Foot structure in Eastern Pomo

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Outline of talk

• Pomoan family
  – quick overview

• Eastern Pomo
  – primary stress on second syllable
  – various patterns of initial stress

• Foot type
  – theoretical considerations
  – relation to historical patterns
POMOAN
Pomoan languages

California

Northern

Central

Southern

Kashaya

Northeastern

Southeastern

Eastern
Internal relationships

Proto-Pomo

Western Branch

Southern Group

Kashaya  Southern  Central  Northern  Northeastern  Eastern  Southeastern

(Oswalt 1964)
EASTERN POMO STRESS
Essential patterns

• Second syllable of most words
  – including all prefixed roots
  – alternating secondary stress
• First syllable
  – monosyllabic roots
    • some by historical aphesis
  – certain disyllabic or longer roots
    • some are systematic exceptions
    • others appear to be simply irregular
• Data from McLendon (1973, 1975)
Second syllable : Prefixed

• Most verbs contain an instrumental prefix
  – found in all the Pomoan languages
  – always /CV:/ in Eastern Pomo

• Stress regularly falls on the next syllable
  – stress on the root, usually monosyllabic

  si:-dí:l     ‘move along in water’
  ka:-ná:?wa:  ‘crowd against something’
  du:-qáṭ’ki: ‘pull off, pluck’
  ma:-t’óqaya ‘roasted (the meat)’
Second syllable : No prefix

• A few polysyllabic words of one [?] morpheme
  mi:tséqaray ‘frog’
  bu:ráqal ‘bear’
  ku:húla ‘north’
• Many disyllables of various shapes
  qa:lí ‘sky’
  xa:má: ‘foot’
  yu:húy ‘pinole’
  ša:qá:x ‘quail’
• All similarly have an initial /CV:/ syllable
  – more on this later
First syllable : On root

• Monosyllabic roots take initial stress
  – initial syllable for these unprefixed roots
    ní́s-a        ‘bad-PL’
    wá-du:ki:    ‘to go, to leave (SG)’
    kʰíl-qayakiya  ‘caused to hang’
• Includes words of just one syllable
    kʰá        ‘spider’
    ts’é:       ‘mushroom’
    ?á:m       ‘thing’
First syllable : Initial CVC

• Initial CVC is not frequent, but takes stress
  – some are perhaps (historical) compounds
    bόṭʰqo  ‘forearm’
  – reduplicated roots, now lexicalized
    líkʰlikʰ  ‘sparrow hawk’
    ṭíxṭix  ‘snipe’

• Verbs with initial CVC are monosyllabic roots
  – therefore expect initial stress anyway
    kámli:  ‘tip over, wreck (a car)’
    ?éčʰki:  ‘sneeze’
First syllable: Aphesis

• Initial stress after historical aphesis
  – loss of initial *hV or *ʔV syllable
    ṭʰó:no ‘seaweed’ < *ʔoṭʰóno
    lámi ‘gopher’ < *ʔaláme
    ṭʰíy-a ‘big (PL)’ < *ʔahṭʰíy
    qól-a ‘long (PL)’ < *ʔahqól
  – last two also have monosyllabic roots now

• Preservation of stress
  – despite change in relative position
First syllable: Word classes

• Some kinship terms
  šówmits’  ‘daughter-in-law’
  ké:xa    ‘father’s younger brother (VOC)’
  bá:-t’ile  ‘paternal grandfather’ (old compound)

• All the numbers
  – others are monosyllabic, or compounds
    k’áli  ‘one’
    lé:ma  ‘five’
    ts’á:di  ‘six’
    hádaqal  ‘ten’
First syllable : Loanwords

• Some from neighboring languages
  háyu ‘dog’ (widely diffused)
  hí:baya ‘men’ (identical to NE Pomo)

• Initial stress in more recent loanwords
  – similar to SE Pomo
  – perhaps borrowed through it
    káhonʔ ‘box’ < Sp. cajón
    pápelʔ ‘paper’ < Sp. papel
    kálawa ‘nail’ < Sp. clavo
    rí:koʔ ‘rich’ < Sp. rico
First syllable : Unknown origin

• Can fall on a long vowel
  dú:šux  ‘quiet’
  ts’á:mal  ‘fly’
  bá:qay  ‘manzanita berry’
  dó:la-ki-baʔ  ‘let’s pound acorns’

• Or a short vowel
  káyu  ‘at the beginning’
  ţ’ásulim  ‘string, rope’
  q’ášalap’  ‘cottonwood’

• Whatever the source, they exist
  – need account of lexical exceptions to stress pattern
Summary

• Stress usually on second syllable
  – often equals “initial in root”
  – never later than this position

• First syllable in various contexts
  – to keep stress on monosyllabic root
  – certain word classes
  – outright exceptions
  – CVC syllables
    • examples too few to assert phonological pattern
    • could just be marked as additional exceptions
FOOT STRUCTURE
Binary iteration

• McLendon (1975: 12)
  – “a sort of two-beat meter of alternating lighter and more heavily stressed syllables (da dá da dá da dá)”
  – Alludes to an iambic structure
    • lighter stress + heavier stress
    • but that would be analysis rather than observation

• Observation just provides the location of prominences
  – not the metrical constituency
  – this requires a closer look
Iambic or trochaic feet

• Iambic feet
  – right headed
  – fully aligned at left
    (σ ṙ) (σ ḋ)
• Trochaic feet
  – left headed
  – initial-syllable extrametricality
    <σ> (ṅ σ) (ṅ)
• Which of these is the better analysis?
  – we’ll look at several reasons to prefer the trochee
Quantity sensitivity

