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Assertive Verb Doubling in Sereer: Reduplication or Repetition?¹

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Gil (2005) delineates a formal distinction between reduplication and repetition: reduplication is a process that occurs at a morphological level, whereas repetition is defined as a syntactic-level process. This paper argues against the drawing of such a distinction, using data from the assertive verb construction in Sereer (Atlantic, Niger-Congo) – a construction that may be analyzed a priori as either a single word or a multi-word phrase.

Sereer, an Atlantic (Niger-Congo) language spoken in southern Senegal, has multiple processes in which all or part of a word is duplicated for systematic linguistic effect. These include both structures that are clearly reduplication and structures that are clearly repetition. Examples of some of these structures are seen in (1) – (5)²:

- | | | |
|-----|-------------------------------|--|
| (1) | <i>jal</i>
'work' | <i>jaajal</i>
'workers' |
| (2) | <i>daan</i>
'sleep' | <i>daandaanloox</i>
'pretend to sleep' |
| (3) | <i>agar</i>
'3SG comes' | <i>Agar agar agar boo meek.</i>
'He comes, and comes, and comes up to here.' |
| (4) | <i>ayaanda</i>
'3SG waved' | <i>Omaag ole ayaanda ayaand amaak.</i>
'The ocean waved a big wave.' |
| (5) | <i>anafa</i>
'3SG hit' | <i>Moodu anafanaf fambe le. / Moodu anafa naf fambe le.</i>
'Moodu hit the goat.' |

¹I would like especially to thank El-Haji Malick Loum, our Sereer consultant.

²Sereer is spelled in this paper according to conventional Sereer orthography, with the exception that the voiced palatal implosive is written as a *j* with a hook top. As such, *j* = IPA /dʒ/, *c* = IPA /tʃ/, *y* = IPA /j/, and the apostrophe ' = IPA /ʔ/. Long vowels are written as double vowels: *aa* = IPA /a:/.

The structures in (1) and (2) are unambiguously processes of morphological reduplication. The CVV- prefix in (1) is an agent nominalizer, and is entirely predictable from the phonological content of the base verb (cf. McLaughlin 2005). The pretendative structure in (2) is a process of full stem reduplication plus the suffix *-loox*, and acts in all cases as a unitary verb stem for inflectional purposes (cf. Donnelly 2013). Similarly, the structures in (3) and (4) are unambiguously processes of syntactic repetition. The sentence in (3) conveys a continuous approach by reiterating the process of coming as three separate actions. The sentence in (4) illustrates a second type of repetition; in using the deverbal event noun *ayaand* 'wave' in conjunction with its source verb, the resulting sentence effectively doubles morphological material through the standard syntax of the language. In both cases, the repetition results not from a dedicated morphological or syntactic construction; rather, it is due to a repeated syntactic constituent of the sentence, or to the independent imputation of the same material to two separate parts of the sentence.

However, the nature of the construction in (5) is unclear. The meaning of the doubled verb is strictly assertive: the sentence in (5) indicates that Moodu did in fact hit the goat. It is akin to the structures in (1) and (2) in that it has a non-compositional meaning innate to the construction, a common (although not universal) feature of reduplication. However, it is akin to the structures in (3) and (4) in that no additional morphosemantic information is imparted by the use of this construction. Its pragmatic function means that in most declarative contexts, the duplicated form is perfectly interchangeable with the unduplicated form of the verb, as seen in (6)³:

- (6) *Moodu anafa fambe le. / Moodu anafa naf fambe le.*
'Moodu hit the goat.'

In addition to its semantic vacuousness, the assertive structure is not clearly classifiable as either a single word or a multi-word phrase along syntactic grounds. It shares behaviors with both canonical words (necessary juxtaposition of parts, and multi-word syntactic phrases (ability to use other words in answers to polar questions)). This combination of non-compositional meaning and

³ It is impossible to present examples of the assertive construction without making a (possibly prejudicial) decision as to the orthographic representation of its wordhood. In the interest of clarity and ease of reading, all subsequent examples of this construction will be written with an intervening space before the reduplicant; this should be taken as a convenience, not a conclusion.

inconclusive wordhood results in a structure that is perfectly ambiguous according to Gil's (2005) criteria for discerning whether a doubled structure constitutes an instance of repetition or reduplication. These criteria are reproduced in Table 1. In order to clearly illustrate this ambiguity, let us look at each criterion in turn.

