Functions of Verb Reduplication and Verb Doubling in Swahili*

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The present paper examines verb reduplication and verb doubling in the East African Bantu language Swahili. These two constructions, in which some part of the verb form is repeated, are both widespread in the Bantu languages. Across Bantu, verb reduplication has been noted to commonly convey an iterative, repetitive, or continuous action, as well as in some languages being associated with a 'pointless' or 'aimless' type of action. Verb doubling appears to be more often associated with a predicate-centred focal reading, which may relate to either truth-value focus or to a progressive aspect reading. The current study examines to what extent these generalisations also hold for Swahili. It explores the functions of verb reduplication and verb doubling in the language. It concludes that whilst the verb reduplication and verb doubling patterns identified in Swahili seem to reflect the more common cross-Bantu observations, Swahili also has a distinct form of verb reduplication in which part of the construction appears 'external' to the reduplicated verb form. This construction has not been identified outside Swahili and has not previously received as much attention in the descriptive literature. However, the claim here is that 'verb-external' reduplication fits within broader patterns relating to the semantic-pragmatic functions of verb reduplication, whilst also appearing to be highly idiomatic, occurring with only a small set of verbs and encoding some degree of 'unexpectedness'.

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Keywords: Bantu languages, Swahili, morphology, verb reduplication, verb doubling

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1. Introduction

The Bantu language family comprises some 500–600 languages spoken across Central, Eastern and Southern Africa. Bantu languages are known for their agglutinative morphology which is particularly visible in the verbal domain. Markers relating to tense, aspect and mood distinctions, as well as those which encode deixis, polarity, and subject and object information are often found as part of the verb form. In addition to this, Bantu languages commonly employ a range of strategies to indicate the discourse prominence of a range of items: pragmatically-conditioned word order and overt morphological markers of focus can be used to convey the information structural properties of the elements within a clause.

Swahili is a Bantu language spoken across much of Eastern Africa. Swahili exhibits many of the features typically associated with the Bantu languages: a dominant SVO word order, an extensive system of agreement and a range of tense-aspect distinctions can be conveyed through the presence of markers on the verb form. Swahili exhibits the standard Bantu verbal template in which, although not all elements are necessarily present in a given verb form, those elements that are present, appear in a highly constrained order. Thus, a simple present tense construction can be formed with the marker *na*- which appears before the verb stem, as can be seen in example (1) below.^{1,2)}

(1) Musa a-na-som-a ki-tabu.

Musa sm1-prg-read-FV 7-book

'Musa is reading a book.' (Swahili)

However, in addition to the use of a simple verb form to encode tense-aspect distinctions, Swahili also exhibits constructions in which the verb stem (or part thereof) is reduplicated. These constructions affect the semantics of the action or event described by the verb (i.e. they modify the manner in which the action or event is carried out) or impact the information structural properties of the clause (i.e. they emphasise a particular part of the utterance). One way in which this done is through a process of verbal reduplication. This can be seen in example (2) below where the verb stem -lia 'cry' is reduplicated, giving rise to a continuous reading, here translated as 'whimper'. The second strategy is called verb doubling and can be seen in example (3) which shows repetition of the verb stem, but in this instance, the first verb appears in a non-finite form and hosts the infinitival prefix ku-whilst the second form is finite and is marked by the present tense subject marker a-. This 'doubled' form emphasizes the predicate – in this instance -fagia 'sweep'.

Bantu languages are known for their noun classes which function as grammatical genders. By convention these classes are assigned numbers. Classes 1–10 typically represent singular-plural pairings, with odd number referring to the singular form and even number being used for its plural counterpart.

²⁾ Glosses follow the Leipzig Glossing Rules with the following additions: 1, 2, 3, etc.=noun class number; Aug=augment; Fv=final vowel; NAR=narrative; OM=object marker; SM=subject marker.

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(2) M-toto huyu a-na-lia-lia tu.
1-child DEM.1 SM1-PRG-weep-weep only
'This child does nothing but whimper.' (Swahili, Schadeberg (1992: 10))
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(3) Ku-fagi-a a-fagi-a.

INF-sweep-FV sM1.PRs-sweep-FV

'As for sweeping, she sweeps.' (Swahili, Ashton (1947: 278))
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Verb reduplication and verb doubling have long been noted to be widespread across Bantu (see Ashton (1947), Meeussen (1967) and Hyman (2009)). Whilst these two constructions differ in some ways-for example, with regards to the agreement patterns which point to underlying structural differences—they also exhibit an obvious similarity: both forms involve the reoccurrence of the same verb form within a single unit. The aim of this paper is to explore verb reduplication and verb doubling in Swahili, with a view to better understanding the contribution these two construction types make to the interpretation of the clause. Whilst verb reduplication in Bantu is relatively well documented (see, for example, Dembetembe (1978); Odden & Odden (1985); Mutaka & Hyman (1990); Downing (1999, 2004); Novotna (2000); Tak (2003); Hyman (2009); Downing & Inkelas (2015), among others), verb doubling is less well described, and certainly remains underdescribed for Swahili. To our knowledge, there has been no systematic examination of verb doubling in Swahili, nor a comprehensive comparison of these two phenomena, either in Swahili or in the wider context of the Bantu languages. This paper seeks to address this gap, adding to our knowledge of these morphosyntactic phenomena in Swahili and the wider comparative context of the Bantu language family. It also highlights a sub-type of verb reduplication which has received less attention in the descriptive literature and which has not been identified beyond Swahili—a phenomenon here termed 'verb-external' reduplication. It will be shown that both verb reduplication and verb doubling function to modify the action or event described by the verb, with verb reduplication affecting the semantics of the event whilst verb doubling serves either to encode specific tense-aspect information or to highlight the predicate as discourse salient.

The paper is structured as follows. Section 2 presents an overview of verb reduplication and verb doubling in Bantu languages. Section 3 examines verbal reduplication in Swahili, first in terms of full verbal reduplication and then through an examination of 'verb-external' reduplication. Section 4 examines verb doubling in Swahili. Section 5 constitutes a concise summary and makes some concluding remarks.

