39 | 68% |
| 2. | Lexicalized partial reduplication | 2 | 4% |
| 3. | Lexicalized rhythmic reduplication | 16 | 28% |

Table 6 shows that some lexicalized reduplicated words occur in total and partial reduplications. In addition, some of those reduplications are rhythmic reduplications.

Based on the results above, Acehese has a lot of reduplication. In fact, almost all nouns in Acehese can be reduplicated regardless of the number of syllables they have. In addition to nouns, other word classes, i.e. verbs, adjectives, adverbs and prepositions, can undergo reduplication, which is a word formation

process in Acehese and its neighboring language. However, word classes do not determine the pattern of reduplication in Acehese. Some words can undergo total and partial reduplications, and others undergo total or partial rhythmic reduplications.²⁶

The data also show that many reduplicated words appear with affixes. However, the number of affixes attached to the reduplicated words is very limited. Table 7 provides the detail of affixation in Acehese reduplication.

²⁶ Zulfadli A. Aziz and Vivi Nolikasari, "Reduplication as a Word-Formation Process in the Jamee Language: A Variety of Minang Spoken in South

Aceh," *Studies in English Language and Education* 7, no. 1 (2020): 43–54, <https://doi.org/10.24815/siele.v7i1.15693>.

Table 7.
Affixation in reduplication in Acehnese *hikayats*

| No | Prefixes | Example | Frequency | Percentage |
|----|-----------|-----------------------------------|-----------|------------|
| 1. | meu- /mu/ | meumet-met 'moving continuously' | 117 | 85% |
| 2. | peu- /pu/ | peudeuh-deuh 'keep showing' | 4 | 3% |
| 3. | teu- /tu/ | teueh-eh 'laying (on the ground)' | 16 | 12% |

1. Total Reduplication

Total reduplication is the most productive pattern of reduplication in Acehnese. This reduplication is very straightforward. The reduplicant is the full copy of the stem. The stem which is copied is not necessarily a monosyllable or

disyllable. Most words in Acehnese are either monosyllabic or disyllabic, but trisyllable stems can also be reduplicated if it is semantically required. The following are examples of monosyllabic and disyllabic reduplicated words in Acehnese.

Table 8.
Number of syllables in Acehnese reduplication

| Stems | Gloss | Reduplicated | Meaning |
|----------|-------------|--------------|----------------------------------|
| a) bət | 'to lift' | bət-bət | 'to lift something continuously' |
| b) bit | 'true' | bit-bit | 'seriously' |
| c) buŋãh | 'morning' | buŋãh-buŋãh | 'very early in the morning' |
| d) gisa | 'to return' | gisa-gisa | 'to keep moving back and forth' |

In terms of syllable structure, Acehnese allows both closed and open syllables.²⁷ Total reduplication has been found in words ending in an open syllable (a-b) and a closed syllable (c-d) in Table 9.

In addition, the reduplication template preserves complex onset both in the reduplicant and in the stem, as shown in Table 9 (e-f).

Table 9.
Types of syllables in Acehnese reduplication

| Stems | Gloss | Reduplicated | Meaning |
|----------|----------------|--------------|----------------------------------|
| a) dara | 'girl' | dara-dara | 'girls' |
| b) liŋka | 'to go around' | liŋka-liŋka | 'to go around continuously' |
| c) kadaŋ | 'maybe' | kadaŋ-kadaŋ | 'sometimes' |
| d) karaŋ | 'to compose' | karaŋ-karaŋ | 'to compose without seriousness' |
| e) preh | 'to wait' | preh-preh | 'to wait continuously' |
| f) graʔ | 'to move' | graʔ-graʔ | 'to move continuously' |

²⁷ Astri Yulia, "Does the Spoken Language Help or Hinder the Spelling in the Second Language? A

Case of Indonesian and Acehnese Language" (Thesis, Texas A&M University, 2009), 6.

Unlike in Malay, Acehese reduplication does not show any backcopying effect.²⁸ Both Malay and Acehese have the nasal spread rule. In Acehese, nasal consonants spread the nasality to the following vowels, and any oral consonants can block this nasal spread. (2d) shows that nasal consonants *m* and *n* spread the nasality to the following vowel *a*. (2a) also shows that the spread is extended to the second vowel. However, the nasality is not spread to *ɔ* in (2b) because the glottal stop blocks the spreading.