Unit of output: The assertive construction may be analyzed as consisting of one word or two; in the former case it may be either a clitic or an independent word. The question of wordhood is often a muddy one (Zwicky & Pullum 1983, Schwegler 1990), as it is in this case. Pertinent criteria to the Sereer facts are inconclusive, but indicate that the unit of output is either equal to or (more likely) greater than a word. I will discuss this criterion in depth in the following section; at this point it is sufficient to say that this criterion fails to clearly disambiguate the two analyses.

Table 1: Criteria for distinguishing repetition and reduplication (Gil 2005)

critereon	repetition	reduplication
<i>unit of output</i>	greater than a word	equal to or smaller than one word
<i>communicative reinforcement</i>	present or absent	absent
<i>interpretation</i>	iconic or absent	arbitrary or iconic
<i>intonational domain of output</i>	within one or more intonation groups	within one intonation group
<i>contiguity of copies</i>	contiguous or disjoint	contiguous
<i>number of copies</i>	two or more	usually two

Communicative reinforcement: This criterion refers to the phenomenon whereby "speakers often repeat themselves in order to make sure that their message has been transmitted successfully" (Gil 2005:34). The assertive construction has a different function, that of emphasizing the content of the message rather than its form. Communicative reinforcement is absent; as such, this criterion fails to disambiguate repetition from reduplication.

Interpretation: The assertive construction has a function that may be viewed as either iconic or arbitrary. While an arbitrary reading is taken as an argument for reduplication, an iconic analysis fails to disambiguate the two analyses. The nature of the structure's interpretation will be discussed in a subsequent section of this paper; at this time it suffices to say this criterion makes an unclear determination.

Intonational domain of output: The assertive construction consists of a single intonational group. This is expected behavior for both reduplication and repetition, and so does not disambiguate the two analyses.

Contiguity of copies: The copied segments are not necessarily adjacent to each other. This criterion therefore suggests the assertive construction is repetition, rather than reduplication. However, there exist many accepted cases of reduplication where the copied material is not immediately adjacent to its source material. Examples include reduplication with fixed segmentation, such as the frequentative verb construction in Arrernte (Breen & Pensalfini 1999). In this construction, the frequentative suffix is a foot consisting of a fixed syllable /ep/ followed by the final VC(C) of the verb stem, as shown in (7):

- | | | | | |
|-----|------------------|-----------------|-----------------------|--------------------|
| (7) | <i>unt-em</i> | 'is running' | <i>unt-epunt-em</i> | 'keeps running' |
| | <i>akemir-em</i> | 'is getting up' | <i>akemir-epir-em</i> | 'keeps getting up' |

A more typologically faithful generalization would be to say that reduplication consists of contiguity between the base and reduplicant.

Number of copies: The assertive construction consists of two copies of the verb stem, which does not at first blush disambiguate the two analyses. However, the intended criterion for repetition in this regard is that the number of copies is variable, and can consist of any number of copies, from two upward. Since the assertive construction is restricted to two copies, this criterion suggests that it is a reduplicative construction.

Summary: Two criteria fail to disambiguate reduplication from repetition, two are unclear, and two call for opposing diagnoses. The *unit of output* criterion has two competing analyses, which militate for opposing conclusions on the nature of the assertive construction. *Interpretation* likewise has two competing analyses; only one argues for a particular conclusion, that of reduplication. These two criteria will be examined subsequently in order to more definitively evaluate their conclusions. Two further criteria are definitive, but in opposite directions: *contiguity of copies* indicates that the assertive construction is repetition, while *number of copies* indicates that it is reduplication.

In order to distinguish between a repetition-based and a reduplication-based account of this construction, only the wordhood and the interpretation (or lack of meaning) of the construction will be able to tilt the balance in diagnostic criteria. The first section of this paper will be a more complete description of the phenomenon in question. The following section will be concerned with a closer examination of arguments for and against wordhood. The third section will look at other possible arguments for and against reduplication on phonological and

morphological grounds. The fourth section will provide arguments for an evidential meaning using syntactic distribution as evidence. The final section will argue against the drawing of a theoretical distinction between reduplication and repetition, given the overlap and possible ambiguity inherent in the two terms.

Description of the Assertive Construction

The assertive construction consists of a fully inflected verb stem followed by a second copy of the stem. The second copy necessarily occurs immediately after the inflected stem, as seen in (8), where a discourse particle may not appear between the two copies.

- (8) *i nga'-a nga' a Jegaan*
 1PL PL.see-PERF RED ACC Jegaan
 'We saw Jegaan.'

**i nga'-a kom nga' a Jegaan*
 1PL PL.see-PERF DISC RED ACC Jegaan
 [Intended meaning: 'We saw, like, Jegaan.']

Such an interpolation is permissible in other contexts, e.g. between a verb and its object, as seen in (9).

