

Evidence of W-words in Twentieth-century Mahican: An Analytical Review

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Remnants of the Mahican language are known to us by way of written documents dated from the mid 1700s through the year 1949. Additionally, a small number of words have been continuously transmitted orally by Mohicans to their children throughout the generations. Efforts have been made to research and study Mahican in the hopes of reawakening this slumbering indigenous language. Historical language research and reconstruction work is a notoriously difficult task, best accomplished by a team effort. This paper is intended to contribute information to the collective linguistic knowledge base about Mahican language "w-words."

W-words are words which begin with the sequence /wə/. This sound may be an established component of certain words or may be added to nouns or verbs in which case it represents the third-person prefix /wə/. W-words are known to us because fluent Mahican speakers self-transcribing their speech using the sound of the consonant "w." Words written in this manner were sometimes transcribed without the "w" by listeners lacking personal proficiency in the Mahican language, leading to some controversy about this phoneme.

It has been claimed that Mahican had evolved new pronunciation patterns over time, replacing the sounds used in the writings of the fluent speakers. Proponents of this language change theory have asserted that twentieth-century Mahican spoken in Wisconsin used markedly different pronunciations than those used during the eighteenth and nineteenth centuries. Pronunciation changes and structural modifications justified by this "language change" theory have been incorporated into the Mahican revitalization program without any attempt to bridge differences of opinion with a careful collaborative weighing of the linguistic evidence.

Why does it matter? This analysis may appear to be little more than a petty effort to promote or to discount certain pronunciations, a kind of "potato-potahto" argument. Much more is at stake here, since several controversial sound changes (o-words, glottal stops, and /e/ vowels) were incorporated into the first draft of revitalized Mahican based on the opinion of a single researcher who failed to collaborate with others known to possess advanced knowledge of the language. Assertions were made without any fact-checking process. The end result of this preliminary work to revitalize slumbering Mahican was the creation of a new language which differs notably from historical Mahican, while also differing from the speech of the 20th-century elders.

This paper is the third of a three part series summarizing the speech patterns of the last Mahican language rememberers as compared to legacy fluent speakers. The information conclusively debunks the theory of twentieth-century Mahican language change.

Parts one and two of the series may be found on the website [munseedelaware.com](https://munseedelaware.com/resources) in the resources section (<https://munseedelaware.com/resources>). Part one reviews the sounds /i/ versus /e/. Part two is devoted to /h/ versus /ʔ/ sounds.

The most solid source of linguistic information about Mahican is a group of documents written by Hendrick Aupaumut, a man whose first language was Mahican (Eastern dialect). Aupaumut consistently used "w" using patterns similar to other closely related Eastern Algonquian languages. The Mahican third-person prefix was unambiguously /wə-/ in Aupaumut's writings. If any irregularities or variants had existed, they would have been attested by him. Variations of the sibilants, for example, may be found scattered among Aupaumut's documents.

Less solid evidence (transcriptions by non-speakers of the language or transcription of speech by non-proficient language rememberers) was used to justify the replacement of "w" by vowel sounds "o" or "u." The graphs featured in this paper will show that all major sources of Mahican language information support the use of "w" across all time periods.

- Mahican words transcribed by German-speaking listeners often substituted /o-/ or /u-/ for /wə-/ since "w" in German is pronounced as a "v."
- Sources of Mahican dated between 1914 and 1949, were written phonetically by linguists who were previously unfamiliar with the Mahican language. One of the linguists almost exclusively used "u" (Michelson) whereas the other linguists (Siebert, Swadesh, Harrington) predominately used "w" and occasionally used "u" or "o."
- There is a relationship between "w" and "o" as evidenced by the English words *won* and *one*, and the French word *oui*. Therefore, it is not entirely surprising that a listener might choose to write a "w" sound using "o," "u," or "ou."

