



Article

Assimilation of the Batak Angkola Language in Pintu Padang, North Sumatra, Indonesia

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SUBMISSION TRACK

Received: February 2, 2024

Final Revision: March 18, 2024

Accepted: March 22, 2024

Available Online: April 5, 2024

KEYWORDS

assimilation, Batak Angkola language, distinctive features, generative phonology, sounds

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ABSTRACT

The objective of this research is to describe the assimilation process in the Toba Batak language, specifically as it is spoken in Pintu Padang Village, located in North Sumatra, Indonesia. Assimilation is a type of sound change that is not the same to become the same or almost the same. This process can occur between segments in a word and between components in compound words. So, it is essential to formalize it by describing the sound features that undergo these changes. The data was gathered through observation and interviews. Listening to Batak Angkola speakers communicate with one another allowed for observations. Simultaneously, interviews were conducted by directly interviewing informants who were chosen based on particular criteria. Three individuals were interviewed using a structured interview format. In addition, a set of unstructured interviews was carried out with several other speakers. For this purpose, a generative phonology approach is used. Data analysis was carried out by the distributional method with the segmenting immediate constituents technique. After that, the distinctive features of the sound are explained. The results of this research show that assimilation took place in nasal consonants [m], [n], and [ŋ], which met the consonants [k], [p], [s], [t], [l], and [c]. The sounds [m], [n], and [ŋ] appear in the forms [p], [t] and [k], respectively. Then, the sound [n] appears in the form [l] and [c] when it meets the sounds [l] and [c] too. Generally, it can be inferred that sound modifications in the form of assimilation are homorganic.

I. INTRODUCTION

The realization of sounds in speech can change. In generative phonology, sound modifications are determined changes in the properties of segments or sounds, such as sound alterations, deletions, additions, combinations, and permutations. Assimilation is one type of sound modification that occurs. Assimilation is the transformation of two distinct sounds into the same or similar as a result of environmental sounds. According to Schane (1992), a segment gains qualities or characteristics from nearby segments throughout the assimilation process. In this process, consonant sounds can be influenced by the qualities of the vowel sounds around them, as well as vowel sounds can take on the characteristics of consonants, and vowel sounds can also influence each other.

Jessica (2016) made a similar statement on a phonological process called assimilation when a sound changes to resemble a neighboring sound. This process can occur in both forward and backward directions, within a word or between words.

The term *assimilation* serves as a clear example of the process it represents (Hock & Joseph, 2009). The word *assimilate* comes from the Latin word *assimilare* which means 'to make similar to'. It is formed by combining the Latin prefix *ad-* which means 'to', and the word *similis* which means 'similar'. In the word *assimilate*, the *d* sound of *the ad* blends with the following *s* and acquires the same articulation.

Assimilation is classified into two forms

based on the alterations that occur: phonetic assimilation and phonemic assimilation. The sound modifications that occur during phonetic assimilation do not change the identity of the sound, but just the pronunciation. This differs from phonemic assimilation, which involves a sound alteration that results in a change in the identity of the sound itself (Muslich, 2009 & Abidin, 2016). This process is classified into two types based on the position of the sound being assimilated: progressive assimilation and regressive assimilation. The sound that changes is positioned after the sound that is assimilated, and the change occurs from left to right (forward). Meanwhile, regressive assimilation occurs when the sound that changes comes before the sound that is assimilated, with the shift occurring from right to left (Lass, 1991; Riswara, 2015; & Widiawati, 2023).

