The Life of Language

Papers in Linguistics in Honor of William Bright

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Lyle Campbell (Editors)

Offprint

MOUTON DE GRUYTER
The regression of sibilant harmony through the life of Barbareño Chumash

Marianne Mithun

In an article entitled “Sibilants and naturalness in aboriginal California” (1978), Bill Bright draws attention to the complexities of sibilants in California languages, alerting us to distinctions between blade-alveolar [s] and apico-alveolar [s] articulations and to the kinds of relations that can link these alveolar sibilants with palatal sibilants such as [ʒ]. One set of languages in which sibilants interact in intricate ways are those of the Chumash family, originally spoken along the California coast from just north of modern Los Angeles around Malibu up to San Luis Obispo. These languages contain sibilants in all three positions. The alveolar sibilants are in complementary distribution: the retracted apico-alveolar [s], pronounced with the tongue tip behind the upper teeth, appears before apicals t, d, n, and l, while the blade-alveolar [s], pronounced with the tongue tip behind the lower teeth, appears elsewhere. These alveolar sibilants contrast with palatal sibilants, but the two sets alternate with each other in patterns of sibilant harmony, whereby all sibilants within a word match in point of articulation.

Sibilant harmony in Ventureño Chumash has been described by John Peabody Harrington (1928, published in 1974), in Barbareño Chumash by Madison Beeler (1970), and in Ineseño Chumash by Richard Applegate (1972). Implications of the process for phonological theory have been discussed by William Poser (1982). In principle all sibilants within a word in these languages are either alveolar (s, ʃ, c, ʒ or ʃ) or palatal (ʃ, ʃ, ʃ, ʒ, ʒ, or ʒ). The harmony is regressive, moving leftward over the word. Either point of articulation may spread: alveolars trigger a shift to alveolar position for any sibilants to their left, and palatals trigger a shift to palatal position. The harmony shows some variation, however. Overall, a gradual fading of the process over time can be traced in Barbareño Chumash, the best attested of the languages.

Speakers of Barbareño Chumash lived in a number of settlements around the area of present Santa Barbara until the late eighteenth century, when they were drawn into the Franciscan mission established in 1786. The Franciscan missionaries had little interest in the language of their converts, although several wordlists were recorded in the eighteenth and nineteenth centuries, most by individuals inexperienced in transcription. Fortunately, extensive material was collected during the first half of the twentieth century. Over a period from around 1913 until his death in 1961, Harrington worked with several speakers, among them three generations of women: first Luisa Ignacio, then her daughter Lucretia García, and finally her granddaughter Mary Yee. Because Harrington was such a careful phonetician, and because he collected so much material, it is possible to trace the gradual fading of the harmony process over half a century. It might
be assumed that this fading was a symptom of the obsolescence of the language: Mrs. Yee was the last speaker not only of Barbareño but of any Chumash language. An examination of the contexts in which harmony receded at various periods during this century indicates a more interesting explanation, based in large part on the circumstances of elicitation, and revealing a certain increase rather than decrease in skill on the part of the speakers.

1. Luisa Ignacio (1835–1922)

When Harrington first met Mrs. Ignacio in 1912 or 1913, she was nearly 80 years of age (Johnson 1988). The bulk of his work with her was carried out in 1914. Fieldnotes from this period show that the basic harmony process was quite systematic in her speech. Examples cited here are given first as in the original and then in a regularized spelling, since Harrington’s transcription conventions changed over time. The number below each word refers to the reel and frame in which the entry appears in the microfilm edition of the fieldnotes compiled by Elaine Mills and Ann Brickfield.

The contrast between alveolar and palatal sibilants can be seen in minimal pairs.

(1) The distinctiveness of palatality

\[
\begin{align*}
\text{slo'w} & \quad \text{slo'w} & \quad \text{flo'w} & \quad \text{slo'w} \\
19.666 & \quad \text{‘eagle’} & 19.666 & \quad \text{‘goal line’ (in shinny)}
\end{align*}
\]

Stems show consistent sibilant harmony: all sibilants within each stem match in point of articulation.

(2) Harmony within stems

\[
\begin{align*}
\text{skojis} & \quad \text{sqojis} & \quad \text{sfo} & \quad \text{sfo} \\
19.684 & \quad \text{‘kelp’} & 19.627 & \quad \text{‘flying squirrel’} \\
\text{tsaxs} & \quad \text{čaxs} & \quad \text{tfumáj} & \quad \text{čʰumaš} \\
19.880 & \quad \text{‘scum’} & 19.645 & \quad \text{‘Santa Cruz Islander’} \\
\text{swo’s} & \quad \text{swo’is} & \quad \text{t’imujáʃʷ} & \quad \text{čʰimuyaš} \\
19.0913 & \quad \text{‘feather ornament’} & 19.0690 & \quad \text{‘escurpe’ (fish sp.)}
\end{align*}
\]

The dynamism of the harmony process can be seen in the alternation of morpheme shapes in different environments. The basic forms of the Barbareño affixes...
that contain sibilants can be seen in (3) and (4). Sibilants in affixes in the left column are basically alveolar; sibilants in affixes on the right are basically palatal.

(3) Prefixes with sibilants

- **s-** 3.SUBJECT
- **sa?-** FUTURE/IRREALIS (FUT)
- **su-** CAUSATIVE (CAUS)
- **sili-** DESIDERATIVE

(4) Suffixes with sibilants

- **-us** 3.SG.BENEFATIVE (BEN)
- **-šś/-šas** REFLEXIVE/RECIPROCAL (RFL)
- **-čč** ‘affected by’
- **-šš** RESULTATIVE (RSLT)
- **-š** IMPERFECTIVE (IMPRF)
- **-(i)waš** ANTERIOR

The basic forms of morphemes are easy to determine from words containing no other sibilants. The paradigm in (5), for example, shows that the future-tense prefix contains an alveolar s, while the past tense suffix contains a palatal š.