- (9) *a-jaang-'-a kom oñuxur siriñ, mustafa 'asi*
 3S-take-PST-PERF DISC voice imam Mustafa 'Asi
 'He took on the voice of an imam, Mustafa Asi.'

All derivational affixes (which are uniformly suffixes in Sereer) are doubled, including valence-changing extensions and manner suffixes; these are illustrated in (10) – (12).

- (10) *Moodu a-ruus-oox-a ruus-oox*
 Moodu 3S-shave-REFL-PERF RED
 'Moodu shaved (himself).'

- (11) *Maalik fo Jegaan a-feet-k-a feetik a Moodu fa Yaande*
 Malick and Jegaan 3S-PL.visit-IT-PERF RED ACC Moodu and Yaande
 'Malick and Jegaan are going to visit Moodu and Yande.'

- (12) *naf-at-aa-m* *a-nafaf* *a* *Jegaan*
 hit-MOD-PERF-1SGS *a*-RED ACC *Jegaan*
 'I lightly hit *Jegaan*.'

As (11) indicates, derivational suffixes may surface in different allomorphs between the two copies. In addition to derivational affixes, plural subject marking is always doubled, as seen in (8) and (11). Plural subjects in Sereer are obligatorily marked by a mutation on the initial consonant of the verb if possible (nasals, voiceless stops, and most approximants do not undergo mutation). One suffix, the inceptive *-at*, is variably doubled, as seen in (13).

- (13a) *ga'-at-aa-m* *a-ga'* *a* *Jegaan*
 (13b) *ga'-at-aa-m* *a-ga'at* *a* *Jegaan*
 see-INC-PERF-1SGS *a*-RED ACC *Jegaan*
 'Now I see *Jegaan*.'

This variation appears to be on an individual speaker basis. The pattern in (13a) is more common, but some speakers use (13b). All other inflectional verb affixes, including subject and object markers, aspect suffixes, relative suffixes, the passive suffix, the topic suffix, negative suffixes, and tense suffixes, do not double⁴.

Both copies of the assertive construction are stressed, with slightly heavier stress on the second copy. This is the same stress pattern that occurs with a complex verb such as the pretendative reduplicative construction previously seen in (2). The two constructions are shown in (14) and (15), with stress indicated by diacritic markings on syllable nuclei.

- (14) *A-gàr-a* *gár.*
 3S-come-PERF RED
 'He came.'

- (15) *A-jàw-jàw-lóox-aa.*
 3S-cook-RED-PRET-PROG
 'He pretends to cook.'

⁴It appears in some circumstances that the past tense suffix *-' /ʔ/* is optionally doubled when the assertive copy immediately precedes a vowel. However, vowels after pause are generally pronounced with an epenthetic initial glottal stop; what is perceived as past tense doubling is probably a boundary pause.

Phrase-level stress in Sereer is on the final stressed syllable. As such, the stress pattern in (14) is consistent with either word- or phrase-level stress. The two verb copies in the assertive construction together form a single prosodic and intonational unit, giving no indication of a word boundary on phonological grounds alone.

The reduplicant surfaces with an initial *a-* when the inflected base verb ends in a consonant, as can be seen in (11) – (13). Note that this vowel is not necessary to avoid a three-consonant string, a phonotactically impermissible sequence in Sereer. As there are no complex onsets or codas in Sereer – homorganic nasal-stop sequences are single segments – nor any restrictions on consonant contact, the apposition of any two syllables will not result in a phonotactically impossible sequence. The doubled verb stem always begins with one consonant, as verb roots always begin with a consonant and no prefixes (apart from the plural subject mutation) are doubled.

The initial *a-* does not appear when the base verb ends with a vowel, but is always present when the verb ends with a consonant, as seen in (16) and (17):

(16) *obox ol-e* *a-jir-a* *jir*
 dog AGR-PROX.DET 3-be.sick-PERF RED
 'The dog is sick.'

(17) *jir-aa-m* *a-jir*
 be.sick-PERF-1SGS *a*-RED
 'I am sick'

Potential sources of a final verbal consonant include: the first-person subject suffix; singular object markers; and the final root consonant itself, when the verb appears in non-finite or narrative forms. In all other contexts, the inflected verb ends in a vowel, and the initial *a-* does not surface.