In this regard, the article focuses on Batak Angkola language assimilation in Pintu Padang Village. The Batak Angkola language is a dialect of the southern Batak language spoken in Southern Tapanuli (Dongoran et al., 1997). Based on preliminary observations, many linguistic phenomena were discovered in the Batak Angkola language, indicating assimilation. Therefore, it is necessary to do this research. The sound [m] for example, becomes [p] as a result of the sound [p] situated in front of it. This form is found, among others, in the word meaning 'better', which comes from [um-] + [pade] 'good' becomes [uppade] 'better'. Another example: when followed by the sound [k], the sound [m] changes to the sound [p], as in [modom] 'sleep' + [-kon] pronounced [modopkon] 'to put to sleep'. This phenomenon, as stated by Abidin (2016), is called phonemic assimilation. Furthermore, the sound that is absorbed comes before the sound that is assimilated. This kind of sound change, as mentioned by Riswara (2015), is also called regressive assimilation.

Generative phonology is a theory that studies the structure of sounds as a system of formulas that generate phonetic representations. It explains the assimilation in the Batak Angkola language. Unlike the concept of phonemes, this theory considers distinguishing features as the smallest unit. It establishes a relationship between distinguishing features, the lexicon, and phonological rules, as stated by Kridalaksana (2008).

Harms (1968) defines generative phonology as a field of research that analyzes the phonemic

structure of morphemes through a set of sequential rules. Nafisah (2017) stated that generative phonology is a set of rules or principles that pertain to the relationship between sounds and their meanings, the phonetic representations in a language, the production of sound changes, and the assumptions made about the resulting sound changes.

In addition, Hintono and Subiyanto (2023) said that, in addition to phonological processes, one of the key subjects explored in generative phonology is the element of distinguishing traits. Hintono & Subiyanto added that the distinctive features or distinguishing characteristics of a segment in generative phonology are based on 1) main class features (syllabic, sonorant, consonantal); 2) articulation area (anterior, coronal); 3) manner of articulation (continuous, delayed release, strident, nasal, lateral); 4) tongue shaft (high, low, back); 5) lip shape (round); 6) addition (tense, voiced, aspiration, glottalization); and 7) prosody (stress and length). Dardjowidjojo (2010) claimed that the distinguishing features of consonants are vowel and consonantal, anterior, coronal, continuous, strident, nasal, and voice, whereas the distinguishing features of vowel sounds are high, vowel (syllabic), back, round, and tense. The rules for constructing a word and the sound changes that occur can be formed by knowing the distinguishing qualities of a language. Several past studies pertinent to this research are included below.

Nababan (2009) studied the process, types, and functions of assimilation of the Batak Simalungun language. The Simalungun language is a language that also comes from the same Batak language group as the Batak Angkola language, namely the Southern Batak language (Adelaar, 1981). Therefore, this research is considered relevant for reference and comparison. The difference with this research is in terms of the approach used. The approach used in this research is structural phonology, while this research uses generative phonology.

Abidin (2016) conducted the following study on assimilation in the Bonai Ulakpatian isolect found in Riau Province. The assimilation process is explained in this study utilizing principles that describe sound changes that occur due to the sound environment in question, allowing the type of assimilation of the language being examined to be discovered. The results demonstrate that the Bonai

Ulakpatian isolect has four types of assimilation in the centre of the word between the two vowels, namely 1) PM *nd / v-v > BU [n] / v-v, 2) PM *ŋg / v-v > BU [ŋ] / v-v, 3) PM *mb / v-v > BU [m] / v-v which is total progressive assimilation and phonetic assimilation, and 4) PM *nj / v-v > BU [ñ] / v-v which is reciprocal and phonemic assimilation.

Additional studies that are pertinent to the present research examined various regional languages in Indonesia and were conducted by Jaya (2019), Siga & Purniawati (2019), Sela & Nurhayati (2020), and Nurainun (2022). Using distinctive feature theory and a generative phonology methodology, these studies describe the assimilation process. The proposed rules define phonological alterations that transpire due to the specific acoustic environment under consideration to identify the particular form of assimilation exhibited by the language under investigation. In addition, affixation research was investigated by Anasti & Liusti (2022) and Halil & Hilmi (2022), who described the forms and varieties of affixes.