Definitions

- **Third-person prefix** - added to nouns to convey the meaning of possession (*his, her, their*). It may be added to verbs when the subject or object is *he, she, they; him, her, them*.
- **Word-initial "w words"** - words which begin with /w/ followed by a short vowel.
- **International Phonetic Alphabet symbols** - enclosed in slashes //
- **Cited forms** - italicized. Mahican words are written as found in the source materials.
- **Semi-speaker** - a person who is less than fluent but has a basic command of the language
- **Rememberer** - a person who only knows isolated words and phrases of a language

Pronunciation

- The Mahican /w/ is a voiced consonant. Its sound is similar to English *well* (voiced means that the vocal cords are involved in the production of the sound).
- /o/ is a Mahican vowel which sounds like the "o" in English *boat*

Evidence from fluent speakers of Mahican

• Johnathan Edwards Jr.

- **Data Source:** *Observations on the Language of the Muhhekaneew Indians*, published in 1787-88.
- **Proficiency level:** Fluent childhood speaker of Mahican; Bilingual; L1 English and Mahican.
 - **Remark:** Edwards transcribed Mahican words using an English-based orthography
- **Examples:**
 - *wneeweh* 'thank you'
 - *wneh* 'in a good way'
 - *wnissoo* 'he/she is beautiful'
 - *wtukoseauk* 'they are thankful'
 - *wtinnoiyuwun* 'he does not make it so'
 - *wnechunan* 'his child'
 - *Wnoghquetoookoke* 'Stockbridge'
 - *wnukuwoh* 'yesterday'

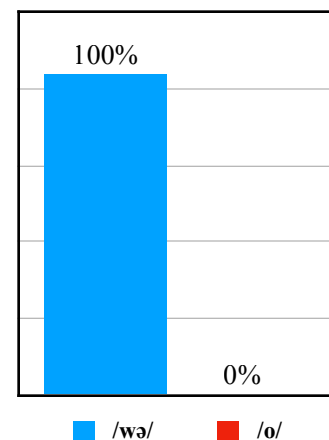
Transcription key:

u = nasalized ə
 o = a like *father*
 a = /ʌ/ or like u as in *nut*
 e = /i/
 ee = /i:/
 i = /ə/ like the A in *America*
 gh = /x/ guttural

• Hendrick Aupaumut

- **Data Sources:**
 - The Assembly's Catechism, Hendrick Aupaumut 1795, Reprinted in 1826; Stockbridge, Mass (available online at <https://content.wisconsinhistory.org/digital/collection/tp/id/29141>);
 - Stockbridge, Past and Present, Or, Records of an Old Mission Station. Jones, Electa Fidelia
- **Proficiency level:** Fluent adult speaker of Mahican; L1 Mahican; L2 English
- **Remarks**
 - Self-transcribed using an English-based orthography, different from Edwards's.
 - Aupaumut consistently used word initial /wə/. His words contained aspirated /h/ sounds, no evidence of glottal stops), and no /e/ vowels rhyming with English *hey*.
 - Aupaumut's writings are a compendium of Mahican language insights higher in quality than any other source.
- **Use of /w/**
 - All "w-words" words were written with "w"
- **Examples**
 - *wmau-weew* 'Miami nation'
 - *wtuhwaunwauwaukun* 'love'
 - *wcheh* 'from'

Aupaumut 1795-1826



- *wtauptoonnauwaukun* 'his word'
- *wtehnehtaun* 'he makes it'
- *wsekenummun* 'he hates it'
- *wtinnaun* 'he told him'
- *wtinnaun* 'they were good'
- *wnithtommauwaukun* 'faith'

Transcription key:
 u = either /ə/ (a nasalized) or /
 ʌ/
 au = either long /a/ or long /a/
 h = /h/
 e = /i/
 o = /a/ like *father*
 kh = /x/ guttural

Aupaumut always used /wə-/ as the third-person prefix in his Mahican words and never "o" except in the case when /wə-/ is added to a word already beginning with /wə-/. The same sound rule is also valid in Munsee:

wuleelúndam (be glad about s.t., be happy about s.t.)
 —*nooleelúndamun* (I am happy about it.)
 —*kooleelúndamun* (You are happy about it.)
 —*ooleelúndamun* (He is happy about it) (*wu* + *wulleelúndam* + *un*)

The *o* makes it clear that there is a *wu*- prefix on the verb.

There are several Mahican examples of this sound rule; in the Catechism, in the Mahican version of Psalm 19, and in one of Michelson's transcribed stories.

