Reduplication in Eggon Language

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Abstract

Reduplication is a morphological process in Eggon, a Plateau Benue-Congo language. This paper studies the morphological process of reduplication in Eggon, spoken in Nigeria, West Africa. The study was motivated by the fact that reduplication in Eggon has special features which have not been given the needed attention by scholars. It is observed that many scholars have sidelined triplication as a feature of reduplication by concentrating on complete and partial reduplication. Thus, the need for the present study to fill the existing gap. The study presents data collated from documented sources, participant observation of native speakers and introspection. The research aims at exposing the structure, types and functions of reduplication in Eggon. The findings show that reduplication is a productive word formation process in the language. A number of features are attested in Eggon language reduplication: complete reduplication, partial reduplication, triplicate reduplication, rhyming reduplication, and alternation. The structure of Eggon reduplication involves the reduplicate being attached at word initial, medial or final positions. The construction morphology schema $\lessdot$ [[Y]j [X]i]k $\leftrightarrow$ [property of being related to SEMi]k $\gtrdot$ can be used to account for the structure of reduplication in the language. Phonological structure of Eggon reduplication include repeating words that are monosyllabic, disyllabic, and polysyllabic. Lastly the findings also show that reduplicate perform derivational and inflectional functions in the language. This study hopes to add to scholarship on African languages' morphological structure and linguistics study in general.

***Keywords:** Reduplication, Triplication, Eggon, Morphological Process, Benue-Congo*

1. Introduction

Some scholars suggest that reduplication is a productive word-formation process across languages (e.g., Inkelas and Zoll, 2005), while others have contrary opinion that reduplication is unproductive Ghomeshi *et al*. (2004) and Igaab (n.d.). Reduplication is a morphological process which deals with complex morphophonological processes and expressing a complex range of semantic-syntactic senses and functions. While reduplication is observed in a wide range of languages, its level of linguistic productivity varies (Ghomeshi *et al.*, 2004; Marantz, 1982). Many linguists suggest that Austronesian languages widely use the morphological process of reduplication (Clark, 2009; Himmelmann, 2005; Macdonald, 1967). Reduplication is also widely use in African languages and it is productive (Eleshin, 2017) and the present study, to mentioned two. Previous study on Eggon grammar by Echi, Okafor and Okoye (2009) shows that reduplication exits in

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the language. However, the study did not elaborate on the features, structure and functions of reduplication in Eggon. Thus the need for the present study to fill the existing academic void.

The present study tries to describe and analyze reduplication as a morphological process in Eggon. Specifically, the article aims at identifying the types of reduplication in Eggon, examines the structure of reduplication, and the functions of reduplication in Eggon. This article is relevant in many ways; one of which is that it serves as one of the most elaborate research on Eggon reduplication. The study not only expose the salient issues in Eggon reduplication, but also in world languages' reduplication. These include the classification of reduplication as a type of compound or affixation, and into complete and partial by many scholars (Haspelmath, 2002; Ghomeshi *et al*., 2004; Booij 2005, Katamba 1993 and 2006; Katamba and Stoneham 2006; Nadarajan (n.d.); Lieber, 2010), Khashimova's (2022), Igaab (n.d.), The current study concentrates on examining the types, structure, and functions of reduplication in Eggon. The language under study is less described linguistically, thus the study suffers dearth of materials. None the less, the first author's intuition complements the available data.

Eggon is a minor group language spoken in North Central, Nigeria, West Africa. It belongs to Benue-Congo: Plateau- Eggonic group of African languages according to Blench (2019:26). The language is tonal with three level tones: high ('), mid (unmarked) and low ('). There are also gliding tones although not productive.

2. Materials and Methods

2.1. Definition of Reduplication

According to Tannen (1987), reduplication is a limitless resource available for an individual to express creativity and linguistic meaning. The term reduplication has been defined by Rosenthal and Telenkova (1989: 288) in the book "Dictionary-directory of linguistic terms" as "repetition". "Repetition" as used refers to one of the ways whereby words, phrasal units, or descriptive forms are derived by reusing part or a whole word (Rosenthal and Telenkova 1989: 288). They identify different types of repetitions, such as: grammatical repetition, imitative repetition, lexical repetition and stylistic repetition.

Grammatical repetition deals with ways of conveying grammatical meaning or creating word forms through synthetic, analytic and hybrid (mixed) methods. Imitation repetition refers to the formation of words through imitation of the sound of both animate and inanimate objects, movement, image and silhouette of objects such as gig-gig, vjik-vjik, boom-boom, etc. lexical repetition involves repeating words for various reasons such as: to express diversity of an object or phenomena; to augment the property of objects or phenomena and to show length of an action. Lastly, stylistic repetition is meant to improve the expressiveness of a piece (Rosenthal and Telenkova 1989: 486-9).

Reduplication is also defined as a word-formation process that comprises copying the base or its part (a segment, syllable, or morpheme). The term 'reduplicant' refers to the copied part of a word, while 'base' means the root to which the reduplication process applies (McCarthy and Prince, 1995). Kiyomi (1995) has also provided a definition of reduplication that may be related to some of our analysis. "Given a word with a phonological form X, then reduplication refers to XX or xX (where x is part of X and x can appear either just before X, just after X, or inside X). Conditions: (i) XX or xX must be semantically related to X. (ii) XX or xX must be productive" (Kiyomi, 1995: 2).

Linguistic Encyclopedic Dictionary (2002) defines reduplication as "a phono-morphological phenomenon having both incomplete (only one syllable of a word is repeated) and complete (the whole basis of the word is repeated) manifestations" (2002: 408). Reduplication is a morphological process whereby all or part of the base is repeated or copied and attached to the base (Haspelmath, 2002; Lieber, 2010). Reduplication, can be structurally total (copy the entire base) or partial (copy part of the base).

Nadarajan (n.d.) defines reduplication as a morphological process whereby the root, stem or part of it is repeated. The repetition, he adds, can involve a segment, syllable or morpheme and it can be at left, right or middle. In other words, repetition can occur at word initial, medial or final positions. This is in contrast to repetition which Nadarajan defines as recurrence of sounds and concepts in one form or another to offer reinforcement and emotional emphasis.

Katamba (1993 and 2006) sees reduplication as an affixation process that deals with addition of a free morpheme at the beginning, middle or end of a base. McCarthy (1983: 25) in Katamba and Stoneham (2006: 184) describes reduplication as a special type of affixation involving copying adjacent segments for full phonetic expression.

Ghomeshi *et al.* (2004) describe reduplication as theoretically awkward and irrelevant, which linguists are less interested in. They also distinguish reduplication with repetition, which they describe as a child language. Wang (2005) suggests that repetition and reduplication are sometimes used interchangeably but reduplication exist at the lexical

level, while repetition exists at the syntactic level. Booij (2005: 35-6) describes reduplication as a special kind of affixation (partial reduplication) or compounding (full reduplication), which involves a complete or partial coping of the base as a prefix or suffix. Crystal (2008: 407) defines reduplication as a repetitive process which involves the prefix/suffix copying certain phonological features of the root in some grammatical contexts. Khashimova (2022: 1663) defines reduplication as "a way of forming a word or form consisting of repetition of morphemes, words or their elements (sounds, syllables), affixes or whole words. The productivity of a particular type of reduplication depends on the specific morphological structure of the language".

In sum, the definition of reduplication can be sub-divided into three: a repetition of the base or its part (see Dineen 1967: 228; Mathews 1974: 127; Richard *et al.*, 1985: 241; Tannen, 1987; Napoli, 1996: 171; Haspelmath 2002: 24; SIL International, 2004: 1; Yule, 2006: 249; Crystal 2008: 407; and Lieber 2010: 80); second, a series of units linked together, resulting in a new word through a change in vowel or initial consonant (see Robins, 1967: 212-3; Stageberg, 1981: 127; Mathews, 1974: 337), and third, a type of affixation (observe Booij, 2005: 35-6; Katamba, 1993: 187 and 2006; and Katamba and Stoneham 2006: 177). In the current study, reduplication is defined as repetition of the base or its part to derive a new meaning or grammatical function.

3. Theoretical Framework

The present study uses Construction morphology (CxM) whose proponents include Booij (2005) and Gurevich (2006). The theory is concerned with the structure, formation and meaning of words. Construction in CxM refers to form-meaning pairing. CxM predicts that the meaning of a morphological construction is the property of the construction not necessarily the individual constituents (Booij, 2010). This is demonstrated using a suffix like –ion in English which has no meaning in isolation but has meaning when attached to a base. Thus, an example of morphological generalization being based on whole words. In this regard, Gurevich (2006) notes that CxM is in agreement with Word and Paradigm (Hocket, 1954) morphology in taking a "top-down" approach of the structural properties of words, which suggests that meaning and selection of smaller units within complex words is determined by larger structures. CxM "aims at a better understanding of the relation between syntax, morphology and the lexicon, and the semantic properties of complex words" (Booij, 2010: 543). CxM can effectively account for the structure of Eggon complex words and particularly, reduplication. One of the many reasons for the choice of this theory is that some affixes in Eggon have no meaning on their own while other affixes have several meanings which cannot be assigned in isolation. More so, some reduplicates are not morphemes in the language making their meaning to be based on the construction.