2. Verb reduplication and verb doubling across Bantu languages

2.1 Verb reduplication

Verb reduplication has been reconstructed for Proto-Bantu (Meinhof 1932: 46) and has long been noted to be widespread across the Bantu language family (see, for example,

Ashton (1947), Hyman (2009)). Verb reduplication involves the reduplication of either the entire verb stem or part of a stem (for example a root) which functions as a single form, i.e. it hosts only one instance of subject marking and tense/aspect information. Verb reduplication can be seen in examples (4) and (5) below from the Bantu languages Totela and Swahili respectively.

(4) Totela (Crane p.c. cited in Hyman (2009: 182))

Abo ba-ku-tutuluka ku-kula ku-kula muzi ku-kula muzi.

they they-nar-come.out nar-clean nar-clean village nar-clean village 'They came out and cleaned up the whole village.'

(5) Swahili (Mbogo 2002: 36)

```
ku-cheka-cheka
                               furaha
                                                 nyota mbele ya macho
... na
                         kwa
                                           kama
   and INF-laugh-laugh with happiness like
                                                         front of eyes
                                                  star
                                                                          of
familia
       kubwa ya Bwana Abdula.
family
        big
                of Mr.
                           Abdula
"... and giggle like stars in front of the big family of Mr. Abdula."
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... and giggle like stars in front of the big failing of Mr. Abdula.

As can be seen in the examples above, reduplication of the verb forms results in a repetitive or iterative reading. In example (4) the meaning involves multiple repeated small actions culminating in the entire event of having 'cleaned up the whole village'. In example (5), whilst the repetition of -cheka also reflects a repeated action, it contributes a more specific meaning as can be seen through the translation 'giggle', implying a particular type of repeated action (perhaps alongside a decrease in 'intensity' reading, a point which will be returned to later in the paper).

A number of authors have noted that verb reduplication is commonly associated with one of a range of seemingly related functions across the Bantu languages (Hyman 2009; Downing & Inkelas 2015) and is often semantically iconic (Inkelas & Downing 2015). Verb reduplication can also be used to convey an intensive action, as can be seen in the examples in (6) below. In Gunu, verb reduplication expresses 'a continuous or sustained action' (Rekanga 1989: 141); in Nyanga it conveys 'an intensive value, do a lot or several times' (Mateene 1969: 82). In Mbukushu, verb reduplication expresses 'frequency or intensification of an action' (Fisch 1998: 123) whilst in Yao, verb reduplication expresses that the action is 'realised repeatedly or frequently at large intervals' (Ngunga 2000: 107).

(6) Verb reduplication to encode repetitive action or a sustained event

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-belabela 'lie continually' < -bela 'lie' [Gunu]
-ikiákia 'do and redo continuously' < -ikia 'do' [Nyanga]
-kwatakwata 'touch everything' < -kwata 'touch' [Mbukushu]
-limalima 'cultivate frequently' < -lima 'cultivate' [Yao]
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Another common, related sense is to encode an action or event that occurs repeatedly

'without aim', 'senselessly' or 'indiscriminately'. This can be seen in the examples in (7) below.

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(7) Verb reduplication to encode repetitive action or an aimless event

-tómbtómba 'pass by over and over again' < -tómba 'pass by' [Duala] (Ittmann 1939: 195)

-lobaloba 'talk, chatter' < -loba 'speak' [Lingala] (Guthrie 1939/1966: 37)

-dzuladzula 'sit here and there' < -dzula 'sit' [Venda] (Poulos 1990)
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In addition to the repetition reading, such as in *-somásomá* 'read repeatedly' in (9a) below, a common interpretation in both Gikuyu and Ganda is to encode extent or degree, as can be seen in *-lagayalagaya* 'to get looser and looser' in (9b).

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(8) Gikuyu (Mugane 1997: 11)
a. -kia 'prepare porridge/beer'
b. -kiakia 'prepare porridge/beer a little more'
c. -ara 'spread'
d. -araara 'spread a little more'
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(9) Ganda (Judith Nakayiza, p.c.)
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a. -somásomá 'read repeatedly' < -soma 'read'</li>b. -lagayalagaya 'get looser and looser' < -lagaya 'get loose'</li>
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Verb reduplication can therefore be seen to commonly be associated with actions or events that are i) repetitive or reoccurring, ii) aimless or purposeless, or iii) represent an increase in degree or intensity from their base forms. Although these functions differ slightly, they can all be seen to involve the core notion of plurality; either in terms of plurality of events (i.e. repetition) or plurality of number of events (i.e. increase in frequency or intensity). This will also be seen to be the case in Swahili (see Section 3).

2.2 Verb doubling

The phenomenon of verb doubling in Bantu languages was observed as early as Meeussen (1967: 121) who describes the structure as the 'advance verb construction'. The various functions of verb doubling have been noted by, amongst others, Güldemann (2003) and de Kind et al. (2015) who note that verb doubling is most commonly used to express predicate-centred focus and/or progressive aspect, although the precise semantics associated with the construction vary across the language family. In such constructions, the entire verb occurs twice in a single clause, typically with one form appearing as an infinitival verb and the other as an inflected verb form, hosting subject information and (where appropriate) tense-aspect subject information.³⁾ This can be seen in the examples

³⁾ As pointed out by a reviewer, Swahili infinitival verb forms can also be thought of as inflected since they host the class 15 subject prefix *ku*- in addition to the final vowel -*a*. We therefore use the terminology 'infinitival verb form' rather than 'uninflected verb form' to acknowledge this observation.

from Kaamba below, where (10a) shows the simple verb form and (10b) shows a verb doubling construction employing the verb stem -sàlá.

(10) Kaamba (Bouka 1989)

a. wà-mú:-sàl-á.
sM1-prg-work-fv
'il est en train de travailler.'
'He is working.'

b. Sàl-á kà-mú:-sàl-á.

INF.work-FV SM1-PRG-work-FV

'il est en train de travailler.' 'Travailler il est en train de travailler.'

'He is working.' Lit.: 'Working he is working.'

In Kaamba, both the examples above are used to express a present continuous event. However, the description for the verb doubling construction shown in (10b) is that it is used to 'reinforce the concept of repetition in the carrying out of the action' (Hadermann 1996: 160).⁴⁾

A similar situation can be seen in Gikuyu. Example (11a) shows a 'basic' sentence, whilst examples (11b) and (11c) show verb doubling constructions in which the infinitival verb form appears before an inflected form of the same verb.

(11) Gikuyu (Morimoto 2013: 9)

- a. Audu é-dete garí y-aké. Irá ne a-ra-mé-tugát-ire.

 Audu sm1-love 9.car 9-poss yesterday foc sm1-pst-9-care-pfv

 'Audu loves his car. Yesterday he took care of it.'
- b. *Ne gu-thabí-a a-ra-mé-thabi-rié kana ne gu-thodék-a a-ra-mé-thodék-ire.* FOC INF-wash-FV sm1-pst-9-wash-pfv or FOC INF-fix-fv sm1-pst-9-fix-pfv 'Did he wash or fix it?'
- c. ne gu-thodék-a a-ra-mé-thodék-ire.

 FOC INF-fix-FV SM1-PST-9-fix-PFV

 'He FIXed it.'

The description of the use of the verb fronting construction has been that it is used to express 'predicate-centred focus' (Morimoto 2013: 9). Predicate-centred focus may involve focus on the lexical verb and/or other associated elements such as tense-aspect-mood markers or the truth value of the predicate (Güldemann 2009; Morimoto 2017). Through an

⁴⁾ Original: renforcer l'idée de repetition dans le déroulement de l'action' (Hadermann 1996: 160).

examination of predicate-centred focus, verb doubling constructions in Bantu can also be seen to interact with the broader tense-aspect system. In this context, these constructions are most commonly associated with a progressive reading—which can be seen as an instance of focus on the tense-aspect-mood of the clause. This can be seen in Fwe below where verb doubling encodes progressive meaning, as shown in (12a). Since verb doubling productively conveys progressive meaning in Fwe, reduplication can be used in addition to verb doubling to encode a repetitive, progressive action as in example (12b).

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(12) Fwe (Gunnink 2016: 1, 2)
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- a. *Ku-har-a ndi-har-a*.

 INF-rake-FV SM1sg-rake-FV 'I am raking.'
- b. kù-tónda-tòndà ndí-tòndà-tôndà.
 INF-watch-watch sm1sg-watch-watch
 'I am looking around.'

Similarly, in Ganda verb doubling can be seen to express predicate-centred focus since it conveys focus either on the truth value of the predicate (i.e. the action described by the verb did/will take place) (13a) or through tense-aspect focus which in Ganda is associated with progressive aspect (13b).

(13) Ganda (Judith Nakayiza, p.c.)

- a. Truth-value focus
 Oku-fumb-a n-fumb-a.
 INF-cook-FV SM1sg-cook-FV
 'I COOK.'
- b. Progressive reading

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Oku-fumb-a n-fumb-a naye te-bi-jja ku-woom-a.

INF-cook-FV SM1sg-cook-FV but NEG-SM8-FUT INF-be.tasty-FV 'I am cooking, but it will not be tasty.'
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Verb doubling constructions in both Gikuyu and Ganda can therefore be seen to be associated with predicate-centred focus, either through truth value focus or through progressive aspect.

This section has set out the broad facts relating to verb reduplication and verb doubling across Bantu. The next sections explore verb reduplication and verb doubling in Swahili, with the goal of identifying the different interpretations with which these phenomena are associated.

3. Verb reduplication in Swahili

Swahili has two types of verb reduplication. In one type of reduplication the entire verb stem (verb root + final vowel) is reduplicated. In the other type of reduplication, only the verb root or part of the verb root is reduplicated and appears external to the main verbal form. In this paper, we call the former strategy 'full verb reduplication' and the latter one 'verb-external reduplication'. ⁵⁾

3.1 Full verb reduplication

Full verb reduplication is highly productive in Swahili (Schadeberg 1992) and involves the repetition of the verb stem, with the subject information and tense/aspect information appearing before the verb stem where appropriate. This can be seen in example (14) below (repeated from (2)), where repetition of the verb -lia 'cry' yields -lialia which indicates a repeated crying event, translated here as 'whimper'.

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(14) M-toto huyu a-na-lia-lia tu.

1-child DEM.1 SM1-PRG-weep-weep only

'This child does nothing but whimper.' (Swahili, Schadeberg (1992: 10))
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As was observed by Makino (2014, 2016), full verbal reduplication in Swahili can also be used to covey a habitual action (15) or an increase in degree (16), as can be seen on comparison of the reduplicated and non-reduplicated forms in the examples below.

