# Prosodic structure in Japanese, part (II)

## IV. The syllable

(1) What evidence shows that syllables (σ) are necessary in Japanese?

- See the examples on the "More about mora structure" data set handout

(2) **Algorithm for building syllable (σ) structure**

(a) Syllables dominate (i.e., contain) moras in phonological structure. All moras must be included in some syllable in a well-formed surface representation.

- A surface representation that does not conform to this requirement is rejected as ungrammatical, unless some phonological rule applies to bring it into conformity

(b) Moras in Japanese fall into two types, $\mu_1$ and $\mu_2$, where:

- $\mu_1$ must be a (C)(j)V mora *i.e.,* must contain at least V
- $\mu_2$ is not a C(j)V mora *i.e.,* C is okay; V is okay; N is okay; but not C(j)V
- Note that a V mora can be either $\mu_1$ or $\mu_2$

(c) Moras are associated with syllables as follows:

i. Assign all moras a label as $\mu_1$ or $\mu_2$

ii. Every instance of $\mu_1$ projects, and associates to, a σ

iii. Every $\mu_2$ to the right of a $\mu_1$ associates to the σ of that $\mu_1$

- These steps are carried out in order. This algorithm ensures that all syllables in Japanese have the structure $\mu_1(\mu_2)$.

(3) Additional points about syllable structure in Japanese

(a) When there are two vowels in a row, our model allows either two light syllables (μ+μ) or one heavy syllable (μμ) to be formed — what actually happens?

- A number of factors appear to be relevant, including which vowels are involved and where the pitch accent is located
- See examples on the "More about mora structure" data set handout

(b) It appears that Japanese occasionally tolerates a syllable with *three* moras

- Loanwords: [ toon ] 'tone', [ tɕeeɴ ] 'chain'
- Complex words: [ nihom-ppoi ] 'Japan-like', [ toot-ta ] 'pass-PAST'