

Morphology-sensitive Stress in Southern Hill Nisenan

Skye J Anderson*

Jonathan A Geary†

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1 Introduction

1.1 Nisenan language revitalization

Nisenan is a Maiduan language that has been spoken historically in California’s Central Valley and the western foothills of the Sierra Nevada.

- (1) Four major dialects of Nisenan (Golla 2011):
 - a. Northern Hill
 - b. Central Hill
 - c. Southern Hill
 - d. Valley

Several Nisenan heritage communities are actively revitalizing the language. Ongoing revitalization efforts at the Shingle Springs Band of Miwok Indians focus primarily on southern Nisenan dialects (1.c,d).

Revitalization efforts are largely document-based, relying heavily on language data collected primarily by linguists and ethnographers in the early 20th century.

1.2 Bill Joe’s oral narratives

By far the largest and most comprehensive language resource for Southern Hill Nisenan is a \approx 21,000-word corpus of oral narratives.

- Narrated by William Joseph, a.k.a Bill Joe, a native speaker of the Southern Hill dialect and a well-respected story-teller.
- Covers a wide range of genres (traditional, autobiographical, etc.)

*No affiliation (skyejanilleanderson@gmail.com)

†Shingle Springs Band of Miwok Indians (jgeary@ssband.org)

- Elicited & transcribed by Hans J. Uldall, a Dutch phonetician, during his field-work in the early 1930’s.
- Compiled and published by William Shipley in Uldall & Shipley 1966.

Despite being the primary source of multiword utterances for the southern dialects of Nisenan, very little linguistic work has been done with Bill Joe’s narratives since Uldall’s initial analyses.

To facilitate working with this corpus, Geary has digitized and morphologically parsed it as part of his work in the SSBMI Language Department.

Here we use this corpus to analyze Bill Joe’s stress system, which is of particular interest for language revitalization purposes...

1.3 Nisenan stress

Northern Hill Nisenan: Primary stress falls on the leftmost syllable of every word (Shipley & Smith 1979:171; no mention of secondary stress).

Central Hill Nisenan: Primary stress falls on the leftmost syllable of every word; no secondary stress (Eatough 1999:4).

- Paul (1967): stress surfaces on a non-initial syllable in *some* words.

Other geographically-contiguous Maiduan languages likewise exhibit a left-edge preference (e.g. Robbins 1991, Ultan 1967).

Southern Hill Nisenan as spoken by Bill Joe exhibits highly variable stress placement with a *right-edge* tendency.

The stress systems of other southern Nisenan speakers, e.g. Tom Cleanso (Valley Nisenan), also show some right-edge tendencies.

So stress represents a major source of dialect variation that we need to understand to effectively revitalize and teach the southern dialects of Nisenan.

1.3.1 Past work on Southern Hill stress

Uldall (1954:13-14) briefly describes Bill Joe’s stress system, noting some general tendencies.

- Nouns: typically one stress on the rightmost syllable, with various exceptions.
- Verbs: typically one stress on the syllable preceding the tense suffix (excluding present tense), with various additional exceptions relating to compounds, specific morphemes, and inflectional categories.

Uldall’s conclusions:

- “No definite rule can be given as to the place of the stress in words” (p. 13)
- “It would hardly be possible to go on listing rules and exceptions.” (p. 14)

Sidenote: Uldall’s observations lead Shipley & Smith (1979:171) to characterize Bill Joe’s prosodic system as “aberrant and problematic”.

- Shipley is a well-respected figure in Maiduan language circles; his harsh appraisal of Bill Joe’s language may have contributed to the subsequent lack of engagement with these materials.

1.4 Aims of this work

Uldall’s description of Bill Joe’s stress, while typical for a brief phonological sketch of the time (written in 1932), does not provide a sufficient foundation for the language teaching and revitalization efforts at Shingle Springs.

Our goal is to re-analyze Bill Joe’s stress system and develop a practical, a-theoretic description of it that will be useful to the SSBMI Language Department.

This work is in-progress; today we will focus on only a part of it.

Ultimately, we will argue that, while different from neighboring dialects, Bill Joe’s stress system is largely regular, with surface variability arising from morpheme-specific restrictions on the domain of stress assignment.

2 Preliminaries

All data is drawn from the ~21,000-word corpus of Bill Joe’s oral narratives (Uldall & Shipley 1966).

Nisenan is a highly-inflected suffixing language; most words are multimorphemic and multisyllabic.

Syllables may have simple onsets and simple codas; vowel-vowel sequences arising through suffixation are resolved by deleting the second vowel, as in (2.a) below¹.