```
(15) a. Yule mbwa a-na-bwek-a.

1.DEM 9.dog sm1-prg-bark-fv

'That dog barks/is barking.'
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b. Yule mbwa a-na-bweka-bweka.
1.DEM 9.dog SM1-PRG-bark-bark
'That dog always/habitually barks.' (Makino 2016: 7)

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(16) a. Kamba hizi zi-na-rege-a.
10.rope DEM.10 sм10-ркG-get.loose-FV
'These ropes are getting loose.'
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5) A third type of partial reduplication can also be observed in Swahili although this is no longer productive and instead only remnants of this can be seen in certain lexical items. The form *-tetema* 'tremble' for example involves reduplication of the initial syllable *te-* similarly *-pepeta* 'winnow' involves the reduplication of this initial stem. As observed by Ashton (1947: 317), the forms containing this reduplicated syllable often indicate an action or event comprised of a series of actions. However, since this type of reduplication involves only the repetition of part of the verb stem, it is not examined in further detail in the current paper.

b. Kamba hizi zi-na-legea-legea.

10.rope dem.10 sm10-prg-get.loose-get.loose

'These ropes are getting looser and looser.' (Makino 2016: 6)

Verb reduplication can also be used to express multiple occurrences of an event, including events which occur incrementally over a period of time. Example (17a) shows the non-reduplicated form comprising of the verbs -anza 'start, begin' and -zoea 'get used to'. In (17b) the first verb (-anza) is repeated whilst in (17c) the second verb (-zoea) is repeated. Whilst speakers accept both versions with no apparent semantic difference between the two constructions, there appears to be a preference for the form in (17b) where the incrementality encoded by the reduplication applies to -anza 'to start'.

