

Operations of reduplication and triplication in Tiv

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ABSTRACT: The study focuses on the operations of reduplication and triplication in Tiv, which are morphological processes that exist in most languages of the world. Reduplication deals with repeating part of a word or a whole word to form a new word. Triplication, on the other hand, has to do with the application of two distinct reduplication processes/operations. The present study, "Operations of reduplication and triplication in Tiv", is aimed at investigating the two processes in the Tiv language. The objectives of the study were to examine reduplication and triplication in Tiv, identify the functions of reduplication and triplication in Tiv, and show the suitability of Morphological Doubling Theory (MDT) in analysing reduplication and triplication in Tiv. Data for the study were sourced from 20 native speakers from Gboko and Makurdi (ten from each). The study employed the use of instruments such as cell phone recorders for recording utterances or responses from native speakers, a jotter for field notes, as well as files for data elicitation. The responses elicited from the respondents were recorded on a cell phone and also jotted down on paper. The data collected were presented, interpreted and analysed descriptively. The findings of the study are as follows: firstly, that reduplication and triplication exist in the Tiv language with partial (incomplete) and total/complete types. Secondly, that reduplication and triplication perform morphological function (formation of words), grammatical function (changing of word classes), emphatic function (emphasis), distributive function, as well as ideophonic and onomatopoeic function. The study proves the suitability of Morphological Doubling Theory (MDT) in analysing reduplication and triplication in Tiv. The paper concludes that the Tiv language is fascinating and worthy of intellectual interest for the purpose of its presentation and development.

Keywords: Morphological processes, phonological constituents, multiplication, ideophonic functions.

INTRODUCTION

Morphology, as a branch of linguistics, studies the word formation processes and analyses the constituents of words in languages. Reduplication and triplication are among the morphological processes evident in many languages of the world. While reduplication as a morphological process has to do with the repetition of a word or its part to form new words as in "àyém (race – a noun) + àyém → àyém-àyém (speedily – adverb)" and *shimà-shimà* (beloved – an adjective)", triplication takes place when a word is represented thrice to form a new word as in the examples "*dèmà-dèmà-dèmà* (extremely reckless)" and "*mílè-mi- mílè* (to do things in a hidden way so that people will not know – an adverb). In the above examples, "*àyém-àyém*" shows total or complete reduplication while "*shimà-shimà*" (beloved) shows partial reduplication. From the above examples, 'shimà-shimà'

(beloved) is derived from 'ishimà' (heart) through the process of reduplication. In the reduplicated form, the initial letter 'i' in 'ishimà' is deleted. In the same manner, "*dèmà-dèmà-dèmà* (extremely reckless)" is an example of complete triplication "*mílè-mi- mílè* (to do things in a hidden way so that people will not know – an adverb) is an example of partial triplication.

The Tiv language, mainly spoken in Benue State, also exhibits the morphological processes of reduplication and triplication. There are researches conducted on reduplication in Tiv, such as Maduagwu (2012), whose research only proves the existence of reduplication in Tiv, neglecting its types and functions. Her study also failed to account for the existence of triplication in Tiv. Similarly, Ayebo (2015) researched the two processes and erroneously concluded that there is no partial reduplication

in Tiv. In his study, he seemed to be more interested in explicating the Optimality Theory (OT), giving examples of reduplication and triplication in Tiv rather than analysing the processes in the context of applying the theory. The gaps noticed in the previous studies necessitate the present study. The present study, therefore, is aimed at investigating reduplication and triplication in the Tiv language. The objectives of the study are:

1. To examine the existence of reduplication and triplication and their types in the Tiv language.
2. Identify the functions of reduplication and triplication in Tiv.

REVIEW OF RELATED LITERATURE

Conceptual review

The concept of reduplication

Reduplication is one of the morphological processes evident in many languages. As a concept, reduplication was coined in the sixteenth century (16th C) from the Latin 'reduplicatio/reduplicationis', which is directly translated as 'doubling or folding'. From the etymological presentation above, it can be said that reduplication is the act of doubling a sound, word or word element to derive a new word or for grammatical purposes. Pushpinder and Jindal (2015, p. 92) define reduplication as a situation where "some words are formed out of two such elements as are almost alike. These elements may be either identical or only slightly different".

Okeke (2008, p.111) avers that reduplication is a word formation process which concerns the "act of repeating part of a word or a whole word to form new words. In other words, it is a process by which a root or stem is repeated during the formation of new words". To Rawski *et al.* (2023), reduplication is a morphological process of copying that has a wide-ranging typology and a display of the computational aspects of reduplication and reduplicative typology, which also classify numerous theories of reduplication. The contention of Haugen *et al.* (2022) that certain patterns of reduplication are difficult to learn and the reason for their rarity is arguable, in the sense that the rarity of any linguistic pattern could be due to a lack of investigative attention. Aleybo (2015, p. 196) contends that "reduplication is a morphological process by which the root or stem of a word or part of it is repeated". Aleybo explains further that reduplication is a distinct phenomenon, quite absolutely different from other phenomena that cause the surface repetition of phonological material. According to him, such distinction is necessary in that "reduplication (that is, iteration is encountered in every language and affects all types of linguistic units (phrases, words and even single segments)".

From these definitions, it is clear that reduplication involves copying, doubling or repeating either fully or partially a word or morpheme. The root, base, stem or sound that is copied or repeated is known as a reduplicant. Examples of reduplication in English are: bye-bye, knock-knock, hocus-pocus (Chahur, 2012), boogie-woogie, chick-chick, teeny-weeny (Aor, 2020), among others. The Tiv examples are: lùgh-lùgh (soft), còugh-còugh (dirty), ahom-ahom (fatty) (Udu, 2009), gbárgbár (swallow bird), ànyòm-ànyòm (yearly), gèngèr-gèngèr (loudly), zàn-zàn (forever, continuously) (Ajim, 2018), among others.