- **Iambs** tend toward light+heavy syllables
  - many iambic languages have lengthening of the stressed syllable to enforce this (Hayes 1985, 1995)
- **Eastern Pomo** is quantity-insensitive
  - initial CV: + CV is common, but an unusual iamb
    - ? (mi: tsé) qa ray
- **Trochees** often ignore quantity
  - syllabic trochees, more specifically
- This typology favors the trochaic analysis
  - <mi:> (tsé qa) ray
Initial length

• All pre-tonic syllables are /CV:/
  – extremely regular process
    • scattered exceptions in McLendon appear to be typographical errors
• Originates in loss of laryngeal increments
  – common *CVhCÚ, *CVʔCÚ > CV:CÚ
    • about half of proto-words include an increment
    • results in widespread pattern of pre-stress /CV:/
  – evidently generalized to all pre-tonic syllables
    • limited parallels in Central Pomo /a:/
      – this language also lost all increments

this page was updated after the presentation
Initial length

• Lengthening within an iamb would necessarily apply to the weak branch
  – compare Norton Sound Yupik (Hayes 1995)
  – gemination before /CV:/ yields a new stress
    • i.e. two feet: (CVCÍ:) → (CÍC)(CÍ:)

• More sensible in a trochaic system
  – CV: syllable precedes the foot
  – perhaps a stage when it was footed separately and subject to a bimoraic minimum??
    • possible parallel in Southern, clearly trochaic
Irregular stress

• Iambic feet
  – recall second-syllable stress
    \((\sigma \dot{\sigma}) (\sigma \dot{o})\)
  – initial stress has a degenerate foot
    \((\dot{\sigma}) (\sigma \dot{o})\)
  – or a word-specific reversal in foot headedness
    \((\dot{o} \sigma) (\dot{o})\)

• Trochaic feet
  – recall second-syllable stress
    \(<\sigma> (\dot{\sigma} \sigma) (\dot{o})\)
  – initial stress has no extrametricality
    \((\dot{o} \sigma) (\dot{o})\)
Representing irregularity

• Iambic approach is conceivable
  – underlying stress for initial iambic stress, forcing a degenerate foot
  – foot reversal would be more unusual
• But word classes and lexical exceptions often have different extrametricality
  – e.g., English verb/noun stress pairs
  – verb recórd, noun récord
• Again, the trochaic analysis is more in line with typological patterns
Diachronic context

• Eastern Pomo stress seems to be quite similar to the proto-language
  – reconstructable stress on the second syllable
• That pattern may originate from a root-stress system
  – combined with pervasive instrumental prefixes
  – ignored for stress, since not part of the root
• Reanalyzed to skip all initial syllables
  – extrametricality rather than morphology
**Pomoan stress patterns**

<table>
<thead>
<tr>
<th></th>
<th>‘duck’</th>
<th>‘bear’</th>
<th>‘woman’</th>
<th>‘angelica’</th>
</tr>
</thead>
<tbody>
<tr>
<td>K</td>
<td>q’ayál</td>
<td>buṭaqá</td>
<td>ʔima:ta´</td>
<td>baʔč’owá</td>
</tr>
<tr>
<td>S</td>
<td>k’á:yan</td>
<td>bu:ṭáka</td>
<td></td>
<td>baʔč’ówha</td>
</tr>
<tr>
<td>C</td>
<td>k’yá:n</td>
<td>p’ṭáka</td>
<td>má:ta</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>k’ayán</td>
<td>bitá:</td>
<td>má:ta</td>
<td>bač’ówa</td>
</tr>
<tr>
<td>NE</td>
<td>k’ayá:-</td>
<td>bóro-</td>
<td>himá:ta</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>q’a:yá:n</td>
<td>bu:ráqal</td>
<td>má:- archaic</td>
<td>ba:k’ó:</td>
</tr>
<tr>
<td>SE</td>
<td>k’yán</td>
<td>bţéqal</td>
<td></td>
<td>?k’ó-b</td>
</tr>
<tr>
<td>PP</td>
<td>*q’ayán</td>
<td>*buṭáqa(l)</td>
<td>*ʔimá:ta</td>
<td>*baʔk’ówa</td>
</tr>
</tbody>
</table>

*K on 2nd/3rd syllable, S on penult, NE less consistent: the other languages show stress on second (proto-)syllable*
Diachronic changes

• Shift from 2nd to 1st syllable
  – scattered examples in E, N, C
  – common in NE

• Deletion yields initial stress
  – syllable aphesis in E, N, C, some in NE
  – all first-syllable vowels in SE, most in C

• Major changes in two languages
  – penultimate in S
  – extrametricality plus iambs in K
Proto-Pomo analysis

- Left extrametricality and trochees
  - skipping of prefix → skipping of any first syllable
- Some languages abandon extrametricality
  - SE deletes the extrametrical syllable
  - S completely replaces the system
  - NE might have variable extrametricality
- Majority of the languages maintain it
  - despite how marked it is cross-linguistically
  - even more marked to have 3rd syllable stress in K
Degenerate feet

• Proto-Pomo had frequent degenerate feet
  – in disyllables with final CV
  – made necessary by extrametricality
• Most languages maintain this element
  – including Eastern Pomo
  – more words shaped CV due to aphesis
  – SE has even more since it loses vowel length
• Two marked metrical elements
  – both survive widely
  – support each other formally
Conclusions

• Left extrametricality is cross-linguistically rare
  – yet it survives in most of the languages
• K keeps extrametricality but switches to iambs
  – may have arisen due to very special circumstances
  – interaction with C that lost most initial syllables
• E is perhaps the closest model for Proto-Pomo
  – regular second-syllable stress using trochees
    • possibly a few initial exceptions or variation in PP
Selected references

Selected references