

Reevaluating the Concept of Partial Reduplication in Banjarese through an Optimality Theoretic Approach

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Abstract

This paper aims to re-examine the partial reduplication process in Banjarese. Previous scholars have mostly claimed that partial reduplication in this language is merely a process of copying the initial syllable of the base. However, we argue that this definition does not adequately describe how the reduplicative morpheme is actually copied. Banjarese syllable structure can be any size, however, the partial reduplicative morpheme in this language can be either CV or V only. A corpus linguistics approach was employed, utilizing data collected from a corpus of hundreds of Banjarese short stories. Additionally, secondary data from previous studies of Banjarese reduplication was incorporated into this study. By implementing the Optimality Theory of phonology, we propose that partial reduplication

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in Banjarese can be defined as copying the initial syllable of the base while ensuring that the reduplicative morpheme remains an open syllable in size. This means that the NOCODA constraint is essential to ensure that the reduplicative morpheme is either CV or V making it impossible for a consonant to emerge in the coda position of a syllable. Moreover, the light reduplicative morpheme represents an unmarked syllable structure that arises in Banjarese partial reduplication. This study aims to contribute to the existing body of research on Banjarese reduplication.

Keywords: Banjarese; Partial Reduplication; Reduplicative Morpheme; Constraint; Optimality Theory; Light Syllable; Unmarked Syllable Structure

1. Introduction

According to Rafiek (2021), Banjarese is a spoken language used by the Banjarese people in South Kalimantan, which has also spread to various parts of Kalimantan Island. Kawi (2002) supports this observation, noting that Banjarese is extensively used in South, Central, and East Kalimantan. Although South Kalimantan is the original home of the Banjarese community, today, they can be found in various locations across Indonesia and Malaysia. This widespread presence is attributed to the community's well-known sense of adventure.

Banjarese has three morphological processes, which are affixation, reduplication, and compounding (Durasid & Kawi, 1978; Hapip, Kawi & Noor, 1981; Suryadikara, Durasid & Ibrahim, 1984). This paper will discuss one of these morphological processes, namely the reduplication process, focusing specifically on partial reduplication. Inkelas and Downing (2015) conclude that reduplication involves the doubling of some component of a morphological base for some morphological purpose. Banjarese reduplication has received a lot of formal attention, particularly from Indonesian (e.g., Asnawi, 2017; Durasid & Kawi, 1978; Juwairiah, 2018; Rafiek, Effendi, & Nisa, 2022; Rosahin, 2017; Sugono, 2008; Suryadikara et al., 1984; Rusdiana, Jumainah, & Suciati, 2021). Suryadikara et al. (1984) defined partial reduplication in Banjarese as the repetition of the initial syllable of the base word. This view is supported by several other scholars, including Sugono (2008), Durasid and Kawi (1978), Juwairiah (2018), and Rusdiana et al. (2021). Examples of Banjarese partial reduplication are shown in (1).

(1) **Banjarese Partial Reduplication**

	Base Word	Derived Word
(i)	/ga.na/ 'live'	/ga-ga.na/ 'RED - live (emphasized)'
(ii)	/ha.baŋ/ 'red'	/ha-ha.baŋ/ 'RED - reddish'
(iii)	/i.ŋa/ 'fascinate'	/i-i.ŋa/ 'RED - fascinated'
(iv)	/i.ŋap/ 'gasp'	/i-i.ŋap/ 'RED - gasp repeatedly'

(Rafiek et al., 2022, p. 248)

This definition can be used to explain the reduplication process of bases that begin with an open syllable, such as CV and V, as shown in (1). However, there are also situations where a word begins with a closed syllable, as illustrated in (2).

(2) **Banjarese Partial Reduplication of Base with Closed Syllable (Si Palui Corpus)**

	Base Word	Derived Word
(i)	/tun.tuŋ/ 'finish'	[tu-tun.tuŋ] 'RED - right after finishing'
(ii)	/kan.daŋ/ 'fence'	[ka-kan.daŋ] 'RED - fences'
(iii)	/um.pat/ 'follow'	[u-um.pat] 'RED - following repeatedly'
(iv)	/un.dʒun/ 'fishing rod'	[u-un.dʒun] 'RED - fishing repeatedly'

The examples in (2) show the difference in size between the reduplicative morpheme and the first syllable of the base. Only a few segments of the first syllable are copied into the reduplicative morpheme, and the segment occupying the coda position of that first syllable of the base is deleted. Therefore, the definition of partial reduplication given by previous scholars (such

as Durasid & Kawi, 1978; Juwairiah, 2018; Rusdiana et al., 2021; Sugono, 2008; Suryadikara et al., 1984) that is, partial reduplication is the repetition of the initial syllable of the base word, is not an accurate description of the actual process of partial reduplication in Banjarese.

The previous definition only mentioned the reduplicative morpheme as a monosyllable without specifying the size of the syllable. However, it also implies that the size of the reduplicative morpheme entirely reflects the size of the base's initial syllable. If the initial syllable is in CV or V form, the reduplicative morpheme should be a light syllable. Conversely, if the initial syllable is in CVC or VC form, the reduplicative morpheme should be a heavy syllable.

However, a CVC or VC-sized reduplicative morpheme has so far not been observed in this language. The only two sizes that have been observed are CV and V, as shown in (1) and (2). This indicates that the size of the reduplicative morpheme does not really reflect the size of the base's initial syllable and vice versa. Hence, the objectives of this study are:

- To determine the size of the partial reduplicative morpheme in Banjarese.
- To provide a comprehensive, constraint-based analysis of the Banjarese partial reduplication process.

