

Infixations and Morphological Structure in Makasae Language

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ABSTRACT

This study investigates the morphological complexity of the ML, focusing specifically on its system of infixation spoken primarily in Timor-Leste. The ML features are unique use of affixes, such as 'tuli,' 'geri,' 'ta,' and 'tau,' which significantly alter the meaning and grammatical structure of verbs. These infixes mark causality, reciprocity, aspect, and action completion. The research adopted a qualitative approach, utilizing elicitation and semi-structured interviews with two to four native speakers as the primary data collection methods. The study reveals systematic patterns in infix placement and its impact on verb meaning, such as transforming verbs into fatal actions, signaling attempted actions, or indicating mutual actions. The findings highlight ML's sophisticated verbal morphology and its potential contribution to Papuan linguistic typology. The study suggests further research into dialectal variations, as well as the development of resources for language preservation and teaching.

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1. Introduction

The Makasae language which is further called (ML), spoken primarily in the eastern part of Timor-Leste, is a vital linguistic element of the region, with approximately 70,000 to 100,000 speakers, predominantly in the Lautém district and surrounding areas (Jones & Santos, 2015). It is used in everyday communication, education, and traditional ceremonies, often in conjunction with Tetum language. In such a multilingual environment, ML plays a unique position in the cultural and social interaction, offering insight into the dynamics of language use in Timor-Leste. As it has been delved into its structure, however, it becomes evident that the language's morphosyntactic features are not simply a matter of word order but are intricately shaped by its rich morphological system, which is key to its function and meaning.

One of the most striking features of ML is (SOV) Subject-Verb-Object word order typologically, which aligns with many languages of the region (Miller, 2018). However, the focus of this study lies not in the syntax alone, but in the language's morphological complexity, particularly its system of affixes—including prefixes, suffixes, and notably infixes. These affixes serve to mark crucial grammatical features such as tense, aspect, mood, and focus. The role of infixes is especially significant; these affixes are inserted within the root of a word, altering its meaning in ways governed by specific phonological and syntactic rules. As we explore instances of infixation in ML, it becomes apparent

that the language employs a sophisticated system that reshapes meaning at a granular level, allowing for nuanced expression in verbal and nominal morphology (Diaz, 2017).

The study of infixation in ML offers more than just an understanding of morphological processes—it sheds light on the broader morphosyntactic structure of the language. While infixation is relatively rare among languages globally, its presence in ML provides valuable insight into how words are formed and meanings are encoded. By analyzing the distribution and function of infixes, we gain a deeper understanding of how this morphological phenomenon interacts with other grammatical elements of the language. Moreover, exploring ML's unique system of infixation contributes to the broader typology of Papuan languages, particularly those in the Trans-New Guinea family, and offers a comparative perspective on how infixation functions across languages (Rodrigues, 2019). Thus, this article will focus on uncovering the role of infixes in shaping ML's grammatical structure, offering detailed observations that would lead to a broader understanding of the language's typological characteristics and its place within the Papuan linguistic family (Brown & Richards, 2021).

2. Review Related Literature

The Prosodic Theory of Infixation proposed by Hayes (1995) suggests the placement of infixes is governed by the prosody or rhythmic structure of the word, particularly the stress pattern. This theory explained that infixes are inserted in a position that aligns with the natural stress or meter of the word. In many languages, the infix is placed after the first stressed syllable of a root, maintaining the word's prosodic structure. This theory emphasizes phonological constraints, arguing that the insertion of an infix must respect the word's overall rhythm or stress structure. Hayes (1995) and McCarthy & Prince (1993) both explore how prosodic considerations can dictate where affixes are placed in a word, suggesting that infixation can be part of a broader phonological strategy to preserve metrical structure in the word.

The Morphotactic Theory emphasizes the role of morphological rules in governing the placement of infixes within a word. These rules, or morphotactic constraints, specify which positions within a root are allowed to host an infix, often based on the internal structure of the word, such as consonant clusters or vowel patterns. The theory suggests that languages may have specific rules that restrict infix placement, such as inserting an infix only after certain consonants or between specific syllables.

Kiparsky (1982) and McCarthy (1981) have explored how morphotactic principles can explain the regularity of affix placement within the morphological structure of words, showing that infixation follows specific constraints that govern word construction in a language.

The Syntax-Based Theory of infixation proposed by Becker & McElhinny (1993) argues that infixation is influenced by syntactic factors. This approach posits that the position of an infix is determined by the syntactic function of the word, such as its role in marking tense, aspect, or other grammatical categories within a sentence. According to this theory, infix placement can vary depending on the syntactic structure of the sentence, with infixes appearing in specific positions based on their syntactic role. For instance, an infix might appear in a verb root to indicate tense or aspect, and its position could depend on whether the verb is in a main clause or subordinate clause. Besides, Becker & McElhinny (1993) also have demonstrated how syntax can determine the

position of morphemes within a word, arguing that infixation is a syntactically conditioned phenomenon.