(5) Basic forms in words without other sibilants

- **kwe’qe** ‘I sleep’
- **k-ša'-we?’ ‘I’m going to sleep’
- **kwe’waš** ‘I slept’

Either kind of sibilant triggers harmony in any sibilant to its left within the word. Examples of shift within stems can be seen in (6) below, within the causative prefix in (7), within the future prefix in (8), and within the third person subject pronominal prefix in (9). As before, the original transcription of each item appears on the left, followed by a regularized spelling. Below this spelling is the basic form of each morpheme, then a parsed gloss, then Harrington’s free translation.

(6) Shift within the stem

- **s’a**
- **s’ah**
- **[ahiwəš]**
- **[sah’ah-ıwaš]**
  tooth
  ‘tooth’
  tooth-PAST
  ‘old tooth’
<table>
<thead>
<tr>
<th>Stem</th>
<th>Pronunciation</th>
<th>Meaning</th>
<th>rifles</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>kisax²lin</td>
<td>kisax²lin</td>
<td>[sax ’inās]</td>
<td>šax²inaš</td>
<td>bake-RSLT</td>
</tr>
<tr>
<td>19.918</td>
<td>19.918</td>
<td></td>
<td></td>
<td>'bread'</td>
</tr>
<tr>
<td>1-bake</td>
<td>'I bake'</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(7) Shift within the causative prefix su-

<table>
<thead>
<tr>
<th>Stem</th>
<th>Pronunciation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>ksulepekëj</td>
<td>ksuleqpey</td>
<td>[sutatāx]</td>
</tr>
<tr>
<td>19.860</td>
<td>19.897</td>
<td></td>
</tr>
<tr>
<td>1-CAUS-trail</td>
<td>'I trail fishline behind boat'</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stem</th>
<th>Pronunciation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>ksasukùj</td>
<td>ksa?sukuy</td>
<td>[sukujas]</td>
</tr>
<tr>
<td>19.936</td>
<td>19.936</td>
<td></td>
</tr>
<tr>
<td>1-FUT-CAUS-boiled</td>
<td>'I am going to boil it'</td>
<td></td>
</tr>
</tbody>
</table>

(8) Shift within the future prefix sa?-

<table>
<thead>
<tr>
<th>Stem</th>
<th>Pronunciation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>19.850</td>
<td>19.850</td>
<td></td>
</tr>
<tr>
<td>1-FUT-flute</td>
<td>'I’ll play the flute'</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stem</th>
<th>Pronunciation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>19.0936</td>
<td>19.0935</td>
<td></td>
</tr>
<tr>
<td>1-FUT-CAUS-emerge</td>
<td>'I am going to take [them] out'</td>
<td></td>
</tr>
</tbody>
</table>

(9) Shift within the pronominal prefix s-

<table>
<thead>
<tr>
<th>Stem</th>
<th>Pronunciation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>sinive</td>
<td>sinive</td>
<td>[šinwefi]</td>
</tr>
<tr>
<td>19.637</td>
<td>19.637</td>
<td></td>
</tr>
<tr>
<td>3-kill</td>
<td>'he killed (it)'</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stem</th>
<th>Pronunciation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>siktsi?i</td>
<td>sikci?</td>
<td>[šišawí]</td>
</tr>
<tr>
<td>19.866</td>
<td>19.643</td>
<td></td>
</tr>
<tr>
<td>3-cloudy</td>
<td>'it is cloudy'</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stem</th>
<th>Pronunciation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>swe’i</td>
<td>swe?</td>
<td>[šaqšan]</td>
</tr>
<tr>
<td>19.867</td>
<td>19.805</td>
<td></td>
</tr>
<tr>
<td>3-sleep</td>
<td>'he is asleep'</td>
<td></td>
</tr>
</tbody>
</table>
2. Lucretia García (1877–1937)

Between 1928 and early 1931, Harrington worked with Mrs. Ignacio’s daughter, Lucretia García. Mrs. García’s speech shows the same patterns of harmony as that of her mother. All sibilants within stems match in point of articulation.

(10) Harmony within stems

<table>
<thead>
<tr>
<th>English</th>
<th>Chumash</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>yásisi</td>
<td>ʃ'épʃ</td>
<td>‘poison oak’</td>
</tr>
<tr>
<td>22.113</td>
<td>22.1029</td>
<td></td>
</tr>
<tr>
<td>‘sitting’</td>
<td>‘moss’</td>
<td></td>
</tr>
<tr>
<td>s'otítśi</td>
<td>ʃ'otítśi</td>
<td>‘yerba del manso’</td>
</tr>
<tr>
<td>22.140</td>
<td>22.133</td>
<td></td>
</tr>
<tr>
<td>‘zacate’ (plant)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ts’dqsq</td>
<td>tśaláyas</td>
<td>‘path, road’</td>
</tr>
<tr>
<td>22.158</td>
<td>22.9</td>
<td></td>
</tr>
<tr>
<td>‘water plant’</td>
<td>‘path, road’</td>
<td></td>
</tr>
</tbody>
</table>

The harmony process also extends across morpheme boundaries. Sibilants in any part of the word may be affected. Shift in the point of articulation of sibilants in stems can be seen in (11), in the causative prefix in (12), in the future prefix in (13), in the dual prefix in (14), and in the third person pronominal subject prefix in (15).