The emergence of syllables with no coda in Banjarese partial reduplicative morphemes furthermore supports a theory known as the Emergence of the Unmarked (McCarthy & Prince, 1994), which will be discussed later. First, however, we will re-examine Banjarese partial reduplication by applying the concept of constraints within a language as developed in Optimality Theory (from now on to be known as OT). The core idea of OT is that linguistic forms (such as words or sentences) are the result of a competition between constraints. The next section discusses the partial reduplication process in some languages, focusing on the size of the reduplicative morpheme.

2. Literature Review

Marantz (1982) defines partial reduplication as a process of copying part of a phonological element, such as the maximal syllable. This suggests that partial reduplication is not solely concerned with syllables, as is the case in Banjarese. In fact, Uzbanczyk (2017) has divided partial reduplication into two types: foot-sized reduplication and syllable-sized reduplication.

A metrical foot is a group of syllables that has a specific stress pattern. A foot can consist of an unstressed syllable followed by a stressed syllable, a stressed syllable followed by two

unstressed syllables, or two stressed syllables. Foot-sized reduplication encompasses various categories of metrical feet, such as iambs (an unstressed syllable followed by a stressed syllable) and trochees (a stressed syllable followed by an unstressed syllable). In their survey of bi-syllabic reduplication patterns, McCarthy, Kimper, and Mullin (2012) found that most patterns copy the first syllable of the base, with the second syllable being a light syllable. This can be seen in the case of Waalubal as presented in (3).

(3) **Foot-Sized Partial Reduplication in Waalubal**

	Base Word	Derived Word
(i)	/buma-ni/	[buma -buma-ni] 'RED - hit about'
(ii)	/yaru:ma/	[yaru -yaru:ma] 'RED - mincing'
(iii)	/yarbi/	[yarbi -yarbi-le:-la] 'RED - singing'
(iv)	/baramga:/	[bara -baramga:] 'RED - hopping'

(Crowley, 1978, cited in McCarthy et al., 2012, p. 187)

All the final syllables of the reduplicative morphemes are open syllables, as required by Waalubal, where reduplicative morphemes always consist of two syllables and end with a light syllable. In contrast, the reduplicative morphemes in Yidiny are formed by copying the first two syllables of the base, regardless of whether the syllables are light or heavy, as shown in (4).

(4) Foot-Sized Partial Reduplication in Yidiny

	Base Word	Derived Word
(i)	/bupa/	[bupa -bupa] 'RED – women'
(ii)	/ŋalal/	[ŋalal -ŋalal] 'RED - many big ones'
(iii)	/dʲugarba-n/	[dʲugar -dʲugarba-n] 'RED - have a restless mind'
(iv)	/gindalba/	[gindal -gindalba] 'RED - lizards'

(Dixon, 1977 cited in McCarthy & Prince, 1990, p. 145)

While reduplicative morphemes in Banjarese, Waalubal, and Yidiny are located to the left of the base, reduplicative morphemes in Manam are located to the right. At the same time, these reduplicative morphemes must contain two moras, either two light syllables or one heavy syllable. An example of Manam reduplication is shown in (5).

(5) Foot-Sized Partial Reduplication in Manam

	Base Word	Derived Word
(i)	/salaga/ 'long'	[salaga-laga] 'getting longer-RED'
(ii)	/moita/ 'knife'	[moita- ita] 'cone shell-RED'
(iii)	/ʔulan/ 'will'	[ʔulan- laŋ] 'desirable-RED'
(iv)	/ziŋ/ 'black ash'	[zin- ziŋ] 'blam-RED'

(Lichtenberk, 1983, p. 100)

According to Uzbanczyk (2017), foot-sized reduplication is seen as copying the prosodic structure of the first two syllables of the root with a tendency to have a reduplication morpheme with an open final syllable. This is seen as different from syllable-sized reduplication. Partial reduplication in Banjarese, according to most previous scholars (e.g., Suryadikara et al., 1984; Sugono, 2008; Durasid & Kawi, 1978; Rahardian, 2017; Juwairiah, 2018; Rusdiana et al., 2021), is viewed as a replication of the first syllable of the root word. However, previous studies on partial reduplication have found that this process does not merely replicate the syllable (Moravcsik, 1978). Instead, the reduplication morpheme has its own fixed form, distinct from the root it is associated with. For example, in the Mokilese, the reduplication morpheme targets heavy syllables, as shown in (6).

(6) Syllable-Sized Partial Reduplication in Mokilese

	Base Word	Derived Word
(i)	/pɔdɔk/	[pɔd-pɔdɔk]
	‘plant’	‘planting-RED’
(ii)	/soorɔk/	[soo-soorɔk]
	‘cry’	‘crying-RED’
(iii)	/diar/	[dii-diar]
	‘search’	‘searching-RED’

(Harrison, 1973 cited in Blevins, 1996, p. 523)

There are three possible ways for Mokilese to satisfy the heavy syllable requirement. The first is by copying the onset segment of the second syllable (as in 6(i)). If the vowel segment of the first syllable is a long vowel, then only that syllable is copied since it already fulfils the heavy syllable requirement (as in 6(ii)). On the other hand, if the vowel segment of the first syllable is a short vowel, the vowel is lengthened in the reduplicative morpheme (as in 6(iii)). The fact that syllable-sized partial reduplication is not merely a copying of the syllable can also be seen in Ilokano, as exemplified in (7).

(7) Syllable-Sized Partial Reduplication in Ilokano

	Base Word	Derived Word
(i)	/pusa/ 'cat'	[pus -pusa] 'RED-cats'
(ii)	/kaldin/ 'goat'	[kal -kaldin] 'RED-goats'
(iii)	/roʔot/ 'tinggal'	[ro:- roʔot] 'RED-thrash'
(iv)	/trak/ 'truck'	[tra:- trak] 'RED-truck'

(Hayes & Abad, 1989, p. 357)

Based on the examples in (7), it can be seen that the reduplicative morpheme in this language is indeed syllable-sized and heavy. There are various ways of forming it, such as by copying the onset segment of the second syllable for syllables that do not have a coda. However, there are exceptions, as shown in 7(iii) and 7(iv), where the coda segment is not copied into the reduplicative morpheme, even though the syllable has a coda. Instead, the vowel in the initial syllable is elongated in order to satisfy the size requirement.

