Cyclic syllabification and a first cycle rule of vowel-rounding in some dialects of Australian English

Jane Simpson
March 1980
In Australian English there are four major phonetic realizations of /l/:

"dark" [ə]: in the rime of a syllable
[ɛtʃ] ell
[ɛtʃh] elk

in the onset of some unstressed syllables
(A.I. Jones says it occurs in general before unstressed syllables, but this does not seem true for the dialects I shall be discussing)

"clear" [l]: in the onset of a syllable:
[letʃ] let

palatal [l]: before [y] (including across word-boundaries in fast speech).
[mIʃjən] million

syllabic [l]: after consonants word-finally
[setʃ] settle

I shall be looking chiefly at "dark" and "clear" /l/

Vowels followed by [ı] undergo various changes. The most striking is the lowering of the second formant and the raising of the first formant. Quite often the tongue makes no actual contact with the roof of the mouth and it is just the final [u] part of the diphthong that indicates the underlying final /l/:

"sell" [sɛu] 3

In front vowels the first part of the diphthong does not change — thus there is no real difference between the vowel in "set" and the first part of the diphthong in "sell". But in some back vowels the front part is rounded and raised a little.

In Australian English in general the vowels in "go" and "goal" are quite distinct: [ɡʌf] [ɡɑːf]

In Adelaide English not only are "go" and "goal" distinct but
also "too" and "tool" \(\begin{array}{c}
+\text{back} \\
+\text{tense}
\end{array}\)

In the speech of some young middle-class students even the vowels in "putt" and "repulsive" are distinct: \(\begin{array}{c}
+\text{back} \\
+\text{tense}
\end{array}\)

But so far this has not extended to non-"pulse" words like "dull". Now non-Adelaide English dialects extend this rounding to round \(\begin{array}{c}
+\text{tense}
\end{array}\) whenever it occurs before /l/, no matter whether the /l/ is phonetically clear or dark. Thus, the following words all have clear /l/ but round vowels:

"holy" "lowly" "goalie"

The rule then is:

\[ +\text{syll} \rightarrow +\text{round} / +\text{lateral} \]

In some dialects of Adelaide English the rounding in "tool" is extended to all instances of the vowel occurring before /l/; the following have clear /l/ but round vowels:

"Julie" "truly" "Dooley" "coolie" "fooling"

The rule here then is: 

\[ +\text{syll} \rightarrow +\text{round} / +\text{lateral} \]

But in at least one dialect of Adelaide English (young middle-class students) there is a contrast between an unrounded vowel in words where the /l/ never was in the same syllable as the vowel ("holy" "lowly" "low" versus "goal", and also "Julie" "truly" "Dooley" "coolie" "true" versus "fool")
and a rounded vowel in words like "goalie" and "fooling" where at one stage in the derivation the /l/ was in the same syllable as the rounded vowel.

I therefore suggest that for this dialect we must postulate cyclic syllabification, and the automatic application of the rounding rule whenever the back vowels appear in the same rime as an /l/. This will, as Morris Halle pointed out, result in the rule operating on the first cycle in some instances, i.e. it will violate the principle of strict cyclicity. Suppose the form before syllabification is [l] with the only vowel in the root syllable, then it is a rule creating derived forms - one syllable the rounding operation occurs per time.

So, syllabification will be done cyclically; there will be a cyclic rule of rounding:

\[
\begin{align*}
+\text{syll} & \quad +\text{round} / \quad +\text{lateral} \\
+\text{back} & \quad +\text{tense} \\
-\text{high} &
\end{align*}
\]

Following a suggestion of K.P. Mohanan, I shall assume that, underlyingly, laterals are dark. A postcyclic rule makes them clear when in the onset:

\[
+ \text{lateral} \rightarrow +\text{"clear"} / \\
\]

I shall give derivations for "holy" "lowly" "goal" and "goalie":

**holy:**

\[
\text{syllabify} \\
\text{lighten} /l/ \\
\text{syllabify}
\]

**lowly:**

\[
\text{syllabify} \\
\text{cycle 2} \\
\text{resyllabify}
\]

\[
\text{syllabify} \\
\text{cycle 2} \\
\text{resyllabify}
\]
goal: [əɬ ʌ t]
syllabify vowel round lighten /l/
goalie: [əɬ ʌ t ɪ] syllabify vowel round cycle 2 syllabify lighten /l/

I am not sure of the restrictions on when an /l/ preceding a vowel-initial unstressed syllable can be dark. In my speech at least it is almost impossible after a tense diphthong; as in "Caleb", or "Sheila".

But dark /l/ is possible in "Angola" and "Dimboola", and rounded vowels are usual for the penultimate vowel of each, although the unrounded vowel (and clear /l/) are sometimes heard.

In these cases we would probably have to add a condition to syllabification that allows the attachment of an /l/ to the rime of the preceding syllable if the following syllable is unstressed, and if other conditions yet to be discovered are met.

\[\text{Current facts}\]
\[\text{must; need\ facts}\]
\[\text{a\ in; c - clearly}\]
\[\text{b\ in;\ l}\]
The seminal work of Mitchell and Delbridge denies the existence of regional dialects in Australia, and instead sets up three dialects based on socio-economic grouping and on city versus country. The three dialects are: Broad, General and Cultivated. In this study I am looking at General to Cultivated dialects, and at regional differences within these. I am working from a small sample:

3 speakers of General Australian (from Parkes, NSW M 29
Casino, NSW F 33
Tamworth, NSW M 28)

2 speakers of General Australia (from Port Augusta, SA M 30?
Adelaide, SA M 27)

5 speakers of Cultivated Australian (3 from 1 family, Adelaide, SA F 27 M 25 F 21
1 from Adelaide, SA F 27
1 from Adelaide, SA M 22)

Further investigation is needed to determine which dialects the observations I have made characterize - regional, socio-economic class, age, educational background.

