REPLICATION IN FORDATA

Craig Marshall and Sarah Marshall
Pattimura University
and
The Summer Institute of Linguistics

A discussion of the reduplication process in Fordata, an Austronesian language spoken in the northern part of the Tanimbar archipelago, is presented. The phonological forms of Fordata reduplication are described using an autosegmental approach. The reduplication process in Fordata is shown to be syllabic reduplication of disyllabic stems, where the associations of the C-V template are via a phoneme-driven process, as opposed to a template-driven process. There is also a pre-associated /a/ in the C-V template, which by convention, overrides the normal phoneme-driven association. In addition, surface constraints regarding geminates and consonant clusters affect the surface form of reduplicated words. Syntactically, Fordata reduplication has several functions, the most common ones being the nominalization of transitive and intransitive verbs, as well as adjectivization of stative verbs. Examples illustrating these various syntactic functions are also presented.

1 INTRODUCTION

For data is an Austronesian language that is spoken mainly in the northern part of the Tanimbar archipelago, which lies in the southern part of Maluku, in eastern Indonesia. It is the lingua franca on the islands of Fordata, Larat, Lutur, Nus Wotar, Labobar, Molo, Maru and northwestern Yamdena, along with one island, Sera, in the southern part of Tanimbar.

In addition to the above areas, the larger provincial cities of Sawahlunto and especially Ambon have sizable communities of Fordata speakers. The current number of speakers is approximately 23,000-25,000.

In Fordata, reduplication has several syntactic functions, with the most common ones being the nominalization and adjectivization of verbs. The phonological forms of reduplication are not complex and are not affected by function. The Fordata language has two dialects, which we will refer to as Fordata and Sera; within the Fordata dialect, three subdialects are present. The reduplication patterns have been observed to follow the same patterns in both the Fordata and Sera dialects.

2 PHONOLOGICAL FORMS

The Fordata reduplication process is mainly a simple syllabic reduplication, with the exception of full reduplication, where the stem is copied intact. Only disyllabic stems are involved in reduplication. We will analyze reduplication in Fordata using an autosegmental approach. Marantz (1982) proposes that the stem is affixed (in Fordata, prefixed) with the appropriate C-V skeletal template, the entire phonemic melody of the stem is copied over to the C-V skeleton, then associated to the C and V slots.
Map 2: Fordata Language Area
available in the template. Marantz proposes that the association is always "phoneme driven", meaning that the phonemes of the stem take priority over the C-V template. Thus, it may be the case that not all of the C-V template is manifested in a given instance. The alternative to a phoneme-driven process can be characterized as "template driven"; in this case priority is given to the C-V template so that not all of the phonemes of even the first part of the stem are necessarily manifested. The first example below could be either phoneme driven or template driven. The direction of matching phonemes to segmental slots proceeds from left to right. The C-V pattern of the syllabic reduplication is CVC, with V being pre-associated with the vowel /a/.

<table>
<thead>
<tr>
<th>Affixation</th>
<th>Melody copying</th>
<th>Association</th>
</tr>
</thead>
<tbody>
<tr>
<td>folat</td>
<td>folat+folat</td>
<td>folat+folat</td>
</tr>
<tr>
<td>CVC+CVCVC</td>
<td>CVC+CVCVC</td>
<td>CVC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CVCVC</td>
</tr>
<tr>
<td>a</td>
<td>a</td>
<td>a</td>
</tr>
</tbody>
</table>

Here the /f/ associates with the initial C of the reduplicative CVC template. The /o/ associates with the V, but by convention is overridden by the pre-associated /a/. The /l/ associates with the second C in the reduplicative CVC template.