The findings on syllable-sized reduplication have influenced scholars to propose the existence of templates for these reduplicative morphemes (Marantz, 1982). A template refers to an empty phonological slot that is attached to the base and must be filled with segmental content. This approach aligns with the development of Autosegmental Phonology (Goldsmith, 1976), where different phonological content is expressed at different levels. The segmental content of a template is filled by copying the base, as shown in Figure 1.



Figure 1. Partial Reduplicative Morpheme Template in Ilokeano

(Authors' own work)

The same approach was also adopted by Syed Ahmad (1998) and Ahmad (2000) in their analysis of partial reduplication in Malay. Examples of this reduplication are shown in (8).

(8) Syllable-Size Partial Reduplication in Malay

	Base Word	Derived Word
(i)	/laki/ 'man'	[lə-laki] 'RED-men'
(ii)	/kuda/ 'horse'	[kə-kuda] 'RED-thruss'
(iii)	/tangga/ 'stair'	[tə-tangga] 'RED-neighbours'
(iv)	/rambut/ 'hair'	[rə-rambut] 'RED-hairs'

(Syed Jaafar, 2013, p.122)

According to Syed Ahmad (1998), all elements of the base word must be copied into the form of the reduplicative morpheme. However, only the first two segments are linked to the CV template. Looking back at the examples of partial reduplication in Malay, the reduplicative morpheme actually undergoes a vowel-weakening process. Therefore, Syed Ahmad's (1998) explanation still fails to account fully for this partial reduplication process. Ahmad (2000) proposed an approach that appears to be an improvement on the template put forward by Syed Ahmad (1998). According to this scholar, the internal structure of the reduplicative morpheme consists only of the CV segments, regardless of the length of the base word. The melody of the base word is then repeated in the form of the reduplicative morpheme and linked to the skeletal tier through a process known as left-to-right mapping. Any unlinked melody is discarded, and vowels in the reduplicative morpheme become schwa through a process of vowel weakening.

The use of the template seems suitable for explaining the formation of reduplicative morphemes with a fixed size. However, as discussed earlier, partial reduplicative morphemes in Banjarese can exist in two sizes, namely CV and V. Thus, this template is unable to account for both sizes simultaneously. In fact, Syed Jaafar (2012) also shared the same view in relation to the

Perak dialect. According to her, there are two sizes of partial reduplicative morphemes in this dialect: CV and CVC, as illustrated in (9).

(9) Syllable-Sized Partial Reduplication in the Perak Dialect

	Base Word	Derived Word
(i)	/budaʔ/ 'child'	[bə-budaʔ] 'RED-children'
(ii)	/tʃərita/ 'story'	[tʃə-tʃərita] 'RED-stories'
(iii)	/pətaŋ/ 'evening'	[pəm-pətaŋ] 'RED-every evening'
(iv)	/dʒaraŋ/ 'rare'	[dʒəŋ-dʒaraŋ] 'RED-rarely'

(Syed Jaafar, 2012, p.98)

This section has discussed the partial reduplication process in several languages. In summary, partial reduplicative morphemes can be formed in many ways, such as by copying the foot of the base or the syllable. Despite this, reduplicative morphemes tend to have a canonical form, leading to the creation of a template for these morphemes. However, there are some cases in which reduplicative morphemes can exist in two forms, as shown in the Perak dialect and Banjarese. Since the template fails to account for the existence of more than one size of reduplicative morpheme, this study will draw on Optimality Theory (OT) to explain the partial reduplication process in Banjarese more thoroughly. The Banjarese partial reduplication also led to situations where certain marked structures, such as closed syllables, are generally allowed in the language but are banned in partial reduplicative morphemes, causing the unmarked structure (open syllables) to emerge. This phenomenon is known as the Emergence of the Unmarked, which will be discussed in Section 4.3.

3. Methodology

This study is based on secondary data retrieved from a corpus as well as on previous studies. According to Bennett (2010), a corpus is a collection of electronic texts that can be used to discover information related to a language that may not be identified by intuition. A corpus known as ‘Si Palui Corpus’ was built for this study, comprising hundreds of short stories written in Banjarese revolving around a character named si Palui. According to Mujiburrahman (2022), this ‘Palui’ character is a fictional character that is quite similar to the ‘Kabayan’ character in Sundanese culture. In each story, Palui has his own identity, which sometimes differs from his identity in other stories. In one story, he is described as a poor man, while in another, he is described as a rich man. However, in general, the Palui characters are presented mostly as Banjarese people, common people, less educated, and poor (Mujiburrahman, 2022). These short stories also depict many aspects of the lives of Banjarese people, such as their daily lives, cultures, customs, and so on.

Considering that the corpus contains more than one million words, categorizing the data manually is quite difficult. Therefore, this study uses a corpus software package known as AntConc to facilitate the data categorization process. The partial reduplication data were obtained from previous studies, such as those of Sugono (2008) and Rafiek et al. (2022). The AntConc software was used only to confirm the existence of these reduplicated words. For example, the word /gagarunum/ was found in earlier studies. By typing ‘gagarunum’ in the Search Term box, a list of sentences containing this word is displayed by the software, as shown in Figure 2.