(11) Shift within the stem

<table>
<thead>
<tr>
<th>English</th>
<th>Chumash</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>she</td>
<td>shēhīwaʃ</td>
<td>bone-PAST ‘old bone’</td>
</tr>
<tr>
<td>22.19</td>
<td>22.346</td>
<td></td>
</tr>
<tr>
<td>‘she threw dirt on me’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>cápnúnit</td>
<td>ksa’sup’unus</td>
<td>1-FUT-dirt-VB-3.BEN ‘I’m going to throw dirt on</td>
</tr>
<tr>
<td>32.28</td>
<td>32.28</td>
<td></td>
</tr>
<tr>
<td>‘dirt-1.BEN’</td>
<td>‘I’m going to throw dirt on’</td>
<td></td>
</tr>
</tbody>
</table>

(12) Shift within the causative prefix su-

<table>
<thead>
<tr>
<th>English</th>
<th>Chumash</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>ksa’sust’owon</td>
<td>kšušu’liš</td>
<td>1-FUT-CAUS-boil ‘I’ll boil the mush’</td>
</tr>
<tr>
<td>22.419</td>
<td>32.452</td>
<td></td>
</tr>
<tr>
<td>‘I’ll boil the mush’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ksa’sust’owon</td>
<td>kšušu’liš</td>
<td>1-CAUS-by.hand-catch ‘I basted it’</td>
</tr>
<tr>
<td>22.419</td>
<td>32.452</td>
<td></td>
</tr>
</tbody>
</table>
The harmony is pervasive but not invariant in Mrs. García’s speech. In (16) the past-tense suffix fails to trigger harmony in the stem, in (17) the benefactive suffix fails to affect the stem, and in (18) the imperfective suffix triggers harmony in the causative prefix but not the future prefix.

(16) Disharmony between past and stem

`shehiwaš`  `s'hehiwaš`
22.19  bone-PAST
`'old bone'`
3. Mary Yee (1897–1965), granddaughter

From December of 1952 until his death in 1961, Harrington worked with Mary Yee, daughter of Mrs. Garcia and granddaughter of Mrs. Ignacio. Mrs. Yee also worked with Bill Bright for three days in June of 1952 and periodically with Madison Beeler from 1954 until her death in 1965. Material cited here is from her work with Harrington except where otherwise specified.

Mrs. Yee’s speech shows the same sibilant harmony within stems as that of her mother and grandmother.

Harmony within stems

- soyis ‘kelp’
- ʔačis ‘beard’
- mansisin ‘a freak’

Harmony across morpheme boundaries can be seen as well.

Harmony across morpheme boundaries

- ʂiʃaw
- s-iʃaw
- 3-hot

‘it is hot’
in (21) show disharmony between the past tense suffix and the third person subject prefix, the reflexive suffix and the subject prefix, the imperfective suffix and the subject prefix, a stem and the causative prefix, and an instrumental prefix and the preceding future tense prefix.

(21) Pervasive disharmony

\[
\begin{align*}
\text{s-kuti-\text{waś}} & \quad \text{s-kuti-\text{saś}} \\
3\text{-see-PAST} & \quad 3\text{-see-RFL} \\
\text{‘he saw (it)’} & \quad \text{‘he saw himself’} \\
\text{s-itwel-ś} & \quad \text{s-wól-ś} \\
3\text{-coil-IMPRF} & \quad 3\text{-untie-IMPRF} \\
\text{‘it [snake] coiled’ 32.44} & \quad \text{‘it is untied’ 32.456} \\
\text{s-exśwey} & \quad k\text{-saś-\text{uš-kuy}} \\
\text{CAUS-melt} & \quad 1\text{-FUT-by.hand-grasp} \\
\text{‘to melt something’} & \quad \text{‘I’m going shellfish hunting’}
\end{align*}
\]

4. Decay?

From the proliferation of disharmonic forms recorded from Mrs. Yee, it might at first appear that the process of sibilant harmony had simply begun to decay as the language was dying. A closer examination of the sources indicates that the issue is more complex and interesting, however. Writing in 1928 (1974: 5), Harrington described variation in harmony in Ventureño:

The assimilation is moreover less thorough with some speakers than with others. Especially in slow speech and when detached words are furnished it is apt to be absent.

Nineteenth-century records suggest that in Barbareño as well, harmony may not have always extended over words pronounced syllable-by-syllable, as would be done in dictation. On September 30, 1878, Alphonse Pinart recorded a Barbareño vocabulary from Martina and Balthazar (Heizer 1952). The transcription is quite good, but the speakers’ first language was Cruzén, another Chumash language originally spoken on Santa Cruz Island. Of the 33 words on the list with multiple sibilants, 26 show harmony. Some of the harmony is within stems, as in (21). In these examples, the first form is from Pinart, the second (in parentheses) the probable actual form, based on Harrington’s later notes.
(21) Harmony within stems: Pinart 1878

katsis (k'aci's) 'my beard'  
ksepsle (ksepsle) 'my lips'

kosos (kosos) 'my heel'
nunasiš (nunasiš) 'animal'

isaus (isawus) 'sweat'
alusiš (alusiš) 'badger'

iasis (yasis) 'poison ivy'
šoso (šoso) 'squirrel'

Other harmony is across morpheme boundaries. Examples of dynamic harmony, resulting in a shift in basic form, can be seen in (22).