Morphophonological Evidence for/against Wordhood

Before examining the arguments for and against the independent wordhood of the assertive copy, it is necessary to determine the internal structure of the constituent in question. As illustrated in (16) and (17), the reduplicant either takes the form of the verb stem on its own, or has an initial *a-* after final consonants in the base verb. There are three possible explanations of the appearance of initial *a-*. Either it is underlying, and is deleted to avoid vowel

hiatus; or it is excrescent, added between consonants; or it is the result of a phonologically conditioned morphological process. Let us examine each of these possibilities in turn.

Assuming the initial *a-* is underlying, the construction results in vowel hiatus when the inflected verb ends in a vowel. Vowel hiatus in Sereer can be resolved across word boundaries in casual speech by deletion of the second vowel. This is illustrated in (18b), where initial vowels on both nouns and verbs are deleted.

- (18a) *oxiic' ole ondeb onge acooxna obox ole amagna*
 (18b) *oxiic' ole ndeb onge cooxna box ole magna*
 bone DET child DET hand:REL dog DET be.big:PERF
 'The bone the child handed the dog is big.'

In careful speech, initial vowels on nouns and verbs are generally recovered; the utterance in (18a) is such an example. In some circumstances, however, these vowels may not be recovered. As seen in (19), determiners with initial vowels cannot have those vowels realized when immediately following a vowel-final noun. This initial vowel is recovered when another word, such as an adjective, is interposed between the noun and determiner.

- (19) *ogurdu le ogurdu maak ole*
 jug DET jug big DET
 'the jug' 'the big jug'
 **ogurdu ole* **ogurdu maak le*

However, it is impossible⁵ for an initial *a-* to be pronounced on a reduplicant following a vowel, as seen in (20):

- (20) *Jegaan a-naf-a naf a Moodu*
 Jegaan 3S-hit-PERF (a-)RED ACC Moodu
 'Jegaan hit Moodu.'
 **Jegaan anafa anaf a Moodu*

⁵Although our consultant was initially insistent that the initial *a-* was not recoverable in cases of vowel hiatus, later elicitation sessions indicated that the initial *a-* could in fact be recovered. This varying grammaticality judgment may be due to interference from eventive nominal constructions, shown in (37) – (40).

In order to be consistent with the rest of Sereer phonology, an underlying *a-* must be word-internal. There are no cases of underlying word-internal vowel hiatus being recoverable in careful speech. One possible example of irrecoverable underlying vowel hiatus is shown in (21), where the first-person subject marker only has an initial vowel when following a consonant.

- | | | | |
|------|--------------------|-------------------|-----------------|
| (21) | <i>naf-aa-n-um</i> | <i>jir-aa-m</i> | <i>*jiraaum</i> |
| | hit-PERF-3SGO-1SGS | be.sick-PERF-1SGS | |
| | 'I hit him' | 'I am sick' | |

The first person subject suffix *-um* is realized as *-m* when immediately following a vowel. This and similar alternations may be explained as phonologically conditioned allomorphy, or as cases of vowel epenthesis; however, it remains the case that there are no heterorganic vowel sequences in native Sereer vocabulary. The only instance of unambiguous word-internal vowel hiatus yet recorded is a borrowing from French: *metrais* 'machine gun' (from *mitrailleuse*). As such, an account of *a-* as being deleted word-internally is consistent with Sereer phonology, and supports an analysis of the assertive construction as reduplication.

If we instead assume the reverse, that the *a-* is underlyingly absent and is inserted after consonants, we appear to lack a systemic justification for this alternation. For one thing, the *a-* introduced in this situation is inconsistent with the *u-* that is involved in phonotactic repair of impermissible consonant clusters elsewhere in the language. This is illustrated in the Sereer form of the English name Mark, *Marku*, where the high vowel *u* is added after the impermissible complex coda to produce a phonotactically acceptable form. The appearance of two different vowels to repair the same problem demands explanation under an excrescent *a-* account. There is a more serious problem with this analysis, however. An excrescent *a-* account would suggest that bare verb stems are impermissible after consonants in Sereer. This is not the case, as seen in (22):

- | | | | | |
|------|----------------------------|------------|--------------|-------------|
| (22) | <i>xan</i> | <i>fuf</i> | <i>waxtu</i> | <i>leng</i> |
| | FUT.1SG | run | hour | one |
| | 'I will run for one hour.' | | | |

With a singular subject, the assertive double is formally identical to the infinitive verb. While the plural assertive double bears the plural subject marker, there is every indication that the plural infinitive verb does the same:

- (23) *xan i ngar*
 FUT 1PL PL.come
 'We will come.'

