Article

Revisiting Full Reduplication in Indonesian, Javanese, and Sundanese Verbs: a Distributed Reduplication Approach

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Abstract

Indonesian, Javanese and Sundanese belong to the same language family, the Austronesian languages. The three languages have some similarities, one of which is the occurrence of reduplication. This paper aims to discuss full reduplication in the three languages, especially on the verbs. The objectives of this paper are to explain the semantic functions of full reduplication, and to present the process of deriving full reduplication in the three languages. In this case, the theory of distributed reduplication was applied in the analysis. The data used in the study were taken from books and research reports. In addition, I also employed a native speaker of Sundanese to check the data on Sundanese. In this case, I used the interview method with an elicitation technique. The result of the analysis shows that Indonesian and Javanese have full reduplication with the notion of repetition, reciprocal, uncertainty of goal, and intensifier. Meanwhile, Sundanese, has full reduplication with the notion of intensifier and reciprocal. The process of full reduplication in the three language is different. In Indonesian, reduplicated forms with a reciprocal notion are composed of three morphemes, while in Javanese and Sundanese this type of reduplication is composed of two morphemes.

1. Introduction

Indonesian, Javanese, and Sundanese are members of the same language family called the Austronesian languages. As members of the same language family, Indonesian, Javanese, and Sundanese have some similarities, one of which is in the word formation process called reduplication. Reduplication is productive in these three languages, and one

type of reduplication found very productive is full reduplication.This morphological operation involves the doubling of a lexical stem that can apply to various lexical categories, but this paper focuses on full reduplication on the verbs as this is the most productive process in the three languages.

Studies on reduplication in Indonesian, Javanese, or Sundanese have been conducted by some scholars. They are, among others, by Subiyanto [1] on reduplication in Javanese from a distributed morphology approach, Mistica et.al.[2] on full reduplication of the verbs in Indonesian from the lexical-functional approach, and Ermanto[3] on morphological hierarchy of verb reduplication in Indonesian from a structural approach. These studies used different theoretical approaches to discuss the forms of reduplication, and therefore, the functions and process of reduplication in the three languages have not been discussed properly.

This paper aims to compare and contrast the function and formation process of full reduplication on the verbs in Indonesian, Javanese, and Sundanese. To explain the process of reduplication in the three languages, the theoretical approach of distributed morphology is applied.

2. Concept of Reduplication and Theory of Distributed Reduplication

Studies on reduplication can be traced back through Marantz's [4] work that views reduplication as the process of adding a prefix or suffix. In this word formation process, an underspecified affix is concatenated or linked with the stem or base and the association rules in the phonology fill out the unspecified aspects of the affix using the raw material taken from the stem (see Frampton [5] [6]). This concept of reduplication was also used by Katamba[7] claiming that reduplication is an affixation process in which the affix is taken from the phonological form of the base or stem. In this case, reduplication can be treated as the addition of a prefix, infix, or suffix, depending on whether the reduplicated form is in the initial, medial, or final position. Using this concept, Frampton[6] gave an example of the derivation of the Mokilese progressive verb *wadwadek* 'is reading', which is the reduplicated form of the word *wadek* 'to read', as seen in the following.

wadek $\xrightarrow{\text{morphology}}$ $\boxed{}_\sigma$-wadek $\xrightarrow{\text{phonology}}$ $\boxed{\text{wad}}_\sigma$-wadek
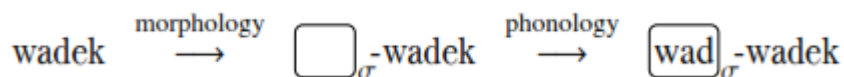
In the example above, the underspecified affix or the reduplicative template is a syllable. This template is then associated in the phonology to compose the reduplicated form *wadwadek*. In this reduplication process, however, there is no information concerning how the template is specified and how the association is carried out. Therefore, the derivation of reduplication as an affixation process has raised some controversies among linguists [6].