From the examples above, it could be observed that while some reduplicatives are hyphenated, others are not hyphenated and separated but considered to be single words derived. In some instances, the reduplication takes place without a hyphen or separation between the doubled elements. Another observation is that, while in some instances, the reduplicants are doubled totally, in other instances, the doubling is partial, hence the concepts of complete/total/absolute reduplication and partial reduplication.

Full/total/complete or absolute reduplication: this entails the exact copying or repetition of a word or sound, as in the Tiv examples kùmbùl kùmbùl (very old), gūdū gūdū (galloping of many animals), among others (Aor, 2020). The English examples of full reduplication are hush-hush, goody-goody (Pushpinder and Jindal, 2015), among others.

Partial reduplication: This is a form of reduplication where only part of the base is reduplicated. Aor (2020, p. 59) observes that, "the partial reduplication involves copying or repeating of only a part of a word." The examples of partial reduplication in English are: hocus-pocus, helter-skelter, razzle-dazzle, among others. Partial reduplication is further classified into rhyming reduplication and ablaut reduplication. Rhyming reduplication has to do with partial reduplicants that are capable of having terminal or end rhyming, as in the following examples: boogie-woogie, hodge-podge, harum-scarum, holus-bolus, among others.

Ablaut reduplication, on the other hand, has to do with changing vowels of words that nearly rhyme, as in the following examples: zigzag, hip-hop, tick-tock, tiptop, pitter-patter, among others.

Some linguists classify reduplications into phonological and morphological types. It is based on this classification that the two theories of reduplication, the Phonological Doubling Theory (PDT) and the morphological doubling theory (MDT) are formulated. While the phonological reduplication involves the reduplication of phonemes (vowels and consonants) as well as the reduplication of prosodic units (syllables and moras), the morphological reduplication is concerned with the doubling of linguistic constituents (words, stems, roots) (Aor, 2020).

The concept of triplication

According to Aor (2020: 69), triplication involves “a double copying of the base. As a result of double copying, we have two reduplicants”. Wee (2016:515) sees triplication as “a pattern obtained by more than one application of a reduplication process or by application of two distinct reduplication operations/processes.” Blust (2001:333) makes a point that semantically the forms that exhibit triplication differ from their reduplicated counterparts only in “the degree or intensity and with which an action is realized.” So, ‘Qata-za-zay and Qata-za-za-zay’ differ only in that the latter conveys greater sense of intensity with

which an action is realized.” “Triplication is reserved to mark this type of semantic nuance” (Blust, 2001, p. 332). Blust (2001) assertion that triplication is only meant to increase the degree or intensity of the semantic notion encoded by reduplication has been faulted by Wee (2016), where triplication is justified to perform more than the aforementioned function by Blust (2001). Wee (2016) proved Blust wrong using colloquial Singapore English.

Blust (2001: 335) proceeds to characterise triplication as being “universally restricted to a single function that can be generalised as [+ more of the same]”. Blust (2001) examples of triplication in Thao, as cited in Wee (2016:516), are as follows:

Base	Triplicated form	
Zay ‘turn’	qata-za-za-zay	‘ceaselessly turn the head from side to side’
Qca ‘return, repeat’	mig-qa-qa-qca	‘keep changing one’s position or one’s mind’
Untal ‘fellow, imitate’	m-unta-ta-tal	‘to follow incessantly’
Mash ‘uzu’ ‘to cough’	mash-‘a’uzu-uzu	‘to cough repeatedly’

Singh and Wee (2002:519) provides examples of triplication in colloquial Singapore English as seen below:

Base	Triplicated form	
Cough	cough-cough-cough	‘keep on coughing’
Walk	walk-walk-walk	‘keep on walking’
Stop	stop-stop-stop	‘keep on stopping’
Cry	cry-cry-cry	‘keep on crying’
Cut	cut-cut-cut	‘keep on cutting’

Triplication could be fully (complete, absolute, total) or partial, as in the following examples in Tiv:

Base	Triplication	type of triplication
Kpa (zero meaning)	kpá-kpá-kpá ‘activeness Or fastness’	full triplication
Ze (zero meaning)	zèzèzè ‘staggered movement’	full triplication
Fele (quick) (Adj.)	fèlèfèlèfèlè ‘quickly, hastily	full triplication
Zemba (zero meaning)	zèmbá-zè-zèmbá ‘stagger-walk about’	partial triplication
Zenga (zero meaning) from one point to another’	zènga-zè-zèngá ‘hover	partial triplication

From the above demonstration, examples one to three (i-iii) show full/complete triplication and examples four to five (iv–v) are instances of partial triplication. It could also be observed that some of the triplications are frozen because the bases are meaningless in the context they are used. For instance, ‘kpa’ in Tiv means ‘but’, with a distinctive realisation with a low tone, but in the context, it is used above, it is meaningless because its meaning is not part of the meaning of the triplicated form ‘kpá-kpá-kpá’ meaning ‘activeness or fastness.’

Empirical studies

Scholars have worked on reduplication and triplication in various languages. Most of those works draw attention to

the functionality or forms of reduplication and triplication in the studied languages. Ashton (1944), as quoted in Hyman (2009) in his study of reduplication as a characteristic of Bantu languages, which Tiv is one, says that Bantu grammars often include sections showing that verbs, nouns, adjectives, numerals and even pronouns and demonstratives can be reduplicated with specific semantic function. He also explains that reduplications show a lot of similarity in both structure and meaning, but also show their differences. Ashton’s study informed this study on checking the various parts of speech that reduplicate in the Tiv language, one of the Bantu languages mainly spoken in Benue State, Nigeria.