Amini et al. (2023) studied the Batak Angkola language's affix forms and morphophonemic processes. The process of phonological change caused by the conjunction of one morpheme with another is addressed in this study. The research emphasis and research limitations distinguish this study from others. Amini et al. (2023) focused on phoneme alterations in the morphological process in the form of affixation, highlighting sound changes only in affixation. In contrast to this study, which is limited to one morphological process, it also analyses sound modifications from an assimilation standpoint. Aside from that, the generative phonology approach used in this study distinguishes it from the work of Amini et al. (2023).

Based on examples of data, the subject of Batak Angkola language assimilation is worth further investigation. Aside from that, according to past research descriptions, no research on the assimilation of the Batak Angkola language has been uncovered. The use of generative phonology as an approach is also novel in linguistic studies of the Batak Angkola language. Therefore, further research is required. This study aims to use generative phonology to describe the process of assimilation of the Batak Angkola language. This research must be carried out to add references to linguistic studies, particularly studies on language

assimilation. Aside from that, the identity of the Batak Angkola language as one of Indonesia's regional languages is better appreciated as a result of this research.

II. METHODS

This is a sort of field research. Native speakers of the Angkola Batak language from the Pintu Padang region, Batang Angkola District, South Tapanuli Regency provided research data. The data was gathered through observation and interviews. Listening to Batak Angkola speakers communicate with one another allowed for observations. The results acquired that are pertinent to this research were documented.

Simultaneously, interviews were conducted by directly interviewing informants who were chosen based on particular criteria, such as having a modest degree of education, being proficient in the language being studied, and exhibiting exceptional oral communication abilities (Nadra & Reniwati, 2023). Three individuals were interviewed using a structured interview format. In addition, a set of unstructured interviews were carried out with several other speakers who possess a high level of proficiency in the Batak Angkola language. This is beneficial for validating the obtained data.

A set of questions was developed ahead of time to ensure the efficiency of the data collection process. The question list is a data-stimulating tool to ensure the informant provides the anticipated data (Sudaryanto, 2015). The informant's information is captured in prepared notes.

For this purpose, a generative phonology approach is used. The data was analyzed using the distribution method and direct constituent segmentation techniques. Segmented forms refer to forms or sounds that undergo the process of assimilation. After that, the distinctive features of the original sound are explained, including the sounds that are influenced and the sounds that influence them. Next, the distinctive features of the typical sounds that have undergone the assimilation process are also described.

III. RESULT

Assimilation occurs in the Batak Angkola language spoken in the Pintu Padang area in the form of affixes, those expressing ownership, those in the form of repetition, those in the form of phrases, and those that occur in the

words themselves. The technique in question is demonstrated using examples from the field. The outcomes of data analysis are presented both formally and informally. Formally, the presentation uses symbols to illustrate the shifting sound qualities. Cons (consonantal), lab (labial), ant (anterior), cor (coronal), dis (distributed), dor (dorsal), son (sonorant), nas (nasal), str (strident), cont (continuant), app (approximant), and lat (lateral) are the extant sound properties. Informally, presentation is accomplished by describing or discussing the process at hand.

Based on data analysis, assimilation in the Batak Angkola language was found as follows.

Assimilation [m] + [k, p, t, s]

The voiced nasal [m] with the features [+cons, +lab, +son, +nas, +ant] appears in the form of the voiceless plosive [p] which features [+cons, +lab, +ant] when it is combined with the voiceless velar plosive [k], bilabial plosive [p], alveolar plosive [t], and alveolar fricative [s].

a) [mk] → [pk]

The voiced nasal [m], when combined with the voiceless velar plosive [k], will appear as a voiceless plosive [p] with the following features.

$$[m] \rightarrow [p] / \text{---} [k]$$

$$\begin{bmatrix} +\text{cons} \\ +\text{lab} \\ +\text{son} \\ +\text{nas} \\ +\text{ant} \end{bmatrix} \rightarrow \begin{bmatrix} +\text{cons} \\ +\text{lab} \\ +\text{ant} \end{bmatrix} / \text{---} \begin{bmatrix} +\text{cons} \\ +\text{dor} \end{bmatrix}$$

The features retained from the original sound are [+cons], [+lab], and [ant]. Meanwhile, the same features influencing it as the sound is [+cons].