Documents transcribed by non-fluent speakers of Mahican

Schmick's Mahican Dictionary

This dictionary was compiled by German-speaking Moravian missionaries in the 18th century. It mostly contains Western Mahican words. Its main author, Johann Jacob Schmick transcribed the phoneme /wə/ interchangeably using "w," "u," and "o." The use of "o" and "u" in some instances of w-words can be explained by the fact that the German-speaking users of the dictionary would have interpreted "w" as a "v sound" (Wanda in German is pronounced "Vanda"),

The following observations confirm the evidence of "w words" in Schmick's Mahican:

- "w" always replaces "o" or "u" when words are in a reduplicated form, by adding extra syllables for emphasis or endearment.
 - a) English examples of reduplication: *Mama* instead of *Ma*; *Papa* for *Pa*; *Itsy bitsy* 'small'
 - b) Mahican example: *wawunit* 'he/she is really beautiful' (Schmick/Masthay) reduplicated version of *onit*. If the word was phonemically "o" the reduplicated word would be "o-onit"
- Mahican words written with [o] in Schmick all become "w words" when there is initial change (characteristic of conjunct forms) [*onit*] > [*waanit*]
- The Schmick dictionary lists multiple versions of the same words showing equivalence of [o-] and [w-].
 - a) [*ojãās*, *ojãāsh*, *ojaash*, *ojās*] compared to [*wiās*, *wojás*, *wojās*, *wějãās*] 'meat' /wəyaas/
 - b) [*osáme*, *osame*] compared to [*wasáme*] 'too much' /wəsami/
 - c) [*uskái*] [*oskekān*] compared to [*waskáikē*] (root /wəsk-/ 'new'

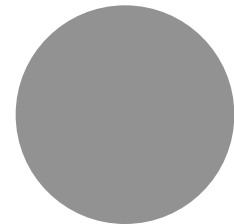
Estes Transcription

In 1905, Dyneley Prince published a story in Mahican narrated by Dennis Turkey and transcribed by Estes, a Sioux schoolteacher. Turkey was an elderly tribal member born in New York and according to Estes, he was toothless and hard to follow. Although most of the words are recognizable, the transcription is too uneven in quality to be used as a source of conclusive phonemic evidence.

The story contains 502 words written using the Dakota language orthography. Twenty-four "w-words" were transcribed using [w, ho, o, au, ou, a, u]. Since Dennis Turkey used multiple versions of the third-person prefix, it is not possible to draw any definitive conclusions about these sounds. Assuming that he was born between 1820 and 1830, Turkey would have learned Mahican from people who spoke like Aupaumut. Therefore, his speech would have used /wə-/. Examples of words using this sound include:

withk-enowak 'young men'
wosak-k-amonman 'her corn'
wic-i 'from.'

Estes 1903



● /wə-/ ● /o/
● Ambiguous

Michelson Transcriptions

- **Language status:** Advanced stage of decline

In 1914 the Smithsonian linguist, Truman Michelson, visited Wisconsin hoping to glean information about the Mahican language. He consulted with several members of the Stockbridge community who resided in Shawano County and also traveled to Lake Winnebago, but found only one person capable of speaking Mahican in sentences (William Dick).

Michelson wrote in his report that "*a dozen people were found who could give isolated words in the Stockbridge (Mahican) language, but only one person who could dictate connected texts. About a half dozen of such texts were obtained with difficulty. Knowledge of the language was too far gone to permit unraveling of its details.*" (Smithsonian miscellaneous collections, v. 65 (1916), Smithsonian Institution, 1862, <https://library.si.edu/digital-library/book/smithsonianmisce651916smit>)

Michelson clearly stated that the quality of the Mahican data he had collected was inadequate for the purpose of properly identifying the sounds and the morphology of Mahican. Therefore, it would be unwise and scientifically improper to override trustworthy high quality data from fluent speakers of previous generations using Michelson's notes. It is also significant that he never published his notes. He certainly would have published his findings had they provided a

"smoking gun" for phonological language change. Michelson's field-notes, handwritten in cursive by pencil, contain ambiguities ("ē" and "ī" cannot be distinguished reliably). These uncertainties may have been eliminated had he chosen to publish his work.

