The editors are pleased to present this second collection of papers from the Linguistics Department at the University of Kansas. In preparing this issue, we have been aided in many ways by members of the faculty and by our department secretary, Ruth Hillers. We wish to express our appreciation for their kind assistance. We are also grateful to Jeanette Gunn for her work on the cover page.
CONTENTS

Agent, Instrument and Intention
Ronald P. Schaefer

Speech Style Shifting in Young Children's Speech
Linda Paul

A Study of the Comings and Goings of the Speakers of Four
Languages? Spanish, Japanese, English, and Turkish
Ginny Gathercole

Some Common Elements of Muskogean Verb Morphology
Karen M. Booker

A Closer Look at Sundanese Phonology
Geoffrey Gathercole

A Study of Speaker Sex Identification
Ronald P. Schaefer

A Linguistic Identification for Kansas Volga German
Gerald L. Denning

Second Language Acrolect Replacement in Limon Creole
Anita Herzfeld
A Closer Look at Sundanese Phonology
Geoffrey Gathercole

Introduction

1.1. In a series of papers published in the 1950's, Robins (1953a, 1953b, 1957, 1959) has presented an analysis of various aspects of Sundanese phonology, morphology, and syntax, within the framework of British linguistics and particularly the principles of prosodic analysis as developed by Firth. The purpose of this paper is to review his treatment of some phonological processes in Sundanese, compare Anderson's (1972) restatement of the processes in a generative framework, and give evidence for a possible reformulation of the rules, including additional rules for some other processes in the language.

1.2. Most of the data presented here are drawn from Robins, but all were elicited for confirmation from Pudiat Surjadikara, a native speaker of Sundanese. Some of the data from Robins do not fit with my observations, and these will be discussed below.

1.3. The phonemes of Sundanese are these:

Non-syllabics:

<table>
<thead>
<tr>
<th>Non-syllabics</th>
</tr>
</thead>
<tbody>
<tr>
<td>p t c k</td>
</tr>
<tr>
<td>b d f g</td>
</tr>
<tr>
<td>s</td>
</tr>
<tr>
<td>w r/l v</td>
</tr>
<tr>
<td>m n ŋ ŋ</td>
</tr>
</tbody>
</table>


Syllables:

\[ i \quad u \]
\[ o \quad o \quad o \]

Nasalization

2.1. In Norton 1957, following the Firthian tradition of prosodic analysis, vowel nasalization is characterized as a feature occurring on the word level (i.e., a suprasegmental feature) which, starting at a nasal consonant, propagates from left to right along a word until it reaches a supraglottally articulated consonant.

Among the data exemplifying this phenomenon are the following:

- mare - 'give'
- nafar - 'seek'
- nifeg (nifeg) - 'love'
- brohfar - 'be rich'

However, as Anderson (1972) points out, this can be satisfactorily described as a common process of assimilation which propagates for as long as the velum is not closed for the articulation of an oral consonant. Thus the notion of the nasal prosody is not necessary for this case.

Robins, however, has argued that this nasalization needs to be seen as a prosodic feature (i.e., non-process phenomena) because of the following:

There is an infix -ar- (n-but), marking a verb as having a plural subject or object, which when it occurs in nasalized forms produces forms like the following:
i.e. the vowel of the infix is nasalized and nasalization crosses over the oral consonant /s/ but does not affect the immediately following vowel. Note that /r/ usually blocks propagation of nasalization. This phenomenon is described by Robins as a condition on the application of the prosody, and Anderson again argues that the description is accurate but fails to characterize the nature of the process at work here. The point could be made that the prosodic analysis completely fails to capture the simplicity of the phonetic process. For example,

sunda
[goreg]  'Sundanese'
[pandok]  'short'

have no nasalization, even though they contain nasal consonants, because the articulatory sequence prevents it.

Anderson, having appealed to the logic of articulatory sequence, then proceeds to create rules to describe the data in a generative framework. However, we formalize them, the required rules would need to describe (1) nasalization of the root form, (2) infixation, (3) nasalization of the infix, and (4) de nasalization of a vowel following non-nasal consonant. Anderson reviews Langendoen's (1968) proposal that one rule can describe the process, viz.,

\[ [+\text{Vocalis}] \rightarrow [+\text{Nasal}] / [+\text{Nasal}] \{ [+\text{Plural}] * \} [-\text{Cons}] \]

He points out that since this rule is intended to nasalize the vowel of the infix as well as the vowels which follow, but skipping the
vowel immediately following the plural marker, we would have to interpret the parts of this rule as being conjunctively ordered since both parts are required to apply in a single derivation.