4. Methodology

This study is qualitative in nature. Data is analyzed using construction morphology and descriptive method. This is achieved by presenting reduplicated words gathered from the Eggon dictionary, Eggon New Testament Bible and the researcher's intuition. The collated data is presented alongside the glosses. This is followed by a detailed description of the reduplicative words based on the types, structures, and functions they serve in the language.

The geographical area of the study is Eggon, spoken in North Central Nigeria. The language has about twenty-five dialects but uses Wane dialect officially in writing therefore the current study also uses the same dialect. The researcher uses her native speaker intuition and training as a linguist to recognize and harmonize variations in the collated data due to dialectal differences. Furthermore, in terms of the subject matter of the study, the present research is on Eggon reduplication. This is a major source of word formation in Eggon, which is very productive.

5. Results and Discussion

This subsection presents and analyzes the data for the present study. The presentation, which is followed by the analysis is based on the objectives of the study. These are: the types of reduplication, the structure of reduplication and the functions of reduplication in Eggon.

6. Types of Eggon Reduplication

Morphologically, reduplication in Eggon can be classified into three major forms namely: complete, partial and triplicate reduplication. Other types of reduplication in the language include: Rhyming reduplication, consonant alternation, and vowel insertion/ alternation.

7. Complete Reduplication

Complete reduplication in Eggon involves total repetition or doubling of the base without any form of change. This form of reduplication is common in Eggon and can be used to form new words. The reduplicate in Eggon complete reduplication

is a free morpheme in the language. The meaning of the base is related to that of the reduplicated form as demonstrated in the analysis that follow. *Dzí dzí* 'perambulate' is formed by repeating *dzí* 'walk'; *ugbyí.ugbyí* 'long time ago' involves repetition of *ugbyí* 'old'; *anyún.anyún* 'greatest' is formed by repeating *anyún* 'great'; *gbágbú gbágbú* 'forever' is derived from *gbágbú* 'long (duration)'; *whín.whín* 'black' is derived from *whín* 'dark'; *pyán pyán* 'peacefully' is formed by repeating *pyán* 'well'; *ogbmú.ogbmú* 'the act of buying' is derived from *ogbmú* 'buy'; *osíosí* 'the act of stealing' is derived from *osí* 'to steal'; *ovyé.ovyé* 'to be thankful' is formed by repeating *ovyé* 'to thank'; *enyú.enyú* 'how much each' is formed by repeating *enyú* 'how much'.

2 a)   dzí dzí   'perambulate'

   b)   ugbyí.ugbyí   'long time ago'

   c)   anyún.anyún   'greatest'

   d)   gbágbú gbágbú   'forever'

   e)   whín.whín   'black'

   f)   pyán   pyán 'peacefully'

   g)   ogbmú.ogbmú   'the act of buying'

   h)   osí.osí   'the act of stealing

   i)   ovyé.ovyé   'to be thankful'

   j)   enyú.enyú   'how much each'

Note that there are some words in Eggon that are reduplicated in shape but are morphemes in the language. These are exemplify below:

3 a)   abyé.byé   'small bird'

   b)   ashi.shi   'corn cob'

   c)   gbá.gbá   'common greeting'

7.1. Partial Reduplication

This form of reduplication in Eggon involves repetition of the base without the initial sound, mostly vowels. However, sometimes there may be a form of insertion of a part of a syllable from the base or outside the base to form another word. Examples of partial reduplication include:

4 a)   ohúhú.hú.hí   'just now'

   b)   kyá.kyákyalé   'whitish'

   c)   end.éndéndím   'different kinds of something'

   d)   endí.gyí.gyín   'early in the morning'

   e)   adlídzí.dzí   'truthfully'

In the examples above, *hú* is repeated in *ohúhú.hú.hí* 'just now'; *kyá* is repeated in *kyá.kyákyalé* 'whitish'; *dén* is repeated in *endén.dén.dím* 'different kinds of something'; *gyí* is repeated in *endígyígyín* 'early in the morning'; and *dzí* is repeated in *adlídzí.dzí* 'truthfully'. Note that in Eggon partial reduplication, there is no static position for the reduplicates. It can be before the base, inside the base or after the base. In addition, most reduplicates are not free morphemes in the language. In the examples in (4) for instance,

7.2. Triplication

Triplicate repetition is a form of reduplication commonly found in Eggon. It involves a triple repetitions of the base to form a new word. This type of reduplications can be complete or partial in nature. There are also instances of insertion of a sound (consonant or vowel) that is not part of the base word. Below are some examples:

7.3. Complete triplication

5 a) mgbyí.mgbyí.mgbyín   'bottomless'

   b) gbá.gbá.gbá   'swaying of body'

   c) réme.réme.réme   'smooth'

| d) | hwá.hwá.hwá | 'crowd (like swarms)' |
| e) | ngzá.ngzá.ngzá | 'brightness of light' |

The examples in (5) above show complete triplication involving the repetition of the whole base: *mgbyí, gbá, réme, hwá, ngzá.*

7.4. Partial Triplication

Partial triplication in Eggon involves a double repetition of a syllable or part of the syllable in the base. The repeated part may be prefix or suffix to the base. In the examples that follow, *kpó* is repeated in *okpókpókpó* 'continue doing'; *hí* is repeated in *híhíhilí* 'very sharp'; *tsé* is repeated in *tsétsétsén* 'very pure'; *gbé* is repeated in *gbyé.gbé.gbé* 'zigzag'; *shó* is repeated in *shó.shó.shón* 'quickly'; *jí* is repeated in *jí.jí.jigí* 'shaken'.

6	a)	okpó.kpó.kpó	'continue doing'
	b)	hí.hí.hilí	'very sharp'
	c)	tsé.tsé.tsén	'very pure'
	d)	gbyé.gbé.gbé	'zigzag'
	e)	shó.shó.shón	'quickly'
	f)	jí.jí.jigí	'shaken'
	g)	gbó.gbó.gbgó	'not smooth'

7.5. Rhyming Reduplication

There are features of rhyming reduplication in Eggon, even though rhyming reduplication is not productive in the language. Based on the collated data, only one rhyming reduplication is found. That is, reduplication that involves a change in initial or final syllable of the repeated form. It is seen in the example (7) below where the word *bogódugó* 'abundantly' involves a change of the first syllable from *bo-* to *du-* in the repeated form.

| 7) | bogó.dugó | 'abundantly' |

7.6. Vowel Alternation

8	a)	ndyá.ndyén	'high up'
	b)	endgá.endgó	'blacksmith'
	c)	aìbaì.obaì	'stranger'

In the examples in (8) vowel alternation is noticed in (8a) *ndyándyén* 'high up' where vowel /a/ change to /e/ in the reduplicated form but the tone is maintained; (8b) *endgáendgó* 'blacksmith', /a/ change to /o/ in the reduplicated form; in (8c), *aìbaìobaì* 'stranger' /a/ change to /o/ in the repeated form.

7.7. Vowel Insertion

Vowel insertion is seen in Eggon reduplication where the vowel /o/ is inserted between reduplicated forms as in the examples that follow. –o- is inserted between the repeated words *ká* 'see', *bá* 'come', *rí* 'eat' and *ashé* 'woman' to formed the words *káoká* 'deliberately'; *báobá* 'just coming'; *ríorí* 'only eating'; and *ashéoshé* 'ordinary woman'.

9	a)	ká.o.ká	'deliberately'
	b)	bá.o.bá	'just coming'
	c)	rí.o.rí	'only eating'
	d)	ashé.o.shé	'ordinary woman'

7.8. Structure of Eggon Reduplication

The reduplicates in Eggon may be attached at word initial, medial or final positions. The reduplicates are mostly found at word initial positions in partial reduplication. This could be linked to the fact that prefixation is more productive in Eggon. Reduplicates that are attached to the stem final position are not productive, which can be because suffixation is not a productive morphological process in the language. The study uses the schema in (10) to account for Eggon reduplication.

(10) < [[Y]j [X]i]k ↔ [property of being related to SEMi]k > where:

    Y is the reduplicate,

    X is the base,

    ↔ show relationship between form (of the word) and meaning (of the word)

    k is the meaning of the construction as a whole correlates with the form of the complex word as a whole

    i the meaning of the base word (SEM) reoccurs in that of the corresponding complex word.

7.9. Eggon Reduplication in Word Initial Position

In the examples that follow, reduplicates are attached before the base to derived adjective and adverb. In (11a) the adjective *kyá.kyákyalé* 'whitish' is derived by prefixing *kyá-* to the adjective *kyákyalé* 'white'; the adverb *shóshóshón* 'quickly' is derived by repeating the prefix *shó-* before the base adjective *shóshón* 'quick'; *kyé.kyékyén* 'hurriedly' is derived by prefixing repeated affix *kyé-kyé-* to the base *kyén* 'run'; *ndyá.ndyá.ndyA⫽en* 'loudly' is derived by prefixing *ndyá-ndyá-* to *ndyén* 'up'.