- (2) a) mōḥ 'to cry'
 b) mīʔɔŋ 'cat'
 c) kamōḥ 'we'
 d) māṅnāŋ 'high'
 e) māleə 'shy'
 f) ināŋ 'girl'

In short, total reduplication in Acehese is simply a full copy of the stem. The base for reduplication is any monosyllabic and dissyllabic stem regardless of the kind of syllable (open and closed syllable). However, the backcopying is not found in Acehese total reduplication, which supports the claim that total reduplication is a full and simple copy or repetition.

2. Partial Reduplication

Partial reduplication is the least productive pattern of reduplication in Acehese. Both dissyllabic and trisyllabic words can undergo partial reduplication, but it has not been found in monosyllabic words. This kind of reduplication has been found in two positions, i.e. prefix and suffix. The template for reduplicating prefix is CV, in which C is the consonant in the first syllable of the stem and V is the vowel following the consonant.

Table 10.
 Partial reduplication (prefix) in Acehese

| Stem | Gloss | Reduplicated | Meaning |
|-------------|------------------|--------------|----------------------|
| a) mandum | 'all' | mamandum | 'all EMP' |
| b) ʃɛdara | 'relatives' | ʃɛʃɛdara | 'relatives EMP' |
| c) gwuratan | 'rust' | gwuguratan | 'rusts EMP' |
| d) mārahēt | 'child executor' | māmārahēt | 'child executor EMP' |

Note: EMP stands for 'emphasis'

The process of reduplicant construction in Table 10 is presented in (3). The stem *mandum* /māndum/ 'all' is a disyllabic word in which the first syllable has a CVC template. When it is

reduplicated, all segments are repeated. These segments are linked to the template, and the segments which fail to link to the template are erased.

²⁸ Raimy, *The Phonology and Morphology of Reduplication*, 16-18.

(3) mandum mandum mandum
 | | | | | → | | | | | | | = mamandum
 CV + CVCCVC CV + CVCCVC

The case in (3) shows that reduplication in Acehnese does not follow the phonemic melody dependence rule. However, the phonemic melody of a reduplicating prefix follows the phonemic melody of the stem.²⁹ The phonemic melody of the word *mandum* /māndum/ yields a CVC template; however, the reduplicating prefix has a CV template. This template is similar to other non-reduplicating prefixes in Acehnese, i.e. *meu* /mw-/, *peu* /pw-/, *teu* /tw-/, *sa* /sa-/,

and *si* /si-/. Therefore, the pattern of a reduplicating prefix in Acehnese is not distinct from that of a non-reduplicating one.

Unlike reduplicating prefixes, the pattern for reduplicating suffixes follows the phonemic melody dependence rule. As previously discussed, Acehnese allows both open and closed syllables. The phonemic melody of the reduplicating suffixes is dependent on the phonemic melody of the last syllable of the stem, whether it is open or closed.

Table 11.
 Partial reduplication (suffix) in Acehnese

| Stems | Gloss | Reduplicated | Meaning |
|----------|-------------|--------------|------------------------|
| a) gwnāp | 'even' | gwnāpnāp | 'every' |
| b) siʔat | 'a moment' | siʔatʔat | 'often' |
| c) siŋāh | 'tomorrow' | siŋāhŋāh | 'next time, not today' |
| d) ʔube | 'as big as' | ʔubebe | 'as big as' (pl.) |

The process of reduplicant construction for reduplicating suffix in Table 11 is presented in (4). In (4a) the phonemic melody of the last syllable has the template of CVC. Therefore, the template of reduplicant is CVC. For stems ending in an open syllable with the template of CV, as shown in (4b), the

reduplicants also have the template of CV. All segments in the stem are copied in the process of reduplication, but the templates of reduplication cannot accommodate all segments. Only the surviving segments appear underlyingly as reduplicants, and others are deleted.