Example:

- (1) [tanom] 'plant' + [-kon] → [tanopkon] 'to plant'
- (2) [unjom] 'fall' + [-kon] → [unjopkon] 'to fall'
- (3) [ma(N)-(-kon)] + [siram] 'flush' → [mañirapkon] 'to water'
- (4) [ma(N)-(-kon)] + [ronjom] 'dip' → [majaronjopkon] 'to dip'
- (5) [ma(N)-(-kon)] + [lomlom] 'black' → [majalomlopkon] 'to blacken'
- (6) [modom] 'sleep' + [-kon] → [modopkon] 'to make someone sleep'

b) [mp] → [pp]

If a voiced nasal [m] is followed by a bilabial

plosive voiceless [p], then the voiced nasal [m] undergo an assimilation process, resulting in the change of the voiced nasal [m] to the bilabial plosive voiceless [p]. The phonological features of the difference can be described below.

$$[m] \rightarrow [p] / \text{---} [p]$$

$$\begin{bmatrix} +\text{cons} \\ +\text{lab} \\ +\text{son} \\ +\text{nas} \\ +\text{ant} \end{bmatrix} \rightarrow \begin{bmatrix} +\text{cons} \\ +\text{lab} \\ +\text{ant} \end{bmatrix} / \text{---} \begin{bmatrix} +\text{cons} \\ +\text{lab} \\ +\text{ant} \end{bmatrix}$$

The features of the original sounds that are still maintained are [con, +lab, and +ant], which are the same as the sound that influences the sound [m]. In other words, the original sound becomes the same as the sound that influences it.

Example:

- (1) [um] 'more' + [pade] 'better' → [uppade] 'better'
- (2) [podom-podoman] → [podop-podoman] 'beds'
- (3) [pohom-pohom] → [pohop-pohom] 'all secretly'
- (4) [simpan] → [sippa] 'save'
- (5) [lumpat] → [luppat] 'jump'
- (6) [rumpu] → [ruppu] 'grass'
- (7) [lempay] → [leppey] 'straight'

c) [mt] → [pt]

The voiced nasal [m], when combined with the voiceless alveolar plosive [t], will appear as a voiceless plosive [p] with the following features.

$$[m] \rightarrow [p] / \text{---} [t]$$

$$\begin{bmatrix} +\text{cons} \\ +\text{lab} \\ +\text{son} \\ +\text{nas} \\ +\text{ant} \end{bmatrix} \rightarrow \begin{bmatrix} +\text{cons} \\ +\text{lab} \\ +\text{ant} \end{bmatrix} / \text{---} \begin{bmatrix} +\text{cons} \\ +\text{cor} \\ +\text{ant} \end{bmatrix}$$

The patterns above show that three of the five features of the original sound, namely [+cons, +lab, and +ant], are still maintained, and two have the same features as the influencing sound, namely [+cons] and [+ant].

Example:

- (1) [mahum] 'get well' + [-toy] 'lah' → [maluptoy] 'to get well'
- (2) [lomlom] 'hitam' + [-toy] 'lah' → [lomloptoy] 'it becomes black'
- (3) [tanom-tanom] → [tanop-tanom] 'floras'
- (4) [tajom-tajom] → [tajop-tajom] 'all are sharp'

Examples:

- (1) [palan-palan] → [palatpalan] 'slow'
- (2) [pajan-pajanon] → [panatpajanon] 'snacks'
- (3) [pinang-pingan] → [pingatpingan] 'plates'
- (4) [parumaen-parumaenku] → [parumaetparumaetku] 'my daughter-in-law'
- (5) [podoman-podomannia] → [podomatpodomannia] 'her/his bed'

d) [ns] → [ts]

