

An Acoustic Analysis of Yaqui Stress
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1. **The phonetic correlates of stress** (Fry 1955, 1958; Hyman 1977): *tone, length, and intensity*.
2. It is generally agreed that Yaqui has contrastive stress. Thus far, however, researchers have been vague about the phonetic features of stress.
3. **Purpose of this study:** To determine the phonetic feature(s) of stress in Yaqui.
4. **Speakers:** Three adult native speakers from Sonora: male and female from Vicam in their mid-fifties; male from Tetabiate in his mid-forties.
5. **Method:** Record readings of texts. Examine samples taken from non-final portions of phrases utilizing *Speech Analyzer*, a free software package developed by the Summer Institute of Linguistics.
6. **Observations** (see figures on following pages):
 - a. One high tone per word on either first or second syllable.
 - b. Pitch gradually falls after H-syllable until the next H.
 - c. Mid is default and shows up only on first syllable of “unaccented” words.
 - d. L tone occurs at final syllable of phrase and does not spread.
 - e. Intensity is *not* a reliable correlate of stress, nor is length.
7. **Conclusion:** The only consistent marker of stress in Yaqui is high tone, which occurs once per word in either the first or second syllable.

References

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Figure 1

This word is phrase final. Notice the decline in energy, pitch, and intensity in the final syllable. The pitch (second window) rises in the second syllable, indicating second syllable stress.

