# Chapter 3.   Sound System

3.1. Overview of the Sound System

Last revision: 2024-07-26

3.1.1. Phonotactics

The basic sounds of Nwehu Nuswei (NN) are described in §1.1.6. But a very important part of learning a language is training the brain to control speech muscles to produce the sounds fluently and naturally. Normally, this happens as a child grows and learns to speak his or her first language. It becomes natural and subconscious to line up the sound-concepts and coordinate the muscles of the vocal tract to produce them. This is known as the **phonotactics** of the language.
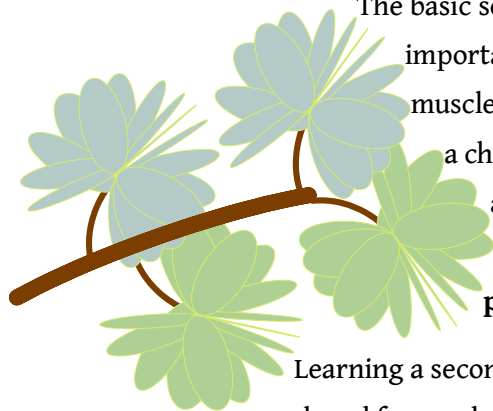
Learning a second language is often more difficult, because the subconscious tactics employed for one language don't work for another. This usually results in speaking a non-native language with an "accent". Often, even fluent speakers of a second language continue to employ the phonotactics of their first language, somewhat adapted or modified for their second language. Those who listen carefully can often guess the first language of a non-native speaker by detecting the phonotactics they use.

Since NN is an artificial language, all or most speakers would be non-native speakers. For this reason, it is expected that a wide variety of phonotactics would be employed. These guidelines are intended to provide pronunciation options that fit the phonotactics of most potential speakers, without compromizing the intelligibility of the NN language.

3.1.2. Word Structure

NN is intended to have a small number of common word patterns, in contrast to languages like English and other Indo-European languages whose words can have a wide variety of syllables and stress patterns. This is also somewhat in contrast to languages like Chinese, whose words are fundamentally single-syllables put together into pairs and sometimes slightly larger meaningful units. NN also contrasts with languages like Turkish, whose messages are made of large numbers of short meaignful units (morphemes) in flexible patterns, not easily described as "words".

Rather, the basic WORD in NN is composed of two syllables, each of which begins with a consonant (C) and ends with a vowel (V): CVCV. The final syllable is always stressed – that is, it carries more energy: CV'CV. (The symbol ' placed in front of a syllable in the International Phonetic Alphabet indicates 'primary stress' in the following syllable. See the discussion of STRESS in §3.4 of this chapter).

Compound words can be formed in NN in two general ways: a main or HEADWORD can be extended by adding either (1) a FUNCTIONAL MARKER, or (2) an EXTENSIONAL word. Each of these types have distinctive initial sounds, to prevent confusion in speech or writing.

3.1.2.1.   Functional Words

There are two sets of FUNCTIONAL words that can be used as MARKERS:

1.   All words beginning with ⱶ⟋–– *Hu--*. These express exclamations, role and number, role-state perspective, relationals (genitive, possessive, etc.), sequencers, manner, comparison, relative markers, bio-social status (age, gender), word classifiers, qualifiers (attitudinals & size), statement types, shape classifiers, creation and use, social markers, time, state/question words; and

2.   Words beginning with ⱨⱴ- *Suh-* (cause-and-effect), ⱨⱴⱡ- *Sun-* (inclusion and selection), ⱡⱴⱡ- *Sum-* (ideal and instance), ⱡⱴ⟍- *Suk-* (discourse connectives), ⱡⱴⱵ- *Sut-* (verbal punctuation), and ⱡⱴⱶ - *Sup-* (life and force).

Details are discussed in their own chapter (8: "Functional Words"), but their influence on the phonotactics of NN is potentially significant, so that aspect is dicussed here.