Unlike the previous model, the theory of Distributed Reduplication (DR) treated

reduplication as the process of juncture insertion in the morphology. Within this theoretical framework, Frampton [7] claims that reduplication is a copying mechanism which occurs in two stages. The first stage is the insertion of junctures, which shows the location of the sound(s) to be reduplicated. This is then followed with the transcription process or the phonological realization of the junctures resulting in the reduplication form. In this case, juncture insertion is interpreted as an instruction that triggers and directs the transcription of reduplicated form. Because transcription occurs in phonology, it is very possible that phonological process occurs after the juncture insertion but before the transcription. The rules of phonological adjustment possibly occur with the presence of junctures.

The following example taken from Frampton[6] shows the derivation of the Ilocano word *siroro?ot* 'covered with litter', which is the reduplicated from of *ro?ot* 'litter' getting the prefix *si-* 'covered with'. We can see from the chart below that the word *siroro?ot* is initially composed of two morphemes, which are COV (covered with) and RO?OT. Through the lexical insertion (LexIns) process, these two morphemes are realized into the phonological form [si] and [ro?ot]. The lexical insertion of the morpheme COV into [si] is followed with the juncture insertion, marked with brackets '[ ]', on the first two phonological items. This juncture insertion, which happens in the readjuctment (Readj) process, is an instruction that these two phonological items are copied, resulting in the form *siroro?ot* after undergoing the transcription (Trscr) and no-crossing constraint repair (NCC repair) mechanism.
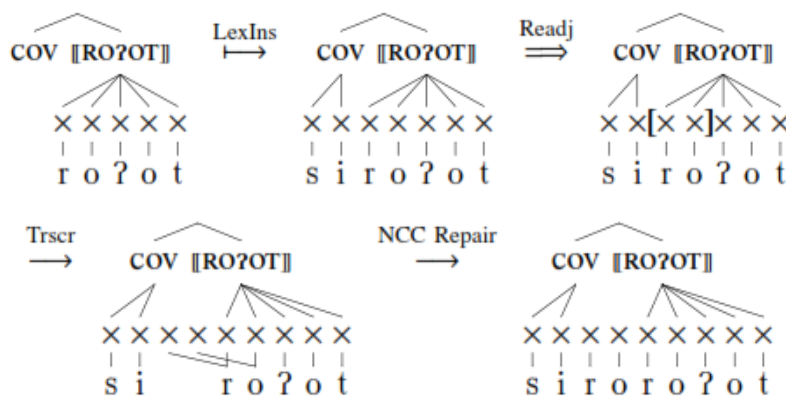
(see Frampton[6])