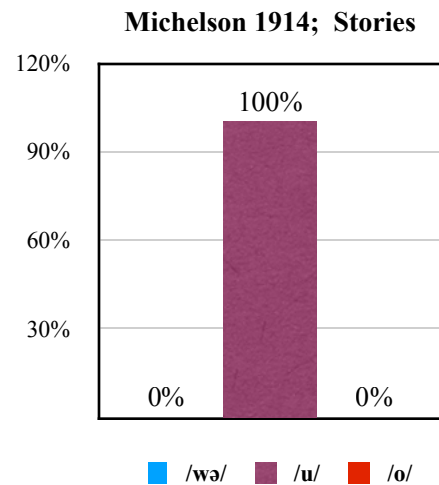
- **Stories**

Truman Michelson transcribed seven stories narrated in Mahican by Sot Quinney (pronounced "sowt") and William Dick. These stories contain a total of 907 Mahican words. Michelson said they were obtained "with difficulty."

Michelson used "u" in his transcription wherever the phoneme /wə/ was expected. The same pattern of transcription ("u" for /wə/) was used by Michelson for his *Munsee* language field-notes. We know how Munsee is spoken, because of the unbroken chain of fluent speakers from pre-contact until the present day.

The Munsee sound represented by Michelson's "u" is incontestably /wə/. Therefore, it is reasonable to interpret the Michelson word-initial "u" as /wə/ for his *Mahican* transcriptions as well.

Using the *Munsee* notes to aid in the interpretation of the *Mahican* notes is similar to the way the **Rosetta stone** was used to teach us how to read Egyptian hieroglyphics. This concept demonstrates that Mahican sounds in the early twentieth-century were essentially identical to those of the preceding time periods.

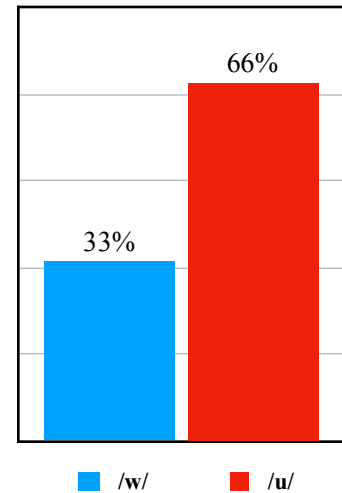


- Even if one were to reject this Rosetta stone notion, there is ample proof of the persistence of w-words among the Mahican language rememberers in the twentieth century.
- W-words were attested with *increasing* frequency during the thirty-year time period *after* Michelson. The data substantiating this assertion will be shown by the graphs charting the prevalence of w-words in words collected by Swadesh and Harrington during the 1930s and 40s.
- The persistence and predominance of /wə-/ by the Mahican language rememberers is sufficient to debunk any theory of language change.
 - If the sound patterns of Mahican had changed, then W-words would have been heard less and less over time from 1914 through 1949.
 - The data shows that Michelson recorded w-words using the written mnemonic "u" creating an apparent loss of the "w" sound in 1914 followed by a resurgence of that "w" sound in the transcribing patterns of the linguists who visited the tribe in the 30s and 40s (linguists Eggan, Siebert, Swadesh, and Harrington). See figures 1, 2, and 3.

- **Word Lists**

In addition to the stories, Michelson collected 550 words from about a dozen Mahican rememberers in 1914. Only nine of the 550 words featured "w-words.". Three times /w/ was used (33%) and six times /u/ was used (66%). We know from the Munsee/Mahican Rosetta stone that Michelson's "u" was phonetically /wə/.

Michelson 1914; Word Lists (multiple consultants)



Swadesh Transcriptions

- **Language status: fragmentary knowledge only**

Linguist Morris Swadesh came to Wisconsin in 1937 and 1938 to interview the remaining rememberers of Mahican. Swadesh shared his thoughts about the language in a paper published in 1949.

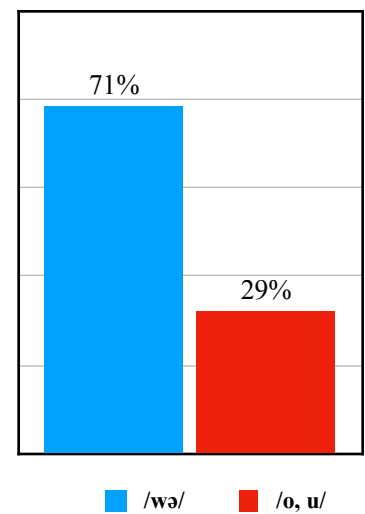
"The language (Mahican) continued in active use until a generation or two ago, and several of the people still know bits of it. In 1938 there were four or so who knew some words of it. These people as children spoke the language with their grandparents, but this was so long ago that not one was still capable of speaking more than isolated words and a limited number of set phrases."