The following example of a vowel-initial root being reduplicated clearly shows a phoneme-driven copying process:

<table>
<thead>
<tr>
<th>Affixation</th>
<th>Melody copying</th>
<th>Association</th>
</tr>
</thead>
<tbody>
<tr>
<td>umat</td>
<td>umat+umat</td>
<td>umat+umat</td>
</tr>
<tr>
<td>CVC+CVCVC</td>
<td>CVC</td>
<td>CVC</td>
</tr>
<tr>
<td></td>
<td>VCVC</td>
<td>VCVC</td>
</tr>
<tr>
<td>a</td>
<td>a</td>
<td>a</td>
</tr>
</tbody>
</table>

Here, if the process associating the CV skeleton to the phonemes were a template-driven process, the surface form would be *umatumat because the initial C of the template would select the /m/ of the reduplicated root as the starting point of the association.

The onset of the reduplicated morpheme will match the onset of the stressed syllable, if there is one (see the first example above). If the stressed syllable has no prenuclear margin, the results are as in the second example above. If the stressed syllable has no postnuclear margin, the reduplicative morpheme will be an open syllable with the pre-associated /a/ as its nucleus; the coda of the reduplicated morpheme in this case will associate with the onset of the unstressed syllable (the second example above illustrates this; see others below). There are surface constraints which apply after the reduplication process; specifically, the consonants /h/, /w/ and /?/ cannot occur in the first slot of a cluster, and geminate clusters are not allowed.

The reduplicated form, then is subject to the following rules:

Rule 1. Geminate reduction  
\[ C \rightarrow \emptyset / C \]  
[ a point ]  

Rule 2. Cluster reduction  
\[ \{ h \} \rightarrow \emptyset / C \]  
\[ \{ w \} \]

In the following examples, the derivations show reduplication of roots
first, followed by application of one of the above rules as applicable:

\[
\begin{array}{cccc}
\text{dudur} & \text{dudur+dudur} & \text{dudur+dudur} \\
\text{lahur} & \text{lahur+lahur} & \text{lahur+lahur} \\
\text{lawan} & \text{lawan+lawan} & \text{lawan+lawan} \\
\text{ko\?u} & \text{ko\?u+ko\?u} & \text{ko\?u+ko\?u} \\
\end{array}
\]

\[
\begin{array}{c}
\text{CVC+CVC} \\
\rightarrow \text{CVC} \\
\rightarrow \text{CVC} \\
\rightarrow \text{CVC} \\
\rightarrow \text{CVC} \\
\end{array}
\]

\[
\begin{array}{c}
\text{a} \\
\rightarrow \text{a} \\
\rightarrow \text{a} \\
\rightarrow \text{a} \\
\rightarrow \text{a} \\
\end{array}
\]

\[
\begin{array}{c}
\text{daddudur} \rightarrow \text{da-dudur} \\
\text{lahlahur} \rightarrow \text{la-lahur} \\
\text{lawlawan} \rightarrow \text{la-lawan} \\
\text{ka\?ko\?u} \rightarrow \text{ka-ko\?u} \\
\end{array}
\]

Roots with the C-V structures CVCVC and CVCV satisfy the C-V template by reduplicating the first CVC:

**CVCVC:**

\[
\text{fal-folat} \quad \text{'DUP-to open (a door)'}
\]

26
kat-kataq 'DUP-pinching'
la-lolak* 'DUP-visit, check out'
ma-mumak 'DUP-to steam s.t. with coconut juice'
mar-merat 'DUP-to be clean'

CV.CV:

lab-leba 'DUP-carry on one's shoulder'
dar-diri 'DUP-to stand'
wal-walu-an 'DUP-eight'
lar-lora 'watermelon'
tay-teva 'top shell'

Bases with the C-V patterns CVVC and CVV reduplicate only the CV of template, as predicted by McCarthy and Prince (1986:94), who stated that the template will not skip the second V in a CVVC stem to complete the entire CVC skeletal structure by using the second C. This is as expected if the reduplication is phoneme driven:

CVVC:

ka-kear 'DUP-dig' *karkear
la-laar 'DUP-sail' *larlaar
ba-buuk 'DUP-to smoke' *bakuuk
qa-qiar 'DUP-white' *qarqiar