- (17) a. A-li-anz-a ku-zoe-a maisha y-a Marekani. sm1sg-pst-start-fv inf-get.used.to-fV 6.life 6-of US 'He started to get used to the life in the US.'
 - b. A-li-anza-anza ku-zoe-a maisha y-a Marekani.
 sm1sg-pst-start-start inf-get.used.to-FV 6.life 6-of US
 'He started to get used to the US life little by little.' (Makino 2014: 8, modified)
 - c. A-li-anz-a ku-zoea-zoea maisha y-a Marekani. sm1sg-pst-start-FV inf-get.used.to-get.used.to 6.life 6-of US 'He started to get used to the US life little by little.' (Yoneda, field notes)

Verbal reduplication can also emphasise the iterative nature of the event described by the verb or indicate plurality of the undergoer. In example (18a) the plurality of undergoers can be considered to be the result of the plural nature of the noun (and the associated agreement), whilst in example (18b) the interpretation stemming from the reduplication is that lots of the tree's branches have been broken (perhaps also into many pieces). Notably, an attempt at using this reduplicated form with an explicitly singular noun phrase, as in example (18c), renders the sentence ill-formed.

- (18) a. *Ma-tawi* y-a m-ti huo ya-me-kwanyuk-a.
 6-branches 6-of 3-tree DEM.3 SM6-PRF-be.broken-FV
 'Branches of that tree are broken.'
 - b. *Ma-tawi* y-a m-ti huo ya-me-kwanyuka-kwanyuka.
 6-branches 6-of 3-tree DEM.3 sM6-PRF-be.broken-be.broken
 'Lots of that tree's branches are broken.'

c. *tawi l-a m-ti huo li-me-kwanyuka-kwanyuka.
5.branch 5-of 3-tree DEM.3 SM5-PRF-be.broken-be.broken
'The branch of that tree is broken.' (Makino 2014: 8)

Actions, states or manners which are perceived of as typical or characteristic of people or entities can also be conveyed using reduplication. For example, the reduplication of the stem *-lewa* 'be drunk' becomes *-lewalewa* 'regularly be drunk, habitually be drunk'. Such a construction can also be used to refer to other features that are commonly associated with this state, so it could also convey a meaning similar to stagger, i.e. indicating the behavior of a drunken person.

```
(19) a. A-li-lew-a.
sм1-pst-be.drunk-FV
'He was drunk.'
b. A-li-lewa-lewa.
sм1-pst-be.drunk-be.drunk
'He staggered, he staggered (drunkenly).' (Makino 2016: 7)
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For reduplication in Swahili, a common feature appears to be the encoding of notions relating to plurality, i.e. plurality of events including iterative and repetitive actions, or a plurality of experiences or undergoers. This has been noted in the previous literature which describes the functions of verbal reduplication in Swahili, as well as in many Bantu languages, as expressing a continuous action or state, or conveying a repeated action (Ashton 1947; Loogman 1965; Schadeberg 1992; Nakajima 2000; Novotna 2000; Mohammad 2001). Other noted uses of verb reduplication in Swahili include to lessen or modify the force of a word (Ashton 1947; Nakajima 2000; Novotna 2000), or to intensify the meaning of a verb (Ashton 1947; Loogman 1965; Schadeberg 1992; Nakajima 2000; Novotna 2000; Mohammad 2001).

There are also examples in which verbal reduplication in Swahili appears to decrease the degree of action, as in *-lialia* 'whimper' derived from *-lia* 'weep, cry', as well as those in which it appears to increase the force of the verb, for example *-pigapiga* 'strike with repeated blows' derived from *-piga* 'hit'. The possibility of encoding either the decrease or the intensification of an action or event described by a verb seems to be at odds, and it may on first glance appear strange that both interpretations can be achieved through the same mechanism. However, Makino (2014, 2016) proposes that each individual action can be lessened through repetition, but that the repetition of total actions can result in intensification. The difference in meaning that stems from verb reduplication can therefore be seen to be, in part, the result of the ability to distinguish between individual and collective actions. Although there is a tendency for some verb stems (particularly those that refer to individual actions) to convey a decrease in intensity and for others (particularly those that refer to collective actions), to convey an increase in intensity, it is also possible

for the same verb form to be associated with either a decrease or an increase in intensity reading depending on the situation or use. This can be seen with the reduplication of the verb -kimbia 'run' which in (20a) conveys an increase in intensity with the referent running 'from place to place'. This contrasts with example (20b) where the reduplication of the verb encodes a decrease in intensity and means 'run lightly' or 'jog'.

- (20) a. Wa-na-kimbia-kimbia huku na huku. sm2-prg-run-run here and here 'They run from place to place.'
 - b. Wa-na-kimbia-kimbia kila asubuhi.

 SM2-PRG-run-run every 9.morning

 'They go jogging every morning.'

The broader discourse context, as well as the specific semantics with which the verb is associated, can therefore be seen to influence the resulting interpretation (as is discussed in further detail below).⁶

The various functions of verbal reduplication in Swahili can be observed in (21) and (22) below which show instances of full reduplication and the verbs from which they are derived.⁷⁾

(21) Reduplication to modify the force of an action or event described by a verb

```
-lialia 'whimper' < -lia 'weep, cry' (Ashton 1947: 316)
-somasoma 'read roughly' < -soma 'read' (Nakajima 2000: 162)
-chorachora 'scribble, write illegibly' < -chora 'carve, engrave' (Novotna 2000: 64)
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(22) Reduplication to express a continuous action or state, or a repeated action