In both numbers, the assertive double has a formal twin in the infinitive. Additionally, under this analysis the infinitive and assertive double are distributionally equivalent: both occur as the second part of a verb complex. If the *a-* were epenthetic, we would expect it to occur with the regular infinitive as well as the assertive construction; however, it does not. As with the initial *a-* account, the excrescent *a-* analysis militates for a one-word, reduplicative account⁶.

The third potential analysis, of phonologically conditioned morphology, asserts that the form of the doubled verb is conditioned by its environment, in a similar manner to the form of the indefinite article in English. Such an analysis, while it does not directly bear on the question of wordhood, does suggest that the assertive form is its own independent structure, rather than a particular application of syntactic structure found elsewhere in the language.

On its own merits, the initial *a-* account is the simplest analysis of the assertive construction⁷. While this is by no means a conclusive argument, it is enough for a tentative decision in favor of a single-word analysis of the phenomenon in question. As an additional piece of evidence in support of this decision, native speaker intuition from our consultant confirms that there is no word break in the middle of the assertive construction.

With the extent of the potential word established, it is now possible to investigate the determinations made by various wordhood tests as they apply to the assertive construction. These tests are discussed in the following paragraphs.

Separability: The separability test is commonly used as a criterion for wordhood, although it is problematic (Schwegler 1990)⁸. According to this test, a

⁶A similar argument can also be made for the initial *a-* account. Sereer has a widely productive eventive nominalization morphological process, consisting of an *a-* prefixed to a mutated verb stem: *gar* 'come' > *akar* 'arrival'. However, the fact that the eventive form always has a mutation when possible, whereas the assertive does not, gives more robust grounds for drawing a distinction between the two constructions.

⁷Also, the initial *a-* analysis is consistent with the variable grammaticality judgments mentioned in Footnote 3.

⁸Problems include the fact that optional morpheme slots in a template would result in a non-word judgment. Schwegler uses the example of alternations in Latin between *amamus* and *amavimus*. This problem is directly relevant to the Sereer case, as the two

word cannot be separated, while a multi-word structure can be. Under this diagnostic the assertive construction is inseparable. As seen in (8), discourse particles may not appear between the two copies of the verb. Adverbs also cannot appear between the copies, as seen in (24).

- (24) *a-moof-a* *moof* *taftaf*
 3S-sit-PERF RED quickly
 "He sat quickly."
 **a-moof-a taftaf moof*

Despite this distributional restriction, the two verb copies are separable in that the inflected form can appear on its own. The separability test does suggest, though, that the uninflected copy is dependent on the inflected verb, either as an affix or a clitic.

Potential pause: In a sense an extension of the separability test, the potential pause test checks to see whether the segments in question can be separated by a pause in regular speech. In the case of the assertive construction, no pause can be introduced between the verb copies. According to Dixon and Aikhenvald (2002), pause is a necessary condition for wordhood in synthetic languages, whereas it may be a sufficient condition for wordhood in analytic languages. In a sense this dichotomy is begging the question, as we are trying to determine the extent to which Sereer is synthetic versus analytic. Either way, however, this test indicates against the assertive construction consisting of independent words.

Variable morpheme ordering: Plural marking on verbs in Sereer is indicated by mutation of the initial consonant of the verb stem, but may also be indicated by the presence of an optional morpheme *yoo* (*oo* after consonants), which is appended to the verb⁹. While *yoo* is generally appended to verbs with immutable initial consonants, it may also appear concurrent with the plural mutation, as seen in (25) – (26).

copies of the verb stem are separable by inflectional material. I follow Schwegler's lead in setting aside this concern when applying this test.

⁹It is unclear whether *yoo* is a suffix or a clitic; it will be treated here as a clitic for reasons akin to the use of a space in the assertive construction, i.e. clarity of presentation.

(25) *faak* *Maalik* *fo* *Jegaan* *a-feet-k-a* *yoo*
tomorrow Malick and Jegaan 3S-PL.see-IT-PERF PL

fetik *moodu* *fa* *yaande*
RED Moodu and.ACC Yaande

'Tomorrow, Malick and Jegaan are going to visit Moodu and Yaande.'

(26) *faak* *Maalik* *fo* *Jegaan* *a-feet-ik-a*
tomorrow Malick and Jegaan 3S-PL.see-IT-PERF

fetik *oo* *moodu* *fa* *yaande*
RED PL Moodu and.ACC Yaande

'Tomorrow, Malick and Jegaan are going to visit Moodu and Yaande.'