Ashton (1944) in his book on *Swahili Grammar* presents the diverse functions of reduplication in Kiswahili, viz, emphasis, expression of intensiveness, modifying the

force of a word, expressing continuous action and expressing a distributive idea. His work assisted as Kiswahili is a Bantu language, and this study is also on a Bantu language.

Oduor (2002) in her research on the syllable weight and its effect on Dholuo phonology mentions reduplication in terms of its effect on syllable weight. She looks at reduplication as the repetition of syllables. This study relates to the present study because it is on reduplication. However, it is beyond the scope of the current study because it can be suitably analysed using phonological doubling theory (PDT). The Tiv language reduplication is a morphological process and can be successfully analysed using the Morphological Doubling Theory (MDT).

Okello (2007) carried out research on morphological reduplication in Dholuo. She observes that reduplication targets the root of a word and that derivational and lexical affixes are not targeted in Dholuo. Her finding was that reduplication in Dholuo is morphological reduplication. Although Dholuo is a Nilotic language, Okello's major concerns are quite similar to the current study. For example, one of her concerns was to employ Morphological Doubling Theory (MDT), which is the same theoretical framework used in the current study. The point of departure is that while the previous study focused on the Dholuo language, the current study focuses on the Tiv language.

Hyman (2009) studied morphosyntactic correspondence in Bantu languages and argued in support of Morphological Doubling Theory. They observe that it is in reduplication that there is an ideal testing ground for theories of morphology, phonology, and their interface. They argue further that the prosodic study of reduplication by phonological copying theories does not account for partial reduplication because they treat reduplication as the total copy of the abstract morphological structure of the base. They conclude that reduplication is not wholly a prosodic phenomenon. This work is relevant to the present study since investigating the relationship between reduplication, morphology and phonology, the study proves that reduplication is not wholly a prosodic phenomenon.

Mwasusu (2012:72) in her study of the nature of stress in Kidawiwa asserts, "polysyllabic adverbs are formed with the reduplication of some bisyllabic adverbs." She submits that primary stress is at the final syllable in reduplicated words. This work is relevant to the present study as it contributes towards providing information needed when looking at reduplication in adverbs.

Lalith (2019) research focused on the functions associated with reduplication in various ways. These range from total meaning change, word formation, marking of number (plurality, distribution, collectivity), distribution of an argument, tense, aspect (continued or repeated occurrence; completion; inchoative), attenuation, intensity, transitivity (valence, object defocusing), conditionality, reciprocity and pretence. The concerns of the previous study examined here helped in directing the current study,

specifically on the functions of reduplication and triplication in Tiv.

Maduagwu (2012) investigated the morphological process of reduplication in the Tiv language. She discussed only adjectives and nominal reduplications. She failed to classify reduplication in Tiv, and the functions of reduplication in Tiv are left out. These vacuums created are filled up in the current study.

Alyebo (2015) looked at reduplication and triplication as phonological and morphological processes of word formation in Tiv. The findings of the study reveal that the Tiv language exhibits common features of reduplication with other Bantu languages. The result also shows that there is only one form of reduplication (full) and two types of triplication (full and partial). The study concludes that reduplication and triplication are key processes of word formation in Tiv; they serve as intensifiers in the semantic content of the sentence. Alyebo's effort is commendable for it considers the Tiv language, reduplication and triplication as morphological processes in Tiv, their types and functions. However, his finding of one type of reduplication, which is 'full reduplication', is contested. Tiv language exhibits partial reduplication too. The gap which the present study hopes to fill. Secondly, the study failed to discuss other functions of reduplication and triplication discussed in the present study. Also, the study failed to account for word classes that undergo reduplication and triplication. The present study focuses on filling the gaps created in Alyebo's work.

Aor (2020) researched reduplication in the Tiv morphology: classification and functions. The objectives of the study were to classify Tiv reduplications, to differentiate between reduplication and triplication in the Tiv morphology, to compare reduplication and compounding, and to state the functions of reduplications in the Tiv morphology. Observation-participation method was used in data elicitation, and Inkelas and Zoll's (2015) Morphological Doubling Theory applied. The study found that reduplication has both morphological and phonological features. Reduplication in Tiv has been trichotomized based on the structure (full/partial), word classes (adjectival, adverbial, nominal and verbal) and functions (onomatopoeic/ideophonic reduplication and numeral reduplication). This study is relevant to the present study, for it looks at reduplication to some extent. It also applies a suitable theoretical framework. However, it fails to discuss the linguistic units affected by reduplication. More importantly, it fails to discuss triplication in detail, the way it discusses reduplication. These gaps are filled in the current study.

From all of the above studies, one observes that every form of reduplication and triplication has a grammatical or semantic role to play in a language. Moreover, every language has peculiar patterns of reduplication and triplication. Therefore, with the inadequacies found in the previous studies as examined above, the present study becomes pertinent and inevitable.

Theoretical framework

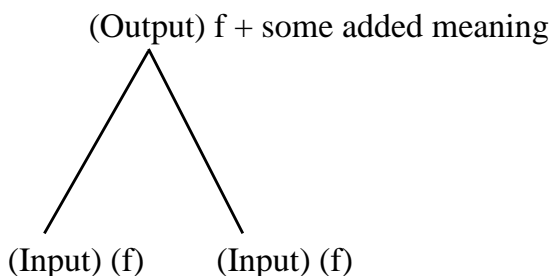
The theory adopted for description and analysis in this study is the Morphological Doubling Theory (MDT). This theory was formulated in 2005 by Sharon Inkelas and Cheryl Zoll. It was developed for morphosemantic feature reduplication or morphological duplication.