When a MARKER is added to a word, the result is a 3- or 4-syllable compound. The final syllable of the main word carries primary stress, while the final syllable of the added MARKER carries secondary stress: CV'CV-CV ˌCV (where the symbol ˌ indicates a lesser degree of stress on the following syllable).

Further, the first syllable of MARKERS may be much reduced or omitted in speech (though it is always written). For example, pronouns in NN do not express gender, but many speakers may prefer to clarify their pronouns by adding a gender-marker. The basic third-person singular pronoun is ⱸⱡⱡⱶ *himoi*, to which may be added the MARKER ⱸⱡⱡⱶ *humo* 'male person'. This compound is written ⱸⱡⱡⱶ–ⱸⱡⱡⱶ *himoi-humo* and may be pronounced [hiˈməiˌmə] completely dropping the first syllable of the MARKER; or [hiˈməiꜞˌmə], [hiˈməiʰˌmə] with a slight voiced or voiceless aspiration for clarity in formal speech to indicate the place where the intial syllable of the MARKER was dropped. The secondary stress on the MARKER serves to differentiate it from the initial syllable of a following word, such as ⱡⱶⱴ *mohu* [məˈhə] 'life'.

3.1.2.2.   Extensional Words

Because of NN's constraints on word-patterns, there are only 65,536 possible basic WORDS in NN. Since words are always needed for new concepts, classification of natural phenomena, and technical activities, NN has provision for creating compound words to represent them. The FAMILY beginning with *ʎ--- F---* is intentionally left undefined to allow compound words to be developed by specialists in their fields. (This is discussed in detail in Chapter 18, "Expansion Words".)

The system works by starting with a predefined NN word expressing a general concept or field and appending a word beginning with *F*, chosen from a set of words defined by specialists in the field.

Another type of word with more than two syllables is the set representing spacial zones. Three-dimensional space can be visualized and represented in NN using CARTESIAN or SPHERICAL systems. In addition, two-dimensional ENCLOSURES can be represented. GENUS *ʎч-- Sw--* is organized differently than other groups of words. Instead of a series of 2-syllable words, each word in *ʎч-- Sw--* is 4 syllables. This is discussed in detail in Chapter 14, "Representing Space and Time".

3.1.3. Consonants and Vowels

As Basic Principle ❻ of the language, NN has 16 consonants and 16 vowels. The sixteen consonant sounds chosen for NN are

$$/ h \, ɕ \, s \, f \qquad ʁ \, ʑ \, n \, m \qquad k \, c \, t \, p \qquad g \, ɟ \, d \, b /.$$

These sounds were chosen to be distinctive enough that expected variations in pronunciation will not affect intelligibility; almost all languages have consonant sounds close enough to these that an equivalent is readily available.

It is more accurate to use the term "syllable nucleus" or simply NUCLEUS rather than "vowel", because many of the syllable NUCLEI are "compounds", "clusters", "diphthongs" or "glides" composed of more than one simple vowel sound. Very few languages have sixteen "simple" vowel sounds (that is, vowels whose tongue-position does not change) without using tones, voice qualities, additional lip positions, or nasality - features not shared by a lot of the world's languages. So NN combines vowel sounds in the vocalic part of each syllable (the syllable nucleus) to produce "glides", a type of vocalic element that *is* found in the majority of human languages - though by no means all. Six common vowel sounds are used as the basis for NN syllabic structure:

/ə i e a o u/, spelled Ɪ ᒪ ᗡ ᒥ Ɪ *u i e a o u*.

These form the basis for the complex syllable NUCLEI. The vowels /e a o/ serve as the "core" to which /u/ may be added before as a semi-vowel [w]; /i/ may be added after as a semi-vowel [j]. This results in the 16 NUCLEI:

/ei   ai   oi   ui   ue   ua   uo   uei   uai   uoi/

[ɛj   aj   ɔj   wi   wɛ   wa   wɔ   wɛj   waj   wɔj]

3.2. Consonants

3.2.1. Places of Articulation

The 16 consonants ae produced by choosing 4 **places of articulation** and 4 **manners of articulation**.