(22) Harmony across morpheme boundaries: Pinart 1878

šišau 'it is hot'
šišaw
s-išaw
3-hot
'it is hot'

šečoho 'bad'
šečho
s-e-čho
3-NEG-good
'it is not good'

šamaxič 'to fight'
šamaxič
s-am-axin-š
3-INDEF-fight-IMPRF
'they are fighting'

Perhaps seven items in Pinart’s list show disharmony, although several of them may not actually be Barbareño words, since they do not match the usual Barbareño terms. One of these, 'my younger brother', shows a clash within the stem, but it should be noted that there is an Ineseño cognate with all alveolar sibilants.

(23) Disharmony within the stem: Pinart 1878

kitsič 'my younger brother'
kičič (cf. Ineseño -ičis)
k-ičič
1-younger.sibling
'my younger brother'

Several clashes occur across morpheme boundaries. One word, 'acorn mush (atole)' appears in the list twice, once with harmony, once with a clash.
Another vocabulary was recorded by Henry Henshaw for the Bureau of American Ethnology on November 10, 1884 (Heizer 1952). These words came from a native speaker of Barbareño, a 50-year-old man named “Hosto” (probably Juan Justo). The transcription, however, is more problematic than that of Pinart: sibilants are often not distinguished accurately even in words containing only one. Of the perhaps 38 forms with multiple sibilants, 25 show sibilant harmony, while 13 or fewer show disharmony. (Possible contexts of sibilant harmony are not always obvious from the notes alone; words are often run together, a single sibilant may be written with a series of symbols, vowels may be omitted, x is heard as s, and some words are simply not identifiable from the transcription.)

(25) Harmony within stems: Henshaw 1884

\[
\begin{align*}
\text{pa'-sas 'chin'} & \quad \text{pasas} & \quad \text{mi-icu'-mac 'Santa Cruz Island Indians'} & \quad \text{michumaš 'Santa Cruz Islanders'} \\
p?\text{lasas} & \quad 2\text{-chin} & \quad \text{LOC-Islanders} & \quad \text{‘Santa Cruz Islanders’}
\end{align*}
\]

(26) Dynamic harmony across morpheme boundaries: Henshaw 1884

\[
\begin{align*}
cik-cēp-cu' & \quad \text{šiqšepšun} & \quad \text{u-cac' ušleš} \\
\text{‘frost’} & \quad \text{s-iqšepšu-n 'grave'} & \quad \text{ušle'-š dig-RSLT ‘grave’} \\
3\text{-frost-VERB} & \quad \text{‘it is frosty’} \\
cak-ca' & \quad \text{šaqša} & \quad \text{ci-wål-lap-sitc šiwolnopšuč} \\
\text{‘dead body’} & \quad \text{s-aqša 'foam'} & \quad \text{s-iwolnopšu-n-š 3\text{-foam-VB-IMPRF ‘foam’} } \\
3\text{-dead} & \quad \text{'dead body’} \\
cēp-slē & \quad \text{‘lower lip’} & \quad \text{šepšleł} \\
ica-nak-skuc & \quad \text{‘eyebrow’} & \quad \text{ičanakuškuś}
\end{align*}
\]
(28) Disharmony across morpheme boundaries: Henshaw 1884

\[\begin{align*}
\text{snac} & \quad \text{‘point of knife’} \\
\text{šnoxš} & \\
\text{s-noxš} & \\
\text{3-nose} & \\
\text{‘its nose’} &
\end{align*}\]

In any case, it appears that in Barbareño even before the twentieth century, sibilant harmony may not always have extended across syllable boundaries in deliberate speech, not such a surprising fact, given the agglutinating nature of the language.

Within the twentieth century, however, a comparison of Harrington’s notes does show a definite fading of the harmony process over the years. Beeler (1970:17) suggested a possible explanation:

As the language approached extinction, this principle [sibilant harmony] came into conflict with another: inflectional morphemes, since they have unitary function, ought to be expressed by unitary phonemes or phoneme sequences—in effect, resistance to allomorphy. In its last speakers the language, in this segment of its structure, was in a condition of disequilibrium.

An examination of the contexts in which the disharmony appears indicates that Beeler was correct that speakers were regularizing forms; the cause of the regularization may not have been reduced phonological skill, however.

5. The contexts of disharmony

The disharmony varies not only with the periods at which the language was documented, but also with the contexts of elicitation, the particular morphemes involved, and the status of the expressions in which they occur.

5.1 Luisa Ignacio 1914: rare disharmony

Harrington began his work with Mrs. Ignacio early in his career and worked with her the least of the three women. He may have met her briefly in 1912 during a dialect survey trip, then contacted her between the 13th and 15th of March in 1913. As far as can be determined, most of his fieldnotes from her date from a period between March 5 and March 24, 1914. This may have been their last occasion to work together.
In general, sibilant harmony is regular in transcriptions of Mrs. Ignacio's speech. One exception does appear. In the verb *kosalwe?waš* 'I was going to sleep', the alveolar future tense prefix *sa?-* clashes with the palatal past tense suffix *-waš*. Both of these affixes usually participate fully in the harmony in Mrs. Ignacio's speech, as can be seen in (29).

(29) Usual harmony of future and past tense affixes

<table>
<thead>
<tr>
<th>Affixes</th>
<th>Meaning</th>
<th>Base Verb</th>
<th>Past Tense Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>ksa?we?we?e's</td>
<td>1-FUT-by-hand-scratch</td>
<td><em>kweše?</em></td>
<td><em>k-wai?we?i?</em></td>
</tr>
<tr>
<td>19.629</td>
<td>'I’ll scratch'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>k-śa?-uš-eš-eš</td>
<td>that-3-body-PAST</td>
<td><em>hoš</em></td>
<td><em>hoš-śa?miniwaš</em></td>
</tr>
<tr>
<td>19.631</td>
<td>'the corpse'</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The context in which the clashing form *ksalwe?waš* was elicited is significant. Mrs. Ignacio had just provided the unmarked verb *k-we?* 'I-sleep' and the past tense verb *k-we?l-waš* 'I-slept'. She next produced the future *k-sal-we?* 'I’ll-sleep', then was asked for its past tense counterpart 'I was going to sleep'. It appears that she simply added the past tense suffix *-waš* to the future form to complete the paradigm.