The derivational process of reduplication within the DR framework as illustrated above also shows that DR adopts the concept of distributed morphology (DM) in explaining a word formation process. Within this theory, there are three components of a word formation, which are morphosyntactic features, vocabulary items, and encyclopedia. The interaction of the three components can be seen below.
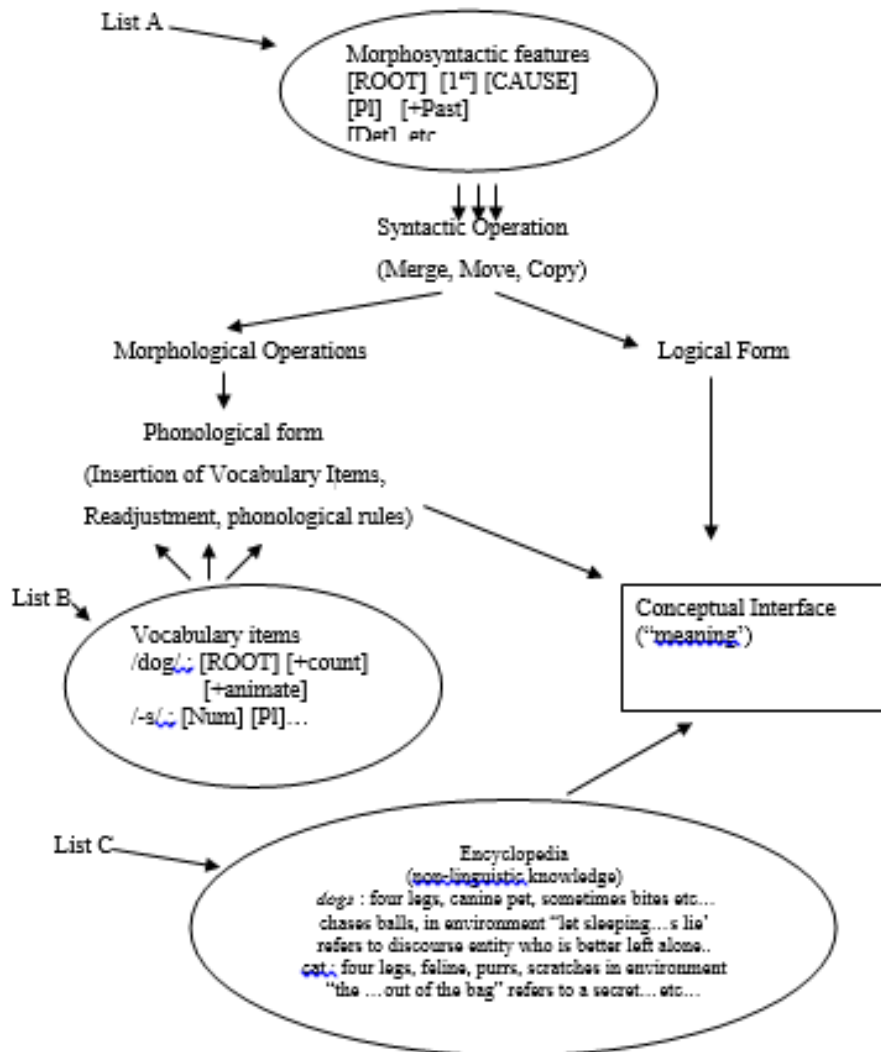
(Harley and Noyer)[8]

According to the chart above, reduplication is treated in morphological operations. The input of these operations is morphosyntactic features, their phonological representations of which are represented through lexical insertions from vocabulary items. Within this model of word formation, encyclopedia gives detailed information about the conceptual meaning of every single lexicon to ensure that the derived forms in the word formation process are clearly understood by the language users.

3. Research Methods

This study used data taken from books, magazines, and research papers containing full reduplication of the verbs in Javanese, Indonesian, and Sundanese. The data were taken by using an observation method with a note-taking technique. This method was applied to collect the data on full reduplication of the verbs in Indonesian, Javanese, and Sundanese. In this case, full reduplication is understood as the reduplication of either a stem or a stem and an affix.

In this study, I also employed a Sundanese informant to get and check the data to ensure the validity of the Sundanese data. As a native speaker of Javanese, I also used a reflective- introspective method (see Sudaryanto [9]) to check the Javanese and Indonesian data to make sure that the data are valid. The collected data were then analysed by using a distributional method. By using this method, I classified the data based on their similarities and differences in terms of the form, meaning, and formation process.

4. Semantic Effect of Full Reduplication in Indonesian, Javanese, and Sundanese

Full reduplication on the verb can have various semantic functions. In Indonesian and Javanese, full reduplication can mean a repetition of the action, an intensity of the action, and a reciprocal action. In addition, full reduplication can also give the meaning of uncertainty of the direction or goal of the action. Meanwhile in Sundanese, full reduplication functions as an intensifier and a reciprocal action. The following table shows the semantic functions of full reduplication and their examples in the three languages.

Language	Base Reduplicated Form	Semantic Function
Javanese	*awe* 'to wave' → *ngawe-awe* 'to wave repeatedly' *pikir* 'to think' → *pikir-pikir* 'to really think' *mlayu* 'to walk'→ *mlaku-mlaku*'to walk around' *antem* 'to hit' → *antem-anteman* 'to hit each other'	Repetition Intensifier Uncertainty of direction/goal Reciprocal
Indonesian	*pukul* 'to hit' → *pukul-memukul* 'to hit each other' *pukul*'to hit → *memukul-mukul* 'to hit repeatedly' *pikir* 'to think'→ *berpikir-pikir* 'to really think' *jalan* 'to walk' → *jalan-jalan* 'to walk around'	Reciprocal Repetition Intensifier Uncertainty of direction/goal
Sundanese	*hayang* 'to want' →*hayang-hayang* 'to really want' *gebuk* 'to hit' →*pagebuk-gebuk* 'to hit each other	Intensifier Reciprocal