In this study, Australian English in general refers to all the speakers. Adelaide English refers to the final 7 speakers. The dialect with the cyclic rule includes the 5 speakers of Cultivated Australian; and, with the cyclic rule applying to "go" but not "too", to the General Australian speaker from Adelaide and the General Australian speaker from Tamworth.

One Broad Australian speaker on a tape of a radio interview seemed to have [u] for dark /l/ and in positions where General and Cultivated speakers have clear /l/ he had an /l/ which varied from moderately dark to light depending on the frontness of the vowels on either side.

The same phenomenon is observed by Daniel Jones for London dialectal speech:

"On the other hand in the distinctive London pronunciation, the dark l's are very dark indeed, the resonance being a kind of ɔ or ə rather than u. In London dialectal speech the dark l is often replaced by a vowel of the ɔ or ə type: field, milk are pronounced fiːld, miːlk, and railway is 'raiʃwɔɪ /raɪˈswɔɪ/.'" p. 91
4. In London English, Daniel Jones notes that vowels change before dark /ɪ/, but not before light /ʌ/:

"...in London it is common to hear differences of vowel quality in bowl and bowling (bouɪ or bɔul, 'bʊllɪŋ'), rule and ruling (ruɪ or rɔɪl and something approaching rʊllɪŋ or rɔllɪŋ), calculate and callous (kalkjulen or kələs)." p.92

In this case we would assume that postcyclically after the assignment of syllable structure dark /ɪ/ occurs in the rime and clear /ʌ/ in the onset, and that then a rule of backing backs the relevant vowels.

5. I have not worked out a satisfactory feature system for describing vowels, and furthermore the differences and changes I describe here are in general not distinctive but surface phonetic. The features given in the rules are tentative descriptions of what I hear, not necessarily of what are underlying features of the segments.

6. Another example of such a cyclic rule is provided by material in Sledd (1958). Sledd describes certain vowels in his own speech, a dialect of Southern American, giving the following examples:

beer idea jeer ɪə
beery jeering ɪərv
Erie hero ɪrV
berry herring ɛrV
care ɛə
caring ɛərv
barium hilarious ɛrɪ
carry carrot ɛrV
air bear əə
airy bearer əərv

In all the /r/ final words the /r/ disappears and the resultant vowel is a diphthong with a schwa offglide. This offglide also appears in words derived from /r/-final words, in which the /r/ is kept. It does not appear in words like Erie, berry, barium, carry in which the /r/ is always an onset.
Now, I assume that the vowel in beer is [iy], like the vowel after vowel-shift in sincere /sincerity (pointed out by Mohanan). I am not sure how to distinguish the vowels in care (and scare and hear) from air (and bear and glare). The pair compare / comparison (unfortunately not given) suggest that one at least will be underlyingly (after vowel-shift) _a_. But, however these are to be distinguished, in order to get the schwa we will have the following rules:

1. syllabify
2. insert schwa before /r/ in same rime
3. delete /r/ word-finally

Now, a schwa also appears in diarrhea, Eritrea, Maria and in idea.

We need not say that the schwa is inserted by rule in the first set, but the second we could — we could say that in fact idea is realized as being /r/ final. Evidence for this would be if idea when followed by a vowel was realized with a /r/, but no other word like diarrhea (which is not /r/ final) were realized with an /r/.

Australian English, also /r/-less finally, has a schwa insertion rule: in beer and care. But it is a general postcyclic rule operating before any /r/: thus beery and Erie are homophonous.

It has an /r/-openthesiophenomenon — which, roughly, inserts /r/ between words homophonous to /r/-final words a and following vowel-initial words:

- saw r≠a book (like sore)
- saw r≠ing wood
- idea r about X (like beer)
- "yeah r # and then..." (like care)
- a galah r ≠ and a parrot (like ajar)
- a gala r≠ occasion (like snarler)

D. Nash notes that: final high offglides and the ability to epenthesis /r/ are in complementary distribution. We might then say that in fact saw idea yeah galah gala all do have final /r/ which is lost before a following consonant. And then of course, the schwa insertion rule will have operated in idea and yeah before /r/-deletion.
I wish to thank Tara and K.P. Mohanan, Paul Kiparsky and David Nash for helpful suggestions.

Bibliography:

JONES, A.I.: An Outline Word Phonology of Australian Occasional Papers No.3, University of Sydney Australian Language Research Centre; July 1966


KIPARSKY, P.: "Metrical Structure Assignment is Cyclic" Mimeo, M.I.T. 1979


SINPSON, J.: "The raising of vowels before "dark" /l/ and cyclic syllabification in a dialect of Australian English" term-paper for 24.962 M.I.T. 1979 (earlier version of this paper)

SLEDD, J.: Language Vol. 5, No. 2 1958