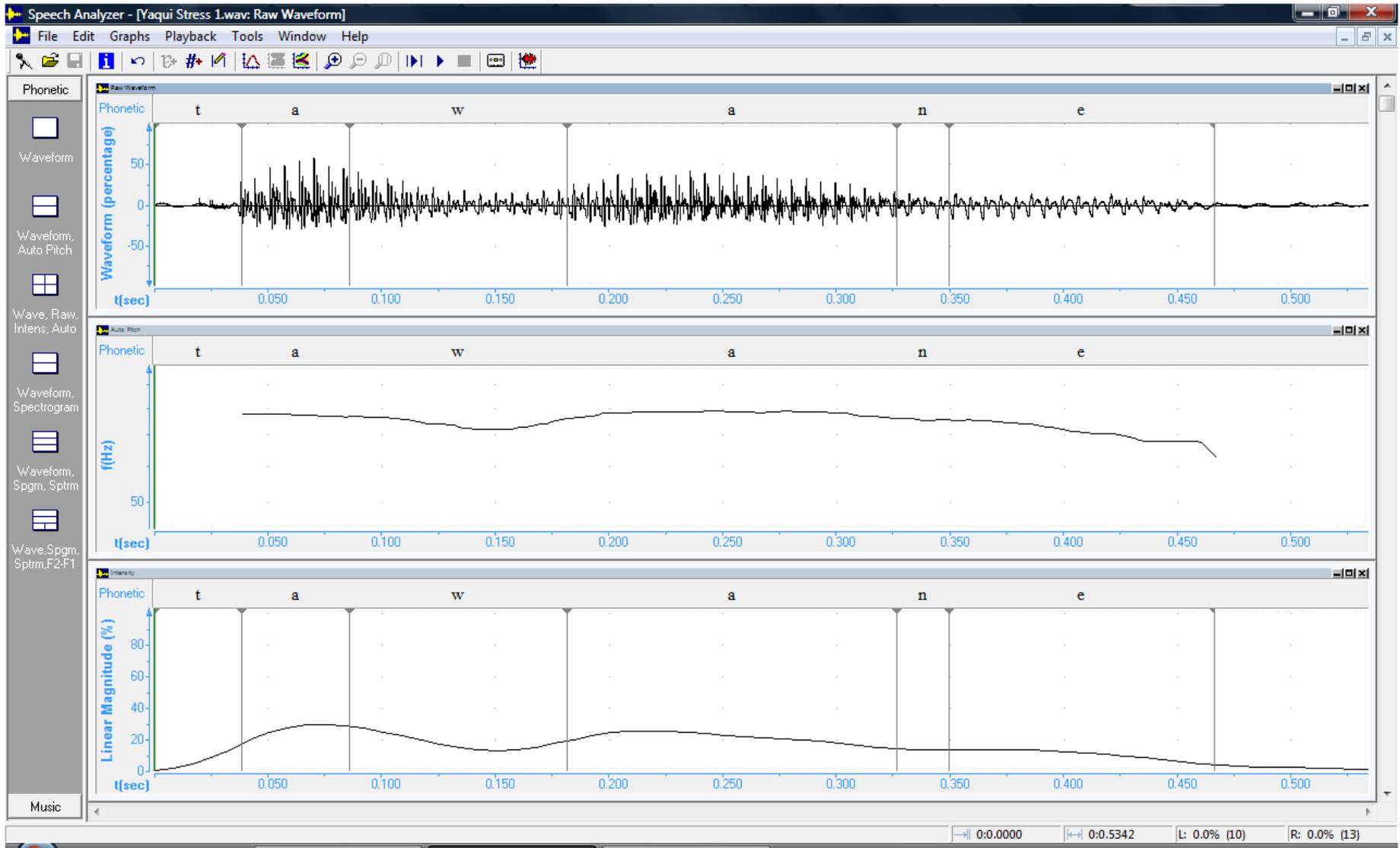


Figure 2

The following utterance has stress on the first syllable, as seen by the steadily descending pitch:

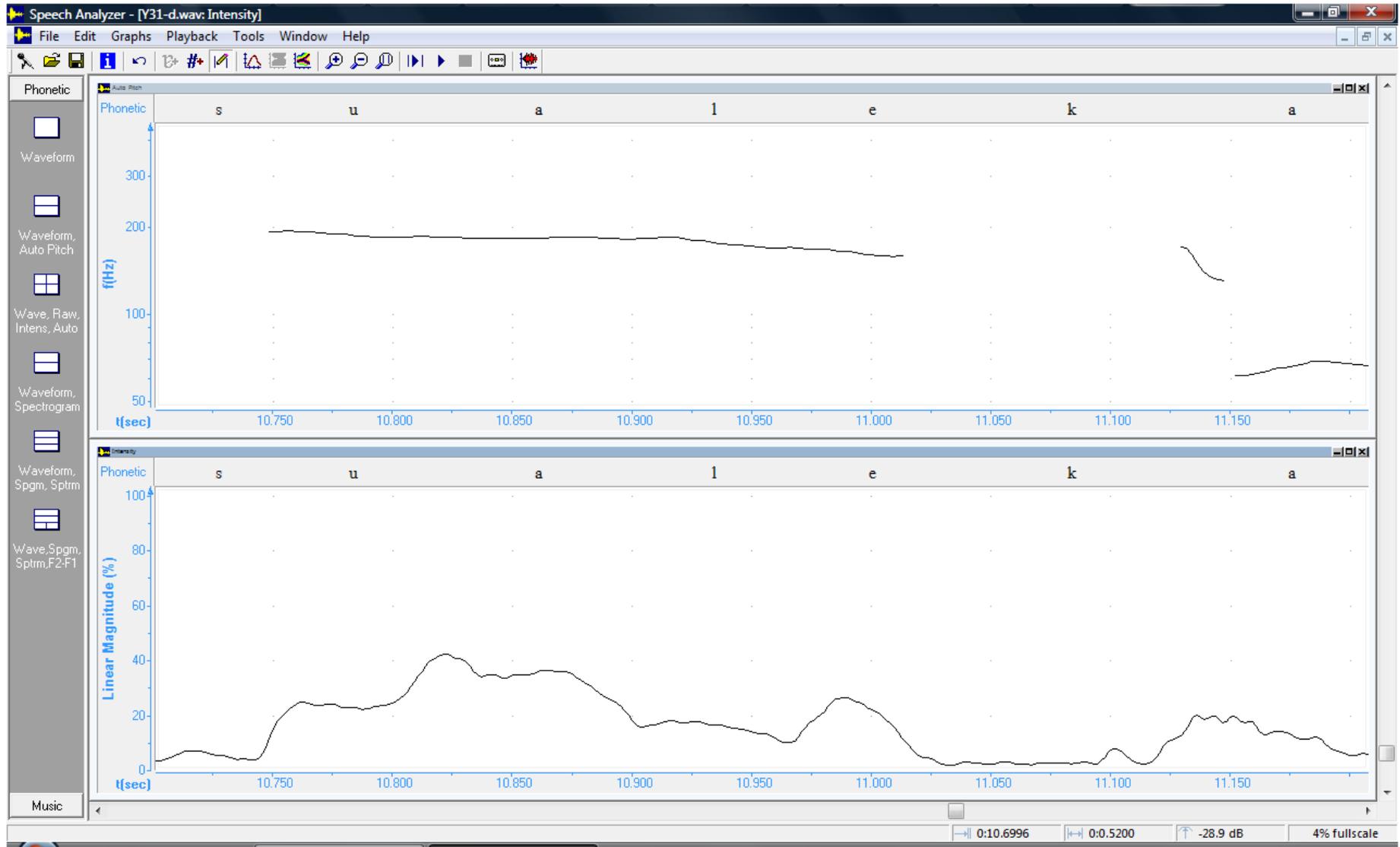


Figure 3

The top window shows a single rise in pitch during the second syllable. The bottom window, which displays intensity, gives no clue as to the location of stress.