    [REDUP + STEM]A = A

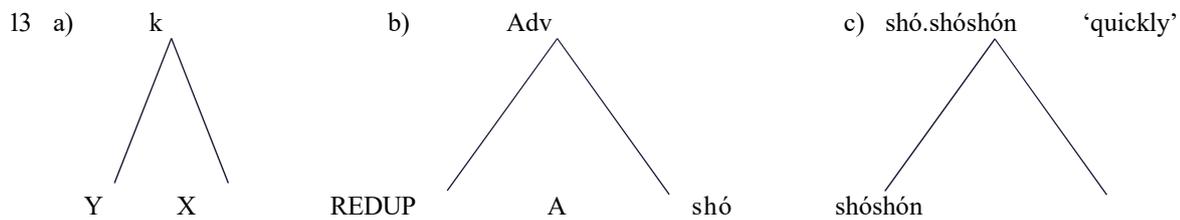11 a)   kyá.kyákyalé   'whitish'

    [REDUP + STEM]A = Adv

12 a)   shó.shóshón   'quickly'

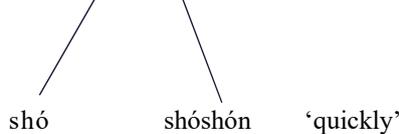   b)   kyé.kyékyén   'hurriedly'

    c)   ndyá.ndyá.ndy'en   'loudly'

Reduplication in word initial position can be accounted for using the diagrams that follow and the schema (14) as found below:

13 a)   k   b)   Adv   c)   shó.shóshón   'quickly'

        Y   X   REDUP   A   shó   shóshón

(14)   < [[Y]j [X]i]k ↔ [property of being related to SEMi]k

      < [shó-]j [shóshón]Ai]A/Advj ↔ [shó.shóshón 'quickly' which has the property of shón]j

    shó   shóshón   'quickly'

7.10. Eggon Reduplication in Final Position

In Eggon, the reduplicate can be attached after the stem. In Eggon, suffixation is not a productive morphological process. The examples below show the repeated forms attached after the base. The reduplicates *–kpo, dzí* and *-gbégbé* in the examples come after the root *okpo, adlídzí* and *gbyé*. A closer look at the examples show that the deleted initial vowels /o, i and e/ are the same vowels that end the base. Thus, this can be regarded as a case of vowel elision rather than suffixation, reiterating the fact that suffixation may not be found in the language. Nonetheless, let's consider these as examples of reduplication word finally.
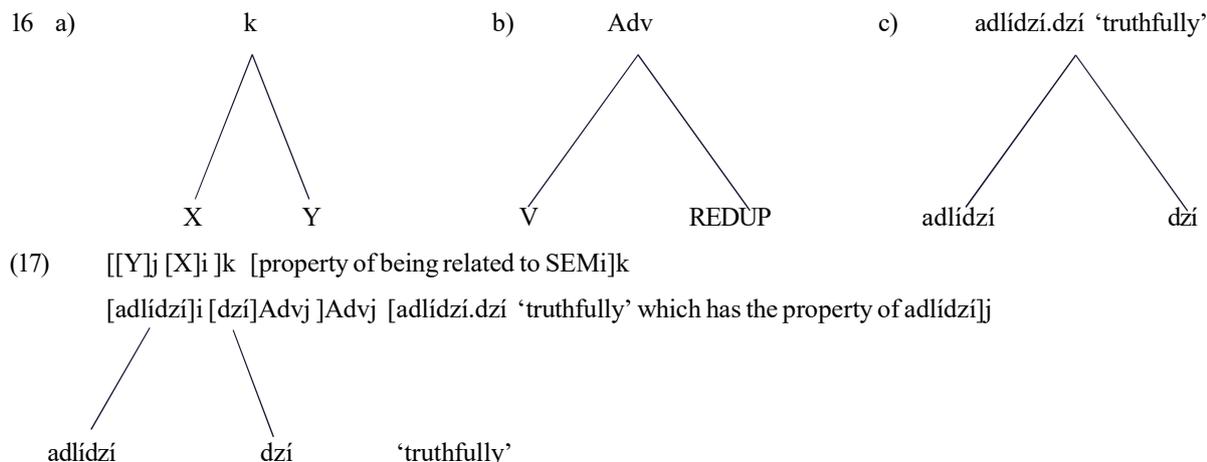
    [STEM]V + [REDUP] = N

15 a)   okpó.kpó   'work/effort'

    b)   adlídzí.dzí   'truthfully'

    c)   gbyé.gbégbé   'zigzag'

Eggon reduplication at word final position can be shown in the tree diagrams in (16). Similarly, the schema in (17) can be used to account for it.

16 a)   k   b)   Adv   c)   adlídzí.dzí 'truthfully'

                   X   Y   V   REDUP   adlídzí   dzí

(17)   [[Y]j [X]i]k [property of being related to SEMi]k

      [adlídzí]i [dzí]Advj]Advj [adlídzí.dzí 'truthfully' which has the property of adlídzí]j

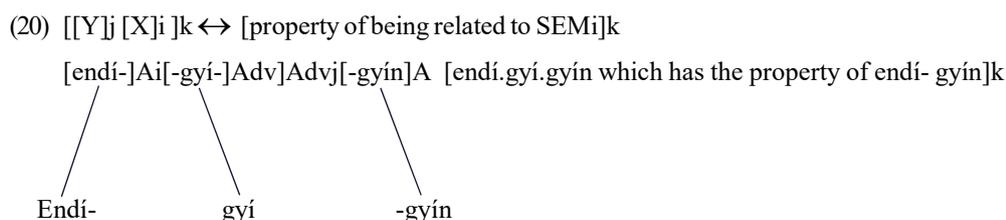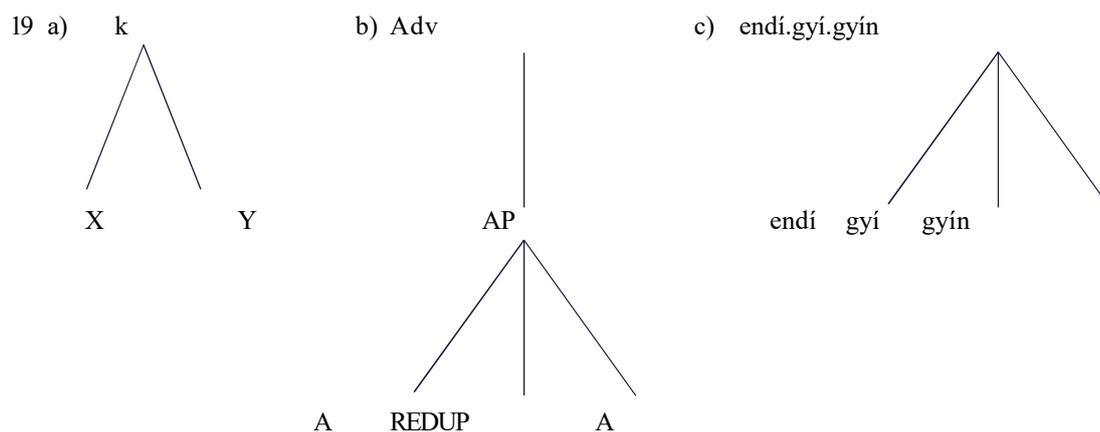   adlídzí   dzí   'truthfully'

7.11. Eggon Reduplication in Medial Position

Reduplication that deals with the repeated form placed inside the stem in form of infixation in Eggon involves breaking the base into meaningless halves. This feature is found in Eggon reduplication, although infixation is not a productive word formation process in the language. A few examples are found below with the infixed reduplicate underlined. In the examples, *endí.gyí.gyín* 'early in the morning', where the stem *endígyín* 'morning' is split into meaningless halves *endi-*[– and *-gyín* by *-gyí-*; *endéndénd'im* 'different kinds of something' is derived from *endéndi*[–m 'different' by splitting it into *endén-* and *-d'im; ohúhúhúhi*[– 'just now' derived from *ohúhúhí* 'now' is split into *ohúhú-* and *-*[–*hi*[– by *hú*; *ógúgubu* 'harvest' is derived from *ógúbu* 'remove' by splitting it into *ógú-* and *–bu.*

    [ST- REDUP-EM]A/ Adv/N

18 a) endí.gyí.gyín   'early in the morning'

    b) endén.dén.dAꞮim   'different kinds of something'

    c) Ohúhú.hú.hí   'just now'

    d) ógú.gu.bu   'harvest'

19 a)   k   b) Adv   c) endí.gyí.gyín

                   X   Y   AP   endí gyí gyín

                                     A REDUP A

(20) [[Y]j [X]i]k ↔ [property of being related to SEMi]k

    [endí-]Ai[-gyí-]Adv]Advj[-gyín]A [endí.gyí.gyín which has the property of endí- gyín]k

    Endí-   gyí   -gyín

7.12. Phonological Structure of Eggon Reduplication

Reduplication in Eggon comprises of the use of words that have one or more syllables. These words however, have different syllabic structures made up of CV, VC, VCV, CCV, and n/CCCV as in the table that follows:

7.13. Syntactic Classification of Eggon Reduplication

Reduplication has different properties in Eggon. The base and reduplicate may belong to the same or different word class, such as verb, adverb or adjective.

7.14. Verb to Adverb

In Eggon reduplication, repeating a base that is a verb can result in an adverb. This form of reduplication is the most productive in the language because, most reduplicative adverbs are derived from verbs, as in the examples:

21 a)   káoká   'deliberately'

    b)   báobá   'just coming'

    c)   ríorí   'only eating'

    d)   adlídzí.dzí   'truthfully'

   In the examples, the words *ka,*'see' *ba,'come' ri* 'eat' and *adli[–dzi[–* 'true' are verbs which were repeated to derive adverbs: káoká 'deliberately', báobá 'just coming', ríorí 'only eating', and adzídzídzí 'truthfully', as a result of reduplication.