Of the semantic functions, reduplication with reciprocal meaning is the most productive in the three languages. This type of reduplication can be commonly applied to transitive action verbs as in Indonesian *tarik-menarik* 'to pull each other', in Javanese *tarik-tarikan* 'to pull each other', and in Sundanese *patarik-tarik* 'to pull each other'. The table above also shows that Indonesian and Javanese have full reduplication with the meaning of a repetition of the action. This type of reduplication is very productive in Indonesian and Javanese, and even it is more productive than that of reciprocal. The verbs that undergo the reduplication with the meaning of action repetition can be both transitive and intransitive verbs. Some examples of this type of reduplication can be found in the Indonesian reduplicated forms *menggaruk-garuk* 'to scratch repeatedly', *mendorong-dorong* 'to push repeatedly', *menari-nari* 'to dance repeatedly', and in Javanese verb forms *nggaruk-garuk* 'to scratch repeatedly', *nyurung-nyurung* 'to push repeatedly', *njoget-njoget* 'to dance repeatedly'.

The occurrence of reduplication with the meaning of action repetition as found in Indonesian and Javanese is in keeping with the general notion of plurality as an effect of reduplication (see Moravcsik [10]). Therefore, it is reasonable that reduplication with the meaning of action repetition is productive in both Indonesian and Javanese. As for Sundanese, the absence of full reduplication with the notion of action repetition is due to the fact that this language has partial reduplication for this notion, as in the forms *godeg* 'to shake one's head' →*gogodeg* 'to shake one's head repeatedly', and *guyon* 'to joke'→ *guguyon* 'to joke repeatedly'. This partial reduplication for the meaning of action repetition is very productive in Sundanese.

5. Process of Full Reduplication in Indonesian, Javanese, and Sundanese

The process of deriving a reduplicated form can be simple or complex depending on the number of morphemes found in the reduplicated form. When a reduplicated form has two morphemes, we can easily predict that there is only one layer or stage of the morphological process. However, when we have more than two morphemes in a reduplicated form, we will deal with two or more layers or stages of the morphological process, and this often causes a problem in determining which morpheme comes first and which one comes later or last. In this case, we should consider whether there is an inflectional affix or a derivational one. Morphologists (see Booij [11]; Haspelmath and Sims [12] ; Katamba [7], 1993) are in agreement that a derivational process occurs before an inflectional process, and therefore, when we have a word containing an inflectional affix and a derivational affix, the derivation affix comes before the inflectional one.

The principle of word formation as mentioned above, however, may not work well when dealing with reduplicated forms. The process of forming reduplication is complex when we have stem or base reduplication added with an affix. In the word *memukul-mukul* 'to hit each other', for example, we have the actor focus affix *me-*, which is an inflectional affix, and the base *pukul* 'to hit'. If we assume that the reduplication of the base as in *pukul-pukul* is a derivational process, as the reduplication affects the meaning (see Booij [11]),

then we will have the reduplicated form occurring before the inflectional affix is added, resulting in the form *memukul-pukul* (*pukul→pukul-pukul→ *memukul-pukul*), which is unacceptable in Indonesian. The question is why we have the form *memukul-mukul*, in which the [p] sound in *pukul* changes into [m]. This is the problem when using a traditional approach to explain a word formation process.