The pivotal assumption of the Morphological Doubling Theory is that reduplication involves semantic rather than phonological identity. The theory claims that reduplication results when the morphology calls twice for a constituent of a given semantic description, with possible phonological modification of either or both constituents. In Morphological Doubling Theory (MDT), reduplication couples' morphological constituents (affix, root, stem, or word) which agree in their semantic specification. The two constituents, related morphologically, are not required to match phonologically. In essence, one would say that Morphological Doubling Theory agrees that the two mechanisms are involved, though it opts to lean on the side of morphological duplication (Inkelas and Zoll, 2005).

The following are the two basic claims of Morphological Doubling Theory (MDT):

1. A reduplication construction calls for morphological constituents (affix, root, stem, or word), not phonological constituents (mora syllable or foot).
2. Reduplication calls for the semantic identity of its sisters, not phonological identity.

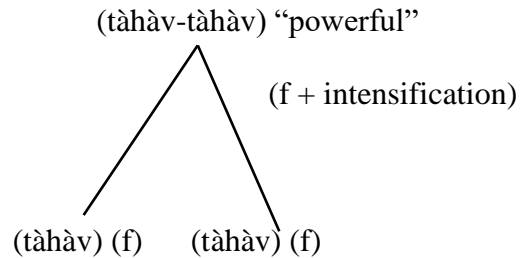
It presupposes the double (reduplication) or multiple (triplication and multiplication) occurrence of a morphological constituent meeting a particular morphosemantic description. Morphological Doubling Theory (MDT) assumes the basic structure below for morphological reduplication. A reduplicated stem has two featurally identical sisters (having the same meaning).



Where (f) means the semantic value of a word (adapted from Inkelas and Zoll, 2005)

The two sisters (inputs) are required to be identical only semantically. The inputs in the above structure refer to morphological constituents, and the output is the reduplicated form.

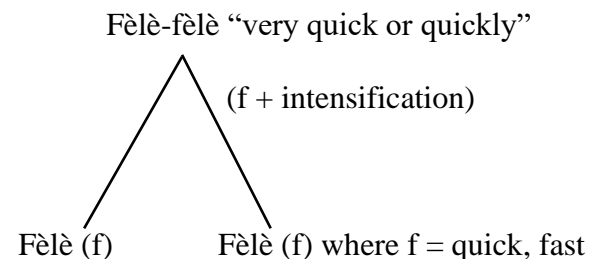
Consider the following example from Tiv:



In the above example, what is coupled is a morphological constituent (tàhàv) 'power', which is a stem in Tiv. These constituents are semantically equal. The output (tàhàv-tàhàv) "powerful" has an additional meaning. The original meaning is 'power', which is a noun and the new meaning after reduplication is 'powerful', which is an adjective.

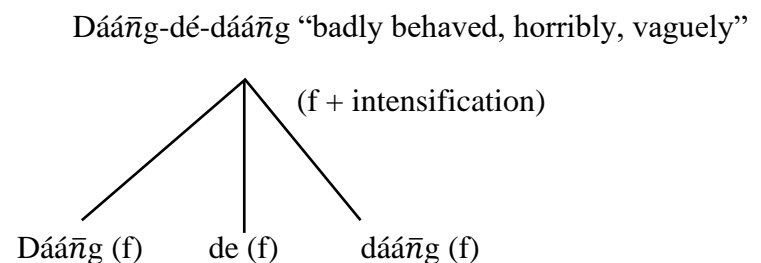
Concepts of reduplication and triplication in Morphological Doubling Theory (MDT)

To carry out a theoretical analysis using MDT, one needs to understand the morphology of reduplication and, by extension, triplication as propounded by Inkelas and Zoll (2005). Consider the following example in Tiv that shows the morphology of reduplication as presupposed by MDT.



From the above example, the stem is 'fele' (quick or fast) in Tiv. The base and the reduplicant have the same semantic description, that is 'quick' or 'fast'. The output 'fèlè-fèlè' has the meaning of the sisters with an additional meaning 'very'. In other words, the output 'fèlè-fèlè' means "fastly, quickly" (intensification). This changes 'fele' as an adjective to 'fèlè-fèlè' which is an adverb.

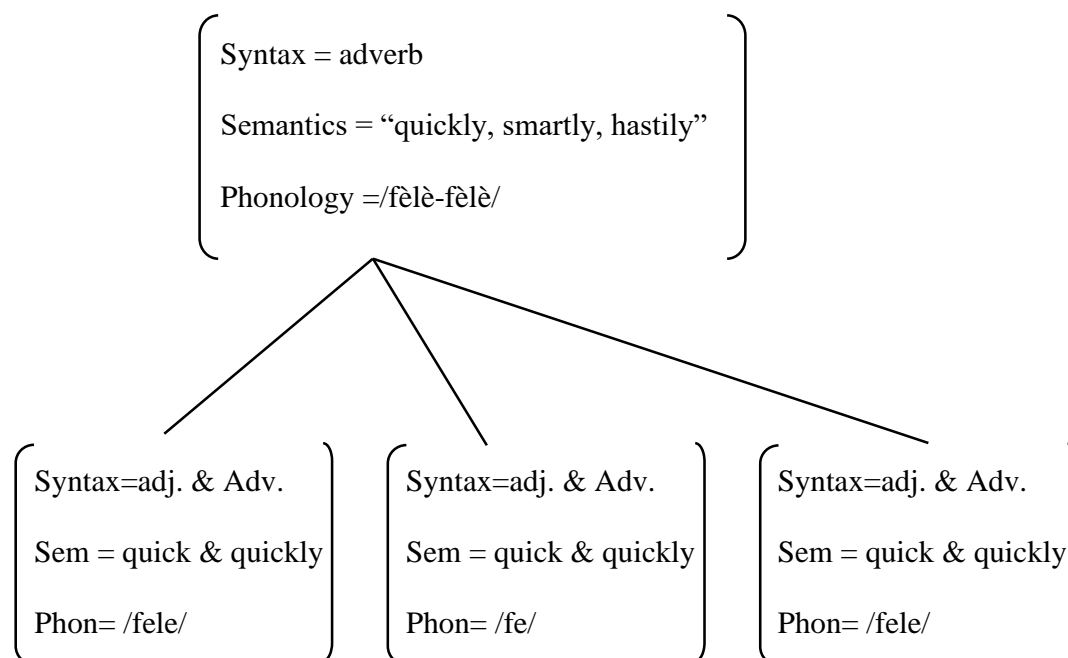
In a similar perspective, let's consider the following example in Tiv that shows the morphology of triplication as presupposed by MDT.