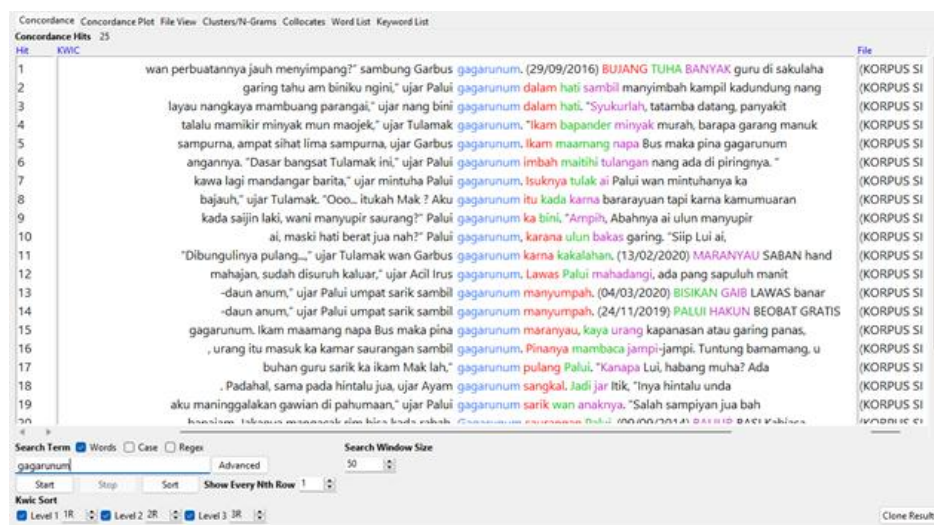


Figure 2. Partial Reduplication Data

A total of 32 words, with 118 concordance hits, were retrieved from the corpus (refer to the Appendix). The data were first divided into two categories, words starting with a consonant (C) and words starting with a vowel (V). The data for each category were divided into two subcategories: open initial syllable bases and closed initial syllable bases. In the following discussion, we will illustrate how OT analysis can effectively account for all four groups.

3.1 Optimality Theory and Correspondence Theory

From a purely morphological perspective, reduplication can be seen as a form of affixation, both in its role in forming morphological categories (such as plural) and in its position relative to the stem (either preceding it as a prefix or following it as a suffix) (Kager, 1999). However, from a phonological standpoint, the unique feature of reduplication is that the reduplicative affix is not fully specified for segmental content. Instead, the segmental content of the reduplicated part is copied from the stem. Thus, reduplication inherently involves phonological similarity between the ‘base’ and the ‘reduplicant’ (Kager, 1999).

OT was introduced by Prince and Smolensky as a general approach to map human linguistic knowledge (McCarthy, 2006). Although OT is often associated with phonology and morphology, it has also been applied in other areas of linguistics, such as syntax and semantics (McCarthy, 2008). The concept emphasized in OT is that Universal Grammar contains a set of constraints that can be violated. Although these constraints can be violated, violations are always minimal and only occur to satisfy higher-ranked constraints (Archangeli & Langendoen, 1997). Over time, various theories have been developed under the OT umbrella, and one of them is known as Correspondence Theory. This suggests that every candidate in OT includes an output representation and a relationship between the input and the output (McCarthy & Prince, 1995). This is called the correspondence relation and is conventionally indicated by \mathfrak{R} . The formal definition of this Correspondence theory is as follows:

(10) Correspondence Theory (McCarthy & Prince, 1995, p.12)

Given two strings S1 and S2, correspondence is the relation \mathfrak{R} between the elements of S1 to those of S2. Elements $\alpha \in S1$ and $\beta \in S2$ are referred to as correspondents of one another when $\alpha \mathfrak{R} \beta$.

The S1 is known as the input, while S2 is the output, and the relation between these two elements is called the IO-correspondence relation. As for the Base-Reduplicant (BR) correspondence, S1 refers to the base while S2 is the reduplicant. McCarthy and Prince (1995) illustrated the correspondence relation between input/output (IO) and base/reduplicant (BR) in a model known as the Basic Model.

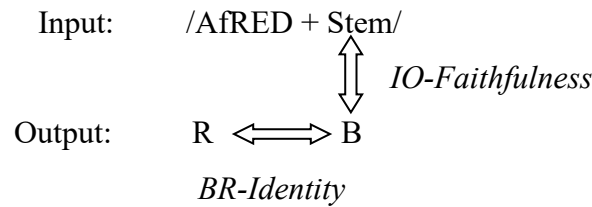


Figure 3. Basic Model

(McCarthy & Prince, 1995, p. 4)

The model depicted in Figure 3 has an input and an output level. The input of reduplication consists of a segmentally empty reduplicative affix, which is abbreviated as AfRED or RED, plus the stem to which the affix adjoins. Input faithfulness constraints require that the stem's input specifications be preserved in the output—the 'base' of the base-reduplicant combination. Base-reduplicant identity constraints require that both parts of this output base-reduplicant combination be identical in some respect.

We will be discussing the interaction between the partial reduplication and the faithfulness constraints in the Basic Model which are IO-Faithfulness and BR Faithfulness. As shown in (1) and (2), the partial reduplicative morpheme in Banjarese does indeed receive its segments from the base, indicating the relationship between the base and the reduplicant (BR). At the same time, all the segments in the input must be preserved in the output form, indicating the relationship between the input and the output (IO). In order to form the reduplicative morpheme, some phonological constraints need to be followed. In the next section, we will provide a further analysis of all the constraints applied in Banjarese partial reduplication.

4. Results and Discussion

The discussion will be divided into two parts. The first part will focus on CV-reduplication, which involves any initial syllables with an onset. The second will discuss the V-reduplication which involves any initial syllables without an onset.

4.1 CV-Reduplication

We will start the discussion with the most productive type of partial reduplication in Banjarese, namely the CV-reduplication. This reduplication involves both open and initial syllable bases. However, both open and closed initial syllables are required to have an onset in order to make CV-reduplication possible. Table 1 presents the relevant data for each group.