(30) The context of elicitation

<table>
<thead>
<tr>
<th>Verb</th>
<th>Meaning</th>
<th>Base Verb</th>
<th>Past Tense Form</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>kweš</em></td>
<td>‘I sleep’</td>
<td><em>kwelg</em></td>
<td><em>kwelg</em></td>
<td>19.852</td>
</tr>
<tr>
<td><em>kwene’waš’a</em></td>
<td>‘I went to sleep’</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>kwe’waš</em></td>
<td>‘I slept’</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>ksalwe?waš</em></td>
<td>‘I’ll sleep’</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>ksalwe?waš</em></td>
<td>‘I was going to sleep (but I didn’t)’</td>
<td><em>ksa’waš</em></td>
<td><em>ksa?we?l-waš</em></td>
<td>1-FUT-sleep-PAST</td>
</tr>
</tbody>
</table>

5.2 Lucretia García 1928–1930: occasional disharmony

In 1915, Harrington accepted a post as ethnologist at the Bureau of American Ethnology, but continued to travel extensively, recording languages all over the West and beyond. From February 7–17, 1928, and again in July of 1929, he worked with Mrs. Ignacio's daughter, Lucretia García. In April of 1930 he took Mrs. García back to Washington, D.C., for nine months. He thus worked considerably longer and more intensively with her than he had with her mother. Much of this work consisted of laborious word-by-word reelicitation or “rehearing” of material collected earlier from her mother and others.

In the earlier notes from 1928, there is somewhat less disharmony than in the later notes. Where the disharmony occurs, the context is significant, as it was for Mrs. Ignacio. The second verb in (31), for example, in which the pronominal
subject does not harmonize with the stem, was given immediately after the imperative, the same form but without a pronominal prefix. The forms were of course transcribed from dictation of a paradigm, not from a tape recording of spontaneous speech. It appears that Mrs. García simply began with the command then added the pronominal prefix to form the indicative, a process that would normally yield the correct results.

(31) Context of elicitation: early 1928

'akšít 'istánıw aqš-it
give-1.BEN
‘give me (a little)’

saḳšít 'istánıw s-aqš-it
3-give-1.BEN
‘he gave me (a little)’

The variation in harmony patterns through the notes suggests a progression in Mrs. García’s consciousness of morphological structure. In the early notes from 1928, one suffix fails repeatedly to trigger harmony in the pronominal prefix, the same one that acted independently in the speech of Mrs. Ignacio: the past tense -waš.

(32) Early transparency of anterior -waš: 1928

siqútwaš s-ixut-waš
22.32 3-burn-PAST
syuqpánwaš s-yuxpan-waš
22.40 3-sick-PAST
‘it burnt down some time ago’
‘she was sick’

It is not altogether surprising that the past tense suffix should pattern more autonomously than other morphemes. Its word-final position renders it more salient formally than would a word-medial position. It constitutes a full syllable. Its meaning is transparent and easily analyzed, since so many pairs of present and past tense verbs exist, differentiated only by the clear past tense meaning and the suffix -waš. The third person pronominal prefix s- similarly occupies a salient position within the verb: word-initial. It does not constitute a full syllable, but when preceded by a proclitic, it typically syllabifies leftward, so that a syllable break separates it from the following stem. Like the past tense suffix, it is open to analysis, since it appears in so many paradigms in which it alternates with nothing (the imperative) or with a different pronominal prefix. It also appears in nouns to specify possessors.

The past-tense suffix does not fail to trigger harmony every time it appears in Mrs. García’s speech, however. Variation in the harmony pattern shows the effect of lexicalization. The more highly lexicalized an expression is, the more likely
it is to exhibit regular harmony, since such words are usually processed as wholes rather than as sequences of identifiable morphemes. The difference can be seen by comparing the expressions in (33). The elicited term for ‘old bone’ shows restoration of the original shape of the root, but the placename, presumably highly lexicalized, shows harmony.

(33) Effects of lexicalization

\[
\begin{align*}
&\text{shehíwaʃ} & & s^h\text{ehiwaʃ} & & \text{‘old bone’} & & 22.19 \\
&\text{ʃhehiwaʃ hipåqatq} & & s^h\text{eh-íwaʃ hi pa}\underline{ax} & & \text{‘old whale bone’} & & 22.346 \\
& & & \text{bone-PAST} & & \text{(placename)}
\end{align*}
\]

As Mrs. García gained experience working with Harrington, it appears that she became conscious of additional morphemes. In early notes from 1928, the future prefix saʔ- consistently harmonizes, as in (34).

(34) Early harmony of the future prefix saʔ-: 1928

\[
\begin{align*}
k\text{ʃá}\text{ʃ}a\text{nq} & & k\text{-s}a\text{ʔ}-\text{aqšan} & & k\text{ʃa}^\prime\text{ʃ}k\text{ʃ}i\text{nwan} & & k\text{-s}a\text{ʔ}-\text{iškin-wun} \\
22.36 & & 1\text{-FUT-die} & & 22.84 & & 1\text{-FUT-save-3.PL} \\
& & \text{‘I will die’} & & & & \text{‘I’ll preserve them’}
\end{align*}
\]

In later notes, the basic form of the future is sometimes restored, first in paradigms and less lexicalized expressions, then more generally. The first two words in (35) were given in succession.

