MODELING OUT-OF-CONTROL REDUPLICATION IN SPOKANE

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0. Introduction. A number of recent treatments have considered phonological, semantic, grammatical, and historical aspects of out-of-control reduplication in Spokane and other Salish languages. These include Carlson and Thompson (1982), Kroeber (1988), Mattina (1989), Van Eijk (1989), and Carlson (1989). This morpheme copies the vowel and the second consonant of typical Spokane CVC roots, attaching the copy directly after CV. Stress and vowel deletion rules create surface variants as illustrated in the following pair of forms. (1) shows stress on the root and out-of-control as -CV: (2) shows stress on the affix with out-of-control as -CV. Out-of-control affixes are underlined.

(1) hékʷ 'it came open a crack without my knowing it.'
(hekʷ 'opened a crack')

(2) qóič 'it got tangled up [as a thread might do as you are sewing]
(qic 'braided; woven')

This paper will pursue a description of out-of-control (henceforth OC) reduplication using constructs from nonlinear phonology and prosodic morphology (see esp. McCarthy and Prince (1986)). This is necessary (1) to fit OC reduplication into the Spokane stress system and (2) to account for the surface variants of OC reduplication that occur with root shapes other than canonical CVC.

1. Stress-Overview. Spokane stress has a morphological base with the following characteristics: Primary stress assignment is on either a root or a suffix; prefixes are unstressed. There is no distinctive secondary stress. Certain suffixes are strong, always taking stress when they appear in a form. Roots are of two types, strong and weak. Strong roots take stress unless a strong suffix is present. Weak roots lose stress to all stressable suffixes (those with an underlying vowel). Weak roots may be stressed when they occur without suffixes.

Spokane suffixes are either grammatical or lexical. The latter, numbering about 100, are root-like in meaning and trace historically to free forms (Carlson, to appear). There are a small number of strong suffixes in both categories. The remaining are variable; stressed with weak roots and unstressed with strong roots. If a variable lexical suffix and a variable grammatical suffix are both present with a weak root, the lexical grammatical suffix will take the stress. Examples illustrating the core of this framework can be found in Carlson (1989) and Bates and Carlson (1989a,b).

In current descriptions of Spokane, stress is described using the metrical grid, which is created from the properties of the morphemes in a word. Bates and Carlson (1989b) argue that all roots and strong suffixes have lexical accent (in the terminology of Halle and Vergnaud (1987), a line 1 grid mark). This accent produces prominences on top of the sequence of stress-bearing units, here vowels (line 0). The most prominent grid column carries the main word stress:

(3)

<table>
<thead>
<tr>
<th>x</th>
<th>line 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
<td>line 0</td>
</tr>
<tr>
<td>x</td>
<td>line 1</td>
</tr>
</tbody>
</table>

Unstressed Vowel Deletion --> Unstressed Vowel Deletion

You made it.

make-TRANS-25

The distinction between having and lacking lexical accent replaces and simplifies the stress hierarchy analysis of Carlson's earlier work.

The strong/weak distinction in roots must be maintained in any analysis; here we simply designate the class of weak roots as such in the lexicon. Some sample lexical entries follow; a grid mark over a form indicates that it carries lexical accent.

(4)

<table>
<thead>
<tr>
<th>x</th>
<th>dip 'pinch'</th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
<td>?ažl 'be a certain way'</td>
</tr>
<tr>
<td>x</td>
<td>qum 'pile'</td>
</tr>
<tr>
<td>x</td>
<td>sut reflexive</td>
</tr>
<tr>
<td>x</td>
<td>ent transitive</td>
</tr>
<tr>
<td>x</td>
<td>cin 'mouth: language'</td>
</tr>
<tr>
<td>x</td>
<td>hec progressive</td>
</tr>
</tbody>
</table>

Ignoring the effects of Unstressed Vowel Deletion and concentrating on the placement of word stress, the lexical entries above will render representations like the following, correctly deriving initial stress in this form with a strong root.

(5)

<table>
<thead>
<tr>
<th>x</th>
<th>line 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
<td>line 0</td>
</tr>
<tr>
<td>x</td>
<td>line 0</td>
</tr>
<tr>
<td>x</td>
<td>line 0</td>
</tr>
</tbody>
</table>

As in other accent systems (e.g., Japanese), if a morpheme contains more than one vowel, the underlying representation of that morpheme includes a specification as to which of its vowels receives the accent. Compare the strong root ?ažl 'be a certain way', with the strong root -dys? 'seems to be'. The lexical entry of the former is included above.

General phonological processes familiar from other languages operate...
We claim that the deriva-

tion will surface with stress when there is a vowel to receive the shifted stress.