(4) a) s i ʔ a t s i ʔ a t s i ʔ a t
 | | | | | | | | | | | | | = siʔatʔat
 CVCVC + CVC CVCVC + CVC

²⁹ Alec Marantz, "Re Reduplication," *Linguistic Inquiry* 13, no. 3 (1982): 435–82.

b) ? u b e ? u b e ? u b e
 | | | | → | | | | | | = ?ubebe
 CVCV + CV CVCV + CV

Some prefixed words have been found to have been reduplicated, and the reduplicant is inserted in the prefix, which seems to form a reduplicating infix. This type of reduplication only applies to words attached by the prefix *beurangka- /buraŋka- /'any-'* According to Asyik, the

prefix *beurangka- /buraŋka- /'any-'* only attaches to seventeen *tu*-words. In this case of reduplication, the reduplicant is inserted into the prefix *beurangka- /buraŋka- /'any-'*.³⁰ It is constructed by copying a part of the prefix, i.e. *-raŋ-*, which results in *beurangrangka- /buraŋraŋka- /'any-'*, as presented in Table 12.

Table 12.
 Reduplication of affix *beurangka- /buraŋka- /'any-'* attached to *tu*-word

| Prefixed words | Meaning | Prefixed reduplicated | Meaning |
|----------------------|-------------|-----------------------|--------------------|
| a) <i>buraŋkaʒan</i> | 'any time' | <i>buraŋraŋkaʒan</i> | 'any time at all' |
| b) <i>buraŋkaho</i> | 'any where' | <i>buraŋraŋkaho</i> | 'any where at all' |
| c) <i>buraŋkari</i> | 'anything' | <i>buraŋraŋkari</i> | 'anything at all' |
| d) <i>buraŋkasəe</i> | 'anyone' | <i>buraŋraŋkasəe</i> | 'anyone at all' |

The explanation for the process of this reduplication lies in the nature of Acehnese words. Most stems in Acehnese are disyllabic, and only few are trisyllabic. The affixed words are mostly trisyllabic. The word *beurangkajan /buraŋkaʒan/* is a four-syllabic word, which is hardly found in Acehnese. Therefore, this long word is phonologically separated into two phonological words (ω) to meet the word template of the language. Since the coda of the second syllable is a nasal consonant, and it is followed by another syllable whose onset is oral, a pause is generated between those syllables. This pause separates the word *beurangkajan /buraŋkaʒan/* into two phonological words,

and the last syllable of the first word is the syllable ending in a nasal consonant, where the pause is generated. The detailed analysis is presented in the following figure.

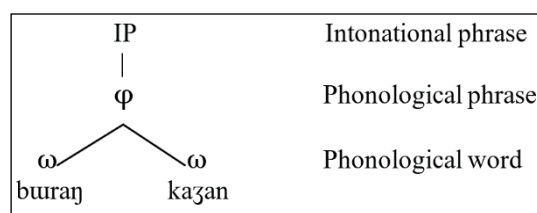


Fig. 2. Phonological words of *buraŋkaʒan*

Because *beurangkajan /buraŋkaʒan/*, as shown in Figure 2, consists of two phonological words, a reduplicant which is inserted into the prefix *beurangka- /buraŋka- /'any-'* can be easily

³⁰ Asyik, "A Contextual Grammar of Acehnese Sentences." 63.

explained. The base for reduplication is the first phonological word, i.e. **beurang* /*buraŋ*/. The process of reduplicating affix formation is similar to (a) in Table 9. The last syllable of the phonological word **beurang* /*buraŋ*/ is a closed syllable, which has the template of CVC. All segments in the word **buraŋ* are copied in the process of reduplication, and they are linked to the CVC templates. The segments which fail to link to the template are deleted. This process results in the reduplicated word *beurangrang* /*buraŋraŋ*/.

3. Lexicalized Reduplication

Many Acehnese words that appear in reduplicated forms do not have stems with specific meanings. The reduplicated form of those words has been lexicalized so that it does not have a stem, and it looks pretty challenging to decide which part of the reduplicated words is the base (left or right part) because neither part has meaning if they stand alone. Lee presumes that this kind of reduplication may have been formed in the past.³¹ These individual words (non-reduplicated words) may have died out because the reduplicated forms are used more frequently, like the word *government over govern* in English.

Lexicalized reduplication is often found in words depicting sound imitation. Sounds are often imitated with a single syllable which best represents the sounds. The reduplication is used to indicate that the sounds are long, repeated or

continuous, as in Table 13. This kind of reduplication does not seem to have been historically derived because neither part (left or right part) would have the meaning as it is only sound imitation.