Anderson shows that by appealing to the notion of "local ordering", whereby rules order themselves at any stage in a derivation in such a way that they feed and counterbleed each other, these rules can be reduced to three simple rules. The nasalization rule would apply before the infixing rule, because otherwise the latter would remove the environments which allow the former to apply. Similarly, the infixing rule would then apply, thus creating new environments for the nasalization rule and the deasalization rule.

2.2. This formulation by Anderson describes the data from Robins 1957 and has important theoretical implications, since he uses this as strong evidence for his local ordering hypothesis. However, my own investigation suggests that for at least some speakers, the nasalization process works differently. The following are among the data obtained for verbs and do not represent exceptional cases.

<table>
<thead>
<tr>
<th>Am</th>
<th>Ampl</th>
<th>pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ḥāhā</td>
<td>'know'</td>
<td>Ḥāhā</td>
</tr>
<tr>
<td>qá:n</td>
<td>'cool o' self'</td>
<td>qá:n</td>
</tr>
<tr>
<td>mā:n</td>
<td>'spend night'</td>
<td>mā:n</td>
</tr>
<tr>
<td>Ḥā:k</td>
<td>'dry'</td>
<td>Ḥā:k</td>
</tr>
<tr>
<td>A:n</td>
<td>'say'</td>
<td>A:n</td>
</tr>
</tbody>
</table>

According to these data, it seems to me that there are three alternatives.

2.3. (i) Since Anderson's rules deal basically with the inter-
action of infixing and nasalization, we can simply remove the denasal-
ization rule, which is not otherwise needed in the phonology and retain
the local-ordering concept. [31] We could accept a periodic treatment
which would look more attractive when it required a less questionable
condition statement. [5] We can return to a revision of the rules
proposed by Howard (1971) and modified by Anderson requiring a morpho-
logical environment, viz.,

\[
(+\text{Syllabic}) \rightarrow (+\text{Nasal}) / (+\text{Nasal}) ([+\text{Plural}]) \quad (\text{-Syll.}) \quad \text{(High)} \]  

thus avoiding the problem by inserting the infix in the input to the P-
rule component. But, as mentioned above, this kind of rule has other-
wise been interpreted as disjunctive, whereas it would have to apply
conjunctively in order to yield the desired output.

A fourth possibility is to posit underlying nasal vowels. This
has consistently been rejected because, apart from the particular case
under discussion where the plural marker appears, all instances of nas-
al vowels are predictable by the simple iterative rule:

\[
(+\text{Syllabic}) \rightarrow (+\text{Nasal}) / (+\text{Nasal}) ([+\text{Consonantal}]) \quad (\text{-Syllabic}) \quad \text{(High)} \]  

Moreover, a rule of nasalization is required independently to nas-
alize the vowel of the infix. Though nasalization of vowels is predict-
able by the correct set of rules, there seems to be a sense in which
the nasalization of the root is a feature which 'belongs' to it. Whether
the proper formalism is that suggested by Anderson, or a set of extrin-
sically ordered rules.

1. Nasalization of root

2. Infixing
3. Nasalization of affix

It would seem desirable to capture the fact that the reason nasalization is allowed to propagate past the /r/ of the plural marker (which we would expect to block propagation) is precisely that it is already present in the form that the infixing rule applies to.

The use of a rule including (Plural) in the environment fails to explain why nasalized vowels should appear beyond the oral consonant, in addition to creating a theoretical problem of the proper application of rules containing parentheses.

Other processes

3.1. Anderson has analysed the process of infixation as a special case of pre-fixation, such that all the prefixes of the form VC (ar-, al-, ur-, in-) appear as prefixes in words beginning with a vowel and infixes in words beginning with a consonant, e.g.,

ala 'take'       ar-ala pl. 'take'

Sahar 'eat'      d-al-sahar pl. 'eat'

He suggests plausibly that this process serves to create or conserve the preferred syllable structure.

In fact, several rules conspire to conserve or create the CVGCVC structure in Sundanese. (a) the above-mentioned infixing rule, (b) Anderson's apenthesis rule,

c → a / + [-syllabic] [−[−syllabic]],

which inserts /a/ when the prefix /n-/ is attached to a root beginning
-a with a non-vowel; (c) glottal stop insertion; and (d) suffix reduction.

3.2. Anderson's formulation of (a) infixing and (b) epenthesis seem to be correct. Robins (1953b) discusses (c) glottal stop insertion and claims that all instances of glottal stop can be predicted by rule.