Where f = bad character, horrible or vague

From the above illustration, the stem is ‘daag’. The base and the reduplicants have the same semantic description, that is, ‘bad character, horrible or vague’, but differ in their phonology. There is a deletion of ‘aag’ in the medial sister and a replacement of /a/ with /e/.

In a summary manner, we would say morphological reduplication and triplication are a double or multiple selection (insertion) of morphological constituents such as root or stem. This is further demonstrated in the following schema:



In MDT, as seen above, reduplication or triplication couples morphological constituents that agree in their semantic (and syntactic) specification. These constituents do not have to match phonologically. Morphological Doubling Theory makes heavy use of the concept of morphological construction to handle reduplicative semantics and phonology. A ‘construction’, broadly speaking, is any morphological rule or pattern that combines sisters into a single constituent. Each affix, compounding rule, truncation construction and/ reduplication process is a unique morphological construction.

The phonology of reduplication and triplication in morphological doubling theory

According to Morphological Doubling Theory, the primary phonological issues arising in reduplication and, by extension, triplication are the following:

1. Are the copies in reduplication phonologically modified relative to how they would appear in isolation?
2. Is surface phonological identity an extrinsic requirement in reduplication?

In Morphological Doubling Theory, as already stated, the essential identity in reduplication and, by extension, triplication is semantic. It does not require phonological identity. Morphological Doubling Theory sees the role of

phonological copying and its scope to be limited to narrow sets of contexts. Phonological constituent copying is restricted to cases motivated by phonological necessity.

From the foregoing examination of the Morphological Doubling Theory and the examples given, the theory is a very suitable theory in the analysis of reduplication and triplication in Tiv, hence its application in this study.

METHODOLOGY

The methodology adopted for the study is the descriptive method. Data for the research were sourced from both the primary and secondary sources. The primary data were sourced from twenty (20) respondents from Gboko and Makurdi Local Government Areas in Benue State, Nigeria (10 respondents from each of the selected areas). The choice of gboko is because the target variety used for this study is the gboko speech form, which is the lect with wide acceptance as the Tiv Bible is translated using the lect (Yongo, 2011 cited by lorember, 2022). Choice of Makurdi, on the other hand, is because some respondents (scholars) who are well-versed in the knowledge of the Tiv language are based in Makurdi. Thus, the choice of Makurdi became necessary. The respondents comprised two categories: native speakers who are proficient in the language, both those who received a Western education and those who have not. The focus was on the elderly (uneducated) from the ages of 50 years and above, their

usage and competence of unadulterated spoken Tiv for a long period. Purposive sampling technique was used for the selection of the respondents, which is referred to as intentional selection of participants by researchers based on unique characteristics or criteria that are valuable to the research question (Memon et al, 2025; Renu, 2024). A face-to-face anonymous unstructured and informal (oral) interview with the competent respondents was used for data collection. The secondary data were elicited from the available literature in Tiv.

The instruments used for data collection were a cell phone for recording responses, and a jotter for jotting down relevant points was used by the researchers. Basically, the respondents were asked to give examples of reduplication and triplication of words in Tiv and the reasons or functions associated with the processes. The data collected has been refined and analysed using Inkelas and Zoll's (2005) Morphological Doubling Theory (MDT).

RESULTS AND DISCUSSIONS

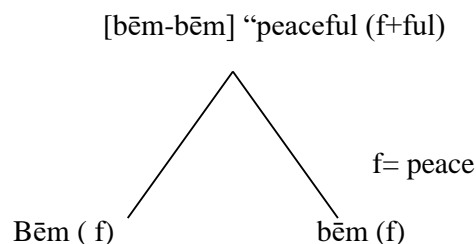
Results of the study are presented in tables with discussions following each table, as follows:

Reduplication and triplication in Tiv

Reduplication and triplication as morphological processes exist in the Tiv language as seen in Table 1. The demonstration in Table 1 showing the existence of reduplication in the Tiv language. From the demonstration, it could be noticed that nouns (No. 1 - 4), verbs (No. 5 - 7), adjectives (No. 8 - 10) and adverbs (No. 11 - 13) can be reduplicated in the Tiv language (Aor, 2020). He also adds that the class of a word (part of speech) can be changed when it is reduplicated. The table above conforms to what Aor has stated, as it can be observed. For example, 'abèèn' (cloud) is a noun, but when reduplicated as "abèèn-abèèn" (cloudy), it becomes an adjective.