(35) Later transparency of the future prefix saʔ-:

\[
\begin{align*}
1928 \\
k\text{a}^\prime\text{l}a\text{tiʃ} & & qalatiʃ \\
22.0417 & & \text{‘belt’} \\
ksa^\prime\text{kálantiʃhʃ} & & k\text{-s}a\text{ʔ}-\text{qalanti-n-ʃ-ʃiʃ} \\
22.0417 & & 1\text{-FUT-belt-VERB-IMPRF-RFL} \\
& & \text{‘I’m going to belt myself’} \\
1930 \\
ksa^\prime\text{xuntipíc} & & k\text{-s}a\text{ʔ}-\text{xuntip-ʃ} \\
32.459 & & 1\text{-FUT-sew-IMPRF} \\
& & \text{‘I’ll sew it’}
\end{align*}
\]

Mrs. García’s experience in analyzing the language appears to have had at least as powerful an effect on the harmony as the speed of production, if not more. An early letter, dated April 15, 1928, shows full harmony even with the third
person pronominal prefix, although it must have taken even more time to write
the letter than it would have to dictate it. The first line contains the original
orthography, the second a phonemic equivalent.

(36) Early letter: harmony of pronominal prefix s-

\[
\begin{align*}
\text{Moh.} & \text{ke' no' no' shmish} - \text{hi hel} \text{ tupmekch} \\
\text{mok'ë} & \text{no?no? s-mi-s} \text{ hi he-l} \text{ tupmekč}
\end{align*}
\]

now very 3-cry-IMPRF the this-ART child

‘Already she is such a crybaby.’ ...

\[
\begin{align*}
\text{shoktoksh} \\
\text{s-oqtok-s}
\end{align*}
\]

3-lazy-IMPRF

‘she is lazy’ 23.522

Here of course the prefix does not constitute a syllable of its own. The same
letter shows the looseness of the boundaries between certain syllabic morphemes,
as in (37).

(37) Orthographic word divisions: some syllabicity

\[
\begin{align*}
\text{no' no' siy anakpna$} \\
\text{no?no? s-iy-anaqipnas}
\end{align*}
\]

very 3-PLURAL-beautiful

‘They are very beautiful’

5.3 Mary Yee, 1950s: little dynamic harmony

On December 20, 1952, Harrington returned to Santa Barbara, where he worked
intermittently with Mary Yee until April 19, 1953. In 1954 he retired there
permanently and worked with her almost daily until his death in 1961. He thus
worked longer with her than with any previous speakers.

Fieldnotes from the work with Mrs. Yee show significantly less harmony than
those from her mother or grandmother. Her status as the last speaker of the
language might suggest that the attrition of the harmony process could be
attributed to the breakdown of the language. A quite different explanation seems
more probable, however. Mrs. Yee was by no means a “semi-speaker”. She had
been raised by her grandmother, Mrs. Ignacio, with whom she spoke Barbareño
(Ernestine McGovran p.c. 1994). As a teenager she rejoined her mother, Mrs.
García, with whom she spoke Barbareño daily over most of the years until Mrs.
García’s death in 1937. Around that time Mrs. García’s brother Tomás returned
to Santa Barbara, and Mrs. Yee spoke Barbareño with him daily until his death
in 1952. This was the year that Bill Bright visited her and the year that Harrington returned to Santa Barbara to resume his work with the language. Mrs. Yee thus used Barbareño almost daily throughout most of her lifetime. She was, furthermore, by no means a passive linguistic consultant. She had begun reflecting on the language at least as early as 1931 when she participated in some of Harrington’s sessions with her mother. On March 25, 1931, Harrington noted that “Mar. has helped regularly on this bunch [fieldnotes “recorded Jan or Feb 1931 at SB”], being present in the middle of the afternoons and over in the late evenings.” Later, in the 1950s, while Harrington continued his work with her, Mrs. Yee kept her own notebooks, meticulously writing down every form herself, including special notations of her own on spelling. She was articulate and conscious of language, fluent and literate in English, Spanish, and Barbareño.

The careful fieldnotes of Bright, Harrington, and Beeler all indicate that just as in the speech of Mrs. Ignacio and Mrs. García, harmony was consistently preserved within stems. (Except where specified otherwise, material in this section is from work with Harrington.)

(38) Harmony within stems: Bright 1952

<table>
<thead>
<tr>
<th>Cardinal</th>
<th>Syllable</th>
</tr>
</thead>
<tbody>
<tr>
<td>?áčis</td>
<td>‘whiskers’</td>
</tr>
<tr>
<td>šipútiš</td>
<td>‘acorn mush’</td>
</tr>
<tr>
<td>čalayiš</td>
<td>‘road’</td>
</tr>
</tbody>
</table>

Particularly in material from the early 1950s, some harmony can also be seen across morpheme boundaries.