In describing speech sounds, the "place" is the part of the mouth in which a narrowing or shutting-off of airflow is made. The four chosen are the most generally found in languages:

- **Velar** or back: the back of the tongue or the throat, producing sounds [h ʁ k g];

- **Palatal** or mid: The top or surface of the tongue approaching the top arch of the mouth, producing sounds [ɕ ʑ c ɟ];

- **Apical** or front: The tip of the tongue approaching the teeth or the alveolar ridge right behind the teeth, producing sounds [s n t d];

- **Labial**, the lips: producing sounds [f m p b].

3.2.2. Manners of Articulation

Two of the manners of articulation are related to how the flow of air is handled to produce the consonant sound:

- **Stops** are consonants in which the flow of air is briefly cut off, producing sounds [k g c ɟ t d p b]

- **Continuants** are consonants in which the flow of air is constricted or diverted, but continues to flow: [h ʁ ɕ ʑ s n f m]. Most are produced by a narrowing of the air passage, while [n] and [m] divert the air through the nasal passage.

Two further manners are related to concurrent vibration of the vocal cords or energy level. These are discussed in greater detail under Phonotactic Variations below.

3.2.3. Phonetic Display

In describing the sounds of a language, it is usually helpful to show a table in which place and manner of articulation are the two dimensions of the phonetic space. This is shown in Ɖρ 3.1.

Ɖρ 3.1: Phonetic Display of NN Consonants

	Labial	**Apical**	**Palatal**	**Velar**
Stops unvoiced	p	t	c	k
Stops voiced	b	d	ɟ	ɡ
Continuants unvoiced	f	s	ɕ	h
Continuants voiced	m	n	ʑ	ʁ

3.2.4. Phonotactic Variations

When the ideal sounds ("phonemes") of language are actually pronounced, there are always slight variations in the sounds produced. Some of these are caused by people's varying shapes and habits; others are systematic variations associated with neighboring sounds, word-stress, or sentence structure. All of these variations are known as "allophones". Each phoneme has a "primary" allophone, and possibly one or more other systematic manifestations.

Allophonic variatons operate within phonotactic or "accent" systems. As explained above, it is expected that speakers of NN from different language backgrounds will differentiate between sounds in NN using the phonotactics they are accustomed to in their original language. In other words, most people would speak NN with an "accent" based on their native language. In some cases, people speaking a non-native language are difficult to understand. This may be because of their inability to reproduce the distinctions between sounds the their second language which are not distinguished in their first language. The design of the NN sound system is intended to minimize these difficulties, but it is inevitable that confusions will arise. The following sections discuss several possible areas of confusion, with suggestions for minimizing problems of intelligibility.

3.2.5. Consonant Pronunciation Variations (in lexical order)

In Ɗρ 3.2, each NN symbol is shown with the phonemic (ideal) pronunciation in IPA notation. Possible variant pronunciations ("allophones") are shown, also using IPA; the most convenient pronunciation for many English speakers is shown in **bold** type.

Ɗρ 3.2: Basic Sounds and Possible Variants

NN	Phoneme /-/	Allophones [-]	Notes
Ɫ	h	**h** ʔ ø	[ʔ] is discouraged but permissible; [ɦ] is not permissible for /h/ but is for Γ /ʁ/ "silent *h*" is permissible only in *huh-*
⅃	ɕ	ɕ ∫ ʂ **∫**	[ʃ] is most likely for English speakers
⅄	s	**s** ʂ	palatalization before [i] is not acceptable
⅃	f	**f** ɸ	
Γ	ʁ	ɹ ʀ ʕ ɦ ʁ r ɽ l ɭ ɭ	Wide variety of sounds is acceptable, so long as they are voiced and either "gutteral", "rhotic" or L-like
Ɫ	ʐ	ʐ ʒ zʲ	
⅄	n	n	[ŋ] is discouraged; [ɲ] is not acceptable
Ɫ	m	m	
Ɏ	g	**g** k ɠ ɢ q	Uvulars are acceptable. See note on voice vs. voiceless
⅄	ɟ	ɟ **dʒ** c gʲ kʲ	
Ж	d	**d** d̪ ɖ ɗ	Dental, alveolar and retroflex are all acceptable; palatalization before [i] is not acceptable
Ӽ	b	**b** p ɓ	
Ɏ	k	**k kʰ** k' q qʰ q'	Uvulars are acceptable. See note on voice vs. voiceless (below)
Ӡ	c	c cʰ c' **tʃ tʃʰ** kʲ k'ʲ	
Ӽ	t	**t tʰ** t' t̪ t̪ʰ t̪' ʈ ʈʰ ʈ'	palatalization before [i] is not acceptable
Ӿ	p	**p pʰ** p'	