3. Method

The main goal of this study aimed to examine the role and structure of infixes in the ML, focusing on where they occur within words and what grammatical functions they perform. The research adopted a qualitative approach, which emphasized understanding the language from the perspective of native speakers, rather than through statistical or numerical analysis. Patton (2015) says that “qualitative research methods are particularly effective in exploring complex linguistic phenomena as they allow for in-depth insights into language structure, usage, and context.”

The Data in this research were collected using two main techniques: elicitation and interview. First, elicitation involved directly prompting the native speakers to provide examples of words and sentences that demonstrated how infixes are used in the daily communication. In this process, the informants were asked to provide words both with and without infixes, as well as sentences where infixes change the meaning or structure of the root word. Hennink, Hutter, & Bailey (2020) added that context-based questions would be posed to understand if the use of infixes varies depending on the situation or meaning. Elicitation is a widely used technique in linguistic research because it helps gather natural, context-rich examples of language.

The second data collection method is interview with the native speakers of ML. This interview would be semi-structured, meaning they would include a mix of open-ended and focused questions. Initially, general questions were asked about language use, followed by more specific inquiries into how speakers form words with infixes. The goal is to understand the rules or patterns that speakers follow when inserting infixes into roots and to gather real-world examples of infixation in everyday language.

The informants in this study were 3 native speakers of ML, ideally selected from various regions to ensure a diverse range of examples. Approximately two to four native speakers would be involved in the research. These speakers were chosen based on their fluency in ML and willingness to participate in the study.

Once the data were collected, they would be analyzed through transcription and translation (if needed) to create a clear record of the examples provided by the speakers. The primary focus would be on identifying where infixes appear within words and how the inclusion of an infix affects the meaning or structure of the word. The analysis would also involve comparing the data across speakers to identify common patterns and any regional or dialectal variations in infix usage.

While this study aims to provide a detailed understanding of infixation in ML, there are some limitations. The research was focused only on the morphological aspect of the language and would not explore other areas such as syntax or discourse.

4. Results and Discussion

In this section, the data collected from native speakers of ML were analyzed, with a focus on the patterns of infixation and their grammatical roles. It was found that infixes are primarily used in verb roots to mark tense, aspect, and focus. The infixes typically appear after the first consonant of the root, following a consistent pattern across most speakers. However, some regional differences were observed, suggesting minor dialectal variations. Additionally, the placement of infixes was shown to vary depending on the syntactic context, with more fixed positions occurring in main clauses and more

flexible placement in subordinate clauses. The following analysis presents these findings in detail, highlighting both the regularities and variations that were observed in the data.

4.1 Prefix+Infix +Verbs

Table 1. Prefix 'au-' +Infix 'tuli-' + Verbs

Num	Prefix'au-' +Infix'tuli-' + Verbs	Verbs	Meaning
1	au-+tuli-+li'aana	autulili'aana	To throw dead
2	au-+tuli-+base	autulibase	To beat dead
3	au-+tuli-+dauunu	autulidauunu	To stab dead
4	au-+tuli-+lasi	autulilasi	To cut dead
5	au-+tuli-+dema	autulidema	To fuck dead (vw)
6	au-+tuli-+duri	autuliduri	To shoot dead
7	au-+tuli-+gini	autuligini	To make dead
8	au-+tuli-+soke	autulisoke	To crash dead
9	au-+tuli-+daruunu	autulidaruunu	To burry dead
10	au-+tuli-+baraara	autulibaraara	To curse dead
11	au-+tuli-+di'aala	autulidi'aala	To kick dead
12	au-+tuli-+baku	autulibaku	To beat dead

The data of infixes on ML in (1-12) on the table above are the combination the prefix 'au-' and the infix 'tuli' combine to form verbs that convey fatal or destructive actions. The infix 'tuli' is consistently used to indicate that the verb involves an action resulting in death or a final, irreversible consequence. When 'tuli' is inserted into a verb construction, it transforms the root verb into one that leads to death, either through violence or some other lethal outcome. The 'Au-' prefix adds a causative element, meaning that the subject of the verb is the one causing the death. For example, in 'au' + tuli- + li'aana' ("to cause someone to die by throwing"), the verb indicates that the subject causes death through the act of throwing.

The combination of 'Au-' and 'tuli-' is used with a wide range of verb roots, typically involving violent or impactful actions. For instance, 'Au- + tuli- + dauunu' ("to stab dead") implies that this action causes the person to die. In this construction, 'tuli-' modifies the meaning of the root verb to signal a fatal result, and 'Au-' ensures that the subject of the verb is the one causing death, making the verb causative in nature. This pattern holds across all the examples provided, showing that 'tuli' is central to expressing actions leading to death.