Table 1. Banjarese Partial Reduplication for Open (CV) and Closed (CVC) Initial Syllable Bases

Open Initial Syllable Bases – CV		Closed Syllable Bases – CVC	
Base	Reduplicated Word	Base	Reduplicated Word
a. /garunum/	[ga .gagarum]	/lampar/	[la .lampar]
‘speak’	‘speaking repeatly’	‘scatter’	‘scattering repeatly’
b. /salah/	[sa .salah]	/liŋkah/	[li .liŋkah]
‘wrong’	‘wrongs’	‘step’	‘steps’
c. /palahan/	[pa .palahan]	/suŋsun/	[su .suŋsun]
‘slow’	‘slowly’	‘early’	‘early’
d. /kuʔiʃjaʔ/	[ku .kuʔiʃjaʔ]	/piŋkut/	[pi .piŋkut]
‘scream’	‘scream repeatly’	‘hold’	‘holding repeatly’
e. /kuriʃjaʔ/	[ku .kuriʃjaʔ]	/kandaŋ/	[ka .kandaŋ]
‘scream’	‘scream repeatly’	‘fence’	‘fences’

(Authors’ own work)

The definition of partial reduplication proposed previously is actually accurate enough to represent this process insofar as it involves the open initial syllable bases (CV). However, when it comes to the closed syllable bases (CVC), the definition seems to be inadequate since there is a segment deletion at the coda position of the reduplicant. We shall now begin the OT analysis, and for this, the Basic Model will be used to account for the issue under discussion. The first thing to be considered in this analysis is the size of the reduplicative morpheme. According to Kager (1999), a reduplicative morpheme tends to have an invariant prosodic shape that has no one-to-

one relation with a prosodic unit in the base. For some languages, the reduplicative morphemes can be described in terms of prosodic units such as syllable or foot. The reduplicative morphemes, however, do not always precisely match their comparable prosodic unit in the base.

When it comes to an open initial syllable (CV) in Banjarese, the reduplicative morpheme copies the whole constituent (in this case, the syllable). However, when it comes to a close initial syllable (CVC), the reduplicative morpheme does not appear to be identical with it. For this reason, partial reduplication cannot be simply ‘constituent copying’, but as claimed by Kager (1999), it involves a prosodic shape invariant in the reduplicant, also known as a reduplicative template. The partial reduplicative morpheme in Banjarese happens to have its own fixed form, whereas it does not favour the existence of the coda segment. Hence, it always exists in the form of an open syllable, despite the size of the first syllable of the base. To make a point, a CVC syllable structure can be in the input of Banjarese but not in the reduplicative morpheme. In order to deal with the segment deletion in the coda position, the NOCODA constraint will be applied as a markedness constraint, which can be violated in the reduplicant but must be satisfied in the input base.

(11) **NOCODA**

*C]σ (all syllables are open syllables)

A reduplicative morpheme in Banjarese partial reduplication can consist of either CV or V only. Hence, a constraint that only allows the reduplicative morpheme to be of that size is crucially needed in the constraint hierarchy. The NOCODA constraint ensures that no segment is allowed to be at the coda position in the reduplicative morpheme. This is the only markedness constraint used in this analysis, yet it plays an important role in determining the form of the reduplicative morpheme. Another constraint that will be used to define the fixed shape of the partial reduplicative morpheme in Banjarese is RED=σ, as defined in the following example:

(12) **RED=σ**

Reduplicative morpheme is a syllable.

This constraint ensures that the reduplicative morpheme consists of no more than one syllable. Banjarese is often synonymous with the Malay language. Although partial reduplication in Banjarese is not seen simply as copying the initial syllable of the base, the reduplicative morpheme does, however, receive its materials from it. In addition to not having a coda segment, a partial reduplicative morpheme also needs to be monosyllabic, which means it needs to exist as a single syllable. Although the RED=σ constraint defines the size of the reduplicative morpheme, it does not specify which syllable in the base needs to be copied.

As the first element in the reduplicative morpheme duplicates the first onset of the initial syllable of the base, a constraint is needed to ensure that the exact element is copied. We propose that a constraint called ANCHORING can fulfil this function. Since the C element in the reduplicative morpheme is determined by the onset of the initial syllable of the base, the relevant ANCHORING constraint, which will play an important role here, is LEFT ANCHOR-BR. The definition of this constraint is as follows:

(13) LEFT ANCHOR-BR

Any element at the designated periphery of S1 has a correspondent at the designated periphery of S2.

This constraint ensures that the left peripheral edge of the base must coincide with the left peripheral edge of the reduplicative morpheme. Figure 4 illustrates the satisfaction and the violation of this constraint, while Figure 5 illustrates the violation of the same constraint.

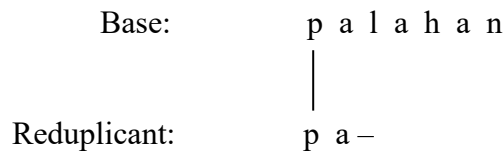


Figure 4. Correspondence Diagram for Satisfaction of LEFT ANCHOR-BR

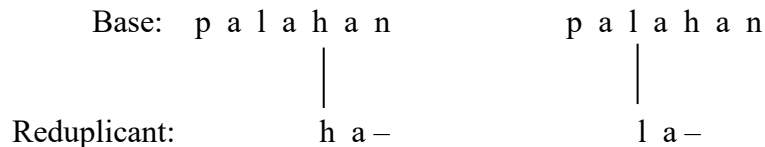


Figure 5. Correspondence Diagram for Violation of LEFT ANCHOR-BR

According to Urbanczyk (1996), the reduplicative morpheme of RED can exhibit the unmarked morpheme shape. This unmarked morpheme shape is what we call the Emergence of the Unmarked (TETU) (refer to subsection 4.3 for further explanation). In previous work, Alderete (1999), McCarthy and Prince (1994) and Steriade (1988) also claim that marked structure is optimal in the base output but not optimal in the reduplicative morpheme. A marked structure in the base can be prevented from occurring in the reduplicative morpheme by ranking the BR faithfulness constraint beneath some markedness structures, as shown in Figure 6:

IO-Faithfulness >> Markedness constraints >> BR-Faithfulness

Figure 6. TETU Constraint Ranking

(McCarthy & Prince, 1995, p. 81)

This solution works well for producing unmarked structures in light reduplicative morphemes. Markedness constraints such as NOCODA need to be preceded by IO faithfulness constraints first before they can be followed by BR-faithfulness constraints. In this analysis, an IO-faithfulness constraint, known as MAX-, will be introduced, followed by two BR-faithfulness constraints known as IDENT-BR and MAX-BR. The MAX-IO can be explained as follows:

(14) MAX-IO

Every segment in the input must have a correspondent in the output.

The constraint in (14) requires every segment in the input to have its correspondent in the output. Segmental deletion in the base is prohibited as it will violate this constraint. Just like TETU suggested, IO-faithfulness constraints need to be ranked higher than others in the constraint hierarchy. As MAX-IO dominates NOCODA in the constraint ranking, a coda segment in the reduplicative morpheme is allowed to be deleted rather than in the base. While MAX-IO links together the input and the output, the base and reduplicative morphemes are linked together by a BR-faithfulness constraint, as shown in the following example:

(15) MAX-BR

All the segments of the base are contained in the reduplicative morpheme.
(no partial reduplication)

The faithfulness constraint, MAX-BR, requires that every element in the base should have a correspondent in the reduplicative morpheme. That means that copying a few segments of the base into the reduplicative morpheme will violate this constraint. Since partial reduplication in Banjarese copies only some elements of the base, this constraint is ranked lowest.

One issue in relation to Banjarese is that it is often equated with Malay. According to Suryadikara (1994), it is claimed that Banjarese is actually a variation of Malay, which is used by the people of South Kalimantan. Hapip et al. (1981) also state that the Malay people who reside on Kalimantan Island, especially in the South and East districts, are known as Banjarese people, and the language used by these people is known as Banjarese. This seems to indicate that Malay and Banjarese speakers are actually the same people but reside in different places. However, there are a lot of differences between these two languages, and this paper will discuss the differences in terms of the reduplication process.

Syed Jaafar and Ahmad (2013) claim that in Malay partial reduplication, the V segment in the light reduplicative morpheme is a reduced segment of schwa (ə). To substantiate this, a REDUCE constraint is used to ensure that the vowel in the reduplicative morpheme is schwa, regardless of what the vowel in the base is (Syed Jaafar and Ahmad, 2013). However, the situation is quite different in the case of Banjarese, so in this analysis, we also try to highlight the difference between Banjarese and Malay by focusing on their partial reduplication. The vowel in the reduplicative morpheme of Banjarese remains the same as the vowel in the initial syllable of the base. There is no reduction of its vowel as there is in Malay. In order to account for this, a constraint known as IDENT-IO (vowel) will be introduced to the analysis”

(16) IDENT-BR (vowel)

Correspondent segments in input and output have identical values for [vowel].

Banjarese partial reduplication can be presented in tabular form to bring all the constraints we have discussed so far. The base word will be /palahan/ (slow), and the hierarchy of the constraint will be as shown in Table 2.

Table 2. OT Tableau for CV-Reduplication of an Open Syllable Base

MAX-IO >> RED= σ >> NOCODA >> LEFT ANCHOR-BR >> IDENT-BR (vowel) >> MAX-BR

input: /RED - palahan/	MAX -IO	RED = σ	NO CODA	LEFT ANCHOR-BR	IDENT-BR (vowel)	MAX -BR
a. pə - palahan					*!	*****
b. pa - palahan						*****!
c. palahan - palahan		**!				
d. pa - plahan	*!					*****
e. ha - palahan				*!		*****

Five candidates are presented in the tableau in Table 2. At first, candidate (d) was eliminated because it violates the MAX-IO constraint. The segmental deletion in the base has caused the candidate to violate this constraint. Next, candidate (c) was eliminated due to the total reduplication. This candidate violates the RED= σ as the reduplicative morpheme consists of more than one syllable. Candidate (e) was eliminated due to a violation of LEFT ANCHOR-BR. Candidate (a) has violated the IDENT-BR (vowel) as the vowel segment in the reduplicative morpheme is not the same as the base. The remaining candidate, candidate (b), therefore, emerges as the winner despite violating the MAX-BR constraint. This analysis focuses on open initial syllable bases. Next, we will demonstrate how these constraints in the same hierarchy could be used to analyse the closed syllable bases. The base word will be /kandaŋ/ (fence), and the hierarchy of the constraints will be the same as before.

Table 3. OT Tableau for CV-Reduplication of a Closed Syllable BaseMAX-IO >> RED= σ >> NOCODA >> LEFT ANCHOR-BR >> IDENT-BR (vowel) >> MAX-BR

input: /RED - kandaŋ/	MAX -IO	RED = σ	NO CODA	LEFT ANCHOR-BR	IDENT-BR (vowel)	MAX -BR
a. kə - kandaŋ					*!	*****
b. ka - kandaŋ						****!
c. kandaŋ – kandaŋ		*!				
d. ka – andaŋ	*!					****
e. da – kandaŋ				*!		*****
f. kan – kandaŋ			*!			***

Six candidates were presented in the tableau in Table 3. At the first tier of constraints, candidate (d) was eliminated due to the violation of MAX-IO, as not all segments in the input were copied into the output. Later, candidate (f) was eliminated as it violates the RED= σ due to the size of the reduplicative morpheme, which is more than a syllable. Next, candidate (f) was eliminated as the coda position in the reduplicative morpheme is filled with a segment, causing a violation of the NOCODA constraint. The remaining candidates will then need to pass through the LEFT ANCHOR-BR constraint, causing candidate (e) to be eliminated. The violation of IDENT-BR (vowel) has caused the candidate (a) to be eliminated. Thus, candidate (b) emerges as the winner despite violating the MAX-BR constraint.