3.2.5.1.   *"Voiced-Voiceless" Distinction Systems*

Voice *vs* voiceless: The distinction between the categories "voiced" and "voiceless" is a generalization which is actually implemented in various languages using a variety of tactics – not simply voicing vs. unvoicing. So for speakers of languages whose differentiations are implemented differently, there may appear to be some overlap, as with ⼂ listed above with an allophone [k] while ⼄ is also listed with an allophone [k]. These allophones should be maintained distinct within the phonotactic system of each speaker or group.

These are some examples of how various languages distinguish between consonants with similar places of articulation, described for convenience here as "voiceless" vs. "voiced"; others have also been observed:

- **Simple Voiceless-Voiced** (as in Italian): the vocal cords do not vibriate during voiceless consonants and do during voiced ones. [k tʃ t p] vs. [g dʒ d b]

- **Voiceless aspirated vs. voiced** or unaspirated (as in most varieties of English): voiceless consonants are followed by a brief puff of air in many locations; voiced ones may or may not have actual vocal cord vibration. [kʰ tʃ tʰ pʰ] vs. [g dʒ d b] or [k̚ d̥ʒ t̚ p̚]

- **Ejective vs. non-ejective** or voiced (as in Navajo and many other languages native to America, the Caucasus, etc.): in voiceless consonants, vocal cords not only have no vibration, but are actually closed briefly during voiceless consonants; the contrasting consonants do not feature glottal closure, and may or may not have vibration of the cords. [k' tʃ' t' p'] vs. [k tʃ t p]

- **Fortis vs. lenis** (as in Danish and Spanish): voiceless consonants are firmly closed and vocal cords do not vibrate; voiced ones are relaxed and may remain partially open or become semi-vowels, with vocal cords vibrating. [k tʃ t p] vs. [ɣ ʒ ð β]

- **Egressive vs. ingressive** (as in Fula and several other African and Southeast Asian languages): voiceless consonants are voiceless or may be weakly voiced; voiced ones are accompanied by a brief lowering of the glottis, producing a slight negative air pressure in the mouth during the stop, while the vocal cords continue to vibrate. [k tʃ t p] vs. [ɠ ʄ ɗ ɓ]

3.2.5.2.   *Alternate Places of Articulation*

The main goal is to provide four clearly distinctive places of articulation. It is expected that speakers with different language backgrounds may be more comfortable using slight variations in places of articulation that are more familiar to them.

- The primary four are velar, palatal, apical, labial [k c t p] etc.; others may include:

- Uvular, palatalized velar, dental, labial [q kʲ t p] etc.;

- Velar, palatal, retroflex, labial [k c ʈ p] etc.;

- For English-speakers, Velar, post-alveolar with affricated stops, alveolar, labial [k ʧ t p] etc.

3.3. Syllable Nuclei

3.3.1. Simple Vowels

As noted above, the simple vowels of NN are /ə i e a o u/ as in North American English *but, beet, bet, bot, bought, boat, boot*. These were chosen as vowels which are used in many languages. Perhaps the only one to cause much difficulty is /ə/, the "schwa", because in many languages it only occurs as a variant of other vowels in certain specific conditions; in NN it varies freely and meaningfully in all positions with all other vowels, so other vowels may never be pronounced as [ə].