CVV:

sa-sa-n 'dup-one'
ra-roa 'DUP-far'
la'au 'sad'
qa-qai 'DUP-clear a garden'

Stems having the C-V pattern VCVC associate only with the VC segments of the template:

VCVC:

am-umat 'DU-cook salted fish'
ali-aliq 'DUP-different'

Full reduplication is found in Fordata, but with limited use. To date, few examples have been found. In full reduplication, the stem is copied as normal and the template is the C-V pattern of the stem; there are no pre-associated phonemes in such instances, and stress is evenly distributed on both morphemes. Below is an example of the full reduplication process:

\[
\begin{array}{c|c|c|c}
\text{leba} & \text{leba+leba} & \text{leba+leba} \\
\hline
\text{CVVC+CVCV} & \text{CVVC} & \text{CVVC} \\
\end{array}
\]

\[
\rightarrow
\begin{array}{c|c|c|c}
\text{leba} & \text{leba+leba} & \text{leba+leba} \\
\hline
\text{CVVC} & \text{CVVC} & \text{CVVC} \\
\end{array}
\]

\[
\rightarrow \text{lebaleba 'DUP-carry'}
\]

Forms with the C-V patterns CVVC and VCVC have been recorded:

VCVC:

\[
\begin{array}{c|c|c|c}
\text{teva-teva} & 'top shell' \\
\text{leba-leba} & 'DUP-carry' \\
\end{array}
\]

VCVC:

\[
\begin{array}{c|c|c|c}
\text{amar-amar} & 'DUP-day' \\
\text{ovar-ovar} & 'DUP-night' \\
\end{array}
\]

27
As mentioned previously, one of the main syntactic functions of reduplication in Fordanu is the nominalization of verbs. The following are derived from transitive and intransitive verbs:

fal-folat dawan
DUP-close big
'big door'

n-folat
'3S-close (a door)'

tan-tunu-n ra r- si- karas
DUP-roast PL 3P RCP bite
'the fire ants bite'

u-tunu
'1S-roast'

ia wel ni dak-doku-n na?a ini
3S NEG 3S Poss DUP-sit at here
'its position isn't here'

t-dcku
'1Pi-sit'

var-vara aleman
DUP-carry heavy
'heavy responsibility'

n-vara
'3S-carry'

Another of the main functions of reduplication is adjectivization of stative verbs (some of which are adjectives which obligatorily take person marking); such reduplicated forms function as noun-phrase modifiers. The obligatorily marked stative verb forms are shown to the right:

wanat val-vuli-n
rice DUP-red
'red rice'

na-vuli
'3S-red'

quuu qa- qiar
sand DUP-white
'white sand'

na-qiar
'3S-white'

mata-n ra was-wosu
eye-3P:POSS PL DUP-tired
'his sleepy eyes'

n-wosu
'3S-sleepy'

afa ovi mak-muku:
things these DUP-round
'these round things'

n-mukur
'3S-round'

afa fan-fonak
thing DUP-hide
'secret thing'

n-fonak
'3S-hide'

Nouns can also be reduplicated to be used as modifiers of other nouns:

ia sar-sira-n
fish DUP-salt
'salted fish'

sira
'salt'

mata-q
lav-lova
eye-1P:POSS DUP-fog
'my cloudy eye'

lova
'fog'

Such reduplicated forms may function as nominals in their own right:

ia n- ka?a kad-kedan
3S 3S-know DUP-little
'he knows a little bit'

kedan
'little'

Cardinal and ordinal numbers are not reduplicated except for special
purposes. The function of a reduplicated number is 'by x numbers' or 'in x numbers':

\[
\begin{align*}
tamata & \quad \text{tal-telu-n} \\
\text{people} & \quad \text{DUP-three} \\
& \quad \text{'people in groups of three'} \\
& \quad \text{i-telu} \\
& \quad \text{'QNT-three'}
\end{align*}
\]