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'wander about'
-tangatanga
                                           < -tanga 'loiter, roam'
-chekacheka
             'keep laughing'
                                           < -cheka 'laugh'
                                                                    (Novotna 2000: 65)
             'strike with repeated blows' < -piga
                                                      'hit'
-pigapiga
-ombaomba
             'pester'
                                           < -omba
                                                     'beg'
             'interrogate'
                                                      'interview'
-hojihoji
                                           < -hoji
```

As can be seen on examination of the verb forms above, verbal reduplication in Swahili can be used to modify the force of an action or event described by the verb. Verb reduplication can also be used to convey readings which have been described as indicating a continuous

⁶⁾ This is a point to which we return below when we discuss the comparison of partial reduplication (Section 3.2) with verb doubling (Section 4).

⁷⁾ There are also instances in which reduplication occurs with adjectival elements, such as -dogo 'small' and -dogodogo 'very small' and -tepe 'many' and -tepetepe 'a lot' (Novotna 2000: 64). However, since the focus of this paper is on verbal reduplication these are not examined in any detail here.

or repeated action. However, we propose here that these two readings are very closely linked in semantic terms and can be seen simply as a continuum of the same phenomenon depending on the verb used and the broader context. The verb -hoji 'interview' for example, can be reduplicated to yield -hojihoji which is translated here as 'interrogate'. However, depending on the context, the verb form -hojihoji can serve either to intensify the manner of the verb -hoji, in which case it suggests prolonged intensive questioning (an interrogation by the police for example). However, if the reduplication is taken to reduce the severity and intensity of the action (conveying the more 'pointless or aimless' senses with which verbal reduplication is also associated), then it may mean to question or interview in a pointless manner, perhaps repeatedly. The same can be said for -ombaomba which is translated above as 'pester' which implies repeated action but without perhaps increased intensity, or it could mean to 'beg over and over again', in which case the repeated action does not lose its force.

3.2 Verb-external reduplication

In addition to the full verb reduplication patterns examined in Section 3.1 above, Swahili also exhibits another type of reduplication which has received less attention in the descriptive literature and to our knowledge has not been described for other Bantu languages. Whilst this strategy also involves reduplication of the verb root, in this instance the reduplicated element appears 'external' to the main verb form. In verb-external reduplication, the reduplicated form appears after the inflected verb and without the final syllable, yielding an independent reduplicated form (glossed as REDUP in the examples below).⁸⁾ The interpretation that arises from this construction can be used to convey a completeness or totality reading as can be seen with the form *-chanua chanu* 'bloom totally, bloom completely', in (23) below.^{9,10)}

(23) a. *Asumini z-ote zi-me-chanu-a*.

10.jasmine.flower 10-all sm10-prf-bloom-fv 'All jasmine flowers have bloomed.'

- 8) As pointed out by one of the reviewers, there seems to be a general tendency for the epenthetic final vowel to be either -o or -u (particularly when the root or reduplicated element ends in a consonant). This is reminiscent of the use of these same vowels in verb-to-noun derivational processes where -o denotes an action or result and -u derives adjectives and nouns of quality. These processes are widespread across the Bantu languages (Schadeberg 2003) and have also been reconstructed for Proto-Bantu (Meeussen 1967: 94–95) although exactly how they relate to the phenomena examined in the current paper is not clear.
- 9) Stress placement in Swahili appears on the penultimate syllable. In example (ib) below, both the 'main' verb from and the 'external' reduplicated element receive stress placement. This provides further support that the reduplicated element is external to the verb since if the reduplication was within a single verb form as in -katakata one only stressed syllable would be expected. (Acute accents on the vowels below indicate stress placement on the associated syllable.)
 - a. Asumíni zóte zimechanúa.
 - b. Asumíni zóte zimechanúa chánu.
- 10) Here the verb stem is considered to comprise of the verbal root and the final vowel.

```
b. Asumini z-ote zi-me-chanu-a chanu.

10.jasmine.flower 10-all sm10-prf-bloom-fv redup

'All jasmine flowers have fully bloomed.' (Makino 2014: 20)
```

This form of verb external reduplication appears to be highly idiomatic and is found with only a small set of verbs. This phenomenon has been noted in early work by Mohamed (1977), and Makino (2014) examined the same base forms identified in the earlier study by Mohamed (1977). Further details of the forms are detailed in the Appendix. We have not identified instances of this construction in written texts and its use implies that it is closely linked to the enrichment of the meaning (in a way similar to enrichment through the use of ideophones and onomatopoeia) and appears to convey 'remarkable' or 'unexpected' semantics.¹¹⁾

When the verb root ends with a consonant, the vowel from the preceding syllable may also be copied, as can be seen in the case of *-nyorora nyororo* in (24) below. ¹²⁾

```
(24) a. Mchuzi huu u-me-nyoror-a.

3.stew DEM.3 SM3-PRF-boil-FV

'This stew has been boiled (and become) soft.'
```

```
b. Mchuzi huu u-me-nyoror-a nyororo.

3.stew DEM.3 SM3-PRF-boil-FV REDUP

'This stew has been boiled (and become) completely soft.' (Makino 2014: 26)
```

The reduplicated element may also appear twice, as in example (25) below where the external form is in turn reduplicated and appears as *katakata* (rather than simply *-kata*).

```
(25) A-na-kata-a katakata kw-end-a chuo-ni.