(39) Harmony across morpheme boundaries: Bright 1952

<table>
<thead>
<tr>
<th>Cardinal</th>
<th>Syllable</th>
</tr>
</thead>
<tbody>
<tr>
<td>syénci</td>
<td>šmáxač</td>
</tr>
<tr>
<td>syénci</td>
<td>s-maxat-š</td>
</tr>
<tr>
<td>3-hot</td>
<td>3-blind-IMPRF</td>
</tr>
<tr>
<td>‘it is hot’</td>
<td>‘(s/he is) blind’</td>
</tr>
<tr>
<td>sikci:n</td>
<td>šakšan</td>
</tr>
<tr>
<td>s-iqci:n</td>
<td>s-aqšan</td>
</tr>
<tr>
<td>3-cloudy-VERB</td>
<td>3-die</td>
</tr>
<tr>
<td>‘it’s cloudy’</td>
<td>‘he died’</td>
</tr>
<tr>
<td>s'čáčis</td>
<td>ša-kšwá:law</td>
</tr>
<tr>
<td>s-láčis</td>
<td>s-aqšwalaw</td>
</tr>
<tr>
<td>3-whiskers</td>
<td>3-like</td>
</tr>
<tr>
<td>‘his whiskers’</td>
<td>‘he likes him’</td>
</tr>
</tbody>
</table>
(40) Harmony across morpheme boundaries: Harrington 1953

\[
\begin{align*}
\text{siyusisonwun} & \quad \rightarrow \quad \text{iyalui\textsuperscript{i}imoi} \\
\text{s-iy-u\textsuperscript{\text{1}}-ismo} & \quad \rightarrow \quad \text{iy-alu\textsuperscript{i}ismo} \\
\text{3-PL-by.hand} & \quad \text{pl-\text{OBJ}} \\
\text{they gathered them [flowers]} & \quad \text{they are together}
\end{align*}
\]

The first disharmony appears in elicited paradigms. The disharmonic forms ‘was wet’ and ‘will get wet’ in (41) seem to have been built up progressively by the addition of affixes, rather than produced spontaneously as a unit.

(41) Early disharmony in certain contexts of elicitation: Harrington 1953

\[
\begin{align*}
\text{‘o’} & \quad \rightarrow \quad \text{‘water’} \\
\text{o\textsuperscript{\text{1}}c} & \quad \rightarrow \quad \text{‘wet’} \\
\text{s’otw\textsuperscript{\text{1}}wa\textsuperscript{\text{1}}} & \quad \rightarrow \quad \text{‘was wet’} \\
\text{s’a’otc} & \quad \rightarrow \quad \text{‘will get wet’}
\end{align*}
\]

Changes in the harmony over time, as reflected in the fieldnotes, suggest a progressive development in Mrs. Yee’s consciousness of morpheme structure. In earlier notes, the third person pronominal prefix s- sometimes harmonizes and sometimes does not.

(42) Some early alternations with 3rd person s-: Harrington 1953

\[
\begin{align*}
\text{š-axmaq-š} & \quad \rightarrow \quad \text{s-axmaq-š} & \quad \text{‘she is pregnant’} \\
\text{š-oxtopol-š} & \quad \rightarrow \quad \text{s-oxtopol-š} & \quad \text{‘it is full of dust’} \\
\text{š-i\text{}sawi} & \quad \rightarrow \quad \text{s-isawi} & \quad \text{‘it is summer’} \\
\text{š-aq\text{}šan} & \quad \rightarrow \quad \text{s-aq\text{}šan} & \quad \text{‘she died’}
\end{align*}
\]

In later notes the pronominal prefix rarely harmonizes. The conscious restoration of basic forms can be seen by comparing vocabulary dictated by Mrs. García in 1928 and the equivalents supplied by Mrs. Yee when Harrington reelicited the list with her in the 1950s.

(43) Reanalysis

\[
\begin{align*}
\text{Mrs. García} & \quad \text{Mrs. Yee} \\
\text{cetchó} & \quad \leftarrow \quad \text{setš’ó} \\
\text{š-e-\text{}čh\text{}o} & \quad \leftarrow \quad \text{s-e-\text{}čh\text{}o} \\
\text{3-NEG-good} & \quad \leftarrow \quad \text{3-NEG-good} \\
\text{‘it is not good’} & \quad \leftarrow \quad \text{‘it is not good’} & \quad 32.0452
\end{align*}
\]
The remnants of harmony involving this prefix that remain in material from Mrs. Yee show the effect of lexicalization. In the verb 'to teetertotter', an action necessarily performed by two parties, the third person singular sa- harmonizes with the following dual prefix -is-

(44) Harmonizing pronoun: Harrington 1953

śiśpinpinan
s-śiś-pin-pi-?nan
3-DU-RDP-through.air-go
'teetertottering up and down'

The future tense prefix sa?-, a full syllable with transparent meaning, shows some harmony in early work, but its basic form was usually restored, particularly in paradigms. The two forms in (45) appeared in sequence.

(45) Early alternations with future sa?:- Bright 1952

Kalśālanśīn
pālesa?lanśīn
1-NOM-FUT-eat
2-NOM-NEG-FUT-eat
'I'm going to eat'
'You're not going to eat'

Remnants of harmony involving other morphemes are even more clearly related to lexicalization. The words 'preacher' and 'sermon' in (46) are apparently lexicalized. They show full harmony of the stem with the imperfective suffix and nominalizer.

(46) Harmonizing root: lexicalization: Harrington 1953

?alalaśpāhac
?alal-aspahan-ś
NOM-advise-IMPRF
'preacher'

?alalaśpāhacʰiʔs
?aspan-ś-ʔlāʔs
advise-IMPRF-NOM
'sermon'
Immediately after these terms were transcribed, Harrington requested a paradigm based on the verb root 'preach/advise'. In the paradigm, the basic forms of both the root and the pronominal prefix were restored.

(47) Clashing root: restoration of basic form: Harrington 1953

\[
\begin{align*}
\text{saspahač} & \quad \text{saspahan-š} \\
3-\text{advise-IMPRF} & \quad \text{‘he is preaching’}
\end{align*}
\]

Alternation in the shape of the causative prefix su- shows similar effects of lexicalization. The lexicalized causative stems in (48) show full harmony.