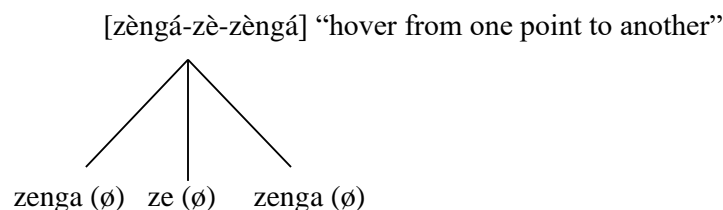
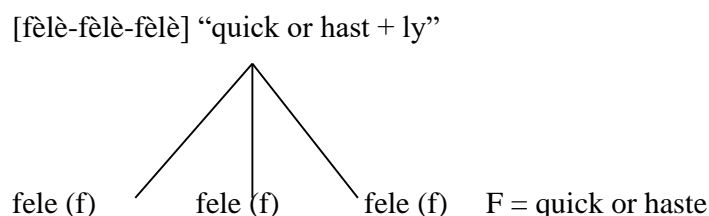
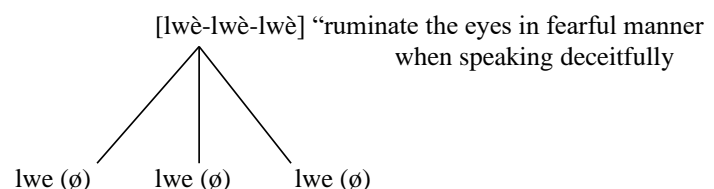
Furthermore, a critical examination of the table reveals that the Tiv language has both complete and partial reduplication. As seen in the table, examples numbered 1 - 13 show complete (total) reduplication while examples 14 - 17 show partial reduplication where the initial letters of the words are dropped (deleted) when reduplicated. This contrasts with the finding of Alyebo (2015), who posits that there is only one type of reduplication in Tiv.

Applying the Morphological Doubling Theory, example number three (3) can be presented diagrammatically as seen below:



Analysing the above diagram in the context of the Morphological Doubling Theory, the morphology calls twice for identical input /bem/ that results in /bem-bem/, which has an added meaning "peace + ful → peaceful". This results to changing a noun "bēm" meaning "peace" into an adjective "bēm-bēm" meaning "peaceful" (Inkelas and Zoll 2015).

From the demonstration in Table 2, it is clear that the Tiv language exhibits triplication. From examples 1 - 13, the triplication is total or complete, while examples 14 - 20 show partial triplication. It should also be known that some triplicated words can take both partial and total triplication, as in "dááng-dé-dááng" or "dááng-dááng-dááng" (Aor, 2020; Alyebo, 2015). Furthermore, it could also be observed that most of the Tiv triplications are frozen. According to Rakassai (2013), items that appear reduplicated but do not exhibit a recognised single lexical item can be referred to as frozen. He further adds that frozen reduplication patterns are represented by items that are highly specified semantically, whether full or partial. Therefore, the seemingly root on their own do not have recognisable meanings as demonstrated in the above table, except examples numbers 1, 5, 6, 7, 8, 11, 12, 13 and 14 where the roots have respective meanings. The above examples can be presented diagrammatically in line with the Morphological Doubling Theory as seen below:



From the above demonstration, diagram 'a' has 'lwè', which has zero meaning and when triplicated, results in 'lwè-lwè-lwè' meaning 'to ruminate eyes in a fearful manner when speaking deceitfully'. This means the triplication is total and frozen. In diagram 'b', the triplication is total and active in the sense that the duplicant 'fèlè' has meaning, which is "quick or fast", and the triplicated form

Table 1. Reduplication in Tiv.

S/No	Base	Gloss	Reduplication	Gloss
1	àbèèn (N)	clouds	àbèè-àbèèn (Adj.)	Cloudy
2	àhán (N)	laughter	àhán-àhán (Adj.)	Always in a laughing mood
3	bēm (N)	peace	bēm-bēm (Adj.)	Peaceful
4	gbèndà (N)	road, a chance created	gbèndà-gbèndà (Adv.)	Just arriving
5	nùgwà (V)	Mixed	nùngwà-nùngwà (Adv.)	Improperly mixed
6	biìshì (V)	to be close to someone	biìshì-biìshì (Adv.)	Be intimately closer to somebody
7	Pààsè (V)	to clarify a point	pààsè-pààsè (Adv.)	Speak clearly when explaining something
8	wàngèr (Adj.)	clear	wàngèr-wàngèr (Adv.)	Clearly
9	fèlè (Adj.)	quick	fèlè- fèlè (Adv.)	Quickly
10	dōō (Adj.)	good	dōō-dōō (Adv.)	Very good, very well
11	cùkù (Adv.)	small in quantity	cùkù-cùkù (Adv.)	Little by little
12	hègèn (Adv.)	now	hègèn-hègèn (Adv.)	Recently, not long, right away
13	zàngè (Adv.)	speedily done	zàngè-zàngè (Adj)	Very active and quick in doing something
14	ìkyòn (N)	woods, trees	kyòn-kyòn (Adj.)	Woody
15	ìshimà (N)	heart	shimà-shimà (Adj.)	Beloved
16	ìnyá (N)	sand	nyá-nyá (Adj.)	Full of sand, sandy,
17	ìkyūá (Adj. Adv)	near	kyūá-kyūá (Adj)	Near, within a short distance or space

Table 2. Triplication in Tiv.