Note that the position of *yoo* is variable with respect to the assertive copy, although there is no scopal relationship between the two. With no other morphemes interacting with either the assertive copy or *yoo* in similar fashion, there are no grounds for a specific determination as to the status of either morpheme, with respect to each other or to wordhood in general. Although Schwegler (1990) suggests that inflectional affixes appear in a fixed order with respect to the verb, Tagalog provides a counterexample (Ryan 2010)¹⁰. The only seemingly robust claim that has been espoused is the statement by Zwicky & Pullum (1983) that affixes do not attach to clitics, whereas clitics may. As such, the remaining possible analyses of this situation are outlined below:

1. The assertive and *yoo* have the same status.
 - a. Both are affixes, with varying order with respect to each other.
 - b. Both are clitics, with varying order with respect to each other.
 - c. Both are words, and may appear in either order.
2. The assertive *fetik* is a word; =*yoo* is a clitic.
3. The assertive is a clitic; *yoo* is a word.

(1a) is called into question by Schwegler's generalization. Coupled with Zwicky & Pullum's claim, the most likely analyses hold that neither the assertive nor *yoo* are affixes. However, they may each be clitics or full words independently of each other. The equivalent plausibility of the remaining analyses means that a judgment of wordhood cannot be made on the basis of this diagnostic criterion.

¹⁰Interestingly, the Tagalog example is also an instance of reduplication.

Other diagnostic criteria for wordhood have been proposed in addition to those discussed thus far (cf. Fonseca-Greber 2013). However, these additional criteria either do not apply to the systematic facts of Sereer words and affixes, or do not apply to the assertive construction specifically. As such, the applicable criteria are summarized in Table 2.

Table 2: Diagnostics for wordhood

Diagnostic	Judgment
Separability	Not independent
Potential pause	Not independent
Variable morpheme ordering	Likely not affixes

In summary, the wordhood diagnostics suggest that the assertive construction does not consist of independent words, but rather of a word and a dependent, whether that dependent is a clitic or a word itself.

Other Morphophonological Evidence for/against Reduplication

In addition to the criteria delineated by Gil (2005), a further argument may be made about the status of the assertive construction, contingent on particular theoretical frameworks of reduplication.

Non-identity of copies: Applicative suffixes in Sereer generally have two allomorphs conditioned by an impetus to avoid light syllables. This allomorphy is illustrated with the itive suffix in (11), reprised here as (27).

- (27) *Maalik fo Jegaan a-feet-k-a feetik a Moodu fa Yaande*
 Malick and Jegaan 3S-PL.visit-IT-PERF RED ACC Moodu and Yaande
 'Malick and Jegaan are going to visit Moodu and Yande.'

The suffix surfaces as *-k* in the inflected verb, but as *-ik* in the assertive copy. This lack of identity between the base and reduplicant is problematic for an analysis of reduplication under a theory of phonemic copying (cf. Marantz 1982, McCarthy and Prince 1995). However, approaches to reduplication such as Morphological Doubling Theory (Inkelas 2005), in which the two copies are independently derived from the same initial material, in fact predict this behavior. As such, this fact cannot be counted as evidence against an analysis of reduplication. Relatedly, the fact that the first copy of the verb bears all inflectional marking while the second bears none is allowed for within

Morphological Doubling Theory, although it is not accepted by templatic approaches to reduplication. What is clear, though, is that the assertive construction is not motivated by phonological identity between the two verb copies.

But neither is it motivated by semantic identity. As seen in (28), the assertive construction cannot consist of synonymous verbs with different roots.

- | | | | | |
|------|----------------------|------------|----------------------|-------------|
| (28) | <i>a-yod-a</i> | <i>yod</i> | <i>a-meeb-a</i> | <i>meeb</i> |
| | 3SG-lift-PERF | RED | 3SG-lift-PERF | RED |
| | "He lifted." | | "He lifted." | |
| | <i>*a-yod-a meeb</i> | | <i>*a-meeb-a yod</i> | |

The assertive construction must be motivated by morphological identity, which indicates that it is a case of reduplication, rather than syntactic repetition. To summarize the argumentation thus far, the morphophonological evidence is noncommittal on the question of whether the assertive construction is a single word, but indicates that it is a reduplicative construction regardless.

Syntactic/Semantic Arguments for an Evidential Meaning

Having addressed one of the two crucial criteria put forward by Gil (2005) disentangling reduplication and repetition, we will now turn to the other, the question of interpretation. The assertive construction is used to indicate that the stated proposition is not speculation. It is distinct from verum focus in that the assertive verb need not be focused, as seen in (27).