SM1-PRG-refuse-FV REDUP INF-go-FV school-LOC

'He flatly refuses to go to school.' (Makino 2014: 23)
```

In the case of a verb such as *-tulia* 'to be(come) quiet', verb external reduplication can be seen to be associated with a strengthening in the result of the action or event described by the verb. As has been seen in the examples above, this gives rise to a completeness or totality reading. In some instances, therefore, the verb external reduplication can be replaced by a construction which instead employs the adverb *kabisa* 'completely' (26b).

¹¹⁾ Marten & Mous (2016, 2017) also identify 'unexpectedness' as being associated with applicative verbs, whilst Marten & Gibson (2016) noted the 'unexpected' reading with subject-object reversal in Swahili. It appears that a broad range of strategies are used in the language to convey a variety of subtle semantic-pragmatic functions.

¹²⁾ A similar situation can be seen in example (26a) where the final vowel of the verb root *-tuli-* 'become quiet' is lengthened, yielding *-tulia tulii* rather than *-tulia tuli* or *-tulia tulii* for example.

- (26) a. Wa-toto wa-li-tuli-a tulii.

 2-children sm2-pst-become.quiet-fv REDUP

 'The children became completely silent.' (Makino 2014: 22)
 - b. Wa-toto wa-li-tuli-a kabisa.

 2-children sm2-pst-become.quiet-Fv completely

 'Children became completely silent.' (Yoneda, field notes)

In the case of an action verb such as *-nyakua* 'snatch', verb external reduplication can be seen to express the intensity of the action or event described by the verb. However, *kabisa* 'completely' cannot be used instead of the verb external reduplication strategy (27b), although the construction can be modified by *ghafla* 'suddenly' (27c).

- (27) a. *A-li-nyaku-a* nyaku kalamu y-a Juma. sм1-рsт-snatch-гv керuр 9.pen 9-of Juma 'He snatched Juma's pen suddenly.' (Makino 2014: 2)
 - b. ??*A-li-nyaku-a kabisa kalamu y-a Juma*.

 sm1-pst-snatch-fv completely 9.pen 9-of Juma
 Intd.: 'He snatched Juma's pen completely.' (Yoneda, *field notes*)
 - c. *A-li-nyaku-a* ghafla kalamu y-a Juma. sm1-pst-snatch-fv suddenly 9.pen 9-of Juma 'He snatched Juma's pen suddenly.' (Yoneda, field notes)

In addition to the completeness or totality reading, verb external reduplication can also encode readings relating to degree or the extent to which the action or event has occurred. Consider example (28) below where the reading is not that the rope has been completely loosened, but rather that it is in the process of becoming (very) loose. Whilst this noncompleted reading stems in part from the use of the present progressive tense-aspect marker na-, this also shows that verb external reduplication is not always associated with completed actions or events.

- (28) a. Kamba hizi zi-na-rege-a.

 10.rope DEM.10 sm10-prg-get.loose-fv

 'These ropes are getting loose.'
 - b. Kamba hizi zi-na-rege-a regerege.

 10.rope dem.10 sm10-prg-get.loose-fv redup

 'These ropes are getting very loose.' (Makino 2014: 8)

In example (29), the verb -duguda 'shake' can be involved in a verb-external reduplication construction (29a) in which case it yields an intensity reading. Alternatively, -duguda 'shake' can be modified by the adverb sana 'very, a lot'. However, an attempt at using the adverb kabisa 'completely' renders the sentence ill-formed, suggesting that the verb reduplication structure again encodes an intensity reading rather than a completeness or totality reading.

- (29) a. A-li-dugud-a maziwa katika chupa dugududugudu.

 sm1-pst-shake-fv 6.milk in 9.bottle redup

 'He shook milk in a bottle very hard.' (Makino 2014: 3)
 - b. A-li-dugud-a maziwa katika chupa sana. sm1-pst-shake-fv 6.milk in 9.bottle very 'He shook milk in a bottle a lot.' (Yoneda, field notes)
 - c. ??*A-li-dugud-a maziwa katika chupa kabisa*.

 sm1-pst-shake-fv 6.milk in 9.bottle completely

 Intd.: 'He shook milk in a bottle a lot.' (Yoneda, *field notes*)

In summary, whilst full reduplication in Swahili can be seen to be commonly associated with a repetitive or iterative meaning, verb-external reduplication can be used to convey one of a number of different possible readings. Verb-external reduplication can be associated with a i) 'completeness' or 'totality' reading in the case of verbs such as *-kataa* 'refuse' and *-tulia* 'be quiet', ii) a degree or extent reading with verbs such as *-regea* 'loosen', or iii) an intensity reading in the case of verbs such as *-nyakua* 'snatch' and *-duguda* 'shake'. In all instances, there is an element of 'unexpectedness' or 'remarkableness' about the semantics with which the predicate is associated.

In some instances, verb external reduplication constructions can be used interchangeably with adverbs such as *kabisa* 'completely', or *ghafla* 'suddenly' and *sana* 'very, a lot', indicating their use in conveying intensive readings. Overall however, verb-external reduplication is idiomatic and serves to add additional texture. The process of verb external reduplication is not as productive as full reduplication, being instead limited to occurring with a restricted set of verbs. Moreover, we have not yet identified structures comparable to the examples of verb-external reduplication discussed above in any languages other than Swahili, whilst full reduplication and verb doubling are widespread across Bantu languages.¹³⁾

¹³⁾ However, given the varying descriptive state of the Bantu languages it is possible that a similar construction may be found in other Bantu languages beyond Swahili.

4. Verb doubling in Swahili

In verb doubling constructions, two forms of the same verb are present. The first verb appears in the infinitival form and is immediately followed by a second verb which hosts tense-aspect-mood and subject information. This is the structure associated with verb doubling in Swahili, as can be seen in example (30) below (repeated from (3) above) where the verb fagia 'sweep' appears with the infinitival prefix ku- and again with the present tense class 1 subject marker a-.

```
(30) Ku-fagi-a a-fagi-a.

INF-sweep-FV sm1.PRs -sweep-FV

'As for sweeping, she sweeps.' (Ashton 1947: 278)
```

In contrast to verb reduplication, the use of verb doubling does not appear to encode information about the manner in which an action or event occurs. Rather, verb doubling conveys emphasis on the verb form. This emphasis can be in terms of the verb form itself, meaning that it can indicate that she swept, not danced—i.e. a predicate-centred focus reading. Alternatively, it can confirm that the event did (or will) happen—i.e. it encodes what has been termed 'truth value focus' or 'state of affairs focus' (Morimoto 2013; Güldemann et al. 2014).

An example of verb doubling in Swahili can be seen in (31) below where the construction serves to encode truth-value focus. This sentence can appropriately be used as a response in a context in which someone asks the speaker whether they will go and the speaker confirms that they are certain that they will go. In other words, the emphasis is on the going event and the associated truth-value.

```
(31) Kwend-a ni-ta-end-a.

INF.go-FV SM1sg-FUT-go-FV
'I will GO.' (Yoneda, field notes)
```

In addition to its present and future tense use, it is also possible for verb doubling in Swahili to occur in the past tense.

```
(32) Kwend-a wa-li-end-a.
INF.go-FV SM2-PST-go-FV
'They WENT.' (Maya Abe, p.c.)
```

```
(33) Ku-nunu-a ni-ta-nunu-a.

INF-buy-FV SM1sg-FUT-buy-FV
'I will BUY.' (Maya Abe, p.c.)
```

It is also possible for an object marker to be used in a verb doubling construction. This can be seen in example (34) where the second person singular object marker *ku*- appears before the verb stem. The reading here is also one in which the reduplication serves to encode truth-value focus.

```
(34) Ku-pim-a ni-ta-ku-pim-a.

INF-measure-FV sM1sg-FUT-OM2sg-measure-FV 'I will MEASURE you.' (Yoneda, field notes)
```

Interestingly, there appears to be variation amongst Swahili-speakers in terms of the formation of verb doubling constructions. We also identified examples in which the verb doubling construction is preceded by the copula ni. In such cases, the construction conveys a progressive reading as can be seen in example (35).