4.2 V-REDUPLICATION

Another thing that distinguishes Banjarese from Malay is that this language allows the reduplicative morpheme to be in the form of a V syllable. V-reduplication happens when the initial syllable of the base does not have an onset segment. Table 2 indicates the relevant data of each group:

Table 4. Banjarese Partial Reduplication for Open (V) and Closed (VC) Initial Syllable Bases

Open Initial Syllable Bases – V		Closed Syllable Bases – VC	
Base	Reduplicated Word	Base	Reduplicated Word
a. /iŋa/	[i.iŋa]	/aŋkut/	[a.aŋkut]
‘fascinate’	‘fascinating repeatly’	‘carry’	‘carrying repeatly’
b. /alim/	[a.alim]	/undʒun/	[u.undʒun]
‘pious’	‘seems pious’	‘fishing’	‘fishing repeatly’
c. /iŋap/	[i.iŋap]	/iŋkin/	[i.iŋkin]
‘gasps’	‘gasping repeatly’	‘stingy’	‘stingy’
e. /udʒuʔ/	[u.udʒuʔ]	/umpat/	[u.umpat]
‘stumble’	‘stumbling repeatly’	‘follow’	‘following repeatly’

(Authors’ own work)

Despite being categorized in a different category than before, the reduplication process for this category can, in fact, be resolved using the same constraints within the same hierarchy as before. The initial syllable of a base that contains a V element is considered a light syllable, while the one with VC elements is considered a heavy syllable. We will now demonstrate how both types of V-reduplication work. Firstly, the reduplication process of the open initial syllable base with the V element. The base word will be /iŋa/ (fascinate), and the hierarchy of the constraint will be as shown in Table 5:

Table 5. OT Tableau for V-Reduplication of an Open Syllable Base

MAX-IO >> RED=σ >> NOCODA >> LEFT ANCHOR-BR >> IDENT-BR (vowel) >> MAX-BR

input:	MAX-IO	RED=σ	NO CODA	LEFT ANCHOR-BR	IDENT-BR (vowel)	MAX-BR
a. ə - iŋa					*!	***
b. i - iŋa						**!
c. iŋa - iŋa		*!				
d. i - ŋa	*!					**
e. ŋa - iŋa				*!		*

Five candidates were presented in the tableau in Table 5. In the first tier of constraints, the MAX-IO candidate (d) was eliminated due to the violation of this constraint. Later, candidate (c) was eliminated since it is a full reduplication, which violates the RED= σ constraint. The next candidate that was eliminated is candidate (e) due to the violation of the LEFT ANCHOR-BR constraint. The two remaining candidates, (b) and (a), then need to pass through the IDENT-BR (vowel) constraint, in which candidate (a) was eliminated, leaving candidate (b) to be the sole winner. In the next analysis, we will demonstrate how these constraints in the same hierarchy could be used to analyse the closed syllable bases. The base word will be /undʒun/ (fishing rod), and the hierarchy of the constraint will be the same as before, as shown in Table 6.

Table 6. OT Tableau for V-Reduplication of a Closed Syllable Base

MAX-IO >> RED= σ >> NOCODA >> LEFT ANCHOR-BR >> IDENT-BR (vowel) >> MAX-BR

input: /RED - undʒun/	MAX- IO	RED= σ	NO CODA	LEFT ANCHOR-BR	IDENT-IO (vowel)	MAX- BR
a. ə - undʒun					*!	*****
b. u —und ʒun						*****!
c. undʒun - undʒun		*!				
d. u - undʒu	*!					*****
e. dʒu - undʒun				*!		*****
f. un - undʒun			*!			***

In the tableau in Table 6, six candidates were presented for the analysis. Candidate (d) was the first one to be eliminated since it violates the MAX-IO constraint. The next one to be eliminated was candidate (c) due to the reduplicative morpheme having more than one syllable, violating the RED= σ constraint. Later, candidate (f) was eliminated due to the existence of a coda segment, hence violating the NOCODA. Candidate (e) was eliminated due to the violation of the LEFT ANCHOR-BR. Due to the difference in vowel, candidate (a) was eliminated because it violates the IDENT-BR (vowel) constraint, leaving candidate (b) to be the sole winner.

4.3 The Emergence of the Unmarked in Banjarese Partial Reduplication

We have already discussed four types of initial syllables of the base (CV, CVC, V, and VC) and how the partial reduplication occurs with each of them. All the constraints that have been discussed before can be used to analyse the partial reduplication process in Banjarese regarding any type of initial syllable of the base. Through the end of this discussion, we are now ready to redefine the meaning of Banjarese partial reduplication. But first, let us dive into one of the theories proposed by McCarthy and Prince (1994), known as “The Emergence of the Unmarked (TETU).” TETU refers to situations where some marked structure is generally allowed in a language but banned in particular contexts; the complementary unmarked structure thus “emerges” (Becker and Potts, 2011). The existence of TETU in various languages has also been observed by many scholars. In Nootka, for example, syllables in a root word may or may not have a coda. However, reduplicative morphemes are exceptional in that codas are not allowed to exist, as shown in (17). From this, we can see that the open syllable is an unmarked structure, as it can appear in many contexts (such as in roots and reduplicative morphemes, for example). A similar situation applies to Malay and Banjarese, where open syllables can exist in many contexts (unmarked structure), but closed syllables are not allowed in reduplicative morphemes (marked structure).