3.3.2. Complex Syllable Nuclei

When combining vowels in the same syllable, NN limits the sequences to begin with /u/ and end with /i/. As with the consonants, it is expected for speakers to employ tactics similar to those they are familiar with in their first language for dealing with complex syllable nuclei. These are dealt with more fully in the "Heavy" Syllables section below. (§3.4.4)

### 3.3.3. Phonetic Displays

In analyzing vowels, a trapezoid representing articulatory and acoustic space is used. Ɖρ 3.3 places NN simple vowels in this space, with circles indicating the approximate intended variability of each sound:
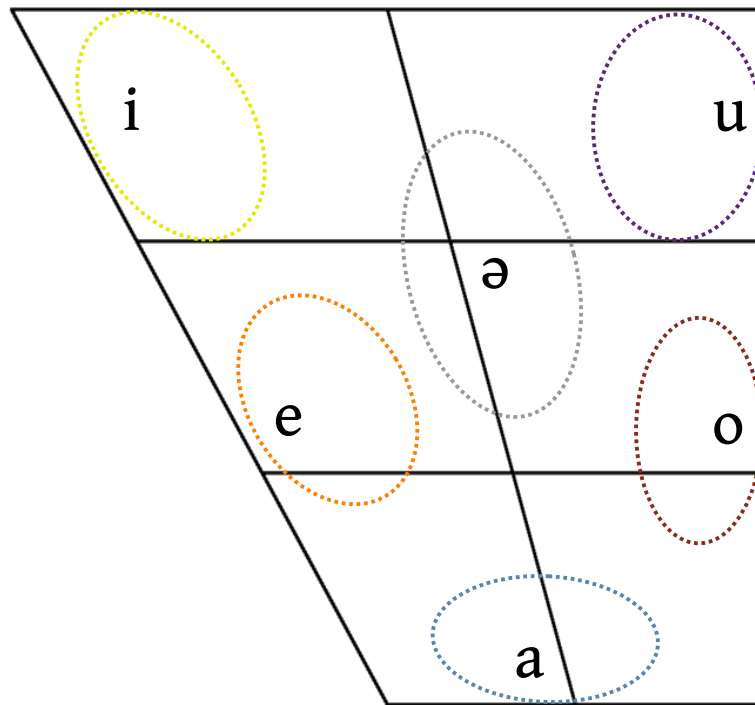
Ɖρ 3.3: NN Simple Vowel Space

The precise pronunciation of simple vowels is not important, so long as the six remain distinct from one another and in the same general articulatory/acoustic space. Diphthongization (gliding) of simple vowels is discouraged, especially when it results in glides that resemble the glides of prescribed complex syllabic nuclei discussed below. (This is challenging for speakers of many varieties of English.)