```
(35) Ni kwend-a na-end-a.

COP INF.go-FV SM1sg.PRS-go-FV

'I am going.' (Morimoto 2017)
```

This example was provided by a speaker of Swahili from Nairobi for whom the example in (35) is grammatical only if the copula form ni is present. Recall that verb doubling is also possible in Gikuyu (and closely related languages) where the construction employs a clause-initial focus marker ne which is, at least historically, related to the copula form (see Morimoto (2013), and Section 2.2 of the current study). The proposal is therefore that the use of the copula element ni in the Swahili verb doubling construction may reflect influence from Gikuyu, or other neighbouring Bantu languages which are contact languages for a variety of Kenyan Swahili spoken in Nairobi. This means however, that verb doubling in Swahili has a progressive reading as well as being used to convey truth-value focus.

5. Summary and concluding remarks

As we have seen, although verb reduplication and verb doubling in Swahili exhibit some similarities, their distribution exhibits a number of differences. In terms of function, the core function of full verb reduplication in Swahili is to express plurality of action, habitual action or an increase in degree. Swahili also exhibits another type of reduplication construction in which the reduplicated element appears 'external' to the main verb. Verb external reduplication is most commonly associated with expressing totality or completeness, as well as extent or degree of the event. Unlike full verb reduplication,

¹⁴⁾ It would be interesting to know whether Swahili-speakers who have a language which allows verb doubling as their first language are also more likely to use verb doubling constructions when speaking Swahili. However, this remains beyond the scope of the current study and will have to remain as a subject for future investigation.

verb external reduplication does not seem to express plurality. However, verb external reduplication in Swahili appears to be idiomatic and its distribution is restricted to a small number of verbs and their associated meanings. Verb doubling in Swahili appears not to express plurality or completeness, but rather to express progressive aspect or truth-value focus.

Although verb external reduplication is only found in Swahili, full verb reduplication and verb doubling can both be observed in other Bantu languages. Verb reduplication across Bantu is commonly associated with a repeated or frequent action, to convey intensive actions, and to encode useless or aimless activities. The function of verb reduplication in Swahili seems to be in line with this general observation. In contrast, verb doubling across Bantu does not relate to plurality (or intensity) of action. Rather it is used to express truth-value focus or progressive aspectual readings—which have both been termed predicate-centred focus. The same can be said for Swahili where verb doubling is most commonly associated with truth-value focus.

A direct comparison of those languages for which we have data on both verbal reduplication and verb doubling (Swahili, Gikuyu and Ganda) reveals that the function of verb reduplication in all three languages are very similar, and all related to notions of plurality. The same appears also to hold of verb doubling which was shown in all three languages to relate to predicate-centred focus, in the case of Gikuyu this is in terms of truth value, and in Swahili and Ganda either a truth value or progressive reading is possible depending on the context and the overt tense-aspect marking involved.

```
(36) Gikuyu (Mugane 1997: 11)

-kiakia 'prepare porridge/beer a little more' (=(8b))

(37) ne gu-thodék-a a-ra-mé-thodék-ire. (=(11c))

FOC INF-fix-FV SM1-PST-9-fix-PFV

'He FIXed it.'

(38) Ganda (Judith Nakayiza, p.c.)

-somásomá 'to read and read repeatedly' (=(9b))

(39) Oku-fumb-a n-fumb-a. (=(13b))