S. No.	Syllable Structure	Examples
**Table 1: Syllable Structure of Eggon Reduplication**

S. No.	Syllable Structure	Examples
a	CV	rí.o.rí 'only eating'*; gí.gí.glí* 'rumble'
b	CVCV	*bogó.dugó*
c	V/CV	ógú.gu.bu 'harvest'; aìbaì.obaì 'stranger'; óvó óvó 'hot'
d	CCV	kyé.kyékyén 'hurriedly'; okpó.kpó 'work/effort'
e	n/CCCV	mgbyé.mgbyé.mbyé 'funny noise'; ndyá.ndyá.ndyAȠen 'loudly', mbwú.mbwí 'reddish'

7.15. Reduplicates That Belong to Other Word Class

As stated in the preceding subsection, most words formed through reduplication are adverbs. However, there are a few others that belong to other word class such as adjective, and noun as in the words below;

	Verb		**Noun**	
22 a)	yí	'go'	oyíyí	'act of going'
b)	ká	'see;	ekáká	'act of seeing'
c)	kyú	'marry'	ekyúkyú	'act of marrying'
d)	nÌglo	'bath'	nÌgoglo	'act of bathing'

   Reduplicative adjectives are derived from noun, and adjectives. But there are some adjectives that are derived from meaningless bases in the language. That is, the base is not a morpheme in the language. These two forms of reduplicative adjectives are exemplify below.

	Adjective		**Adjective**	
23 a)	umbwí	'red'	mbwú.mbwí	'reddish'
b)	kyá.kíle	'white'	kyá.kyákíle	'whitish'
c)	whí.whín	'black'	whí.whíwhín	'blackish'

	Noun		**Adjective**	
d)	amí	'water'	amí amí	'watery'
e)	óvó	'fire'	óvó óvó	'hot (food/water)'

   The examples in (23) above, show adjectives that are derived from other adjectives and nouns in Eggon reduplication. The adjectives u*mbwí* 'red', *kyákíle* 'white', *whí.whín* 'black', and nouns *amí* 'water', *óvó* 'fire' were repeated to derive

the adjectives u*mbwú.mbwí* 'reddish', *kyá.kyákíle* 'whitish', *whí.whí.whín* 'blackish', *amí amí* 'watery', and *óvó óvó* 'hot'. The derivation of u*mbwú.mbwí* 'reddish' involves partial reduplication of u*mbwí* 'red'

    The examples in (24) below show adjectives in Eggon that are derived from meaningless bases. *Hwá.hwá.hw*á 'in swarms' is derived from *hwá; shrí shrí shrí* 'good shade' is derived from *shrí; gí.gí.glí* 'rumble' is derived from *glí; mgbyé.mgbyé.mbyé* 'funny noise' is derived from *mbyé* and *shá.shá* 'just' is derived from *shá*.

24	a)	hwá.hwá.hwá	'in swarms'
	b)	shrí shrí shríí	'good shade'
	c)	gí.gí.glí	'rumble'
	d)	mgbyé.mgbyé.mbyé	'funny noise'
	e)	shá.shá	'just'

7.16. Semantic classification of Eggon reduplication

Reduplication in Eggon serve both derivative and inflectional functions. Note that derivational refers to the situation where new meaning is formed while inflectional function refers to grammatical function without a change in meaning or word-class. Reduplication in Eggon also shows intensity. The derivational functions are discussed shortly.

7.17. Derivative Reduplication in Eggon

Reduplication performs derivative function in Eggon and it is very productive. All the examples of reduplication and partial triplication given above are examples of derivation in reduplication. Here are some more examples for reiteration.

25	a)	adlídzí.dzí	'truthfully'
	b)	gbyé.gbé.gbé	'zigzag'
	c)	ndyá.ndyá.ndyén	'highest' 'loudly
	d)	okpó.kpó.kpó	'continue doing'
	e)	Kyá.kyákyále	'whitish'

    In the examples, *adlidzi.dz*i 'truthfully', is derived from *adlidzi* 'true'; *gbý̀e.gbý̀e.gbý̀e* 'zigzag' is derived from *gbý̀e* 'bend', *ndý̀a.ndý̀a.ndý̀en* 'highest or loudly' is derived from *ndý̀en* 'up', *okpó.kpó.kpó* 'continue doing' is derived from *okpó* 'do' and *Kyá.kyákyále* 'whitish' is derived from *kyákyále* 'white'.

7.18. Inflectional Reduplication in Eggon

Reduplication in Eggon performs the function of inflection. Number is express in the language using reduplication among other methods. This has been established in an earlier study Garba (2020:200), some examples are reproduced here for reiteration.

	Singular	**gloss**	**plural**	**gloss**
26 a.	azheʼn	'door'	azhʼaenazhén	'doors'
b.	azhgá	'tooth'	azhʼazhgá	'teeth'
c.	ayá	'leaf'	áyáyá	'leaves'

    Other functions of reduplication in Eggon include intensity. This comprises of showing the extreme or exhaustive form of a word. The examples of intensity include:

27	a)	hí.hí.hilí	'very sharp'
	b)	tsé.tsé.tsén	'very pure'
	c)	anyún.anyún	'greatest'
	d)	gbágbú gbágbú	'forever'
	e)	mgbyí.mgbyí.mgbyín	'bottomless'

8. Discussion of Findings

The findings of the present research show that reduplication is a productive morphological process in some languages such as Eggon. New meanings can be formed belonging to the same or different word class through reduplication.

Examples include *whí.whín* 'black' (Adjective) derived by repeating the stem *whín* 'dark' (adjective); *gbyé.gbé.gbé* 'zigzag' (noun) formed by repeating the stem *gbyé* 'bend' (verb). New meaning can also be formed in Eggon triplication by repeating meaningless base such as *mgbyí.mgbyí.mgbyín* 'bottomless'. The types of reduplication in Eggon include complete reduplication (*anyún.anyún* 'greatest'); partial reduplication (*adlídzí.dzí* 'truthfully'), triplication (*gbá.gbá.gbá* 'swaying of body' *hí.hí.hilí* 'very sharp'); rhyming reduplication (*bogó.dugó* 'abundantly'); vowel alternation and insertion (*ndyá.ndyén* 'high up' *ashé.o.shé* 'ordinary woman'). The construction morphology schema) [[Y]j [X]i]k [property of being related to SEMi]k effectively account for the structure of Eggon reduplication. Except in the case of the use of vague base in triplication where the meaning of the word (SEM) is not entirely base on the meaning of the stem, since the stem may be ambiguous.

Previous studies on reduplication, especially in English focus on double repetition for emphasis and clarification (Nadarajan (n.d.), Khashimova's (2022), Lieber (2010), Ghomeshi et. al, (2004), Igaab (n.d), Haspelmath 2002,). Also, a cross linguistic study of reduplication shows that the morphological process involves some form of repetition, which could be complete or partial. However, the present study shows some language specific features of reduplication. These include where the reduplicate attaches and the types of reduplication. In Eggon, reduplicate may be attached at the beginning, medial or final position of the stem. Similarly, the types of reduplication in Eggon include: Complete, partial and triplicate reduplication. This is against the usual classification of reduplication (complete and partial). The findings show that triple reduplication is an effective communication tool that helps Eggon users to express exhaustive meaning of a word and even express precise meaning from vague stems. This has implication for theories of language evolution and the role of repetition in languages. Accordingly, as noted earlier that CXM cannot effectively account for Eggon triplication formed from vague stems. However, the findings of the current study on reduplication align with a few authors (Nadarajan n.d; Khashimova's 2022) that note its productivity as a word formation process.

The present study is limited to reduplication as words. The use of reduplication in sentences, different contexts and cultures are not explore. Thus, serve as a limitation of the present study. However, future research can dwell on these areas as well as cross cultural/linguistic variations in the use and perception of reduplication as a morphological process.

9. Conclusion

This study sets out to describe and analyze the morphological process of reduplication in Eggon. The findings show that Eggon makes use of reduplication in its words formation, and the process is productive. The language has several types of reduplication which are: complete reduplication, partial reduplication, triplicate reduplication, vowel insertion and rhyming reduplication. Complete reduplication involves the repetition of the stem, which is a morpheme in the language. There are morphemes in the language that are in form of complete reduplication. Complete triplication in Eggon comprises of triple repetition of a stem which may or may not be a morpheme in the language. Partial reduplication involves the repeated form being attached at word initial, medial or final positions. Mostly, it is the initial vowel that is deleted in partial reduplication. Partial triplication contains repeating part of the stem and attaching it at the word initial or final positions. Complete and partial reduplication are the most productive while rhyming reduplication is the least productive.

The structure of reduplication in Eggon comprises of the reduplicate being placed at word initial, medial or final positions. That is, reduplication in Eggon repeats the stem or its part in various ways. This is obvious in partial reduplication/triplication where the reduplicate attaches before, inside or after the stem. The reduplicates have the structure: [REDUP+STEM]A=A; [REDUP+STEM]A=ADV for initial position; [ST-REDUP-EM]A/Adv/N/ for medial position and [STEM]V+ [REDUP]=N, for final position. In other words, reduplicates that attach before the stem derived adjective and adverb; the ones that attach inside the stem derive adjective, adverb or noun, and the ones that attach after the stem derive noun. Complete reduplication and triplication derive adjective or adverb.