In addition, lexicalized reduplication is also found in names of birds, as presented in Table 13 (b) or other animals which do something repeatedly or produce repeated sounds. Other lexicalized reduplication is found in word classes of adjectives or verbs referring to repeated actions (d) and sight (c) in Table 13. However, some lexicalized reduplication does not refer to repetition. This kind of lexicalized reduplication behaves in the same way as other lexical words.

Almost all kinds of lexicalized reduplication appear in a prefixed form. If they appear in a lexical reduplicated form, Nouns are not prefixed. The prefix usually found to attach to lexical reduplication is *meu-* /*mũ-*/.

Table 13.
Lexicalized reduplication in Acehnese

| Reduplicated | Meaning |
|-------------------------|---|
| a) <i>mũŋã-ŋã</i> | 'loudly and continuously' for crying, also <i>mũŋĩ-ŋĩ</i> . |
| b) <i>toŋtoŋ</i> | 'woodpecker' |
| c) <i>mũbrenj-brenj</i> | 'glittering' |
| d) <i>jron-jron</i> | 'to run or go quickly in queue' |

4. Rhythmic Reduplication

Most rhythmic reduplication, also known as rhyming deduplication,³² in Acehnese is almost similar to lexicalized

³¹ Lee, "Kavalan Reduplication," 135.

³² Vitaly Voinov, "Rhyming Reduplication in Russian Paired Words," *Russian Linguistics* 36, no. 2 (2012):

175–91, <https://doi.org/10.1007/s11185-012-9091-5>.

reduplication in that no individual word can be used separately. In this kind of reduplication, certain elements on the left or right part are copied while others are not, but the segments are copied. These empty segments are filled with another phoneme. This 'copy and fill' creates harmonizing sounds in the pronunciation. In most cases, vowel segments which are left empty are filled by other, different vowels to create the rhythm while consonants are copied from another part (either left or right part).

Table 14.
Rhythmic reduplication in Acehnese

| Reduplicated | Meaning |
|----------------|-----------------------|
| a) kaʔã-kaʔũ | 'crowded sound' |
| b) ʔapoh-ʔapah | 'hard/difficult' |
| c) tuloŋ-mũloŋ | 'to help one another' |
| d) ruʔoh-ruʔah | 'very tired' |

Distinguishing between stem and reduplicant is very challenging as neither right nor left side can stand alone. Like the lexicalized reduplication, this kind of reduplication was derived before the non-reduplicated form died out. However, some non-reduplicated words survive because they are used more frequently than the reduplicated words, e.g. *tulong* /tuloŋ/ 'to help' (c) and *reu'oh* /ruʔoh/ 'sweat' (d) in Table 13. These instances show that a reduplicant in rhythmic reduplication is a reduplicative suffix or right part because the words in the left part are lexical words, i.e. *tuloŋ* and *ruʔoh*, which should be the stems. Because rhythmic reduplication has presumably been formed in the past, which is similar to the lexicalized reduplication,

the stem in rhythmic reduplication must be similar to the lexicalized reduplication, i.e. the left part.

The segment alternation between the left part (henceforward it is written as stem) and the right part (henceforward it is written as reduplicant) in rhythmic reduplication is not totally random. The alternation is based on defined segment mapping. Vowel alternation involves the alternation of the place of articulation, i.e. backness and fronting, and manner of matriculation, i.e. openness and closeness. However, all vowels preserve the nasality, i.e. IO(nasal).

- (5) a) a → u place and manner
 b) a → œ place and manner
 c) o → a place and manner
 d) ε → ʌ place and manner
 e) a → ɔ place and manner
 f) i → uə place of articulation
 g) ã → ù place
 h) ě → ĩ place manner
 i) ě → õ place
 j) ã → ĩ manner

Vowel alteration in (5) shows that some back vowels in the stem become front vowels in the reduplicant and vice versa. In other cases, open vowels become close (or less open) vowels and vice versa.

In addition to vowel alternation, some words have been found to have consonant alternation. One example is presented in Table 13 (c), i.e. *tulong-mulong* /tuloŋ-mũloŋ/ 'to help one another'. This consonant alternation is a fixed alternation.

/m/ in *-mulong* /mūlonʝ/ is not a result of nasal assimilation because nasal assimilation does not result in phoneme [m]. The process of assimilation presented in Figure 3 results in the alveolar nasal [n]. This assumption is supported by words like *tuwo-muwo* /tuwλ-mūwλ/ 'forgetful' which do not have nasal at all in the stem.