- **Field-notes:** Never published. Three thousand slip files contain 1909 lines of Mahican words or phrases. The handwritten notes also contain words copied from Schmick's manuscript with German glosses, and words cited from other sources including Edwards, Jenks, Aupaumut, and Michelson.

Fifty-six instances of /w-/ or /o-/ or /u-/ were counted. Swadesh transcribed forty of those words using /w-/ (69%). Sixteen were transcribed using /o/ (n=7) or /u/ (n=11).

This distribution, favoring the historically attested sound /w/ supports the notion that twentieth-century Mahican rememberers had heard this sound from their Mahican-speaking grandparents. Had language changed, the consultants would not have used old fashioned sounds.

Swadesh 1937



- **Comparison of data from Michelson and Swadesh**

The predominance of w-words in the Swadesh field-notes contrasts sharply with the quasi-absence of word initial /w/ in Michelson's transcriptions. This finding, bolstered by the even stronger preponderance of "w" in Harrington's notes unequivocally rules out the hypothesis that Michelson's "u" had become the new way of pronouncing w-words. It also strengthens the interpretative value of the so-called "Rosetta Stone" inferred from the comparison of Michelson's Munsee and Mahican field-notes, adding confidence that Michelson used "u" as a phonetic mnemonic for the sound /wə/.

Harrington Transcriptions

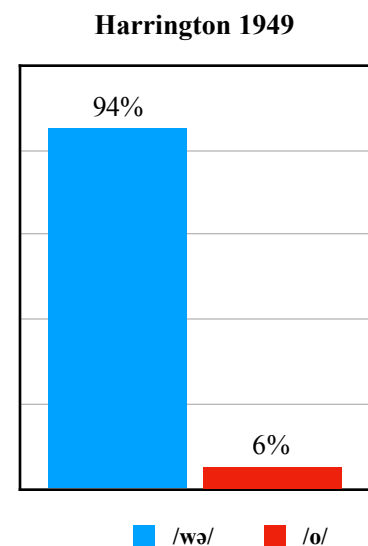
- **Language status: fragmentary knowledge only**

Mr. and Mrs. Arvid Miller hosted John P. Harrington during his visit in 1949 and facilitated the linguist's efforts to collect Mahican language data. Since Arvid was the tribal leader, we know that there was no community-wide opposition to the sharing of Mahican language information with outsiders.

- **Field-notes**

788 word were elicited from several consultants, primarily Webb Miller and Bernice Metoxen Robinson (pronounced BERnice).

Harrington recorded 18 instances of word-initial /wə/ or /o/. Seventeen "w" sounds (96%) were counted, compared to one instance of /o/ (6%).