(17) Nootka CV(:) Reduplication (Stonham, 1990; Shaw, 1992 cited in McCarthy & Prince, 1994)

(a) Root [CV, Reduplicative Morpheme CV-]

(i) **ʔu** - ʔu – ‘i:ħ

‘RED-hunting it’

(ii) **či** – čims – ‘i:ħ

‘RED-hunting bear’

(b) Root [CV:, Reduplicant CV:-]

(i) **wa:** - wa:s – čil

‘RED-naming where’

(ii) **ta:** - ta:kwa – i:ħ

‘RED-hunting only that’

According to Jakobson (1962), Clements and Keyser (1981), and Steriade (1982), not having a coda is one aspect of universal syllable unmarkedness. There are languages where no syllables have codas, and there are also languages where some syllables have codas, yet no language obliges syllables to have codas. Syllables with no coda or light syllables were also found to be one of the unmarkedness characteristics in Malay, as shown in (8). Besides the reduplicative morpheme being a light syllable, another characteristic of unmarked syllable structure in Malay partial reduplication is a reduced vowel (Syed Jaafar and Ahmad, 2013). As can be seen in (8), the vowel in the reduplicative morpheme is always schwa, regarding the type of vowel in the initial syllable of the base. To ensure this, the REDUCE constraint was applied, which plays a role in ruling out the candidate with other types of vowels.

Contrary to Malay, partial reduplication in Banjarese does not involve any changes in the reduplicative morpheme's vowel and copies the exact vowel from the initial syllable of the base. Although partial reduplicative morphemes in Banjarese can be either CV or V, both are still considered to be light syllables and can be analysed using constraints within the same hierarchy. To sum up, just like Nootka and Malay, the light reduplicative morpheme is an unmarked syllable structure that emerges in Banjarese partial reduplication. This claim also supports the statement that not having a coda is one aspect of universal syllable unmarkedness.

The application of OT analysis has also proven that the partial reduplication in Banjarese is not merely copying the first syllable of the base, as claimed by most scholars. As demonstrated previously, the light reduplicative morpheme is controlled by the markedness constraint, NOCODA. In order to ensure that the vowel in the reduplicative morpheme is the same as the initial syllable, IDENT-BR (vowel) was used in the analysis. To sum up the finding, we claim that partial reduplication in Banjarese could be defined as copying the initial syllable of the base while maintaining the size of the reduplicative morpheme to be an open syllable. This can be seen in the examples provided in Tables 1 and 2, where the reduplicative morpheme remains in the open syllable form without any coda segment, regardless of the size of the initial base syllable.

5. Conclusion

The definition of partial reduplication given by previous scholars seems inadequate to explain this phenomenon. Previously, partial reduplication in Banjarese was claimed to be a process of copying the initial syllable of the base. This definition only covers the partial reduplication involving the light syllables in the form of CV and V. However, it doesn't apply correctly when it comes to heavy syllables such as CVC and VC since there is no coda segment in the reduplicative morpheme. Hence, the initial syllable of the base is not fully copied. In 2022, Rafiek, Effendi and Nisa came out with a definition for partial reduplication. According to them, there are two ways for partial reduplication to happen. In the first one, only the initial segment of the base is copied, and the second syllable is deleted. The second one is only the initial syllable of the base that is copied, and the second syllable is deleted. However, this statement is still inadequate considering that it is possible for the base to be more than two syllables, such as /pa.la.han/ (slow) and /ku.tʃi.jaʔ/ (scream). Here, we claim that the adequate definition of Banjarese partial reduplication is the copying of the initial syllable of the base while maintaining the size of the reduplicative morpheme to be an open syllable. To comply with this, the NOCODA constraint is used to prevent the existence of a segment in the coda position. In addition, the light reduplicative morpheme is an unmarked syllable structure that emerges in Banjarese partial reduplication. This study, however, focuses more on the written data rather than the spoken data. In order to strengthen the findings, a study on the spoken data should be conducted and compared with this one.

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Appendix

Initial Phoneme	Root Word	Derived Word	Gloss	Concordance Hits
/b/	baya	ba.baya	enough	4
	biri	bi.biri	sheep	1
	bini	bi.bini	woman	1
/g/	garunum	ga.garunum	nagging	25
	guling	gu.guling	back and forth	8
/i/	inga	i.inga	fascinated	1
	ingap	i.ingap	gasp	1
/k/	kanak	ka.kanak	kid	6
	kaina	ka.kaina	later	1
	kalubut	ka.kalubut	blanketed	1
	kuciak	ku.kuciak	scream repeatedly	11
	kuriak	ku.kuriak	scream repeatedly	8
	kurang	ku.kurang	more or less	2
	kamban	ka.kamban	scarf	3
	kalung	ka.kalung	necklaces	2
	lampar	la.lampar	Banjarese traditional dessert	1
	padah	pa.padah	words	5
/p/	palahan	pa.palahan	slowly	1
	pura	pu.pura	pretend	5
	pudak	pu.pudak	Banjarese traditional dessert	1
	palingau	pa.palingau	look around	2
	parucus	pa.parucus	-	1
	ra.ma	ra.ra.ma	butterfly	1
/s/	salah	sa.salah	wrongly	1
	sain	sa.sain	more and more	3
	sala	sa.sala	gaps	2
	singut	si.singut	moustache	1
	tuha	tu.tuha	elderly	1
/t/	tamu	ta.tamu	guest	9
	tudung	tu.tudung	serving lid	2
	tangga	ta.tangga	neighbour	5
	tarus	ta.tarus	continuously	2