In distributed morphology, the problem as mentioned above can be handled effectively. In this theory, reduplication has to do with the insertion of junctures followed with the transcription process. In this case, it is possible that phonological process occurs after juncture insertion, but before the transcription process. Therefore, the changing sound, from [p] to [m] as in *memukul-mukul* can happen because of the effect of phonological process occurring after a juncture insertion, as seen in the following diagram.
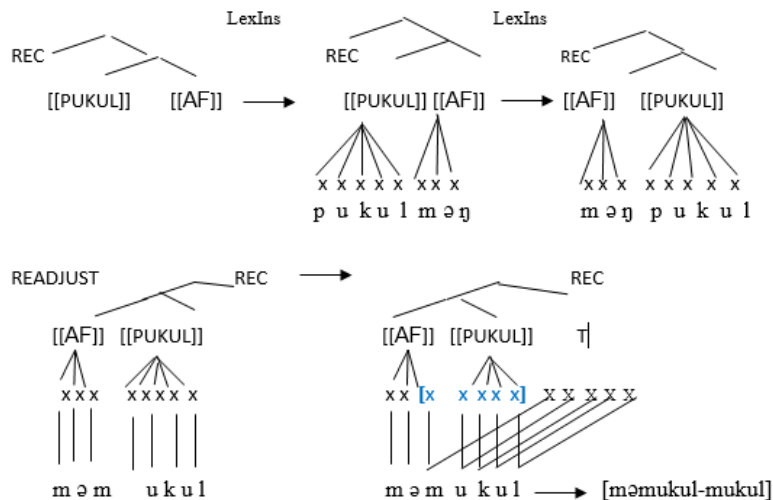
The diagram above shows that the reduplicated form *memukul-mukul* derives from three morphemes, which are the morpheme for actor focus (AF), the morpheme meaning [PUKUL], and the morpheme for reciprocal (REC). Through a lexical insertion (Lexins) process, we get the prefix [məŋ], which is the morphophoneme for AF. This prefix is the basic form for AF because it has the widest distribution (see Subiyanto[1]). The following step is readjustment (READJUST), which is the phonological process changing [ŋ] into [m] followed with the deletion of [p]. This phonological process occurs because of the assimilation process followed with the deletion process. In this case, the velar nasal [ŋ] changes into bilabial [m] before bilabial consonant [p]. This rule is followed with another rule saying that a voiceless stop is deleted after a bilabial nasal sound. After READJ process, we have an insertion of junctures resulted from the addition of the reciprocal (REC) morpheme. In this case, the REC morpheme, which is realized as [T], triggers the

insertion of junctures, which is the last sound of the prefix and the base. This results in the form *memukul-mukul.*

The process of reduplication illustrated above can be different from that in another form of reduplication added with an affix. In Javanese, for example, the form *antem-anteman*'to hit each other' derives from two morphemes: the morpheme meaning [ANTEM] and the morpheme reciprocal [REC]. This is due to the fact that the form *antem-antem* does not exist in this language. In this morphological process, the REC morpheme is represented with the suffix *–an*, which triggers the insertion of junctures of the whole base. In this process, there is no phonologiacal process involved. This morphological process for the Javanese data is similar to that in Sundanese. The Sundanese reduplicated form *pagebug-gebug* 'to hit each other', for example, derives from the morpheme meaning [GEBUG] and the REC morpheme realized as the prefix *–pa*. This prefix triggers the insertion of junctures of the whole base, resulting in the form *pagebug-gebug*.

6. Conclusion

Indonesian, Javanese, and Sundanese have full reduplication with various semantic functions. Indonesian and Javanese are similar in the sense that the two languages have full reduplication with semantic functions covering repetition, reciprocal, uncertainty of goal/direction, and intensifier. Meanwhile in Sundanese, full reduplication has the semantic functions as an intensifier and reciprocal. In Indonesian and Javanese, full reduplication with the notions of repetition and reciprocal are very productive, while in Sundanese, full reduplication with the notion reciprocal is productive.

The process of reduplication involving an affix can be complex in morphology. However, with the theory of distributed reduplication, we can clearly explain the word formation process, as this theory claims that reduplication deals with the insertion of junctures. In this case the inserted parts/junctures can be the ones having undergone a phonological process. Reduplicated forms added with an affix may contain two or more than two morphemes, depending on whether the reduplicated base has meaning or not. In Indonesian, the reciprocal reduplication should be treated as having three morphemes, while in Javanese and Sundanese, this type of reduplication contains two morphemes.

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