S/No	Triplication	Gloss
1	kùkùkù (Adv.)	The act of being secretive about doing something
2	lwè-lwè-lwè (Adv.)	Ruminate the eyes in a fearful way, especially when speaking deceitfully
3	Ngbò-ngbò-ngbò (Adj)	Blocked in many places, so that there is not enough room to pass or do something.
4	Pè-pè-pè (adv)	Behave irrationally
5	Zà-zà-zà (adv.)	Stagger-walk about as if drunk or half asleep
6	Tà-tà-tà (Adv.)	Become divided in one's opinion
7	Fèlè-fèlè-fèlè (Adv.)	Hastily
8	Dááng-dááng-dááng (adv.)	Not composed
9	Kèrá-kèrá-kèrá (adv)	Extremely reckless
10	Dèmà-dèmà-dèmà (adv)	Extremely reckless
11	Kpèí-kpèí-kpèí (interjection)	Expression of surprise or fear
12	Wèí-wèí-wèí (interjection)	Expression of surprise or fear
13	Káí-káí-káí (interjection)	Expression of surprise or fear
14	Ngbèlè-gbè-gbèlè (noun), Adv.	Meddling, be secretly meddling in people's affairs
15	Pètà-pè-pètà (Adj)	(of a semi-liquid substance) sluggishly drop in bits
16	Tsèlá-tsè-tsèlá (Adj)	(of something taken) drop many parts as one carries it; not based on one thing at a time
17	Zèngá-zé-zèngá (Adj)	Hover from one point to another, overemphasising interest in doing something.
18	Kèrá-ké-kèrá (Adj)	Fidgety
19	Tūsè-tū-tūsè (Adv.)	Continuously toss somebody about
20	Zèmbà-zé-zèmbà (Adv.)	Stagger-walk as if drunk or half asleep

has additional meaning 'ly', making "fèlè-fèlè-fèlè" to mean 'quickly or hastily'. In diagram 'c', the triplication is partial and frozen because 'zèngá' itself has zero meaning and its medial form is reduced to 'ze', which has zero meaning,

but its triplicated form "zèngá-zè-zèngá" means "to hover from one point to another". The demonstrations above have revealed a deeper dimension of the operations of both reduplication and triplication in the Tiv language.

Table 3. Grammatical function of reduplication and triplication in changing word classes in Tiv.

S/No	Base word	Word class	Reduplication/triplication	Word class
1	abèèn (clouds)	Noun	abèèn-abèèn (cloudy)	Adjective
2	gbèndà (road)	Noun	gbèndà-gbèndà (just arriving and not rested)	Adverb
3	bávèr (to suddenly understand a point in a discussion)	Verb	bávèr-bávèr (loudly)	Adverb
4	kimbir (to repeat)	Verb	kimbir-kimbir (repeatedly severally)	Adverb
5	sáán (to express happiness)	Verb	sáán-sáán (happy, cheery)	Adjective
6	wàngèr (clear)	Adjective	wàngèr-wàngèr (clearly)	Adverb
7	dyèlègh (naked)	Adjective	dyèlègh-dyèlègh (nakedly)	Adverb
8	tsuàà (earlier, formerly)	Adverb	tsuàà-tsuàà (earlier, formed)	Adjective
9	fèlè (fast, quick)	Adjective	fèlè-fèlè-fèlè (hastily, fastly, quickly)	Adverb
10	dááng (to have bad character, vague or formless)	Adverb, Adjective respectively	dáág-dááng-dááng (of one's character not composed, to behave rashly)	Adverb

Table 4. Reduplication and triplication for emphasis in Tiv.

S/No	Reduplication/Triplication	Gloss
1	'fèlè-fèlè' or 'fèlè-fèlè-fèlè' (fèlè-fè-fèlè)	hastily
2	'dááng-dááng' or 'dááng-dááng-dááng'	not compose
3	'gèng-gèng' or 'gèng-gèng-gèng'	loudly and very loudly
4	'bēm-bēm' or 'bēm-bēm-bēm'	peaceful, peacefully
5	'vindi-vindi' or 'vindi-vindi-vindi'	Thoroughly

The functions of reduplication and triplication in Tiv

Reduplication and triplication as word formation processes in Tiv: Reduplication and triplication function as word formation processes in the Tiv language. Through the processes, the Tiv language acquires numerous words which are used in meeting the linguistic and communicative needs of the language (Iorembor, 2022).

The function of reduplication and triplication in changing word classes: Reduplication and triplication perform the grammatical function of changing the word classes Aor, 2020; Iorembor, 2022). Alternatively, they are derivational processes that help in deriving other word classes different from the word class the bases belong to (Unubi and Yusuf, 2019), as in Table 3.

From the above demonstration, the parts of speech or word classes the bases belong to differ from when the bases are reduplicated or triplicated for example while “abèèn” (clouds) is a noun, “abèèn-abèèn” (cloudy) is an adjective and while “fèlè” (quick) is an adjective its triplicated form “fèlè-fèlè-fèlè” (quickly, hastily) is an adverb. Affirming, Aor (2020), to an extent, made similar demonstrations how reduplication and triplication. Meanwhile, Alyebo sidelines this function, focusing on reduplication and triplication as serving as intensifiers in semantics.

Reduplication and triplication as indicators of emphasis in Tiv

Reduplication and triplication in Tiv perform the function of emphasis as seen in Table 4. From the demonstration in Table 4, the reduplication and triplication placed emphasis on the activity or act conveyed in the words Alyebo (2015). It should also be known that extremity can also be emphasised through this process. In such instances, the repetition goes beyond triplication. This involves multiplication where the pattern of repetition is usually quadruple (four-fold) or more, as seen in Table 5.

From the demonstration in Table 5, the quadruple repetition indicates the extremity of the action exhibited. Alternatively, it indicates the intensification of the emphasis. Alyebo (2015), in his study, narrowed his findings to emphasise leaving out the degree of emphasis that extends to multiplication.

The distributive function of reduplication and triplication in Tiv

Reduplication and triplication in the Tiv language can also perform the distributive function in numerals exhibiting an undertone of plurality for emphasis, as seen in Table 6. From the demonstration in Table 6, it is clear that redupli-

Table 5. Multiplication showing the degree of emphasis of extremity in Tiv.