The Ɖρ 3.4 illustrates the glide-paths of complex syllable nuclei:
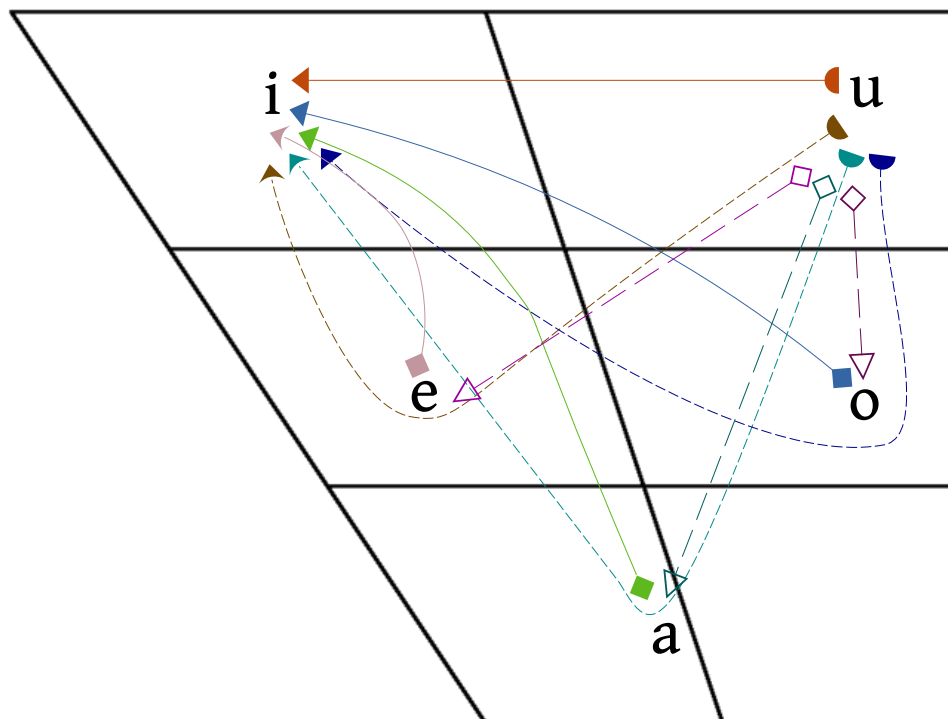
Dᴘ 3.4: Glide-paths of complex nuclei

One strong suggestion: the mid-height vowels /e, o/ should be pronounced relatively low as [ɛ, ɔ]. This is to increase the glide-distance in the complex nuclei /ei, uo/ so they are [ɛj, wɔ] rather than [ej, wo], because the latter pronunciation tends toward a simple lengthened [eː, oː], potentially confusing two distinct NN sounds. (This is a recognized weakness of the vowel structure for which no better solution has been proposed.) Conversely, /ə/ should be somewhat raised [ə̣] or [ɝ] to avoid confustion with /a/.

3.4. Stress, Tone, and Timing

To a great extent, timing and intonation patterns are determined by factors beyond the control of a language-inventor. All speakers of NN (at least at first) would bring many patterns from their native languages. In addition, the prescribed syllabic structure and lexical stress would exert an influence on the patterns for any fluent NN speakers.

STRESS is prescribed for the second syllable of most words in NN for a purpose: to clarify the most important distinctions between similar words. The first syllable of NN words represents their general area of meaning,

while the second syllable specifies the precise meaning. This leads to many words sounding very similar, but having important semantic differences. In many cases, the context will make the general meaning of a sentence fairly clear. It is considered important to stress the second syllable so its exact meaning will be easier to distinguish.

STRESS also serves the purpose of separating an utterance into words. Most languages with simple syllable structures like NN tend to be spoken quite rapidly. Having a clear stress-pattern for words helps cluster a rapid stream of spoken syllables into words.

Let's start by establishing a clear understanding of what is meant by STRESS.

3.4.1. What is Phonological Stress?

The term STRESS in discussing speech sounds is a general term refering to the amount of energy with which a syllable is pronounced relative to other nearby syllables. In many languages (but certainly not all), stress is a way to distinguish between meanings of words. English uses stress this way; for example, the word *record* can be pronounced in two ways, depending on which syllable receives the stress: REcord refers to a physical object or concept, while reCORD refers to the action of creating a REcord. English does not indicate stress in the spelling of words, but many other languages such as Spanish and Portuguese do.

Adding energy to a syllable can commonly produce any or all of four differences, depending on the phonotactics of each language or language variant:

- **Loudness** (amplitude) may be greater in stressed syllables;

- **Length** (duration) may be longer in stressed syllables;

- **Pitch** (tone) in stressed syllables may contrast with pitch in neighboring syllables – usually higher, but occasonally lower;

- **Clarity** may be enhanced, in some cases by emphasizing consonants through aspiration or firm closure, or in some cases by more carefully pronouncing the vowel rather than letting it be centralized and indistinct.