Voiced nasal [n] if it appears with a voiceless alveolar fricative [s] will appear as a voiceless alveolar plosive [t] with the following features.

$$[n] \rightarrow [t] / \text{---} [s]$$

$$\begin{bmatrix} +\text{cons} \\ +\text{son} \\ +\text{nas} \\ +\text{cor} \\ +\text{ant} \end{bmatrix} \rightarrow \begin{bmatrix} +\text{cons} \\ +\text{cor} \\ +\text{ant} \end{bmatrix} / \text{---} \begin{bmatrix} +\text{cons} \\ +\text{cont} \\ +\text{str} \\ +\text{cor} \\ +\text{ant} \end{bmatrix}$$

The patterns above show that three of the five features of the original sound, namely [+cons, +cor, and +ant], are still maintained and three have the same features as influencing sound, namely [+cons, +cor, and +ant].

Example:

- (1) [suan-suanon] → [suatsuanon] 'to be planted'
- (2) [soban-soban] → [sobatsoban] 'firewood'
- (3) [songon-songon] → [sonotsonon] 'like'
- (4) [sungkun-sungkun] → [sukkutsukkun] 'breadfruit'

Assimilation [ŋ] + [k, p, t, s]

The voiced velar nasal [ŋ] with the features [+cons, +son, +nas, +dor] appears in the form of the voiceless velar plosive [k] with the features [+cons, +dor] when it is combined with the voiceless velar plosive [k], bilabial plosive [p], alveolar plosive [t], and alveolar fricative [s]. The patterns of change can be seen below.

a) [ŋk] → [kk]

The velar voiced nasal [ŋ] which is combined with the voiceless velar plosive [k] will appear as a voiceless velar plosive [k] with the following features.

$$[\eta] \rightarrow [k] / \text{---} [k]$$

$$\begin{bmatrix} +\text{cons} \\ +\text{son} \\ +\text{nas} \\ +\text{dor} \end{bmatrix} \rightarrow \begin{bmatrix} +\text{cons} \\ +\text{dor} \end{bmatrix} / \text{---} \begin{bmatrix} +\text{cons} \\ +\text{dor} \end{bmatrix}$$

The patterns above show that two of the four features of the original sound, namely [+cons] and [+dor], are still maintained, and these features are the same as the sound that influences the sound [ŋ]. In other words, the original sound becomes the same as the sound that influences it.

Example:

- (1) [lobon] 'split' + [-kon] → [lobokkon] 'split it'
- (2) [sinapan] 'gun' + [-ku] 'my' → [sinapakku] 'my gun'
- (3) [ma(N)-(-kon)] + [sirap] 'divorced' → [maqirakkon] 'to divorce'
- (4) [potoŋ] 'cut' + [-kon] → [potokkon] 'cut it'
- (5) [tuŋkot] 'stick' → [tukkot] 'stick'
- (6) [naŋkon] 'no need' → [nakkon] 'no need'
- (7) [maŋ-] + [kali] 'dig' → [makkali] 'to dig'
- (8) [maŋ-] + [kojar] 'run after' → [makkojar] 'to run after'

b) [ŋp] → [kp]

The velar voiced nasal [ŋ], which is combined with the bilabial plosive [p], will come as a voiceless velar plosive [k] with the following features.

$$[\eta] \rightarrow [k] / \text{---} [p]$$

$$\begin{bmatrix} +\text{cons} \\ +\text{son} \\ +\text{nas} \\ +\text{dor} \end{bmatrix} \rightarrow \begin{bmatrix} +\text{cons} \\ +\text{dor} \end{bmatrix} / \text{---} \begin{bmatrix} +\text{cons} \\ +\text{lab} \\ +\text{ant} \end{bmatrix}$$

The patterns above show that two of the four features of the original sound, namely [+cons] and [+dor], are still maintained, and one has the same feature as influencing sound, namely [+cons].