Reduplication in Eggon performs derivational and grammatical functions. The study shows that new meaning can be formed through reduplication which may belong to the same word class as the stem or not. The study also posits that reduplication performs the grammatical functions of number and intensity.

Finally, the current research settles that reduplication is a productive word formation process with its unique constituents, and should be treated as a complex word rather than a type of compounding or affixation as opined by some scholars (Katamba, 1993 and 2006; Booij, 2005; Katamba and Stoneham 2006; Eleshin, 2017). This is because reduplication (repetition of a stem or its part) in Eggon does not fit into the definition of affixation (combination of a stem and affix(s)) or compounding (combination of two or more lexemes). Similarly, the research posits that reduplication is a

productive word formation process and refute the notion that reduplication is not productive or informal (Igaab, n.d.). It may be unproductive in some languages but not all languages. The study further underscores a feature of reduplication which has been less treated in previous studies –triplication. Triplication in Eggon performs derivative and grammatical functions of forming new words and intensifying meaning. These findings on Eggon reduplication contribute to a broader understanding of reduplication as a morphological process and its expressive functions in languages.

Conflicts of interest

The authors declare no conflict of interest.

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the language. However, the study did not elaborate on the features, structure and functions of reduplication in Eggon. Thus the need for the present study to fill the existing academic void.

The present study tries to describe and analyze reduplication as a morphological process in Eggon. Specifically, the article aims at identifying the types of reduplication in Eggon, examines the structure of reduplication, and the functions of reduplication in Eggon. This article is relevant in many ways; one of which is that it serves as one of the most elaborate research on Eggon reduplication. The study not only expose the salient issues in Eggon reduplication, but also in world languages' reduplication. These include the classification of reduplication as a type of compound or affixation, and into complete and partial by many scholars (Haspelmath, 2002; Ghomeshi *et al*., 2004; Booij 2005, Katamba 1993 and 2006; Katamba and Stoneham 2006; Nadarajan (n.d.); Lieber, 2010), Khashimova's (2022), Igaab (n.d.), The current study concentrates on examining the types, structure, and functions of reduplication in Eggon. The language under study is less described linguistically, thus the study suffers dearth of materials. None the less, the first author's intuition complements the available data.

Eggon is a minor group language spoken in North Central, Nigeria, West Africa. It belongs to Benue-Congo: Plateau- Eggonic group of African languages according to Blench (2019:26). The language is tonal with three level tones: high ('), mid (unmarked) and low ('). There are also gliding tones although not productive.

2. Materials and Methods

2.1. Definition of Reduplication

According to Tannen (1987), reduplication is a limitless resource available for an individual to express creativity and linguistic meaning. The term reduplication has been defined by Rosenthal and Telenkova (1989: 288) in the book "Dictionary-directory of linguistic terms" as "repetition". "Repetition" as used refers to one of the ways whereby words, phrasal units, or descriptive forms are derived by reusing part or a whole word (Rosenthal and Telenkova 1989: 288). They identify different types of repetitions, such as: grammatical repetition, imitative repetition, lexical repetition and stylistic repetition.

Grammatical repetition deals with ways of conveying grammatical meaning or creating word forms through synthetic, analytic and hybrid (mixed) methods. Imitation repetition refers to the formation of words through imitation of the sound of both animate and inanimate objects, movement, image and silhouette of objects such as gig-gig, vjik-vjik, boom-boom, etc. lexical repetition involves repeating words for various reasons such as: to express diversity of an object or phenomena; to augment the property of objects or phenomena and to show length of an action. Lastly, stylistic repetition is meant to improve the expressiveness of a piece (Rosenthal and Telenkova 1989: 486-9).

Reduplication is also defined as a word-formation process that comprises copying the base or its part (a segment, syllable, or morpheme). The term 'reduplicant' refers to the copied part of a word, while 'base' means the root to which the reduplication process applies (McCarthy and Prince, 1995). Kiyomi (1995) has also provided a definition of reduplication that may be related to some of our analysis. "Given a word with a phonological form X, then reduplication refers to XX or xX (where x is part of X and x can appear either just before X, just after X, or inside X). Conditions: (i) XX or xX must be semantically related to X. (ii) XX or xX must be productive" (Kiyomi, 1995: 2).

Linguistic Encyclopedic Dictionary (2002) defines reduplication as "a phono-morphological phenomenon having both incomplete (only one syllable of a word is repeated) and complete (the whole basis of the word is repeated) manifestations" (2002: 408). Reduplication is a morphological process whereby all or part of the base is repeated or copied and attached to the base (Haspelmath, 2002; Lieber, 2010). Reduplication, can be structurally total (copy the entire base) or partial (copy part of the base).

Nadarajan (n.d.) defines reduplication as a morphological process whereby the root, stem or part of it is repeated. The repetition, he adds, can involve a segment, syllable or morpheme and it can be at left, right or middle. In other words, repetition can occur at word initial, medial or final positions. This is in contrast to repetition which Nadarajan defines as recurrence of sounds and concepts in one form or another to offer reinforcement and emotional emphasis.

Katamba (1993 and 2006) sees reduplication as an affixation process that deals with addition of a free morpheme at the beginning, middle or end of a base. McCarthy (1983: 25) in Katamba and Stoneham (2006: 184) describes reduplication as a special type of affixation involving copying adjacent segments for full phonetic expression.

Ghomeshi *et al.* (2004) describe reduplication as theoretically awkward and irrelevant, which linguists are less interested in. They also distinguish reduplication with repetition, which they describe as a child language. Wang (2005) suggests that repetition and reduplication are sometimes used interchangeably but reduplication exist at the lexical

level, while repetition exists at the syntactic level. Booij (2005: 35-6) describes reduplication as a special kind of affixation (partial reduplication) or compounding (full reduplication), which involves a complete or partial coping of the base as a prefix or suffix. Crystal (2008: 407) defines reduplication as a repetitive process which involves the prefix/suffix copying certain phonological features of the root in some grammatical contexts. Khashimova (2022: 1663) defines reduplication as "a way of forming a word or form consisting of repetition of morphemes, words or their elements (sounds, syllables), affixes or whole words. The productivity of a particular type of reduplication depends on the specific morphological structure of the language".

In sum, the definition of reduplication can be sub-divided into three: a repetition of the base or its part (see Dineen 1967: 228; Mathews 1974: 127; Richard *et al.,* 1985: 241; Tannen, 1987; Napoli, 1996: 171; Haspelmath 2002: 24; SIL International, 2004: 1; Yule, 2006: 249; Crystal 2008: 407; and Lieber 2010: 80); second, a series of units linked together, resulting in a new word through a change in vowel or initial consonant (see Robins, 1967: 212-3; Stageberg, 1981: 127; Mathews, 1974: 337), and third, a type of affixation (observe Booij, 2005: 35-6; Katamba, 1993: 187 and 2006; and Katamba and Stoneham 2006: 177). In the current study, reduplication is defined as repetition of the base or its part to derive a new meaning or grammatical function.

3. Theoretical Framework

The present study uses Construction morphology (CxM) whose proponents include Booij (2005) and Gurevich (2006). The theory is concerned with the structure, formation and meaning of words. Construction in CxM refers to form-meaning pairing. CxM predicts that the meaning of a morphological construction is the property of the construction not necessarily the individual constituents (Booij, 2010). This is demonstrated using a suffix like –ion in English which has no meaning in isolation but has meaning when attached to a base. Thus, an example of morphological generalization being based on whole words. In this regard, Gurevich (2006) notes that CxM is in agreement with Word and Paradigm (Hocket, 1954) morphology in taking a "top-down" approach of the structural properties of words, which suggests that meaning and selection of smaller units within complex words is determined by larger structures. CxM "aims at a better understanding of the relation between syntax, morphology and the lexicon, and the semantic properties of complex words" (Booij, 2010: 543). CxM can effectively account for the structure of Eggon complex words and particularly, reduplication. One of the many reasons for the choice of this theory is that some affixes in Eggon have no meaning on their own while other affixes have several meanings which cannot be assigned in isolation. More so, some reduplicates are not morphemes in the language making their meaning to be based on the construction.

4. Methodology

This study is qualitative in nature. Data is analyzed using construction morphology and descriptive method. This is achieved by presenting reduplicated words gathered from the Eggon dictionary, Eggon New Testament Bible and the researcher's intuition. The collated data is presented alongside the glosses. This is followed by a detailed description of the reduplicative words based on the types, structures, and functions they serve in the language.

The geographical area of the study is Eggon, spoken in North Central Nigeria. The language has about twenty-five dialects but uses Wane dialect officially in writing therefore the current study also uses the same dialect. The researcher uses her native speaker intuition and training as a linguist to recognize and harmonize variations in the collated data due to dialectal differences. Furthermore, in terms of the subject matter of the study, the present research is on Eggon reduplication. This is a major source of word formation in Eggon, which is very productive.

5. Results and Discussion

This subsection presents and analyzes the data for the present study. The presentation, which is followed by the analysis is based on the objectives of the study. These are: the types of reduplication, the structure of reduplication and the functions of reduplication in Eggon.