English uses all four of these methods. In *record*, the contrast can be written with IPA this way (North American English):

REcord: [ˈɹɛˑkɝd] *e* is clear, louder, higher pitch and longer that the indistinct *er* sound in the second syllable;

reCORD: [ɹɨ ˈkʰɔ˞ˑɹd] *e* is short, centralized and indistinct, *c* /k/ has a puff of air after it (absent in REcord), and *o* is longer, higher pitch, more distinct from *r*, and louder.

Portuguese uses somewhat similar distinctions, as does Spanish, except Spanish does not centralize (reduce the clarity) of unstressed vowels. Many of the Eastern European languages (Hungarian and some Slavic) place stress automatically on a particular syllable of most words, but because they have distinctive vowel lengths which vary independent of the stress, stress does not make vowels significantly longer. Of course pitch – apart from the other ways of producing stress – is used to make meaningful distinctions between words in many languages such as Chinese. And languages like French do not distinguish words with stress, but stress all syllables of a word more or less equally, while using stress to put FOCUS on words the speakers consider important in a sentence.

The practical point here is that if we say NN words have stress on a particular syllable, which of the several ways of stressing a syllable will fit best with the other features of NN? Let's start by looking at the word patterns.

3.4.2. NN Word Patterns

In the first section of this chapter, we mentioned the limited number of word-patterns of NN:

- The only words that are **one syllable** are exclamations, the 16 words beginning with ꞛꞮ– *Huh-*, such as ꞛꞮꞭ *huhi* [hi, i] 'yes', ꞛꞮꝇ *huhw* [hu, u] 'no', ꞛꞮꝒ *huho* [hɔ, ɔ] 'oh!', ꞛꞮꝆ *huhai* [hai, ai] 'greetings'. These receive stress depending on their position in an utterance – or if they're the only word in the utterance, they would be pronounced with clarity: ˈCV or ˈV

- The majority of words are of **two syllables**, with stress on the second: CVˈCV

- When a MARKER is added to a word, it forms, in effect, a **three-syllable** word. The primary word retains its stress on the second syllable, while the MARKER loses its first vowel and its second is demoted to a secondary level: more stress than the first syllable of the primary word, but less than the second: CVˈCVˌCV

- When an EXTENSION word is added, it forms a **four-syllable** word. The primary word recieves secondary stress on the second syllable, and the extension receives primary stress on its second syllable: CVˌCVCVˈCV. It may be desireable to add secondary stress to the third syllable as well: CVˌCVˌCVˈCV to improve clarity.

3.4.3. NN Stress Options

Which of the four common ways of implementing stress should be used in NN?

- **Loudness** relative to other syllables: OK

- **Pitch** relative to other syllables: OK

- **Length** relative to other syllables: generally NO, because of "heavy" syllables (see below)

- **Clarity** relative to other syllables: NO. All syllables of NN are key to meanings, and must be pronounced clearly, as in Spanish.

So speakers may implement stress in NN using either loudness, pitch, or both. But trying to make stressed syllables longer could be problematic, and making unstressed syllables less clear would be extremely harmful to intelligibility.

3.4.4. "Heavy" Syllables

One goal of NN is to use sounds that are as easy as possible to pronounce for speakers of most of the world's languages. For this reason, NN avoids front-rounded vowels (like German *ö ü* /ø y/) or back-unrounded vowels (like Vietnamese *ơ ư* /ɤ ɯ/). NN also avoids distinctions between nearby front and back vowels, like English long- and short-*i* [i ɪ], long- and short *oo* [u ɷ], French *é* and *è* [e ɛ], *ô* and o [o ɔ], and uses combinations of more widely-used vowels. That led to the use of multiple vowels in syllable nuclei, but those are not without difficulties either.