The rule of Weak Shift derives the difference in stress behavior between strong and weak roots, correctly predicting that the only time a weak root will surface with stress is when it is word-final:

The Weak Shift analysis is attractive because it eliminates the need for an underlying stress category 'variable suffix': formerly 'variable' suffixes are now simply suffixes with no lexical accent which have received stress via Weak Shift. The analysis also accounts for data with multiple variable suffixes (a problem for Carlson (1989)), and maintains the generalization that stress is fundamentally a property of roots in Spokane (cf. Bates and Carlson (1989a) for argumentation).

This completes our overview of Spokane stress: although we will continue to informally employ the familiar terminology of Carlson's earlier work, the derivations given will be consistent with the analysis presented here. For example, we will often refer to a root which has lexical accent and does not occasion Weak Shift with its traditional name of 'strong root'.
Characteristic of affixes. Problem application would rest on the initial vowel: /calə/. The unaffixed form of /pvrəd/, however, is /prəd/. If the analysis is (32) is correct, then Weak Shift must have applied to /prəd/, but not to /calə/. At this point, we have no alternative for this difference in the behavior of the unaffixed forms in (14)-(20), which do not undergo Weak Shift, and those in (21)-(28), which do.
2.3. Longer Forms. Weak roots with OC reduplication will shift stress to following grammatical suffixes which have no lexical accent, as in the transitive form below.

\[(33) \text{eile}^*\text{etén} 'I accidentally laid a bunch of round things down.'\]
\[(\text{caiaik}^* [w] 'bunched'\text{-nt transitive -en i sg. Subj.)}\]

The -nt cycle triggers Weak Shift, which moves the stress off of the stem and onto the affix. The only mystery here is why the reduplicative cluster \[\text{nt}^*\] is simplified. Although strings of identical consonants are typically simplified or dissimilated in Spokane nonreduplicative morphology, this is generally not true of reduplication, as is illustrated by the sequence \[\text{nt}^*\] in (33).

2.4. Other Patterns. A few forms exist showing OC copying the second mora of CVCC roots, as in (33).

\[(34) \text{yéi}^*\text{ér} 'It got bowed by accident.'\]
\[(\text{yer}^* [s] 'bowed')\]

This root also appears in a completely unique form showing a lexical suffix more reduplicated to signal OC. This would be a typical pattern in Shuswap, where OC targets the stressed syllable (Van Eijk 1988).

\[(35) \text{nyi}^*\text{lyi}^*\text{đi}^*\text{đi} 'His legs became bowed under a strain.'\]
\[\text{//s-OVC-ysér-uswa// in, at-PL-bowed-leg-OC}\]

3. Conclusion. Treating Spokane reduplication as single or double more copying seems to account for all the data currently available. An attempt has been made to check all noncanonical root shapes. Establishing bimoraic weak roots handles OC reduplication and stress shift examples (14)-(28), and these data have further motivated the process of Weak Shift.

Some linguists might question the use of moraic structure in the description of a language where stress is morphologically based and there are no syllable weight distinctions. However, the pattern of OC reduplication in Spokane suggests that this prosodic unit has relevance even when it is not used as a stress/timing unit (Auer 1989).

**FOOTNOTES**

1. The fieldwork done to support this paper was done with the help of the Sherwood-Morse Trust. We would also like to thank Susan Fitzgerald and Susan Doyle for contributions to this analysis.

2. In certain cases, stress may fall on a reduplicated prefix.

3. A small number of roots are variable, regularly acting either strong or weak. All roots may have the potential to be variable (Carlson 1990).

4. A note on the condition on the rule in (7): Weak Shift applies cyclically, successively moving stress to the right on each cycle. It will only move a stress off a vowel in a stem formed on a weak root, however. Stem-forming morphemes include the reduplications, the 'inchoative' -ng, the 'middle' -g and a few others. Bates and Carlson (1989a) argue that these affixes, which appear closer to the root than any others, form with it a significant morphophonological domain in the lexical phonology of Spokane. Once other suffixes are added after the stem-forming suffixes, Weak Shift will only apply while it is moving stress off a vowel which is within the stem. Later affixation of accentless morphemes will not affect stress placement. For example, the first stressable suffix after the weak root tap 'shoot' receives the stress:

\[\text{tap-at-es} \rightarrow \text{tapatés} 'He shot him.'\]
\[\text{shoot-TRANS-2SL} \rightarrow \text{shoot-TRANS-3S}\]

But an additional grammatical suffix fails to move stress any further to the right; stress falls on the first vowel to the right of the weak stem vowel, not on the final affix:

\[\text{tap-at-es} \rightarrow \text{tapatés} 'He shot you.'\]
\[\text{shoot-TRANS-2CL-3S}\]

5. Adjacent laryngeals protect unstressed vowels from deletion.

6. This mora copying analysis requires that the second consonant in a CVCC root be syllabified with the first vowel and not form the onset to the second vowel.

**REFERENCES**


Mattina, Anthony. 1989. (V)C2 reduplication in Colville-Okanagan, with historical notes. XXIV ICIL.


Van Eijk, Jan P. 1989. VC reduplication in Salish. MS.