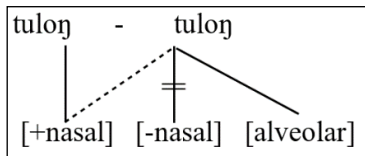


Fig. 3. Expected result of assimilation

(6) Template of rhythmic reduplication

- Template for vowel alternation : (C)(C)(V)(C)C \underline{X} C- (C)(C)(V)(C)C \underline{Y} (\emptyset)(C)
- Template for consonant alternation : C λ (C)(C)(V)(V)(C) - C β (C)(C)(V)(V)(C)

5. Affixation in Reduplication

A lot of reduplicated words in Acehnese appear in the affixed form. Compared to other reduplication, total reduplication appears more frequently in bare form. Lexicalized reduplication which refers to a concrete noun behaves like a concrete noun; therefore, it is not affixed. Other word classes like verb and adjective are often affixed if they are semantically e.g. to add the meaning of X by X to the

The pattern of vowel and consonant changes can be used to formulate templates for rhythmic reduplication, as presented in (6). X is the vowel in the last syllable of the stem which becomes Y in the reduplicant. Some vowels in the reduplicant are diphthongs ending in /ə/. No diphthongs in any stem alternate to form rhythmic reduplication. In consonant alternation, λ is a consonant in the first syllable of the stem, and β is the alternant of λ in the reduplicant.

stem. On the other hand, almost all rhythmic reduplication is affixed.

Word formation in Acehnese does not involve suffixation, although pronouns have suffixal forms. This generalization also applies to reduplicated words, i.e. they are prefixed but not suffixed. Moreover, infixes such as *-eum-* /uɯm/ and *-eun-* /uɯn/ do not attach to a reduplicated word, which distinguishes reduplicated words from other lexical words. In short, only prefixes attach to reduplicated words.

Table 15. Affixed reduplication in Acehnese

| Reduplication | Meaning | Affixed | Meaning |
|--------------------|--------------|-------------------|---------------------------------|
| a) bit-bit (adv) | 'seriously' | mūbit-bit (v) | 'to make something serious EMP' |
| b) buhə-buhə (adj) | 'brave EMP' | puwbuhə-buhə (v) | 'to act brave EMP' |
| c) duəʔ-duəʔ (v) | 'to sit EMP' | tudueʔ-duəʔ (adj) | 'to be seated EMP' |
| d) sagoə-sagoə (n) | 'corners' | mūsagoə-sagoə (v) | 'to have many corners' |

Note: EMP stands for 'emphasis'

Examples in Table 15 show that adding a prefix to reduplicated words adds additional meaning to the words and, apparently, changes the word classes of the reduplicated words. This change is similar to affixation in non-reduplicated words, in which *meu-* /*muw*/ and *peu-* /*puw*/ form verbs³³ and *teu-* /*tuw*/ forms adjectives. However, some affixation is unique in

reduplication. Some words that can appear without affixes in a non-reduplicated form are always prefixed when reduplicated and considered ill-formed if those particular prefixes do not attach to them. Those reduplicated words, which appear only in prefixed forms, are lexicalized-reduplicated words.

Table 16.
Reduplicated words appeared only in affixation

| Stem | Gloss | Affixed | Meaning | Reduplicated |
|----------------|--------|--------------------|--------------------------|--------------------|
| a) <i>khan</i> | 'half' | <i>mūkhan-khan</i> | 'half by half' | * <i>khan-khan</i> |
| b) - | - | <i>mūtāt-tāt</i> | 'very (painful, scared)' | * <i>tāt-tāt</i> |

For lexical reduplication in Table 16 (b), *meu-* /*mūw*/ is not functionless. It is one of the prefixes that form adjectives and *meutat-tat* /*mūtāt-tāt*/ is an adjective which shows that prefix *meu-* /*mūw*/ in lexicalized-reduplicated words has the same function as *meu-* /*mūw*/ attaching to total and rhythmic reduplications, as well as to other lexical words. It supports the claim previously made by Lee that lexicalized reduplication is a result of total and rhythmic reduplications, which are used more often than the stems, causing the stems to die out.³⁴