All the six simple vowels /ə i e a o u/ can serve alone as syllable nuclei. But additionally there are ten syllable nuclei consisting of 2 or 3 vowels. Vowels /e a o/ can serve as the CORE VOWEL of a syllable in combinations. When combined, /u/ is always placed first and /i/ is always placed last. Thus, syllable nuclei in NN can be of three lengths or "weights":

- Simple vowel only: weight of 1

- CORE VOWEL plus one PERIPHERAL VOWEL: weight of 2

- CORE VOWEL plus two PERIPHERAL VOWELS: weight of 3

The heavier the nucleus, the more time or effort it demands of the speaker. Some attempt has been made to represent simpler and more common concepts with lighter vowels, but this has not always been possible. In the following paragraphs, we'll take a look at some of the ways speakers might find to pronounce the heavier syllables.

3.4.4.1.   Weight 2

Most languages have combinations like /ei ai oi ui ue ua/. The most straight-forward tactic is to shorten the /u/ and /i/, making them glides or approximants:

/i/ → [ĭ , j]   giving [ɛĭ aĭ ɔĭ]   or [ɛj aj ɔj]

/u/ → [ŭ, w]   giving [ŭi ŭɛ ŭa ŭɔ]   or [wi wɛ wa wɔ]

But some combinations are problematic, such as the combination /wo/, and combinations of three vowels, for most languages' speakers. How to suggest pronouncing them?

As mentioned above, the /wo/ combination can best be handled by using the most "open" [ɔ] or [ɒ] that doesn't overlap with /a/. That way, the glide involves enough change in tongue position and acoustic signal to clearly distinguish its two components. Similarly, using an open [ɛ] or even [æ] in the /ei/ syllable is clearer than beginning with a closer [e].

3.4.4.2.   Weight 3

There are three basic strategies for handling weight 3 syllable nuclei: shortening PERIPHERAL VOWELS, shortening all vowels, or using mora-timing.

3.4.4.2.1   Shortening high vowels

This is essentially the same strategy shown for weight 2 nuclei: /i → ĭ , j/ and /u → ŭ, w/ giving [wej waj wɔj]. This is probably most useful for English speakers, given the similarity to *way, Y, *woy* (*pronounceable, but not a real word).

3.4.4.2.2   Shortening all vowels

Speakers of some languages may find it more convenient to pronounce all vowels together more as a team of equals, shortening them so that together they are only slightly longer than a simple syllable nucleus: [ɛ͡i a͡i ɔ͡i u͡i u͡ɛ u͡a u͡ɔ u͡ɛi u͡ai u͡ɔi].

3.4.4.2.3   Mora-timing

While many languages (such as Spanish and French) base their speech rhythm on syllables of approximately equal length, others (like English and Russian) base their rhythm on stressed syllables. A third way of timing speech bases rhythm on the length of a simple (short) vowel; this is used in Japanese, possibly also in Italian and some Eastern European languages. The length of a simple vowel is known as a "mora" (plural morae). Speakers of mora-timed languages may feel most comfortable using that system with NN. Doing this will result in syllable nuclei of the same number of morae as the "weight" shown above.

3.4.4.3.   Semantic Considerations

In addition to basic vocabulary distinctions between words, the change of one vowel can sometimes completely reverse the meaning of an entire message. In chapter "The Verb" §6.4.2, the discussion of Assertion – Negation presents the difference between "Come in" and "Don't come in" as the addition of the sound /w/ in one word:

ᘭᘺ ⅃ᛁᚱᛁ-ᛁᛁ᙭ᚲ *Seihei xuya-huto*   [sɛj ˈhɛj ʃə ˈʒa ˌtɔ] 'come in! (command)'

ᘭᘺ ⅃ᛁᚱᛁ-ᛁᛁ᙭ᚾ *Seihei xuya-hutwo* [sɛj ˈhɛj ʃə ˈʒa ˌtwɔ] 'do not come in! (command)'

It would make sense in such cases to emphasize the negative vowel as much as possible:

ᘭᘺ ⅃ᛁᚱᛁ-ᛁᛁ᙭ᚾ *Seihei xuya-hut<u>w</u>o* [sɛj ˈhɛj ʃə ˈʒa ˈˈtwːɔ] 'do NOT come in! (command)'.

This concludes the discussion of NN pronunciation.