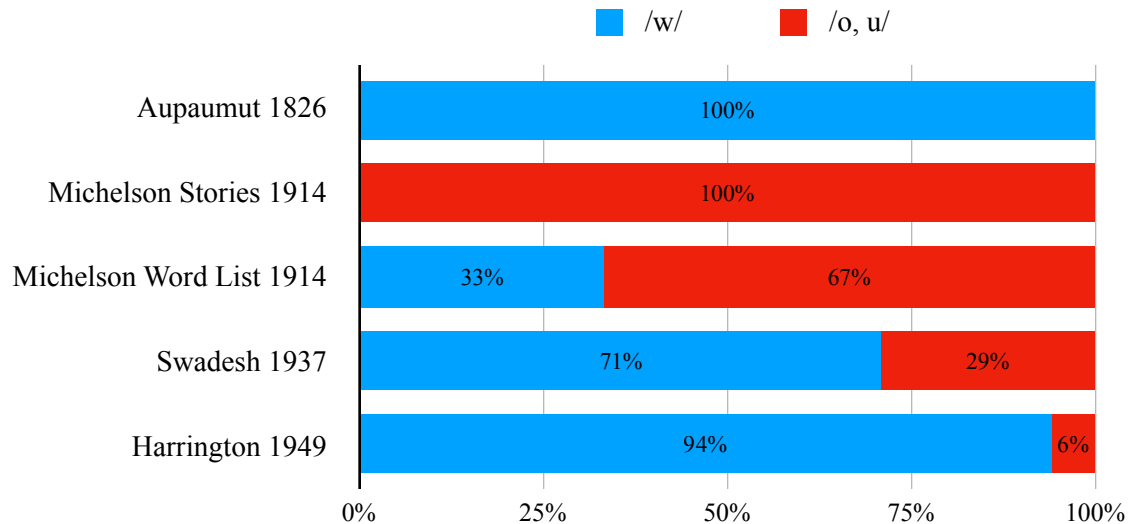


- **Remarks**

- Harrington's transcriptions provide a means of double-checking the work of Swadesh, done a decade earlier using some of the same tribal language consultants. Harrington's "second opinion" shows that Mahican language sounds spoken by the same speakers were often heard more or less distinctly by one linguist or the other.
- The sounds heard by Harrington validate the historical sounds found in the writings of Aupaumut and Edwards.
- Harrington's transcriptions were not analyzed in Goddard's 2008 paper "Notes on Mahican: Dialects, Sources, Phonemes, Enclitics, and Analogies." When this writer provided Goddard with Harrington's data, Goddard responded with the following comment via personal email:
 - *"I think that the other writers of Mahican make it evident that Schmick's <o-> (also with a breve accent) was phonemically /wə-/. This misled Pentland."*

Summary of the data

Figure 1



The historically attested /w/ at the beginning of Mahican words was well documented throughout the 1900s (top row). In 1914, an *apparent* sound change occurred which is attributable to the way one linguist chose to write down sounds. Alternatively, the choice of transcription symbols could reflect a failure to have heard certain sounds in Eastern Algonquian languages reliably (rows 2 and 3). Rows 4 and 5 show the frequency of word-initial w increasing during the subsequent thirty-five years, a pattern incompatible with any process of natural language change.

Figure 2 shows the frequency of use of the English word *thy* as it becomes old fashioned by natural processes of language change.

Figure 2. The English word *thy* declined gradually in frequency over time as shown by the Ngram viewer. The pattern is similar for other old-fashioned English words.

Google Books Ngram Viewer

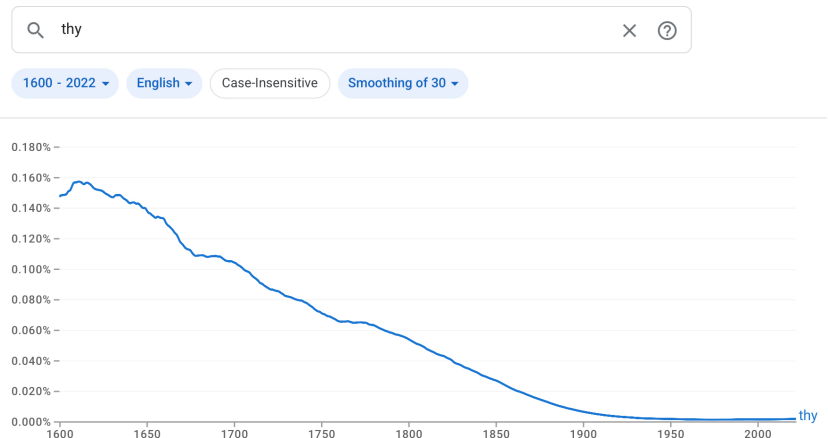
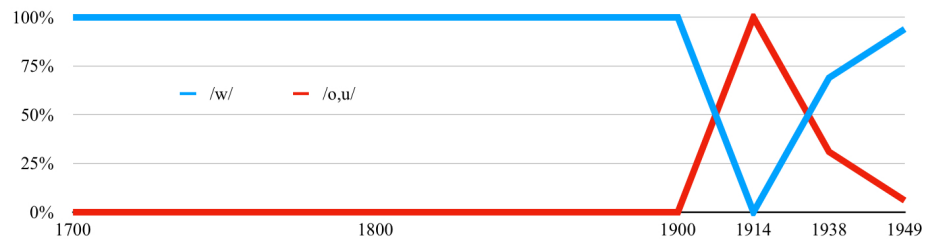


Figure 3 shows a graph similar to that of figure 2, for Mahican w-words (in blue) and for words transcribed without the /w/ (in red).