6. Types of Eggon Reduplication

Morphologically, reduplication in Eggon can be classified into three major forms namely: complete, partial and triplicate reduplication. Other types of reduplication in the language include: Rhyming reduplication, consonant alternation, and vowel insertion/ alternation.

7. Complete Reduplication

Complete reduplication in Eggon involves total repetition or doubling of the base without any form of change. This form of reduplication is common in Eggon and can be used to form new words. The reduplicate in Eggon complete reduplication

is a free morpheme in the language. The meaning of the base is related to that of the reduplicated form as demonstrated in the analysis that follow. *Dzí dzí* 'perambulate' is formed by repeating *dzí* 'walk'; *ugbyí.ugbyí* 'long time ago' involves repetition of *ugbyí* 'old'; *anyún.anyún* 'greatest' is formed by repeating *anyún* 'great'; *gbágbú gbágbú* 'forever' is derived from *gbágbú* 'long (duration)'; *whín.whín* 'black' is derived from *whín* 'dark'; *pyán pyán* 'peacefully' is formed by repeating *pyán* 'well'; *ogbmú.ogbmú* 'the act of buying' is derived from *ogbmú* 'buy'; *osíosí* 'the act of stealing' is derived from *osí* 'to steal'; *ovyé.ovyé* 'to be thankful' is formed by repeating *ovyé* 'to thank'; *enyú.enyú* 'how much each' is formed by repeating *enyú* 'how much'.

2 a)   dzí dzí   'perambulate'

   b)   ugbyí.ugbyí   'long time ago'

   c)   anyún.anyún   'greatest'

   d)   gbágbú gbágbú   'forever'

   e)   whín.whín   'black'

   f)   pyán   pyán 'peacefully'

   g)   ogbmú.ogbmú   'the act of buying'

   h)   osí.osí   'the act of stealing

   i)   ovyé.ovyé   'to be thankful'

   j)   enyú.enyú   'how much each'

Note that there are some words in Eggon that are reduplicated in shape but are morphemes in the language. These are exemplify below:

3 a)   abyé.byé   'small bird'

   b)   ashi.shi   'corn cob'

   c)   gbá.gbá   'common greeting'

7.1. Partial Reduplication

This form of reduplication in Eggon involves repetition of the base without the initial sound, mostly vowels. However, sometimes there may be a form of insertion of a part of a syllable from the base or outside the base to form another word. Examples of partial reduplication include:

4 a)   ohúhú.hú.hí   'just now'

   b)   kyá.kyákyalé   'whitish'

   c)   end.éndéndím   'different kinds of something'

   d)   endí.gyí.gyín   'early in the morning'

   e)   adlídzí.dzí   'truthfully'

In the examples above, *hú* is repeated in *ohúhú.hú.hí* 'just now'; *kyá* is repeated in *kyá.kyákyalé* 'whitish'; *dén* is repeated in *endén.dén.dím* 'different kinds of something'; *gyí* is repeated in *endígyígyín* 'early in the morning'; and *dzí* is repeated in *adlídzí.dzí* 'truthfully'. Note that in Eggon partial reduplication, there is no static position for the reduplicates. It can be before the base, inside the base or after the base. In addition, most reduplicates are not free morphemes in the language. In the examples in (4) for instance,

7.2. Triplication

Triplicate repetition is a form of reduplication commonly found in Eggon. It involves a triple repetitions of the base to form a new word. This type of reduplications can be complete or partial in nature. There are also instances of insertion of a sound (consonant or vowel) that is not part of the base word. Below are some examples:

7.3. Complete triplication

5 a) mgbyí.mgbyí.mgbyín   'bottomless'

   b) gbá.gbá.gbá   'swaying of body'

   c) réme.réme.réme   'smooth'

d)	hwá.hwá.hwá	'crowd (like swarms)'
e)	ngzá.ngzá.ngzá	'brightness of light'

The examples in (5) above show complete triplication involving the repetition of the whole base: *mgbyí, gbá, réme, hwá, ngzá.*

7.4. Partial Triplication

Partial triplication in Eggon involves a double repetition of a syllable or part of the syllable in the base. The repeated part may be prefix or suffix to the base. In the examples that follow, *kpó* is repeated in *okpókpókpó* 'continue doing'; *hí* is repeated in *híhíhilí* 'very sharp'; *tsé* is repeated in *tsétsétsén* 'very pure'; *gbé* is repeated in *gbyé.gbé.gbé* 'zigzag'; *shó* is repeated in *shó.shó.shón* 'quickly'; *jí* is repeated in *jí.jí.jigí* 'shaken'.

6	a)	okpó.kpó.kpó	'continue doing'
	b)	hí.hí.hilí	'very sharp'
	c)	tsé.tsé.tsén	'very pure'
	d)	gbyé.gbé.gbé	'zigzag'
	e)	shó.shó.shón	'quickly'
	f)	jí.jí.jigí	'shaken'
	g)	gbó.gbó.gbgó	'not smooth'

7.5. Rhyming Reduplication

There are features of rhyming reduplication in Eggon, even though rhyming reduplication is not productive in the language. Based on the collated data, only one rhyming reduplication is found. That is, reduplication that involves a change in initial or final syllable of the repeated form. It is seen in the example (7) below where the word *bogódugó* 'abundantly' involves a change of the first syllable from *bo-* to *du-* in the repeated form.

7)	bogó.dugó	'abundantly'

7.6. Vowel Alternation

8	a)	ndyá.ndyén	'high up'
	b)	endgá.endgó	'blacksmith'
	c)	aìbaì.obaì	'stranger'

In the examples in (8) vowel alternation is noticed in (8a) *ndyándyén* 'high up' where vowel /a/ change to /e/ in the reduplicated form but the tone is maintained; (8b) *endgáendgó* 'blacksmith', /a/ change to /o/ in the reduplicated form; in (8c), *aìbaìobaì* 'stranger' /a/ change to /o/ in the repeated form.

7.7. Vowel Insertion

Vowel insertion is seen in Eggon reduplication where the vowel /o/ is inserted between reduplicated forms as in the examples that follow. –o- is inserted between the repeated words *ká* 'see', *bá* 'come', *rí* 'eat' and *ashé* 'woman' to formed the words *káoká* 'deliberately'; *báobá* 'just coming'; *ríorí* 'only eating'; and *ashéoshé* 'ordinary woman'.

9	a)	ká.o.ká	'deliberately'
	b)	bá.o.bá	'just coming'
	c)	rí.o.rí	'only eating'
	d)	ashé.o.shé	'ordinary woman'

7.8. Structure of Eggon Reduplication

The reduplicates in Eggon may be attached at word initial, medial or final positions. The reduplicates are mostly found at word initial positions in partial reduplication. This could be linked to the fact that prefixation is more productive in Eggon. Reduplicates that are attached to the stem final position are not productive, which can be because suffixation is not a productive morphological process in the language. The study uses the schema in (10) to account for Eggon reduplication.

(10) < [[Y]j [X]i]k ↔ [property of being related to SEMi]k > where:

  Y is the reduplicate,

  X is the base,

  ↔ show relationship between form (of the word) and meaning (of the word)

  k is the meaning of the construction as a whole correlates with the form of the complex word as a whole

  i the meaning of the base word (SEM) reoccurs in that of the corresponding complex word.

7.9. Eggon Reduplication in Word Initial Position

In the examples that follow, reduplicates are attached before the base to derived adjective and adverb. In (11a) the adjective *kyá.kyákyalé* 'whitish' is derived by prefixing *kyá-* to the adjective *kyákyalé* 'white'; the adverb *shóshóshón* 'quickly' is derived by repeating the prefix *shó-* before the base adjective *shóshón* 'quick'; *kyé.kyékyén* 'hurriedly' is derived by prefixing repeated affix *kyé-kyé-* to the base *kyén* 'run'; *ndyá.ndyá.ndyA⫽ en* 'loudly' is derived by prefixing *ndyá-ndyá-* to *ndyén* 'up'.

    [REDUP+STEM]A=A

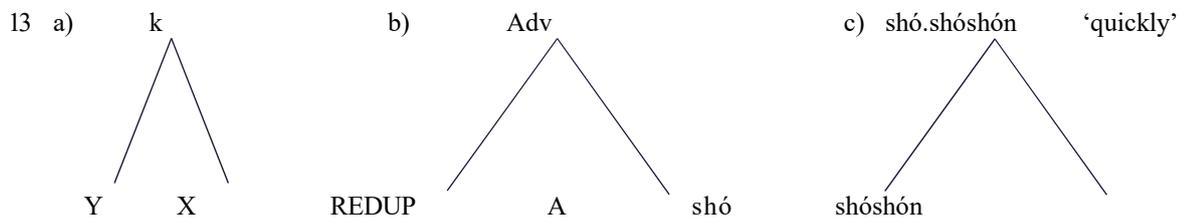11 a)   kyá.kyákyalé   'whitish'

    [REDUP+STEM]A=Adv

12 a)   shó.shóshón   'quickly'

    b)   kyé.kyékyén   'hurriedly'
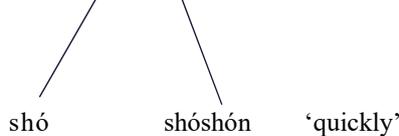
    c)   ndyá.ndyá.ndy'en   'loudly'

Reduplication in word initial position can be accounted for using the diagrams that follow and the schema (14) as found below:

(14)   < [[Y]j [X]i]k ↔ [property of being related to SEMi]k

    < [shó-]j [shóshón]Ai]A/Advj ↔ [shó.shóshón 'quickly' which has the property of shón]j

7.10. Eggon Reduplication in Final Position

In Eggon, the reduplicate can be attached after the stem. In Eggon, suffixation is not a productive morphological process. The examples below show the repeated forms attached after the base. The reduplicates *–kpo, dzí* and *-gbégbé* in the examples come after the root *okpo, adlídzí* and *gbyé*. A closer look at the examples show that the deleted initial vowels /o, i and e/ are the same vowels that end the base. Thus, this can be regarded as a case of vowel elision rather than suffixation, reiterating the fact that suffixation may not be found in the language. Nonetheless, let's consider these as examples of reduplication word finally.
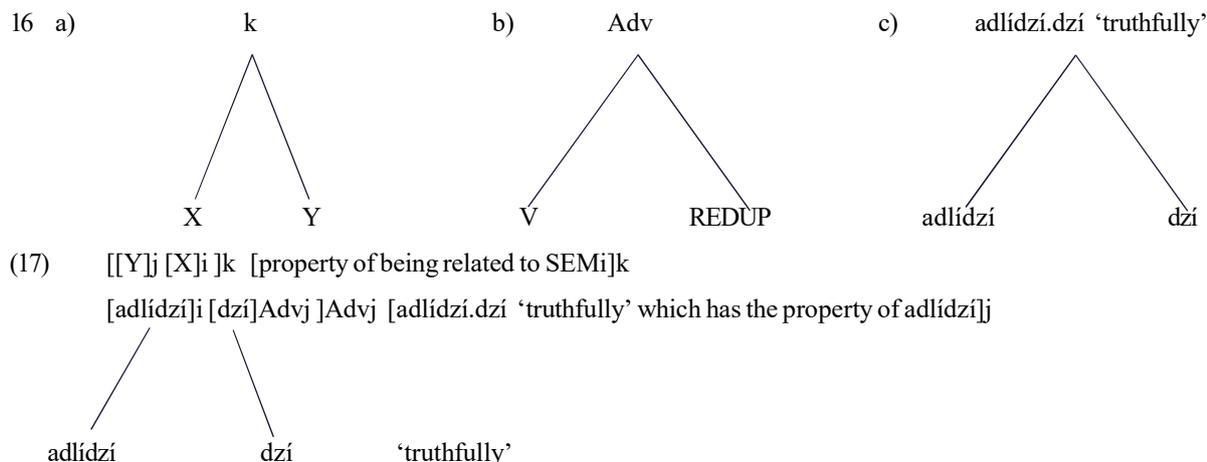
    [STEM]V+[REDUP]=N

15 a)   okpó.kpó   'work/effort'

    b)   adlídzí.dzí   'truthfully'

    c)   gbyé.gbégbé   'zigzag'

Eggon reduplication at word final position can be shown in the tree diagrams in (16). Similarly, the schema in (17) can be used to account for it.

16 a)   k   b)   Adv   c)   adlídzí.dzí 'truthfully'

              X   Y   V   REDUP   adlídzí   dzí

(17)   [[Y]j [X]i]k [property of being related to SEMi]k

         [adlídzí]i [dzí]Advj]Advj [adlídzí.dzí 'truthfully' which has the property of adlídzí]j

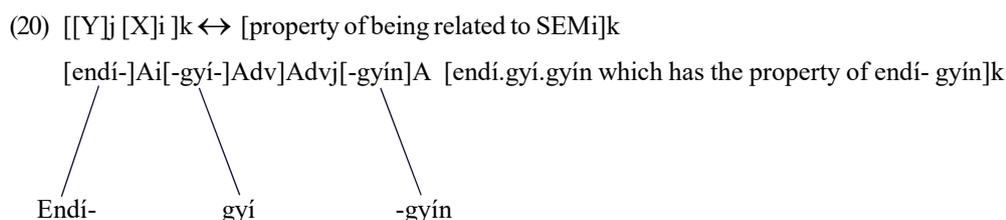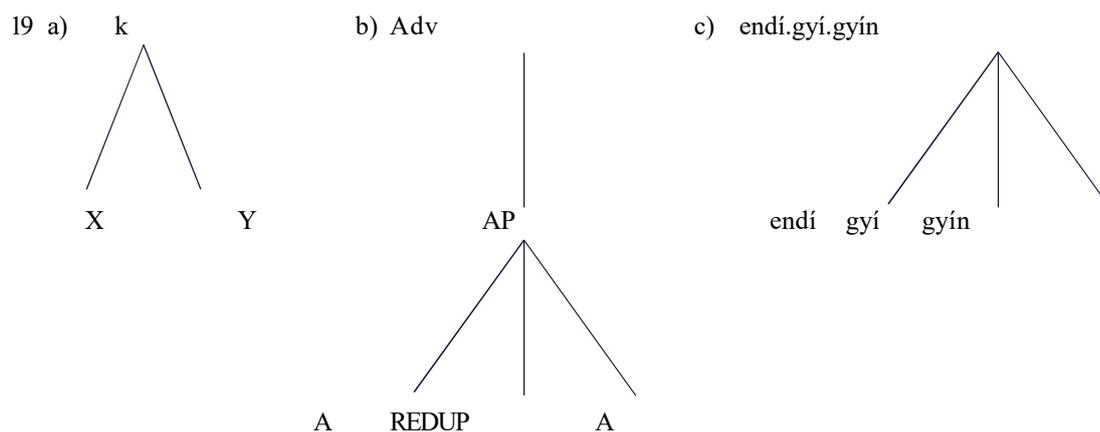   adlídzí   dzí   'truthfully'

7.11. Eggon Reduplication in Medial Position

Reduplication that deals with the repeated form placed inside the stem in form of infixation in Eggon involves breaking the base into meaningless halves. This feature is found in Eggon reduplication, although infixation is not a productive word formation process in the language. A few examples are found below with the infixed reduplicate underlined. In the examples, *endí.gyí.gyín* 'early in the morning', where the stem *endígyín* 'morning' is split into meaningless halves *endi-*[– and *-gyín* by *-gyí-*; *endéndénd'im* 'different kinds of something' is derived from *endéndi[–m* 'different' by splitting it into *endén-* and *-d'im; ohúhúhúhi[–* 'just now' derived from *ohúhúhí* 'now' is split into *ohúhú-* and *-[–hi[–* by *hú*; *ógúgubu* 'harvest' is derived from *ógúbu* 'remove' by splitting it into *ógú-* and *–bu.*

     [ST- REDUP-EM]A/ Adv/N

18 a) endí.gyí.gyín   'early in the morning'

     b) endén.dén.dAɁim   'different kinds of something'

     c) Ohúhú.hú.hí   'just now'

     d) ógú.gu.bu   'harvest'

19 a)   k   b) Adv   c)   endí.gyí.gyín

         X   Y   AP   endí   gyí   gyín

                              A   REDUP   A

(20) [[Y]j [X]i]k ↔ [property of being related to SEMi]k

     [endí-]Ai[-gyí-]Adv]Advj[-gyín]A [endí.gyí.gyín which has the property of endí- gyín]k

         Endí-   gyí   -gyín

7.12. Phonological Structure of Eggon Reduplication

Reduplication in Eggon comprises of the use of words that have one or more syllables. These words however, have different syllabic structures made up of CV, VC, VCV, CCV, and n/CCCV as in the table that follows:

7.13. Syntactic Classification of Eggon Reduplication

Reduplication has different properties in Eggon. The base and reduplicate may belong to the same or different word class, such as verb, adverb or adjective.

7.14. Verb to Adverb

In Eggon reduplication, repeating a base that is a verb can result in an adverb. This form of reduplication is the most productive in the language because, most reduplicative adverbs are derived from verbs, as in the examples:

21 a) káoká   'deliberately'

    b) báobá   'just coming'

    c) ríorí   'only eating'

    d) adlídzí.dzí   'truthfully'

In the examples, the words *ka,* 'see' *ba,* '*come*' *ri* 'eat' and *adli[–dzi[–* 'true' are verbs which were repeated to derive adverbs: káoká 'deliberately', báobá 'just coming', ríorí 'only eating', and adzídzídzí 'truthfully', as a result of reduplication.

S. No.	Syllable Structure	Examples
Table 1: Syllable Structure of Eggon Reduplication		
a	CV	rí.o.rí 'only eating'*; gí.gí.glí* 'rumble'
b	CVCV	*bogó.dugó*
c	V/CV	ógú.gu.bu 'harvest'; aìbaì.obaì 'stranger'; óvó óvó 'hot'
d	CCV	kyé.kyékyén 'hurriedly'; okpó.kpó 'work/effort'
e	n/CCCV	mgbyé.mgbyé.mbyé 'funny noise'; ndyá.ndyá.ndyAꞰ en 'loudly', mbwú.mbwí 'reddish'

7.15. Reduplicates That Belong to Other Word Class

As stated in the preceding subsection, most words formed through reduplication are adverbs. However, there are a few others that belong to other word class such as adjective, and noun as in the words below;

		Verb		**Noun**	
22	a)	yí	'go'	oyíyí	'act of going'
	b)	ká	'see;	ekáká	'act of seeing'
	c)	kyú	'marry'	ekyúkyú	'act of marrying'
	d)	nÌglo	'bath'	nÌgoglo	'act of bathing'

Reduplicative adjectives are derived from noun, and adjectives. But there are some adjectives that are derived from meaningless bases in the language. That is, the base is not a morpheme in the language. These two forms of reduplicative adjectives are exemplify below.