- | | | | | | | |
|------|-------------------|---------------|------------------|------------|----------|----------------|
| (29) | <i>'an</i> | <i>naf-u?</i> | <i>A-naf-a</i> | <i>naf</i> | <i>a</i> | <i>Jegaan.</i> |
| | who | hit-FOC | 3SG-hit-PERF | hit | ACC | Jegaan |
| | "Who did he hit?" | | "He hit Jegaan." | | | |

The assertive construction may be used when asking a question (30), where it asks for certainty, and in making a statement about the future, where it indicates a firm basis for the stated claim (31).

- | | | | | |
|------|--------------------------------|---------------|----------------|-------------|
| (30) | <i>Ndaa</i> | <i>Jegaan</i> | <i>a-gar-a</i> | <i>gar?</i> |
| | POL | Jegaan | 3SG-come-PERF | come |
| | "Is Jegaan definitely coming?" | | | |

- (31) *Gar-k-ee* *gar.*
 come-FUT-NEG come
 "He won't come."

Given the limited force of the assertive construction, it is reasonable to ask whether it in fact has any meaning at all. However, distributional facts indicate that it does. The assertive construction cannot occur in irrealis modal constructions, as shown in (32) and (33).

- (32) *Fat-o* *gar.*
 should-2SG come
 "You should come."
 **Fato gar agar.*

- (33) *A-bug-a* *gar.*
 3S-want-PERF come
 "He wants to come."
 **Abuga gar agar.*

It also cannot occur with *kaa*, a particle indicating verum focus (Neely 2013).

- (34) *Kaa te* *gar.*
 VER 3SG come
 "He is coming."
 **Kaa te gar agar.*

Additionally, the assertive cannot occur in the future tense; the received meaning is that of the iterative.

- (35) *Xan-a* *gar.*
 FUT-3S come
 "He will come."
 **Xana gar agar.*
 [Received meaning: "He will come and come."]

In all of these cases, it is not possible to express metalinguistic certainty, whether due to the hypothetical nature of the assertion (with the modals and future tense) or because certainty is already otherwise expressed (with verum focus). Note however that the assertive *can* occur in the future when the verb is negative, as

seen in (31). In such a circumstance, the speaker is interpreted as knowing a reason why it is impossible for the named situation to take place. This restricted distribution supports the analysis of an inherent meaning of certainty to the assertive construction.

The question is whether this construction has an iconic interpretation or an arbitrary one. Per Gil's criteria, an arbitrary interpretation is evidence for reduplication, whereas an iconic interpretation is inconclusive. Sereer has clearly iconic repetition structures such as the iterative construction seen in (3). Another example is given in (36), illustrating the total verb reduplication of the iterative.

- (36) *A-xe* *meeb-ax-am* *a-meeb-ax-am* *boo* *m-fuux*.
 3SG-PROG lift-PERF-1SGO 3SG-lift-PERF-1SGO until 1SG-anger
 "He lifts me and lifts me until I get angry."

In comparison, the assertive construction conveys a distinct meaning of metalinguistic certainty. It is possible to argue that the assertive meaning is also iconic: repeating the verb can be seen as drawing attention to its prototypicality, akin to the "salad-salad" contrastive focus reduplication phenomenon in English (Ghameshi et al. 2004). Conversely, it can also be argued that the assertive construction has an arbitrary meaning, in that despite its doubling there is no emphatic force imputed to the verb. Emphatic force can be indicated in Sereer through the cognate eventive structure seen in (4). Such a use is exemplified in (37).

- (37) *Nafaaxong anaf*.
 "I hit you." (assertive)
 "I hit you a hit(ing)."

That it is emphatic can be seen when the eventive form is used in the negative, as in (38). The two possible eventive readings support two different sites of emphasis: either there was no hitting, or the hit wasn't a hit.

- (38) *Nafirong anaf*.
 "I didn't hit you." (assertive)
 "I didn't hit you at all."
 "I didn't really hit you."

Note that the eventive nominalization in Sereer is often formally identical to the second copy of the assertive, due to isomorphy between the eventive noun class

marker *a-* and the initial *a-* of the assertive. However, verbs ending with voiced implosives undergo final devoicing when nominalized, whereas assertive copies do not. This enables the two structures to be disambiguated, as seen in (39) – (40).

(39) *Meebaxong ameeb.*

"I lift you."

*"I lift you a lift."

(40) *Meebaxong ameeβ.*

"I lift you a lift."

*"I lift you."

Due to the simultaneously certain and unemphatic nature of the assertive construction, it is difficult to qualify its meaning. In any case, it is evident that the assertive construction has a less iconic meaning than the iterative structure in (36).