Stress does not appear to be weight-sensitive: Long vowels need not be stressed, as in (2.b), and syllables with codas need not be stressed (2.c).

| | | | | | | |
|-----|----|---|----|---|----|---|
| (2) | a. | méy.t’om mej-t’o- im give-PST-REAL ‘gave’ | b. | c’uu .yé c’uuye mush ‘mush’ | c. | mom .ná mom-na water-ALL ‘to the water’ |
|-----|----|---|----|---|----|---|

Stress count is not straightforwardly connected to syllable count: There are short words with multiple stresses (as in (3.a) below), and long words with only one stress (3.b).

| | | | | |
|-----|----|---|----|---|
| (3) | a. | máa.tín maati-in do.thus-SS ‘do thus’ | b. | dəə.’o.mis.we. yée .t’o.ma.toy dəə-’omis-weyee-t’o-im-atoy laugh-REFL-go.along-PST-REAL-REP ‘laughing at himself as he went (it is said)’ |
|-----|----|---|----|---|

That said, the vast majority of multisyllabic words exhibit only one stress (90.5% of tokens), with fewer having 2 stresses (9.2%), and even fewer having 3 – 5 (<0.4%).

Today, we will focus on stress placement in words which receive only one stress.

When and where additional stresses occur is an important question, but we take the most frequent case as a starting point.

¹We present Nisenan language data using the Shingle Springs Band of Miwok Indians’ Language Department’s orthography, with the addition of periods to indicate syllable boundaries, and the following abbreviations: 1 = ‘1st person’, 2 = ‘2nd person’, 3 = ‘3rd person’, ACC = ‘accusative’, AG = ‘agentive’, ALL = ‘allative’, ATTR = ‘attributive’, CAUS = ‘causative’, CONTR = ‘contrastive’, DS = ‘different subject’, DU = ‘dual’, FUT = ‘future’, HAB = ‘habitual’, INSTR = ‘instrumental’, NMLZ = ‘nominalizer’, NOM = ‘nominative’, OPT = ‘optative’, PL = ‘plural’, PST = ‘past’, Q = ‘question marker’, REAL = ‘realis’, REFL = ‘reflexive’, REP = ‘reportative’, SG = ‘singular’, SS = ‘same subject’.

3 Analysis

3.1 Hypothesis

Unlike the Central and Northern Hill dialects, Southern Hill Nisenan stress is sensitive to morphological structure.

- As we saw above, phonological properties of words appears to have little influence on stress placement in Southern Hill Nisenan.
- The “rules and exceptions” Udall mentions in his description of Bill Joe’s stress mostly reference morphological properties.
- The more distantly related Sahaptian languages also exhibit right-edge stress tendencies, with stress placement being sensitive to lexical and morphological constraints (e.g. Crook 1999, Jansen 2010:52-57).

3.2 Results

The data is consistent with this hypothesis: We have found a set of suffixes which are consistently excluded from the domain of stress assignment; any syllable whose nucleus is furnished by an excluded morpheme is ineligible for stress.

Once these exceptional morphemes are factored out, stress is assigned according to a straightforward algorithm: stress the rightmost eligible syllable.

3.3 Evidence

The data in (4) on the facing page consist solely of morphemes that are included in the domain of stress assignment (boxed on the first gloss line).

Crucially, the behavior of a given suffix is highly consistent across the corpus.

- Sidenote: As in any sizeable corpus, there are a few exceptional tokens. We are presenting the overwhelming trends.

- (4) Stress falls on the rightmost syllable within the domain of stress assignment (boxed on line 1); all morphemes are included in that domain.

| | | | |
|----|--|----|--|
| a. | me.yís mey-is give-1SG.OPT ‘I will give’ | d. | mom.ná mom-na water-ALL ‘to the water’ |
| b. | me.yi.c’é mey-ic’e give-3.DS ‘(they) give’ | e. | k’aa.to.hóm k’aato-ho-im play-NMLZ-NOM ‘game’ |
| c. | me.yi.c’e.té mey-ic’e-te give-3.DS-CONTR ‘(they) didn’t give’ | f. | p’a.t’a.pe.ti.pém p’at’a-pe-ti-pe-im baby-AG-CAUS-AG-ATTR ‘midwife’ |

The data in (5) contain some morphemes that are ineligible for stress (bolded on the second gloss line). Again, a given suffix behaves quite consistently.

- (5) Stress is still assigned to the rightmost syllable within the domain of stress assignment; some morphemes are excluded (bolded on line 2).

| | | | |
|----|--|----|--|
| a. | méy wes mey- wes give-FUT ‘will give’ | d. | ’i.síp wes.ka ’isip- wes-ka go.out-FUT-3SG.Q ‘(it) will come out?’ |
| b. | mey.ha.há t’om mey-haha- t’o-im give-HAB-PST-REAL ‘always gave’ | e. | ’i.síp we si.c’é ’isip- wes-ic’e go.out-FUT-3.DS ‘(different subject) will go out’ |
| c. | méy t’o.ma.toy mey- t’o-im-atoy give-PAST-REAL-REP ‘gave (it is said)’ | f. | ’i.mit we sín ’imit- wes-in go.in-FUT-SS ‘(same subject) will go in’ |

3.4 The nitty-gritty

Can we make further generalizations about which morphemes are excluded from the domain of stress assignment?

Short answer: Some, but they're limited.

3.4.1 Nominal morphology

Nominal and nominalizing suffixes (e.g. NOM, ACC, ATTR, INSTR) consistently participate in the default stress assignment.

Exceptions appear to be driven by specific noun stems, which may be lexically-specific for stress.