A little-used function is to express customary or regular behavior, which is signified by full reduplication:

\[
\begin{align*}
vai & \quad \text{amar-amar} \\
\text{language} & \quad \text{DUP-day} \\
& \quad \text{'every day language'} \\
& \quad \text{amar} \\
& \quad \text{'day'}
\end{align*}
\]

\[
\begin{align*}
\text{o-} & \quad \text{ovan-ovan} \\
\text{u-} & \quad \text{dava} \\
\text{oa} & \quad \text{oa} \\
\text{DUP-} & \quad \text{night} \\
& \quad \text{1S-look for 2S} \\
& \quad \text{'every night I looked for you'} \\
& \quad \text{ovan} \\
& \quad \text{'night'}
\end{align*}
\]

There are a significant number of reduplicated forms with no post-nucleus coda, to which a word-final /-n/ is added. The only concrete statement that can be made at this point is that all reduplicated numbers have this consonant added, and both nouns and adjectives are also found with this added /-n/; its specific function is not known. In the examples below, the cardinal numbers and the verb forms are shown on the right, while the reduplicated forms with word-final /n/ are shown to the left.

Numbers:

\[
\begin{align*}
sa & \quad \text{sa-saa-n} \\
\text{DUP-} & \quad \text{one} \\
& \quad \text{'by ones'} \\
& \quad \text{i-saa} \\
& \quad \text{'QNT-one'}
\end{align*}
\]

\[
\begin{align*}
vat & \quad \text{vat-vatu-n} \\
\text{DUP-} & \quad \text{ten} \\
& \quad \text{'by tens'} \\
& \quad \text{vutu} \\
& \quad \text{'ten'}
\end{align*}
\]

Nouns:

\[
\begin{align*}
\text{ban} & \quad \text{ban-bana-n} \\
\text{DUP-} & \quad \text{go} \\
& \quad \text{'journey, path'} \\
& \quad \text{u-bana} \\
& \quad \text{'1S-go'}
\end{align*}
\]

\[
\begin{align*}
\text{mat} & \quad \text{mat-mata-n} \\
\text{DUP-} & \quad \text{dead} \\
& \quad \text{'death'} \\
& \quad \text{t-mata} \\
& \quad \text{'1P1-dead'}
\end{align*}
\]

\[
\begin{align*}
\text{lak} & \quad \text{lak-leka-n} \\
\text{DUP-} & \quad \text{fall} \\
& \quad \text{'the falling'} \\
& \quad \text{n-leka} \\
& \quad \text{'3S-fall'}
\end{align*}
\]

Adjectives:

\[
\begin{align*}
\text{val} & \quad \text{val-vuli-n} \\
\text{DUP-} & \quad \text{red} \\
& \quad \text{'red, reddish'} \\
& \quad \text{na-vuli} \\
& \quad \text{'3S-red'}
\end{align*}
\]

\[
\begin{align*}
\text{sar} & \quad \text{sar-sira-n} \\
\text{DUP-} & \quad \text{salt} \\
& \quad \text{'salty'} \\
& \quad \text{n-sira} \\
& \quad \text{'3S-salt'}
\end{align*}
\]
Fordata shows two major types of reduplication: CVC with /a/ preassociated, and (less frequently) full reduplication. The association is phoneme driven. Various syntactic functions of reduplication are evident, some of which are restricted with regard to the mechanisms they use. A final suffix /-n/ occurs on some forms; its function is not yet clear.

NOTES


2. The entries in which the morphemes are not separated by a hyphen are obligatorily reduplicated; that is, there is no unreduplicated form of these morphemes.

3. The reduplicated forms *la1-lolak and mam-mumak become la-lolak and ma-mumak after applying the geminate reduction rule.

4. The usage of some of these forms varies from village to village. Tevateva is rendered tavteva in several villages. Lebaleba is an old word meaning 'canoe' and has been for the most part replaced by another term.

REFERENCES

French, Koleem W.

Marantz, Alec

Marshall, Craig and Sarah Marsnall

McCarthy, John and Alan Prince

Nivens, Richard