

Thomas Dougherty

Department of Linguistics, [tmd@hawaii.edu](mailto:tmd@hawaii.edu)

## Introduction

Only three morphemes in Okinawan permit morpheme-initial geminate consonants: *kkwa* /kk<sup>w</sup>a/ ‘child’, *cchu* /ttɕu/ ‘person’, the instrumental enclitic =*sshi* /ɕei/.

## One-syllable words

One-syllable phonological words in Okinawan must be two morae in length. A mora in these words may either be a vowel or a syllable-final (or syllabic/moraic) nasal.

1. \**ya* /ja/
2. *yaa* /jaa/ ‘house’
3. *yan* /jan/ ‘to be’

## Polysyllabic words

Polysyllabic words allow non-nasal syllable-internal and -final consonants—including the exact sequences we find initially, so long as they are geminate consonants:

4. *nicchi* /nit.tɕi/ ‘diary, journal’
5. *shikkwa* /ɕik.k<sup>w</sup>a/ ‘wedge, brace’
6. *disshin* /diɕɕin/ ‘success in life; marriage’

Typologically, we would expect more complex syllable-internal and -final consonant clusters to occur before more complex syllable-initial clusters. Okinawan conforms to this typological pattern.

## Problematic forms

A consonantal onset is obligatory in Okinawan, and generally does not count as a mora. However, with our initial characterization, we are left with a handful of one-mora, one-syllable words:

7. *kkwa* /kk<sup>w</sup>a/ ‘child’
8. *cchu* /ttɕu/ ‘person’
9. =*sshi* /ɕei/ instrumental enclitic

We also have a number of forms that NINJAL (1963) characterizes as having initial geminates whose clusters are, apparently, not moraic:

10. \**yaa* /ʔjaa/ ‘you (nonpolite sg.)’
11. \**ya* /ʔja/
12. \**waa* /ʔwaa/ ‘pig’
13. \**wa* /ʔwa/

## Coarticulated glottal stops

The glottal stop–glide sequences in (7) and (8) are better analyzed as co-articulated glottal stops: /ʔj/ and /ʔ<sup>w</sup>/.

Though typologically uncommon, /ʔj/ and /ʔ<sup>w</sup>/ are phonetically and phonologically possible, and phonotactically, like other co-articulated segments (e.g., /k<sup>w</sup>/), do not count as mora in Okinawan in-and-of themselves.

## The history of initial geminates

Historical high vowels between voiceless consonants in initial syllables tend to delete in Okinawan (Thorpe 1983: 47). Generally, the resulting clusters are resolved as single segments:

14. \**pito-tu* → /tii.tɕi/ ‘one’
15. \**ki-ta-m-u* → /tɕan/ ‘came’

## Conclusions

A number of reasons conspire to maintain a historically intermediate form for *kkwa*, *cchu*, and =*sshi*:

- All forms are highly frequent
- All used as clitics in some circumstances
- These patterns already exist in other phonological contexts
- These patterns are phonetically plausible

## References

- NINJAL. 1963. *Okinawago Jiten [A Dictionary of Okinawan]*. Tōkyō: Ōkurashō Insatsukyoku.
- Thorpe, Maner Lawton. 1983. *Ryūkyūan Language History*. PhD dissertation: University of Southern California.