Example:

- (1) [potan-potan] → [potak-potan] 'late afternoon'
- (2) [potoŋ-potoŋ] → [potok-potoŋ] 'cut into pieces'
- (3) [pajan-pajanon] → [pajak-pajanon] 'for display'
- (4) [pisan-pisan] → [pisak-pisan] 'bananas'
- (5) [goreŋ pisan] → [gorek pisan] 'fried bananas'

c) [ŋt] → [kt]

The velar voiced nasal [ŋ] combined with

the voiceless alveolar plosive [t] will change into a voiceless velar plosive [k] with the following features.

$$[ŋ] \rightarrow [k] / \text{---} [t]$$

$$\begin{bmatrix} +\text{cons} \\ +\text{son} \\ +\text{nas} \\ +\text{dor} \end{bmatrix} \rightarrow \begin{bmatrix} +\text{cons} \\ +\text{dor} \end{bmatrix} / \text{---} \begin{bmatrix} +\text{cons} \\ +\text{cor} \\ +\text{ant} \end{bmatrix}$$

The patterns above show that two of the four features of the original sound, namely [+cons] and [+dor], are still maintained, and one has the same feature as influencing sound, namely [+cons].

Example:

- (1) [ginjaŋ] ‘long’ + [-toŋ] → [ginjaktoŋ]
‘go high’
- (2) [godajaŋ] ‘big’ + [-toŋ] → [godaktoŋ]
‘go big’
- (3) [tulaŋ-tulaŋ] → [tulak-tulaŋ]
‘uncles’
- (4) [tobaŋ-tobaŋ] → [tobak-tobaŋ]
‘old people’
- (5) [tiaŋ-tiaŋ] → [tiak-tiaŋ]
‘pillars’
- (6) [timbaŋ-timbaŋ] → [timbak-timbaŋ]
‘to be weighed’

d) [ŋs] → [ks]

The velar voiced nasal [ŋ], which is combined with the voiceless alveolar fricative [s], will appear as a voiceless velar plosive [k] with the following features.

$$[ŋs] \rightarrow [k] / \text{---} [s]$$

$$\begin{bmatrix} +\text{cons} \\ +\text{son} \\ +\text{nas} \\ +\text{dor} \end{bmatrix} \rightarrow \begin{bmatrix} +\text{cons} \\ +\text{dor} \end{bmatrix} / \text{---} \begin{bmatrix} +\text{cons} \\ +\text{cont} \\ +\text{str} \\ +\text{cor} \\ +\text{ant} \end{bmatrix}$$

The patterns above show that two of the four features of the original sound, namely [+cons] and [+dor], are still maintained, and one has the same feature as influencing sound, namely [+cons].

Example:

- (1) [sonaŋ-sonaŋ] → [sonaksonaŋ]
‘enjoying’
- (2) [sombaŋ-sombaŋ] → [somboksombaŋ]
‘all arrogant’
- (3) [selaŋ-selaŋi] → [selakselaŋi]
‘those pipes’
- (4) [singgaŋ-singgaŋ] → [singaksinggaŋ]
‘squatting’
- (5) [sulaŋ-sulaŋon] → [sulaksulaŋon]
‘to be bribed’

Assimilation [n] + [l]

Nasal voiced [n] with features [+cons, +son,

+nas, +cor, +ant] which occur with alveolar voiced [l] will appear as lateral alveolar voiced [l] with the features [+cons, +son, +app, +lat, +cor, +ant] ([nl] → [ll]).

$$[n] \rightarrow [l] / \text{---} [l]$$

$$\begin{bmatrix} +\text{cons} \\ +\text{son} \\ +\text{nas} \\ +\text{cor} \\ +\text{ant} \end{bmatrix} \rightarrow \begin{bmatrix} +\text{cons} \\ +\text{son} \\ +\text{app} \\ +\text{lat} \\ +\text{cor} \\ +\text{ant} \end{bmatrix} / \text{---} \begin{bmatrix} +\text{cons} \\ +\text{son} \\ +\text{app} \\ +\text{lat} \\ +\text{cor} \\ +\text{ant} \end{bmatrix}$$

The patterns above show that four of the five features of the original sound, namely [+cons, +son, +cor, and +ant.], are still maintained, and four have the same features as influencing sound, plus two features came from the influencing sound, namely [+app] and [+lat].