Rule (c(i)) inserts a glottal stop between a prefix ending in a nasal consonant or a vowel and a root beginning with a vowel.

\[
(c(i)) \quad \text{+} \rightarrow \text{?} \quad \begin{cases} \text{[-Syll]} \\ \text{[+San]} \end{cases} \quad \text{#} \quad \begin{cases} \text{[-Syllabic]} \end{cases}
\]

e.g. amup 'enter' kaya:amup 'belong'
leidin 'permission' pa?lidin 'permission'
ente 'put in order' pa?enteper 'lie on top'
indit 'leave' pe?jindit 'reason for leaving'
cen 'say' me?cen 'talk about'

Rule (c(ii)) inserts a glottal stop between two identical vowels whenever these would come together (i.e. morpheme internally or at a boundary).

\[
(c(ii)) \quad \text{+} \rightarrow \text{?} \quad \begin{cases} \text{[-Syll]} \quad \text{[+Syll]} \end{cases} \quad \begin{cases} \text{[+High]} \quad \text{[+High]} \end{cases} \quad \begin{cases} \text{[-Low]} \quad \text{[-Low]} \end{cases} \quad \begin{cases} \text{[Round]} \quad \text{[Round]} \end{cases}
\]

e.g. tivis 'cold'
lovo 'look after'
dua 'two'
duana 'two'
dua 'two'
dua'an 'two'
dua 'two'
menta 'ask'
menta'an 'propose to'
menta 'ask'
menta'an 'ask questions'

Note that this process does not represent a constraint on all vowel clustering, as the following data show:
The first of these rules does not operate across all morpheme boundaries, but only at the beginning of a root. Further investigation could prove that the environment is **Stress 1**, thus providing a phonetic environment for this rule. If it should turn out that the glottal stop is present in some underlying forms, it would require that Anderson's epenthesis rule be rewritten so as to overlook the glottal stop but not /h/.

3.3. The fourth process (d) works on suffix -an as follows. Suffix reduction can occur with some words yielding a contracted form. It takes the form

\[ \begin{array}{c|c|c}
\text{High} & \text{Low} & \text{High} \\
1 & 2 & 1 - 2 \\
\end{array} \]

E.g.

<table>
<thead>
<tr>
<th>Word</th>
<th>stem</th>
<th>suffix = stem</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>impi</td>
<td>'dream'</td>
<td>impi-an = 'dream'</td>
<td></td>
</tr>
<tr>
<td>tabu</td>
<td>'copy'</td>
<td>tabu-an = 'copy'</td>
<td></td>
</tr>
<tr>
<td>sumbu</td>
<td>'wick'</td>
<td>sumbu-an = 'touch hole (of musket)'</td>
<td></td>
</tr>
<tr>
<td>pasti</td>
<td>'be settled'</td>
<td>pasti-an = 'fate'</td>
<td></td>
</tr>
</tbody>
</table>

but, cf. tilu 'three' tilu-an = tiluan 'the three'

It is not clear if this is a minor rule (it is not an optional rule), since not all forms that fit the structural description undergo the
Conclusion

A complete working description of Sundanese is barely begun. An inspection of the table of derivational processes in Sundanese presented in Robins 1959 reveals the complexity of the morphology while hiding to some extent the processes of the phonology. This has been a small attempt to review some and reveal others with the help of first-hand evidence.

Footnotes

1. The distribution of \textit{ar} / \textit{al} is described in Robins (1957). \textit{-al} is used with forms whose initial consonant is \textit{l}, and with those containing a following \textit{r}, except as initial consonant of the second syllable. Words of any other structure regularly infix \textit{-ar-} \ldots ".

2. Among the problems with this rule that A. doesn't mention are: i) The specification of [-Consonantal], while intended to refer to \textit{h}/ and \textit{/} actually includes all the vowels and would thus yield the wrong result, and ii) Robert L. Rankin has pointed out to me that this rule violates the "Adjacency condition" which specifies that no 'vulnerable' segment may occur between two segments subject to this kind of assimilatory \textit{P}-rule.

3. As Howard pointed out (Howard 1971 - cited by Anderson), this violates the proper application of collapsed rule schemata, the parts of which, according to Chomsky and Halle (1968), should be in a disjunctive relation. Kenneth Minor questions whether any serious attempt has ever been made to clarify the ordering of the extensions of these iterative schemata.

4. Kenneth Minor has noticed that a further problem with this analysis is that the infusing rule is a \textit{P}-rule ordered in the phonological component, whereas inflexion has previously been regarded as belonging to the input of the \textit{P}-rules. This question is not addressed by Anderson.

5. Robert L. Rankin points out that this solution is reminiscent of
Lightner's (1965) *Surgical Features* which incorporates harmony features into a generative account of the phonology of Mongolian.

**Bibliography**


(1953b) "Formal divisions in Sundanese," *Transactions of the Philological Society*, 131-142.