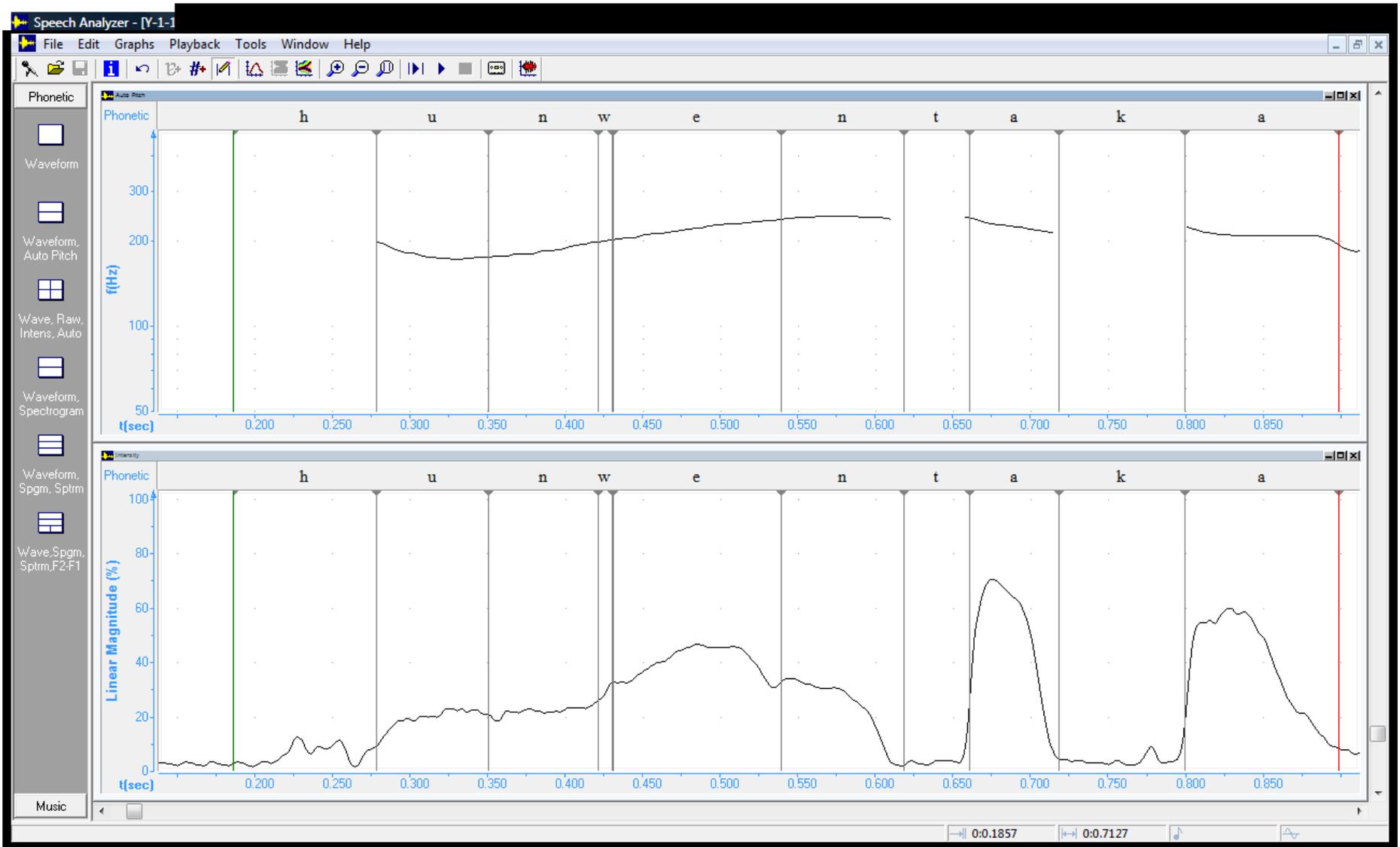


Figure 4

The following utterance also has stress on the second syllable, as seen by the rise in pitch. There is no corresponding change in intensity.