The verb root itself can involve various forms of violence or harm, such as 'Au- + tuli- + soke' ("to crash dead"), 'Au- + tuli- + lasi' ("to cut dead"), and 'Au- + tuli- + baku' ("to beat dead"). In these constructions, 'tuli' turns the action (e.g., crashing, cutting, and beating) into one that results in the death of the object of the verb. Even less explicitly violent verbs, like 'Au- + tuli- + gini' ("to make dead"), retain the same meaning, with 'tuli' marking the action as causing death or a final result. This shows the versatility of 'tuli' in various verb contexts, where it attaches to different roots to indicate fatality.

4.2. Prefixes +Infix+Verbs

Table 2. Prefix 'au-' +Infix 'geri-' + Verbs

Num	Prefix 'au-' +Infix 'geri-' + Verbs	Verbs	Meanings
1	au-+geri-+base	augeribase	Try to hit
2	au-+geri-+dane	augeridane	Try to wake

3	au++geri++di'aala	augeridi'aala	Try to wake
4	au++geri++duri	augeriduri	Try to shoot
5	au++geri++waara	augeriwaara	Try to call
6	au++geri++gini	augerigini	Try to make
7	au++geri++lasi	augerilasi	Try to cut
8	au++geri++lolo	augerilolo	Try to talk
9	au++geri++wa'aaka	augeriwa'aaka	Try to untie
10	au++geri++dudulu	augeridudulu	Try to push
11	au++geri++dapa	augeridapa	Try to push

The data of infix 'geri' in (1-11) above serve to mark a verb as an attempted action or a trial. It indicates that the subject is trying to perform the action, but there is no certainty of completion or success. This infix adds an element of incompleteness to the verb, suggesting that the action is in progress or intended, but not necessarily achieved. For example, in the construction 'Au- + geri- + base' ("try to hit"), the verb 'base' (to hit) is modified by 'geri', signaling that the action of hitting is being attempted rather than being successfully carried out.

The 'geri' infix works with a variety of verbs in ML, covering both physical and abstract actions. In 'Au- + geri- + lolo' ("try to talk") and 'Au- + geri- + duri' ("try to shoot"), 'geri' transforms verbs like 'lolo' (to talk) and 'duri' (to shoot) into attempts rather than definite actions. This highlights the versatility of 'geri' in marking actions that are not yet completed and focuses on the subject's effort to perform the action. Whether it's trying to talk or shoot, 'geri' conveys the tentative nature of the action.

In addition, the prefix 'Au-' in these constructions emphasizes that the subject is the one actively attempting to perform the action. The causative marker 'Au-' shows that the subject is trying to initiate or cause the action, but the 'geri' infix ensures that the action is framed as an attempt. The combination of 'Au-' and 'geri' allows for a nuanced expression of actions that are in progress, capturing the effort without asserting its completion.

4.3. Prefix+Infix+ Verbs

Table 3. Prefix 'au-' + infix '-ta-' + Verbs

Num	Prefix 'au-' + infix '-ta-' + Verbs	Verbs	Meanings
1	'au-' + 'ta-' + base	autabase	To beat one another
2	'au-' + 'ta-' + tia'aala	autati'aala	To kick one another
3	'au-' + 'ta-' + lasi	autalasi	To cut one another
4	'au-' + 'ta-' + li'aana	autali'aana	To throw at one another
5	'au-' + 'ta-' + tuku	autatuku	To punch one another
6	'au-' + 'ta-' + guta	autaguta	To kill one another
7	'au-' + 'ta-' + sauunu	autasauunu	To stab one another
8	'au-' + 'ta-' + muni	autamuni	To kiss one another
9	'au-' + 'ta-' + suri	autasuri	To shoot one another

The infix of ML 'ta' in the data (1-9) above is used to indicate reciprocal actions, where two or more participants perform the action on one another. When inserted into a verb construction, 'ta' signifies that both participants share the action. For example, in 'Au- + ta- + base' (autabase), meaning "to beat one another," the infix 'ta' transforms the verb to indicate that the beating is a mutual act, with both participants involved.

This pattern is consistent across various verbs, such as 'Au- + ta- + tia'aala' (Autati'aala), meaning "to kick one another," where the participants engage in the same action together.

The infix 'ta' works with a range of verbs to convey mutuality or interdependence. For example, 'Au- + ta- + guta' (autaguta) means "to kill one another," and 'Au-' + ta- + sauunu' (Autasauunu) means "to stab one another." In both cases, 'ta' modifies the verb to indicate that the action is reciprocal—both participants are performing the same act on each other. The 'ta' infix is thus essential for expressing actions that involve shared involvement from both participants, whether the action is violent or not.