It is conceivable that the iterative construction could be construed as an extended version of the assertive, given that the two structures have the same phonological form in certain circumstances, i.e. with a third person subject. However, the iterative structure requires three or more copies if there are no inflectional suffixes, as seen in (41). This suggests that the repetition meaning is blocked by a formally identical structure with its own intrinsic meaning.

(41a) *Agara gar boo meek.*

"He came up to here."

(41b) **Agar agar boo meek.*

[Intended meaning: "He comes and comes up to here."]

The iterative reading also cannot be recovered with achievements, as seen in (42).

(42a) *Axona xon.*

"He died."

(42b) **Axon axon.*

[Intended meaning: "He dies and dies."]

(42c) **Axon axon axon.*

[Intended: "He dies and dies and dies."]

The impermissibility of (42c) indicates that the iterative repetition construction is dependent on the semantic meaning of the verb it applies to. In contrast, the

assertive construction has an inherent meaning, which is added to the meaning of its verb. Whereas the iterative is a compositional construction, the assertive is non-compositional.

Conclusion

The Sereer assertive construction is either an instance of reduplication, repetition, or both. Wordhood tests indicate tentatively that the assertive is a multi-word construction consisting of a head verb and a dependent enclitic, which conventionally indicates syntactic repetition. Independently, the necessary morphological identity between copies militates for an interpretation of reduplication.

There is little empirical support for a hard-and-fast distinction between morphological reduplication and syntactic repetition processes. The conventional dichotomy is not robust to begin with (Gil 2005). The Sereer assertive verb construction, straddling the boundary between the two established categories as it does, suggests instead that the difference between reduplication and repetition is one of scale rather than mechanism. As it stands, Morphological Doubling Theory (Inkelas 2005) is poised to handle this realignment¹¹. The assertive construction works perfectly as morphological doubling, which allows for non-local doubling of a morphological constituent such as a verb stem (Inkelas 2008).

If we reframe the distinction between reduplication and repetition in this way, we find that similarly ambiguous constructions are cross-linguistically common¹². One example is reciprocal verb marking in Malay (Mintz 1994, in Inkelas and Zoll 2005):

(43) *tulis* 'write' *tulis-menulis* 'write for one another'

The two copies of the infinitive verb are separated by a focus prefix, yet the construction as a whole has a meaning that is not clearly related to the sum of its parts.

¹¹As long as we assume that the excrescent *a-* account is incorrect. Morphological Doubling Theory cannot justify the fact that the conditioning environment for the added *a-* is the other copy of the verb, as one of its main stipulations is that the two daughters are phonologically independent. Given the evidence presented earlier, this seems to be a reasonable assumption.

¹²Interestingly, they often involve the infinitive form of the verb.

Another less straightforward example is a cognate infinitive construction in Barwar Neo-Aramaic, a Semitic language spoken in northern Iraq (Khan 2008). As seen in (44), a connotation of unexpectedness can be conveyed to a verb by the juxtaposition of its infinitive form to the verbal complex.

- (44) *ʔéga lán-wa bri-θa ʔána bráya*
 since NCOP.1S-PST be.born.PASS-FS 1SG be.born.INF
 ‘At that time I was not even born.’

The structure as it appears in (44) is highly analogous to the Sereer case, in that it consists of an uninflected copy of the verb postposed to the verb and its greater constituents. The only difference here is that a free pronoun is between the two copies, indicating a weaker link between them than in Sereer. It is the case though that only pronouns and other agreement markers may be interposed in this manner. (Again, this nonconsecutivity is expected behavior for a reduplicative construction under Morphological Doubling Theory.) However, unlike in Sereer, the cognate infinitive in Barwar may occur either before or after the inflected verb:

- (45) *ʔína bróna lèla xíl-t-alle, har-nobál-t-alle*
 but son(M) NCOP.3PLS eat.PRF-FS-3MO INT-take.IMP-FS-3MO

mutt-éθ-alle mattòye
 put.IMP-FS-3MO put.INF
 ‘But she did not eat the boy. She had just taken him and put him down.’

- (46) *fqíl-ta réfe mattóye mtú-t-alle l-ära*
 take.PRF-FS head(M) put.INF put.PRF-FS-3MO to-land
 ‘She took his head and slowly put it on the ground.’

If we expand the definition of reduplication to unequivocally account for the Sereer assertive construction, the Barwar case seems to constitute a new midway point between reduplication and repetition.

Approaches have been put forward to generalize structures across syntactic and morphological domains, using syntax to characterize morphology (Halle & Marantz 1993) or vice versa (Booij 2002, Jackendoff 2002). Constituent doubling would appear to be a fruitful avenue along which to pursue these efforts.

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