This research has provided significant information regarding reduplication patterns in Acehese. First, Acehese full reduplication behaves similarly to reduplications in other Austronesian languages, such as Indonesian,³⁵ Papapana,³⁶ Abui,³⁷ and many others. In Acehese and other given languages, full reduplication involves repeating the stem with or without modification in the reduplicant. In Morphological Doubling Theory, the stem is called twice to satisfy semantic requirements. In this case, full reduplications signals emphasis, plurality,

³³ Neni Umar, Mulyadi Mulyadi, and Nurlela Nurlela, "Causative Construction of Aceh Language: Typology Approach," *Language Literacy: Journal of Linguistics, Literature, and Language Teaching* 3, no. 1 (2019): 74–82, <https://doi.org/10.30743/ll.v3i1.969>.

³⁴ Lee, "Kavalan Reduplication," 135.

³⁵ Mary Dalrymple and Suriel Mofu, "Plural Semantics, Reduplication, and Numeral Modification in Indonesian," *Journal of Semantics* 29, no. 2 (2012): 229–60, <https://doi.org/10.1093/jos/ffr015>.

³⁶ Ellen Smith, "Papapana Re~redu~reduplicates: Multiple Reduplication in an Endangered Northwest Solomonian Language," *Oceanic Linguistics* 55, no. 2 (2016): 522–60, <https://doi.org/10.1353/ol.2016.0024>.

³⁷ Marian Klamer and George Saad, "Reduplication in Abui: A Case of Pattern Extension," *Morphology* 30, no. 4 (2020): 311–46, <https://doi.org/10.1007/s11525-020-09369-z>.

prolonged and repeated actions, and mutuality. Reduplications in other languages are also used to emphasize, such as Italian,³⁸ to mark plurality as in Indonesian,³⁹ and to show repeated actions such as in Japanese.⁴⁰

A less productive pattern of reduplication, partial reduplication, was found in prefix and suffix positions. In a prefix position, the reduplication follows CV template instead of the phonemic melody proposed by Wiltshire and Marantz.⁴¹ Some Austronesian languages do not share this pattern, such as Tagalog.⁴² However, the partial reduplication in the suffix position follows the phonemic melody of CV(C), depending on the last syllable of the stem, be it an open or close syllable, as in Mojeño Trinitario.⁴³

Many instances of reduplication found in the data sources are in affixed form, particularly with prefixes. Prefixed reduplication has also been found in Hawaiian.⁴⁴ In Acehnese, only verb forming prefixes *meu-* /mũ/ and *peu-* /pw/

and adjective-forming prefix *teu-* /tu/ are attached to reduplicated words. As in Hawaiian, prefixes never appear in reduplicant position.

Another finding related to affixation in Acehnese reduplication is unique. Some reduplicated words appear only in an affixed form such as *meukhan-khan* /mũkhan-khan/ 'half by half.' The pure reduplicated form **khan-khan* never appears in the data source, and it is unacceptable to native speakers of Acehnese. Similarly, some lexicalized reduplications, termed pseudo-reduplication by Wray, Stockall, and Marantz,⁴⁵ reduplication without an active stem, are never used without an affix such as *meutat-tat* /mũtat-tat/ 'very painful or scared.' This result suggests that reduplication in Acehnese is essential in the word formation process, more essential than previously thought.

Finally, one of the most often types of reduplication in the world's languages, rhythmic reduplication, is very often in

³⁸ Cecilia Poletto and Raffaella Zanuttini, "Emphasis as Reduplication: Evidence from Sì Che/No Che Sentences," *Lingua* 128 (2013): 124–41, <https://doi.org/10.1016/j.lingua.2012.10.016>.

³⁹ Dalrymple and Mofu, "Plural Semantics, Reduplication, and Numeral Modification in Indonesian," 229.

⁴⁰ Nahyun Kwon, "Total Reduplication in Japanese Ideophones: An Exercise in Localized Canonical Typology," *Glossa: A Journal of General Linguistics* 2, no. 1 (2017): 1–31, <https://doi.org/10.5334/gjgl.267>.

⁴¹ Caroline Wiltshire and Alec Marantz, "Reduplication," in *Morphologie* (Walter de Gruyter, 2000), 557–67, <https://doi.org/10.1515/9783110111286.1.8.557>.

⁴² Naonori Nagaya, "Reduplication and Repetition from a Constructionist Perspective," *Belgian Journal of Linguistics* 34, no. 1 (2020): 259–72,

<https://doi.org/10.1075/BJL.00051.NAG/CITE/REFWORKS>.