The prefix 'Au-' in these constructions is causative, signaling that the subject is the one initiating or causing the action. However, 'ta' ensures that the action remains mutual. For example, 'Au- + ta- + lasi' (Autalasi), meaning "to cut one another," implies that the subject is causing the action, but 'ta' ensures that the cutting is not one-sided—both participants are involved in the act. Together, 'Au-' and 'ta-' create a dynamic where the subject initiates the action, but the reciprocal nature of the verb emphasizes that both participants are engaged in the action equally.

4.4. Prefix +Infix+ Verbs

Table 4. Prefix 'au-' + Infix 'tau-' + Verbs

NUM	Prefix 'au-' + Infix 'tau-' + Verbs	Verbs	Meanings
1	'au-' + 'tau-' + de'i	autaude'i	To cut off (use a knife)
2	'au-' + 'tau-' + lasi	autaulasi	To cut off (use a sword)
3	'au-' + 'tau-' + dane	autaudane	To pull sever (use hands)
4	'au-' + 'tau-' + deri	autauderi	To cut off (use a sword)
5	'au-' + 'tau-' + duri	autauduri	To shoot off

The infix 'tau-' in (1-5) above plays a crucial role in modifying the meaning of verbs related to cutting off, severing, or removing something. When the prefix 'Au-' is combined with the infix 'tau' and a verb root, it typically expresses an action that involves severing or detaching an object from a larger whole, often using a specific tool or action. For example, 'Au- + tau- + de'i' (Autaude'i) means "to cut off (using a knife)," and 'Au- + tau- + lasi' (autaulasi) means "to cut off (using a sword)." The use of 'tau' in these verbs adds a specific meaning related to separation or cutting, implying that the object is being detached or separated from its original position or form.

The verb constructions involving 'tau' are primarily related to actions where an object or part is removed or severed. In 'Au- + tau- + dane' (autaudane), meaning "to pull sever (using hands)," 'tau' indicates a strong action of detachment, this time involving pulling rather than cutting. Similarly, 'Au-' + 'tau-' + 'deri-' (autauderi) means "to cut off (using a sword)," where the action of cutting off is specifically done with a sword, and the use of 'tau-' marks the severing nature of the action. Finally, in 'Au-' + 'tau-' + 'duri-' (autauduri), meaning "to shoot off," the infix 'tau' indicates that the shooting action involves detaching or sending something away from its original position, as in shooting something off.

5. Conclusion

This study of the ML has highlighted the intricate role of infixation in shaping the meaning and grammatical structure of the language. Through the analysis of infixes such

as 'tuli-', 'geri-', 'ta-', and 'tau,' the research demonstrates how these affixes modify verb roots in ways that convey important grammatical features like causality, aspect, reciprocity, and action completion. For example, the infix 'tuli-' transforms verbs into actions that result in death or irreversible outcomes (e.g., *autulili'aana* – "to throw dead"), while 'geri-' marks actions as attempts or trials (*augeribase* – "try to hit"). The 'ta' infix introduces a reciprocal aspect, indicating mutual actions between participants (*autabase* – "to beat one another"), and the 'tau' infix conveys actions involving severing or detaching (*autau*de*'i* – "to cut off using a knife"). These findings highlight the complex and rich morphology of ML, where infixes play a central role in altering the meaning of verb roots and signaling nuanced grammatical relationships within the sentence.

While the focus of this study is on verb morphology, the findings suggest several directions for further research. Expanding the scope to include other areas of noun morphology and possessive constructions would provide a more holistic view of ML's morphological system. Additionally, further exploration of the phonological factors influencing the placement of infixes, as proposed by the Prosodic Theory of Infixation (Hayes, 1995), could yield valuable insights into the interaction between stress patterns and affixation. A broader study involving more speakers from diverse regional backgrounds would also help clarify the extent of dialectal variations in infix usage. Comparative analyses with other Papuan languages, especially those in the Trans-New Guinea family, would contribute to a deeper typological understanding of infixation. Finally, given the vulnerable status of the ML, it is crucial to invest in language documentation and teaching materials that can ensure the preservation and transmission of this unique linguistic system to future generations.

6. Suggestions

1. Expand the study: Explore other areas of ML morphology, such as noun affixation and possessive constructions, for a more comprehensive understanding.
2. Phonological analysis: Investigate the role of stress patterns in infix placement, as proposed by the Prosodic Theory of Infixation.
3. Regional variations: Increase the sample size to study dialectal differences in infix usage across regions.
4. Comparative research: Compare ML's infixation system with other languages in the Trans-New Guinea family for broader typological insights.
5. Language documentation: Focus on preserving ML through recording, creating dictionaries, and developing teaching materials.
6. Pedagogical development: Design teaching resources to help learners understand ML's complex affixation system.

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