(48) Harmonizing causative: lexicalization

\[
\begin{align*}
\text{šutewelit} & \quad \text{šutowič} \\
\text{s-su-štewe-it} & \quad \text{su-towin-š} \\
3-\text{CAUS-get.pricked-3.OBJ} & \quad \text{CAUS-fast-IMPRF} \\
\text{‘they [berries] pricked me’} & \quad \text{‘Hurry up!’}
\end{align*}
\]

\[
\begin{align*}
\text{kilšumišup} & \quad \text{šuKotč} \\
\text{kil-su-mišup} & \quad \text{s-su-qon-š} \\
\text{a.little-CAUS-down} & \quad 3-\text{CAUS-laugh-IMPRF} \\
\text{‘Lower it a little!’} & \quad \text{‘it is funny’}
\end{align*}
\]

In more transparent causative constructions, however, the basic form of the causative prefix is restored.

(49) Clashing causative: transparency

\[
\begin{align*}
\text{kuwayatc} & \quad \text{kalsa’suixti-č} \\
k-su-wayan-š & \quad \text{k-al-sa?-su-ixti-č} \\
1-\text{CAUS-swing-IMPRF} & \quad 1-\text{NOM-FUT-CAUS-roof-VB.IMPRF} \\
\text{‘I’ll swing her’} & \quad \text{‘I am going to roof [my house]’}
\end{align*}
\]

\[
\begin{align*}
\text{ksa’sušantap} & \quad \text{sutipšewun} \\
k-sa?-s-uš-antiap & \quad \text{s-s-uipše-wun} \\
1-\text{FUT-CAUS-by.hand-enter} & \quad 3-\text{CAUS-fall.down-3.OBJ} \\
\text{‘throw something into the house’} & \quad \text{‘he knocks them down’}
\end{align*}
\]

Mrs. Yee was obviously conscious of the phenomenon of sibilant harmony. She was not only a good speaker, she had also become a knowledgeable linguist. Her work particularly with Harrington was methodical; much of their time together
was spent reeliciting every word Harrington had recorded from earlier speakers and those recorded by others before him. They also assembled small paradigms. Mrs. Yee not only dictated the forms for Harrington, she also wrote them herself, examining their similarities and changes in shape. At some points her analysis even caused her to reanalyze roots. Some of these alternations in the shapes of roots can be seen in (50).

(50) Hypercorrection

1953  
sworş  
s-woqş  
3-spine  
'spine, backbone (of it)'  

1954  
siysaksanwaš  
s-iy-sal-aqšan-waš  
3-PL-FUT-die-PAST  
'they were going to die'  

1955  
"atsišis or is it atcišis"  
(ačišis)  
'tweezer clams'

6. Conclusion

John Peabody Harrington's extensive documentation of the speech of three generations of Barbareño Chumash speakers over the first half of the twentieth century shows a fading of sibilant harmony. What at first might appear to be decay in a phonological process, attributable to reduced competence on the part of speakers of a dying language, is better explained as the result of their increasing awareness of the morphological structure of their language. The more experience they had with linguistic fieldwork, the more often they restored the basic forms of morphemes in their collaboration with linguists. As originally suggested by Harrington, some disruption in the harmony process may always have occurred on occasion in deliberate speech. As suggested by Beeler, the increased disruption may have been associated with obsolescence of the language. Yet it was probably not due to diminished phonological skill on the part of the speakers. If anything, it may have resulted from a desire to preserve as pure a form of the language as possible in the face of its impending demise. It has been possible to trace the regression of the process only because of the extensive, painstaking work of Harrington over a half century, and because of his scrupulous fidelity to the data. Although he was well aware of both the underlying forms of morphemes and the process of sibilant harmony, he recorded every form just as it was produced. If only taperecorders had been more readily available during that
period, it might have been possible to take the next step: comparing the regularity of the process in spontaneous conversation and in the transcription of paradigms.

Although we cannot know whether allomorphy was ever repaired in spontaneous speech, the elicited material reveals interesting facts about speakers’ awareness of morphological structure. The harmony process did not fade uniformly in all contexts. Basic shapes of morphemes were restored first in elicited paradigms, where attention was directed to similarities and differences in form. Furthermore, all morphemes were not treated uniformly. The first morphemes to be regularized were easily analyzed roots and affixes, those with salient forms and transparent meanings. The third person subject prefix was regularized early, for example, followed by the future prefix, and only later by the causative. The fading of the harmony process also reveals differences in degrees of lexicalization among expressions: more lexicalized forms, such as ʔataˈalašpáhač ‘preacher’ or su-mišup ‘to lower’ proved more resistant to regularization than less lexicalized expressions such as saspaháč ‘he is preaching’ or s-ixti ‘to roof (a house).’

Bill Bright offered good advice in alerting us to the complex patterns exhibited by sibilants in the aboriginal languages of California. Barbareño Chumash, like several other California languages, contains both apico- and blade-alveolar hissing sibilants, in addition to palatal hushing sibilants. The hissing and hushing sibilants alternate in both expressive and structural contexts. According to Mrs. Ignacio, the alternation was used expressively to portray Coyote’s language in tales (1914: 19.917). The word kiniskanuks would be substituted for kíniskatukf, for example. (“[kálukf] is said when the gas escapes from belly of an animal, like cattle.”) The structural alternation of sibilants in patterns of sibilant harmony is not only interesting in itself, it also allows us glimpses into speakers’ consciousness of morphological structure and varying degrees of lexicalization. Overall, it holds as much interest for us in its “decline” as in its prime.

Note

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