		Adjective		**Adjective**	
23	a)	umbwí	'red'	mbwú.mbwí	'reddish'
	b)	kyá.kíle	'white'	kyá.kyákíle	'whitish'
	c)	whí.whín	'black'	whí.whíwhín	'blackish'
		Noun		**Adjective**	
	d)	amí	'water'	amí amí	'watery'
	e)	óvó	'fire'	óvó óvó	'hot (food/water)'

The examples in (23) above, show adjectives that are derived from other adjectives and nouns in Eggon reduplication. The adjectives u*mbwí* 'red', *kyákíle* 'white', *whí.whín* 'black', and nouns *amí* 'water', *óvó* 'fire' were repeated to derive

the adjectives u*mbwú.mbwí* 'reddish', *kyá.kyákíle* 'whitish', *whí.whí.whín* 'blackish', *amí amí* 'watery', and *óvó óvó* 'hot'. The derivation of u*mbwú.mbwí* 'reddish' involves partial reduplication of u*mbwí* 'red'

    The examples in (24) below show adjectives in Eggon that are derived from meaningless bases. *Hwá.hwá.hw*á 'in swarms' is derived from *hwá; shrí shrí shrí* 'good shade' is derived from *shrí; gí.gí.glí* 'rumble' is derived from *glí; mgbyé.mgbyé.mbyé* 'funny noise' is derived from *mbyé* and *shá.shá* 'just' is derived from *shá.*

24	a)	hwá.hwá.hwá	'in swarms'
	b)	shrí shrí shrií	'good shade'
	c)	gí.gí.glí	'rumble'
	d)	mgbyé.mgbyé.mbyé	'funny noise'
	e)	shá.shá	'just'

7.16. Semantic classification of Eggon reduplication

Reduplication in Eggon serve both derivative and inflectional functions. Note that derivational refers to the situation where new meaning is formed while inflectional function refers to grammatical function without a change in meaning or word-class. Reduplication in Eggon also shows intensity. The derivational functions are discussed shortly.

7.17. Derivative Reduplication in Eggon

Reduplication performs derivative function in Eggon and it is very productive. All the examples of reduplication and partial triplication given above are examples of derivation in reduplication. Here are some more examples for reiteration.

25	a)	adlídzí.dzí	'truthfully'
	b)	gbyé.gbé.gbé	'zigzag'
	c)	ndyá.ndyá.ndyén	'highest' 'loudly
	d)	okpó.kpó.kpó	'continue doing'
	e)	Kyá.kyákyále	'whitish'

    In the examples, *adlidzi.dz*i 'truthfully', is derived from *adlidzi* 'true'; *gbý e.gbý e.gbý e* 'zigzag' is derived from *gbý e* 'bend', *ndý a.ndý a.ndý en* 'highest or loudly' is derived from *ndý en* 'up', *okpó.kpó.kpó* 'continue doing' is derived from *okpó* 'do' and *Kyá.kyákyále* 'whitish' is derived from *kyákyále* 'white'.

7.18. Inflectional Reduplication in Eggon

Reduplication in Eggon performs the function of inflection. Number is express in the language using reduplication among other methods. This has been established in an earlier study Garba (2020:200), some examples are reproduced here for reiteration.

	Singular	**gloss**	**plural**	**gloss**
26 a.	azheʼn	'door'	azhʼaenazhén	'doors'
b.	azhgá	'tooth'	azhʼazhgá	'teeth'
c.	ayá	'leaf'	áyáyá	'leaves'

    Other functions of reduplication in Eggon include intensity. This comprises of showing the extreme or exhaustive form of a word. The examples of intensity include:

27	a)	hí.hí.hilí	'very sharp'
	b)	tsé.tsé.tsén	'very pure'
	c)	anyún.anyún	'greatest'
	d)	gbágbú gbágbú	'forever'
	e)	mgbyí.mgbyí.mgbyín	'bottomless'

8. Discussion of Findings

The findings of the present research show that reduplication is a productive morphological process in some languages such as Eggon. New meanings can be formed belonging to the same or different word class through reduplication.

Examples include *whí.whín* 'black' (Adjective) derived by repeating the stem *whín* 'dark' (adjective); *gbyé.gbé.gbé* 'zigzag' (noun) formed by repeating the stem *gbyé* 'bend' (verb). New meaning can also be formed in Eggon triplication by repeating meaningless base such as *mgbyí.mgbyí.mgbyín* 'bottomless'. The types of reduplication in Eggon include complete reduplication (*anyún.anyún* 'greatest'); partial reduplication (*adlídzí.dzí* 'truthfully'), triplication (*gbá.gbá.gbá* 'swaying of body' *hí.hí.hilí* 'very sharp'); rhyming reduplication (*bogó.dugó* 'abundantly'); vowel alternation and insertion (*ndyá.ndyén* 'high up' *ashé.o.shé* 'ordinary woman'). The construction morphology schema) [[Y]j [X]i]k [property of being related to SEMi]k effectively account for the structure of Eggon reduplication. Except in the case of the use of vague base in triplication where the meaning of the word (SEM) is not entirely base on the meaning of the stem, since the stem may be ambiguous.

Previous studies on reduplication, especially in English focus on double repetition for emphasis and clarification (Nadarajan (n.d.), Khashimova's (2022), Lieber (2010), Ghomeshi et. al, (2004), Igaab (n.d), Haspelmath 2002,). Also, a cross linguistic study of reduplication shows that the morphological process involves some form of repetition, which could be complete or partial. However, the present study shows some language specific features of reduplication. These include where the reduplicate attaches and the types of reduplication. In Eggon, reduplicate may be attached at the beginning, medial or final position of the stem. Similarly, the types of reduplication in Eggon include: Complete, partial and triplicate reduplication. This is against the usual classification of reduplication (complete and partial). The findings show that triple reduplication is an effective communication tool that helps Eggon users to express exhaustive meaning of a word and even express precise meaning from vague stems. This has implication for theories of language evolution and the role of repetition in languages. Accordingly, as noted earlier that CXM cannot effectively account for Eggon triplication formed from vague stems. However, the findings of the current study on reduplication align with a few authors (Nadarajan n.d; Khashimova's 2022) that note its productivity as a word formation process.

The present study is limited to reduplication as words. The use of reduplication in sentences, different contexts and cultures are not explore. Thus, serve as a limitation of the present study. However, future research can dwell on these areas as well as cross cultural/linguistic variations in the use and perception of reduplication as a morphological process.

9. Conclusion

This study sets out to describe and analyze the morphological process of reduplication in Eggon. The findings show that Eggon makes use of reduplication in its words formation, and the process is productive. The language has several types of reduplication which are: complete reduplication, partial reduplication, triplicate reduplication, vowel insertion and rhyming reduplication. Complete reduplication involves the repetition of the stem, which is a morpheme in the language. There are morphemes in the language that are in form of complete reduplication. Complete triplication in Eggon comprises of triple repetition of a stem which may or may not be a morpheme in the language. Partial reduplication involves the repeated form being attached at word initial, medial or final positions. Mostly, it is the initial vowel that is deleted in partial reduplication. Partial triplication contains repeating part of the stem and attaching it at the word initial or final positions. Complete and partial reduplication are the most productive while rhyming reduplication is the least productive.

The structure of reduplication in Eggon comprises of the reduplicate being placed at word initial, medial or final positions. That is, reduplication in Eggon repeats the stem or its part in various ways. This is obvious in partial reduplication/triplication where the reduplicate attaches before, inside or after the stem. The reduplicates have the structure: [REDUP + STEM]A = A; [REDUP + STEM]A = ADV for initial position; [ST- REDUP-EM]A/Adv/N/ for medial position and [STEM]V + [REDUP] = N, for final position. In other words, reduplicates that attach before the stem derived adjective and adverb; the ones that attach inside the stem derive adjective, adverb or noun, and the ones that attach after the stem derive noun. Complete reduplication and triplication derive adjective or adverb.

Reduplication in Eggon performs derivational and grammatical functions. The study shows that new meaning can be formed through reduplication which may belong to the same word class as the stem or not. The study also posits that reduplication performs the grammatical functions of number and intensity.

Finally, the current research settles that reduplication is a productive word formation process with its unique constituents, and should be treated as a complex word rather than a type of compounding or affixation as opined by some scholars (Katamba, 1993 and 2006; Booij, 2005; Katamba and Stoneham 2006; Eleshin, 2017). This is because reduplication (repetition of a stem or its part) in Eggon does not fit into the definition of affixation (combination of a stem and affix(s)) or compounding (combination of two or more lexemes). Similarly, the research posits that reduplication is a

productive word formation process and refute the notion that reduplication is not productive or informal (Igaab, n.d.). It may be unproductive in some languages but not all languages. The study further underscores a feature of reduplication which has been less treated in previous studies –triplication. Triplication in Eggon performs derivative and grammatical functions of forming new words and intensifying meaning. These findings on Eggon reduplication contribute to a broader understanding of reduplication as a morphological process and its expressive functions in languages.

Conflicts of Interest

The authors declare no conflict of interest.

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