S/No	Multiplication	Gloss
1	dááng-dááng-dááng-dááng-dááng	extremely uncomposed
2	gèng-gèng-gèng-gèng	extremely loud
3	nyà-nyà-nyà-nyà	extremely sandy
4	dèmà-dèmà-dèmà-dèmà-dèmà	extremely reckless
5	zèmbà-zèmbà-zèmbà-zèmbà-zèmbà	extremely stagger-walk

Table 6. The distributive function of reduplication and triplication in Tiv.

S/No	Base	Reduplicated/Triplicated form
1	mòm (one/once)	mòm-mòm (one by one, one after another)
2	uhàr (two)	uhàr-uhàr (two by two/in twos)
3	utár (three)	utár-utár (three by three)
4	pùè (ten)	pùè-pùè (in tens, ten tens)
5	ìkyùndù (twenty)	ìkyùndù-ìkyùndù (in twenty's)
6	dùbù (thousand)	dùbù-dùbù (thousand by thousand, in thousands)
7	u-(PL) dùbù (thousands)	ùdùbù-ùdùbù-ùdùbù (thousands of thousands)

Table 7. Ideophonic and onomatopoeic function of reduplication and triplication in Tiv.

S/No	Ideophones/onomatopoeia	Representing
1	fyàgh-fyàgh	the action of lightening
2	gbyàègh-gbyàègh	the action of thunder
3	vèghèr-vè-vèghèr	The movement that is sluggish and abnormal
4	pūūng-pūūng	representing white colour
5	bááng-bááng	representing red colour
6	dìshì-dìshì	representing black colour
7	gbàng-gbàng	the sound made by corrugated iron sheet
8	gbèlèng-gbèlèng	sound of a bell
9	shòkó-shòkó	rattle
10	tùgh-tùgh	a sound made by tugh tugh (a bird)
11	Ján-ján	Loud noise

cation (1 – 6) and triplication (7), which have to do with Tiv numerals, indicate an undertone of plurality or pluralisation, as it shows that the items or people involved are more than one. This is a common operation in many languages, including the Sinhala language, as posited by Lalith (2019).

Ideophonic and onomatopoeic functions of reduplication and triplication in Tiv

Reduplication and triplication do perform ideophonic and onomatopoeic functions in some Tiv words. Ideophone as a concept, has to do with a word that uses sound symbolism to express aspects of an event that can be experienced by the senses, like smell, colour, shape, sound, action or movement. Onomatopoeic, on the other hand, has to do with a word that sounds like what it

represents. It can be said to be the property of a word sounding like what it represents (Aor, 2020). Reduplication and triplication, therefore, perform ideophonic and onomatopoeic functions in the Tiv language as seen in Table 7. From the table, it is clear that reduplication and triplication do perform ideophonic and onomatopoeic functions, where the sounds of words suggest the meanings or what the words represent.

Summary of the findings

The paper investigates reduplication and triplication in the Tiv, and the findings are as follows:

Firstly, that reduplication and triplication as morphological processes operate in extended dimensions in the Tiv language, as demonstrated by Maduagwu (2012), Alyebo

(2015), and Aor (2020). Both reduplication and triplication in Tiv have partial and total (complete) types. While some reduplication and triplication are active, others are frozen. The finding has corrected the position of Alyebo (2015) who concluded that there is only one type of reduplication (total) and two types of triplication (total and partial).

Secondly, reduplication and triplication perform different functions in the Tiv language. These include morphological function (word formation processes), changing of word classes, indicators of emphasis (emphatic function), distributive function and ideophonic and onomatopoeic functions (Aor 2020). Maduagwu (2012) in her study discussed only adjectives and nominal reduplications in Tiv, while Alyebo's focus is on reduplication and triplication as intensifiers in semantics.

Lastly, it has been found out that reduplication and triplication in Tiv are morphological copying, justifying the suitability of Inkelas and Zoll's (2005) Morphological Doubling Theory (MDT) in reduplication and triplication in Tiv, hence its application in this study. Aor also adopted this theory in his study, while Alyebo adopted Optimality theory.

Conclusion

The study exposes the fascinating nature of reduplication and triplication in the Tiv language. This shows that the language is worthy of intellectual interest. As the people's culture is preserved through language, the language has to be preserved, maintained and developed. The Tiv language should not be allowed to become extinct. It has to be handed over to generations yet to come as a legacy.

Recommendations

Having embarked on the study, "operations of reduplication and triplication in Tiv", with deep investigations, there is a need for more intensive investigations of these linguistic patterns, amongst others, the study could not exhaust. the following recommendations are made:

1. Studies on reduplication and triplication, including 'Multiplication' (higher dimension of intensification pattern Tiv), phonological and syntactic reduplication, as well as other areas of language, should be carried out by linguists, scholars and students on other Benue languages. This will help in projecting, maintaining and sustaining the languages. Without such studies, the attrition of such languages becomes inevitable.
2. The Benue State Government should double her effort in implementing the teaching of the Benue indigenous languages in our primary, secondary and tertiary schools. The Benue indigenes who study indigenous languages at colleges of education and graduates of linguistics from Benue State University should be employed to handle the teaching of the languages.

Contribution to Knowledge

The study contributes to knowledge by giving detailed insight into reduplication and triplication in Tiv. It proves a deeper level of existence of the processes in Tiv given their productive roles, types and the different functions they perform in the Tiv language. The study also proves the suitability of Inkelas and Zoll's Morphological Doubling Theory in analysing reduplication and triplication in Tiv.

CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

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