W-words dropped then rose again. O-words and u-words peaked in 1914 then faded. These patterns does not match what would be expected for naturalistic language change.

Figure 3. This graph depicts the relative frequency in percentage for words beginning with /w/ and /o, u/:



Examples of Mahican words from the elders

The next section of this paper provides examples of w-words as spoken by the elders who last remembered fragments of the Mahican language. These words are reproduced here exactly the way the linguists wrote them down. One can easily see that many of the Mahican words spoken during the twentieth-century were phonetically similar to way those same words were recorded by fully fluent speakers of the nineteenth century. If Mahican had "changed" then the elders would have avoided using archaic sounds and grammar. Modern English speakers would rarely say, "thou art," or "he hath," or "they eateth." If we did, we would say that those patterns of speech are relics of the past and we would readily supply words in common use today.

Julia Palmer: 1937

- *wəda* 'his heart'
- *wəda:yo:m* 'his son' (missing obviative suffix)
- *wənaksiyan* 'guts'
- *wa danq-o* 'he told him'
- *wəskan* 'bone'
- *wəθq-mi* 'too much'
- *wəni:wɪ* 'thanks'

Webb Miller: 1937, 1949

- *wɪθkənpɔwak* 'young men'
- *waton* 'his mouth'

Avery Miller: 1937

- *wθi·n* 'he said it'
- *wposiwa* 'he embarks'
- *wusi tiya* 'get out dog'
- *wətana·ʔka·n* 'he did it'

Bernice Robinson: 1914, 1937, 1949

- *wəsi·' diyau* 'Are you cold?'
- *woskákkan* 'a girl'
- *wətanqəsk* 'his ears'
- *wtón* 'his mouth'
- *wəxákin* 'his hair'
- *wónit* 'good, pretty'
- *woskičəsk* 'his eye'
- *wəpitin* 'his tooth'
- *wəxgáman* 'today'

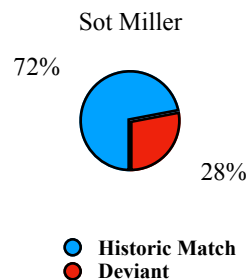
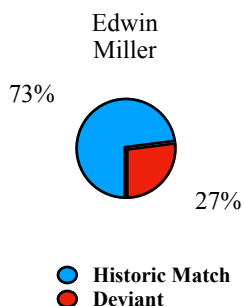
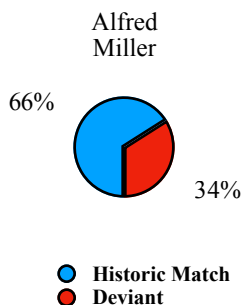
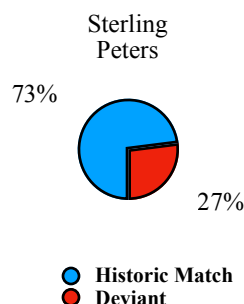
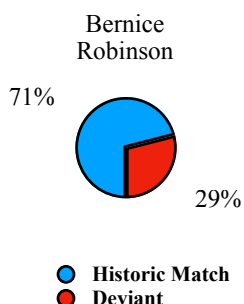
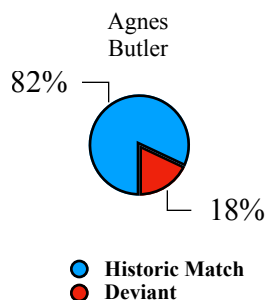
Elmer Davids, 1949

- *wú·si di·yáw* 'get out dog'

Carl Miller, 1949

- *wanaxkwan* 'dish, bowl'

How often did the Mohican elders of 1914 say Mahican words which matched historic versions?



These graphs show that words without any indication of language change were used more often than not in the early 20th century. Similar graphs for the speakers interviewed in the 1930s and 40s would show an even more striking preponderance of historically matched sounds (see graphs for the Swadesh and Harrington era transcriptions above).

Was there a twentieth-century way of pronouncing Mahican?