- Compare *teebey-e* 'boy-ACC' → *teebeyé* (default stress assignment) to *nisenaan-e* 'Indian-ACC' → *nisenáane* (stress falls on the antepenult despite the presence of a stress-eligible syllable further right).

This appears to be a property of the noun *nisenaan*, and not related to the suffixes it combines with.

From a teaching perspective, which is what we are most interested in, identifying and teaching exceptions like this is not too onerous.

3.4.2 Verbal morphology

- (6) There are two coherent categories of verbal suffixes that are excluded from stress assignment:
 - a. Tense suffixes: past *-t'o*, future *-wes*²
 - b. Inflectional morphemes specified for second person:
2SG.OPT *-bene*, 2PL.OPT *-beem*, 2SG.Q *-kani*, and 2PL.Q *-keem*.
 - The 2.DS suffix *-menc'e*, surfaces consistently as *-méc'e*, **menc'é*, **-menc'e*. More in a moment.
 - The 2DU.OPT *-baam* appears only once and occurs with stress.
- (7) The remainder of excluded suffixes are more of a grab-bag:
 - a. Reportative suffix *-atoy*
 - b. Generic question marker *-ka*
 - c. 3rd person optative *-bo*
 - d. A suffix whose gloss is unclear right now *-'as(i)*

²Uldall (1954) mentions that the 'present tense' suffix is an exception; this was a mis-analysis of the realis suffix *-im*, which does participate in default stress assignment.

- (8) There is a small group of suffixes whose behavior is conditioned by additional factors, such that they appear to take stress on their penultimate syllable:
 - a. Recall the second person DS marker *-méc'e* in (6.b); we suspect it is multimorphemic, with the final suffix ineligible for stress.
 - b. Another generic question marker *-ibe* also permits stress on the penult only, e.g. *-ibe*, **-ibé*. Again, we have reason for thinking this is multimorphemic, but our analysis is ongoing.
 - c. The contrastive suffix *-te* is eligible for stress (e.g. *mey-ic'e-té* 'no matter what they gave'), unless it follows the negation suffix *-men*, e.g. *mey-mén-te* 'instead did not give' (**mey-men-té*).
 - *-te* is far more frequent in combination with *-men* than alone.
 - This may be grammaticalized contrastive stress.

4 Summary

We hypothesized that the surface variability of stress placement in Bill Joe's Southern Hill Nisenan narratives stemmed from morphological structure.

Inspection of the corpus indicates that this is accurate: When the behavior of specific stress-ineligible morphemes is factored out, stress is assigned according to a straightforward algorithm (stress the rightmost eligible syllable).

Taking into account the morpheme-specific restrictions mentioned above, the proposed stress pattern accounts for 91.6% of the single-stress multisyllabic tokens in the corpus (83% of all multisyllabic tokens).

5 Next steps...

Here we considered only the most frequent case - words with one stress. Going forward we will consider when and where additional stresses get assigned.

- We suspect compounding to be the source of many of the words exhibiting multiple stresses.
- We also suspect that there are some roots with lexically-specified stress.

6 Future directions

We are also interested in Bill Joe’s stress system from a diachronic perspective:

- It closely resembles the stress systems of other Plateau Penutian languages, namely the Sahaptian languages Sahaptin/Ičishkíin and Nez Perce.
- The Sahaptian languages also have stress systems that are sensitive to lexical and morphological factors, and tend to place stress near the right edge (e.g. Crook 1999, Jansen 2010:52-57).

Rather than being “aberrant”, Bill Joe’s Southern Hill Nisenan may have retained an older Plateau Penutian stress system while precursors of the more northern Nisenan dialects and other Maiduan languages developed a less variable stress system.

7 Discussion

Our goal is to support language teaching and revitalization activities at the Single Springs Rancheria and in other Nisenan heritage communities.

We feel that our characterization of Bill Joe’s stress lends itself better to practical application (teaching, revitalization) than those in previous work.

We also hope that it can help dispel any negative impression of Bill Joe’s language that one might get from previous literature (c.f. the “aberrant and problematic” comment from Shipley & Smith).

7.1 Implications for language revitalization

Understanding Bill Joe’s stress system may help to elucidate the systems of less well-documented southern Nisenan speakers, like Tom Cleanso and Pamela Adams (Valley Nisenan), which also show right-edge tendencies (e.g. Kroeber 1929:282).

This work will help Language Department staff at the Shingle Springs Rancheria assign stress to novel utterances in ways that are authentic and faithful to the speech of past speakers.

The Language Department is also starting to represent stress orthographically, so understanding the stress systems of Bill Joe and other southern Nisenan speakers is important.

This work also highlights the value of the digitization and quantitative analysis of language resources, which can help reveal generalizations that eluded past scholars working without the benefit of computational resources.

7.2 Implications for language teaching

From a teaching perspective, we would recommend introducing the basic stress pattern (stress the rightmost syllable) early and teaching the stress behavior of each morpheme at the time the morpheme is introduced.

In this way, students should be able to accurately assign stress within their vocabulary, and have a heuristic for stressing new words which will often, if not always, be right.

A cheat sheet listing exceptional morphemes could also be provided to students for reference.

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