INF-cook-FV SM1sg-cook-FV

'I COOK, I am cooking.'
```

On the basis of the small sample of languages examined in the present study, it can be assumed that a similar situation holds across the other Bantu languages which have both verb reduplication and verb doubling: the verb doubling structures relate to information structure and aspect, whilst verb reduplication is connected to lexico-semantic plurality. In Gikuyu and Ganda, verb doubling conveys focus on the verb which can result in either truth value focus or a progressive aspect reading. Whilst these two functions seem quite

different, this observation can be seen to link to the broader observation that there is a relationship between tense-aspect distinctions and information structure in Bantu, with the progressive aspect in particular being inherently focal in the Bantu languages, as was proposed as early as Hyman & Watters (1984), and has more recently been explored by Güldemann (2003) and Gibson (2017). As such, both the progressive aspect and the truth-value focus associated with verb doubling can be assumed to be related to focus, either focus on the verb asserted or TAM focus.

In terms of distribution, verb reduplication is attested in a large proportion of languages from the Bantu family, however this does not appear to the case with verb doubling. A related question is therefore whether there are other structures that perform the same (or similar) functions in the languages in which verb doubling is not attested. Preliminary studies seem to suggest that verb doubling, and other strategies which are used for the encoding of specific information structural properties (such as the conjoint/ disjoint alternation) are in complementary distribution across the Bantu languages (see also Morimoto (2017) for an exploration of this idea). The way in which verb reduplication and verb doubling structures interact with notions of topic and focus, as well as their distribution across specific tense-aspect combinations, can therefore be seen to be part of a larger issue relating to the connection between tense-aspect-mood on the one hand and the encoding of pragmatic salience on the other. As the descriptive state of the Bantu languages improves, and the subtle information structural properties that are associated with certain construction types become clearer, this connection will be ripe for further investigation. Whilst additional research would be needed to investigate this proposal in more detail, it seems that an examination of verb doubling, at least, should also be included in such a study.

Appendix

Examples of verb external reduplication

The examples listed below are those that are termed 'verb-external reduplication' in the current work. These forms were originally described as onomatopoeic words in Mohamed (1977). Since they have been considered as onomatopoeia, some examples which do not strictly involve the reduplication of the verb form are also included, such as *-funga kikiki* 'to close strongly', *-lala fofofo* 'to sleep like a dead person'. Makino (2014) described items in which verb root (or part thereof) is reduplicated as instances of 'partial reduplication'. The following examples are those described by Makino (2014) as 'partial reduplication'. The English translation is provided by authors, and the original explanation in Swahili by Mohamed (1977) is indicated by the use of square brackets.

- 1. batana: be dented / batana bata bata: be extremely dented [pondeka kupitia kiasi.]
- 2. **benuka:** protrude or bulge out / **benuka** *benu*: be bent or bulge out noticeably [kupindika au kutokeza kunakoonekana dhahiri.]
- 3. bingiria: roll / bingiria bingiri bingiri: roll down, as a stone rolls down a mountain

[mwendo wa kupindukapinduka kama jiwe kwenye mlima.]

- 4. **birua:** drop, turn over / **birua** *biru*: drop or turn over suddenly [angusha, pindua kwa ghafla.]
- 5. **boboja:** talk about various topics / **boboja** *bobobo*: say words which are unintelligible [sema maneno yasiyofahamika.]
- 6. **bwakia:** gulp down food / **bwakia** *bwaku*: put food in the mouth quickly and hurriedly [kutia kinywani upesiupesi.]
- 7. **bweka:** bark / **bweka** *bwe bwe bwe*: bark like a dog, say loudly with force [kulia kama mbwa, sema kwa kelele na hamasa.]
- 8. **chanua:** bloom / **chanua** *chanu*: bloom completely, open completely [kufumbua kwa ukamilifu.]
- 9. **chapuka:** accelerate, hurry / **chapuka** *chapu*: hurry along, go quickly [haraka kubwa, kwenda upesi upesi.]
- 10. **chechea:** limp / **chechea** *checheche*: limp along [kwenda kama mtu aliyeumia mguu mmoja.]
- 11. **chefua:** be disturbed (emotionally) / **chefua** *chefu chefu*: be very upset (emotionally) [hali ya kukorogeka moyo.]
- 12. **chemka:** boil, bubble up / **chemka** *chem chem*: bubble up, boil fiercely [chemka kwa kufanya povu; chemka kwa nguvu.]
- 13. chiririka: flow gently / chiririka chiriri: flow very slowly [miminika m'mwaiko mmoja.]
- 14. **demka:** move in time to music / **demka** *dem dem*: dance, particularly twisting the hips [chezesha sehemu ya mwili, hasa kiuno.]
- 15. **didimia:** sink / **didimia** *dididi*: sink straight down, sink immediately [zama moja kwa moja.]
- 16. **duguda:** shake / **duguda** *dugudu* dugudu: rattle (audibly) [kutika kwa mlio unaosikika.]
- 17. **futika:** to pocket / **futika** *futi*: hide something secretively [ficha kwa siri kubwa.]
- 18. **gugumiza:** gulp down / **gugumiza** *gugugu*: gulp down forcibly due to serious thirst or as in swallowing medicine [kunywa kwa kujisukumiza ama kwa kiu au kwa kujilazimisha kama vile dawa chugu.]
- 19. gwanyuka (kwanyuka): be stripped of, split off / gwanyuka gwanyu (kwanyuka kwanyu): be broken, have chipped parts [toka au vunjika sehemu.]
- 20. kataa: refuse / kataa kata kata: refuse flatly [kataa moja kwa moja. Kataa kabisa.]
- 21. **komea:** fasten, close up / **komea** *kome kome*: close all doors and windows completely [komea au funga milango yote na madirisha.]
- 22. **kwajuka:** lose colour or beauty, fade / **kwajuka** *kwaju* kwaju: lose colour completely, fade completely [kwajuka bila ya kubakia rangi.]
- 23. mwaya: spread or spill things out on the ground / mwaya mwaa: spill out in one go [mwaya kwa mwayo mmoja.]
- 24. **ng'ang'ania:** clutch, hold something firmly / **ng'ang'ania** *ng'ang'anu*: grip sth very firmly without wanting to let go [kushikilia kitu bila ya kutaka kukitoa.]
- 25. nyakua: snatch / nyakua nyaku: snatch something suddenly [chukua kitu ghafla.]

- 26. **nyatia:** walk stealthily / **nyatia** *nyatu nyatu*: walk stealthily (especially on tiptoe) or to not let anyone hear your actions [kwenda (hasa kwa kuchuchumia) taratibu kwa kudowea kitu, au kwa kutaka mtu asisikilizane sauti ya mwendo wake.]
- 27. **nyofoa:** pick pieces off something / **nyofoa** *nyofu:* gouge parts of meat off by force with teeth or talons [toa pande la mwili au nyama kwa nguvu, ama kwa meno au makucha makubwa.]
- 28. **nyorora:** become thin and loose / **nyorora** *nyororo*: be in the condition of something soft which is trickling (like snot) [kuwa katika hali ya kutiririka kwa wepesi kama vile kamasi changa.]
- 29. **pachuka**: drop down from the top / **pachuka** *pachu*: allow something to drop after cutting off, or fall from one's hand [anguka kwa kukatika kitu alichokishika mtu, au kwa kuachia mikono.]
- 30. **papatika:** flutter, flap wings / **papatika** *papatu papatu*: make a big noise like a bird flapping its wings [fanya mashindo ya kufurukuta, kama vile ndege apigavyo mabawa yake.]
- 31. **pofua:** cause blindness / **pofua** *pofu*: become completely blind [tia mtu upofu.]
- 32. **pururika:** be stripped off in large quantities, eg. leaves off a tree / **pururika** *pururu*: be released, fall as a result of becoming loose [kufunguka, kuanguka kwa kulegea.]
- 33. **pwaga:** boil / **pwaga** pwa pwa pwa: boil loudly [chemka kwa mashindo.]
- 34. rarua: tear apart / rarua raru raru: tear apart completely [rarua yote.]
- 35. **rashia:** sprinkle / **rashia** *rasha rasha*: colour or sprinkle a little without spreading out [paka au nyunyizia kidogo, bila ya kuenea.]
- 36. regea (legea): be loose / regea rege rege: be extremely loose [regea kupita kiasi.]
- 37. tepwereka: rot, go off / tepwereka tepwere tepwere: loosen, soften [regea; kuwa laini.]
- 38. **tiririka:** trickle, flow, drop / **tiririka** *tiriri tiriri*: spill (audibly) [mwaika kutoka juu kwa sauti.]
- 39. **tulia:** be calm, be quiet / **tulia** *tulii*: be completely quiet [tulia bila ya mtikiso au ghasia zo zote.]
- 40. **vuruga:** stir up / **vuruga** *vurugu vurugu*: break up into small pieces [vunjika vipande vidogo vidogo.]
- 41. **zurura:** loiter, wander / **zurura zururu:** loiter, hang around aimlessly [tangatanga ovyo.]

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