Example:

- (1) [lipan-lipan] → [lipal-lipal] ‘centipes’
- (2) [lamun-lamun] → [lamul-lamun] ‘all rape’
- (3) [bulan lapan] → [bulal lapan] ‘the eighth month’

Assimilation [n] + [c]

Voiced nasal [n] with features [+cons, +son, +nas, +cor, +ant] appears in the form of voiced palatal plosive [c], which has features [+cons, +cor, +dis, +dor] when it comes with the voiced palatal plosive [c] with the same features ([nc] + [cc]).

$$[n] \rightarrow [c] / \text{---} [c]$$

$$\begin{bmatrix} +\text{cons} \\ +\text{son} \\ +\text{nas} \\ +\text{cor} \\ +\text{ant} \end{bmatrix} \rightarrow \begin{bmatrix} +\text{cons} \\ +\text{cor} \\ +\text{dis} \\ +\text{dor} \end{bmatrix} / \text{---} \begin{bmatrix} +\text{cons} \\ +\text{cor} \\ +\text{dis} \\ +\text{dor} \end{bmatrix}$$

The patterns above show that two of the five features of the original sound, namely [+cons] and [+cor], are still maintained, and two have the same features as influencing sound, namely [+dis] and [+dor]. The original sound becomes the same as the sound that influences it.

Example:

- (1) [man-] + [cet] ‘paint’ → [maccet]
‘to paint’
- (2) [man-] + [calong] ‘pick’ → [maccalong]
‘to pick’
- (3) [man-] + [cabut] ‘revoke’ → [maccabut]
‘to revoke’
- (3) [man-] + [cubit] ‘pinch’ → [maccubit]
‘to pinch’
- (5) [mancit] → [maccit] ‘sick’
- (6) [lancet] → [laccat] ‘langsar’
- (7) [ancogot] → [accogot] ‘tomorrow’
- (8) [incur] → [iccor] ‘small fish’

IV. DISCUSSION

The type of assimilation that occurs in the Batak Angkola language is regressive assimilation because the direction of the influence of the sound that occurs is behind or lies before the assimilated sound. For example, the change in the sound [n], which has alveolar-nasal features, is pronounced to [l], which has alveolar-lateral features in the phrase *bulan lapan* [bulal lapan] ‘month eight’.

There is a novelty in this research when compared with previous research by Amini et al. (2023). The novelty in question is the regressive assimilation of the sound [n] into [l] when it meets the sound [l] as well. Apart from that, different from the research of Amini et al. (2023), sound (phone) changes are not limited only to those that occur in the morphological process, like affixation, but are also found in the reduplication process, as in the data *sonan-sonan* [sonak-sonan] ‘happy-fun’, in phrases, such as *bulan lapan* [bulal lapan] ‘the eighth month’, and in the word itself, like *mancit* [maccit] ‘sick’.