⁴³ Françoise Rose, *When Vowel Deletion Blurs Reduplication in Mojeño Trinitario*, ed. Gale Goodwin Gómez and Hein van der Voort, *Reduplication in Indigenous Languages of South America* (BRILL, 2014), <https://doi.org/10.1163/9789004272415>.

⁴⁴ John Alderete and Kayleigh MacMillan, "Reduplication in Hawaiian: Variations on a Theme of Minimal Word," *Natural Language & Linguistic Theory* 33, no. 1 (2015): 1–45, <https://doi.org/10.1007/s11049-014-9255-7>.

⁴⁵ Samantha Wray, Linnaea Stockall, and Alec Marantz, "Early Form-Based Morphological Decomposition in Tagalog: MEG Evidence from Reduplication, Infixation, and Circumfixation," *Neurobiology of Language* 3, no. 2 (2022): 235–55, https://doi.org/10.1162/nol_a_00062.

Acehnese. In addition to vowel changes as in Malay,⁴⁶ consonant alteration has also been found, although not as frequent, as also found in Palembang.⁴⁷ The vowel alteration in this type of reduplication is motivated by phonological rules to differentiate the openness and backness of the vowels in reduplicants to those in the stem, as in *reu'oh-reu'ah* /ruʔoh-rwʔah/ 'very tired' where a back close-mid vowel changes to a front open vowel. However, consonant changes seem to be random, so it needs more tokens to properly understand the phonological motivation underlying this alteration, if there is any.

This study has some limitations which can be the basis for future research. First, the data were obtained from early literary works, and thus might not entirely apply to the currently used Acehnese. Therefore, future studies need to consider more recent data sources such as published talks on social media and video sharing such as YouTube. Second, the focus of this study is restricted to traditional morphological analysis, ignoring Morphological Doubling Theory⁴⁸ and phonological perspectives such as Optimality Theory.⁴⁹ Therefore, future research is recommended to analyze

Acehnese reduplication using multiple doubling theory and optimality theory to gain more detailed knowledge on reduplications in this rarely explored language.

D. Conclusion

The study has revealed the patterns of reduplication in Acehnese. The first mostly used reduplication is total reduplication, amounting to 92% or all tokens extracted from the data source, leaving partial reduplication of 8% occurrence. Detailed analyses of these reduplication patterns show that some total reduplications are rhythmic reduplication, and more than 70% of partial reduplication falls under this type of reduplication. In addition, some reduplicated words in Acehnese do not have any non-reduplicated form, and thus they are considered lexicalized reduplication. More than half of lexicalized reduplicated words are onomatopoeia, words imitating sounds.

The results of this study have provided a comprehensive overview regarding the patterns of reduplication in Acehnese. Comprehensive information about rhythmic reduplication and how affixes are used in reduplicated words

⁴⁶ M. N. Kassim, Mohd Aizaini Maarof, and Anazida Zainal, "Enhanced Rules Application Order Approach to Stem Reduplication Words in Malay Texts," in *Advances in Intelligent Systems and Computing*, ed. Tutut Herawan, Rozaida Ghazali, and Mustafa Mat Deris, vol. 287 (Springer, Cham, 2014), 657–65, https://doi.org/10.1007/978-3-319-07692-8_62.

⁴⁷ Mardheya Alsamadani and Samar Taibah, "Types and Functions of Reduplication in Palembang,"

Journal of the Southeast Asian Linguistics Society 12, no. 1 (2019): 113–42.

⁴⁸ Sharon. Inkelas and Cheryl Zoll, *Reduplication: Doubling in Morphology* (Cambridge: Cambridge University Press, 2005), 6.

⁴⁹ McCarthy and Prince, "The Emergence of the Unmarked: Optimality in Prosodic Morphology"; Jesse Saba Kirchner, "Minimal Reduplication and Reduplicative Exponence," *Morphology* 23, no. 2 (2013): 227–43, <https://doi.org/10.1007/s11525-013-9225-5>.

have not been addressed in previous studies. Onomatopoeia has previously been researched, but it is just a type of rhythmic reduplication discussed in more detail in the present study. Finally, the findings have revealed that reduplication is a more significant morphological process of word formation in Acehese than previously believed.

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