The following examples show that elders of the 1930s did not have uniform speech patterns (i.e. there was no "twentieth-century way" of speaking). The examples provided are reproduced here exactly as they were transcribed by Swadesh. The graphs previously shown indicate that 70% of the time, these elders pronounced words like Aupaumut and Edwards. Bold type is used in the examples for pronunciations matching historically attested words. The linguists dutifully transcribed the sounds as they heard them, and 30% of the time, the pronunciation did not match the patterns used by fluent speakers. It is likely that these unexpected sounds were mispronunciations or result of linguists mishearing the sounds. It is reasonable to expect some enunciation difficulties on the part of the Mahican language consultants who were accustomed to speaking English.

Julia Palmer

- *máθsánáí*, *məθa·na·e* 'blanket' (/i/ vs /e/ and changing vowel length)
- *kəse·sau*, *kasi·su* 'be small' (/i/ vs /e/ and alternate endings)
- *qnaí*, *o·naí*, *a·naí*, *q·na·e* 'road' (/i/ vs /e/ and /a/ vs /ə/ and changing vowel length)
- *nda·ʔ*, *ndá·h* 'my heart' (/h/ vs /ʔ/)

Avery Miller

- *ma·wi*, *máwí*, *ma·we* 'all' (/i/ vs /e/ and changing vowel length)
- *wi·xθi*, *we·xθe* 'speak Indian' (/i/ vs /e/)
- *nunka·wí*, *nónká·we* 'a little while' (/i/ vs /e/)
- *o·θe·n*, *θi·n*, *u·θi·n*, *wəθi·n* 'he said it' (3rd-person prefix as either /o, ø, u, wə/ and /i/ vs /e/)

Summary and Conclusions

The sound patterns of Mahican of the 20th century can be characterized as follows:

- Sounds predominately matching historic pronunciations.
- Historically attested sounds actually *increased* with the passage of time between 1914 and 1949. This observation is inconsistent with the theory that Mahican had changed.

- Multiple linguists transcribed Mahican sounds from the language rememberers. Their second, third, and fourth-opinions do not support the theory of phonological change but do support the consultant's efforts to reproduce the sounds historically attested.
- The proper interpretation of Michelson's transcription system based on solid knowledge of Munsee phonology confirms the lack of Mahican sound changes. Other data sources, however, suffice to prove that the last rememberers of Mahican spoke the same way as Hendrick Aupaumut did in 1795.
- Deviant sounds follow patterns expected for a language in an advanced stage of decline.

Honoring the elders has been an integral component of Mahican revitalization project, started in 2017. Unfortunately, the data, as presented in this paper, was not available at that time. A minority subset of the speech patterns of the last rememberers were branded as 20th-century Mahican and taught to language students. Consequently, the elders' mispronunciations of Mahican words were prioritized and used to overwrite all of the sounds of the language. The grammatical errors of this group of elders were appropriately rejected while generalizing their pronunciation errors. A new language, unworthy of being called Mahican or Mohican, was created, by splicing the sounds of language decline with the historically attested grammatical structures used by 19th-century fluent speakers.

By all verifiable accounts, Mahican was in an advanced state of decline by the beginning of the twentieth century. Five independent language researchers visited Wisconsin between 1914 and 1949 seeking knowledge of the language, and all concluded that only fragments of Mahican were remembered by a small number of people.

Interestingly, some present day tribal members have reported that some families may have continued to speak Mahican fluidly until about 1950. They chose not to share the language with outsiders. No written records about their words or phrases were left behind, because writing the language was ostensibly prohibited. These anecdotal reports do not contribute anything to our linguistic knowledge base and do not alter any of the findings of this paper. The only way we can reconstruct Mahican for the purpose of revitalization is to rely on solid evidence using the available written sources.

During the years 1980-2016, the author of this paper collected Mahican words remembered by tribal elders. 100% of these words matched the sounds of Aupaumut's Mahican. The most frequently remembered words were:

ndamiikah 'come inside'

wusih nduyaaw 'get put dog!'

Muh he con new /Mghiikaniiw/ 'A Mahican person'

As fate would have it, these words, transmitted orally from Mohican to Mohican across many generations, show evidence of w-words, /i/ vowels, and aspiration.

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