The sounds that undergo assimilation are nasal [m, n, ŋ] when they meet the sounds [k, p, t, s, l, c]. Five rules can be created based on these sound changes. (1) [m] > [p] / _[k], [p], [t], [s]. The first rule states that the voiced nasal sound [m] with the features [+cons, +lab, +son, +nas, +ant] appears in the form of a bilabial plosive [p] with the features [+cons, +lab, +ant] in word-initial position followed by the voiceless velar plosive [k] with the features [+cons and +dor], bilabial plosive [p] with the features [+cons, +lab, +ant], alveolar plosive [t] with the features [+cons, +cor, +ant], and alveolar fricative [s] with the features [+cons, +cont, +str, +cor, +ant]; (2) [n] > [l] / _[k], [p], [t], [s]. The second rule is that the voiced nasal [n] with the features [+cons, +son, +nas, +cor, +ant] appears in the form of the alveolar plosive [l], which has the features [+cons, +cor, +ant] as followed by the voiceless velar plosive [k], with the features [+cons and +dor], bilabial plosive [p] with the features [+cons, +lab, +ant], alveolar plosive [t] with the features [+cons, +cor, +ant], and alveolar fricative [s] with the features [+cons, +cont, +str, +cor, +ant]; (3) [ŋ] > [k] / _[k], [p], [t], [s]. The third rule states that the voiced velar nasal sound [ŋ] with the feature [+cons, +son, +nas, +dor] appears in the form of the voiceless velar plosive [k], which has the feature [+cons, +dor] when combined with the sound voiceless velar plosive [k] which has the

feature [+cons, +dor], bilabial plosive [p] with the features [+cons, +lab, +ant], alveolar plosive [t] with the features [+cons, +cor, +ant], and alveolar fricative [s] with the features [+cons, +cont, +str, +cor, +ant]; (4) [n] > [l] / _[l]. The fourth rule is that the nasal-voiced [n] with features [+cons, +son, +nas, +cor, +ant] which occur with alveolar voiced [l] will appear as lateral alveolar voiced [l] with the features [+cons, +son, +app, +lat, +cor, +ant]; and (5) [n] > [c] / _[c]. The fifth rule is that voiced nasal [n] with features [+cons, +son, +nas, +cor, +ant] appears in the form of voiced palatal plosive [c], which has features [+cons, +cor, +dis, +dor] when it comes with the voiced palatal plosive [c] with the same features.

The sounds that change is homorganic. This means that the sound features of the original sound retain their features after changing. For example, the voiced nasal [n] with the features [+cons, +son, +nas, +cor, +ant] appears in the form of the voiceless alveolar plosive [t] with the features [+cons, +cor, +ant]. The consonant, coronal, and anterior sound features are equally present in the sound before and after it changes. Another example is the sound velar [ŋ] with the feature [+cons, +son, +nas, +dor] becoming velar [k] with the features [+cons and +dor]; alveolar [n] with features [+cons, +son, +nas, +cor, +ant] becomes alveolar plosive [l] with the features [+cons, +cor, +ant]; and voiced nasal [m] with the features [+cons, +lab, +son, +nas, +ant] becomes bilabial plosive [p] with the features [+cons, +lab, +ant]. This implies that assimilation can be found in the Batak Angkola language, in which the process of changing a sound into a similar sound or the same as another nearby sound occurs.

V. CONCLUSION

Based on the previous results and discussion, it can be concluded that the assimilation process in the Batak Angkola language is regressive assimilation because the direction of sound change is behind the assimilated sound. The sounds that undergo assimilation are the nasal sounds [m, n, ŋ] when they meet the sounds [k, p, t, s, l, c]. The sound [m] changes to [p]; [n] become [l]; [ŋ] becomes [k] in the initial position of a word followed by the sounds [k, p, t, s]. Then, the sound [n] appears in the form of [l] and [c] in the initial position of the word, followed by the sounds [l] and [c]. Overall, it can be concluded that the sounds that undergo assimilation are all nasal sounds. In other words,

nasal sounds are the sounds that adapt most easily to their environment.

ACKNOWLEDGEMENT

This article is part of research funded by the Faculty of Humanities, Universitas Andalas, with the Postgraduate Research Scheme (TPPs), PNPB

Fund Research Contract Number: 2 371/UN16.07. D/KPT/XI/2023. The author would like to thank the financial assistance provided. The author would also like to thank the informants who provided oral data on the Batak Angkola language in the research area and other parties who helped so that this research could proceed as planned.

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