

Crash course in linguistic terminology used for Na'Vi

I. Pronunciation

As many of you have already read and written using the standardized Na'Vi form of writing, which is not the writing system of the Na'Vi since they do not have one, you are by now familiar with the script. However, if you are not, we have here the standardized letters that we use to spell out names, known as the orthography, in brackets [] and the IPA symbols that correspond to the orthographic Na'Vi letters next to those. IPA stands for International Phonetic Alphabet and is the standard system for linguistics in writing out how a word is to be spoken and understood. Please refer to the tables I have attached of both the Na'Vi consonants and vowels with their IPA equivalents next to them (**Table A**), and also the standard IPA chart with all language sounds on them (**Table B**). Do not be daunted by the large multitude of sounds that most humanoid sentient beings possess, as there are many of them! What I would like for you to focus on are three aspects of any sound that we are capable of making: place of articulation, manner of articulation, and voicedness.

Place of Articulation

When you produce the “b” sound, ask yourself what part of your mouth is moving? If you are producing the correct sound, you should be using both of your lips. This aspect of a sound refers to the location of where in your mouth the sound is being produced. If you were to produce the “p” sound, you would bring your bottom lip up to meet your upper teeth and blow air out, thus creating the /p/ sound. The term for this location of sound production is dubbed labiodental, named so for labio, “lip”, and dental, “teeth.” (**Tables C & D**) show you from a cross section of the human head where in your mouth the top portion of the IPA consonant chart refers to and also what your mouth should roughly look like when producing these sounds, respectively.

Manner of Articulation

Back to our example of the /b/ sound, I would like for you now to notice not the location, but what happens when you produce this sound. If you were to slow down this sound, you would detect a small amount of pressure being built up inside your mouth behind your lips. Since you then release this positive pressure in a sort of “popping” noise, these types of sounds are called Plosives (think explosives and how they burst). With the second example, /f/, you bring your lower lip to your upper teeth and blow air out. If you were to carry this sound out for a few seconds, it would resemble air being let out of a tire. These types of sounds create a lot of friction in the air when they escape your mouth, and are thus dubbed fricatives.

Two problems Na'Vi presents to English speakers are the Glottal stop and the Ejectives. The Glottal stop is actually a sound we have in English, however we do not give it a second thought. Take the phrase “uh-oh”; when you go from uh to oh, you will notice your vocal folds opening quickly to create a sort of pause in the phrase. The same goes for the word “Latin”, whereas in every day speech we do not say Lah-Tin, but instead Lah'In, whereas the t reflects this glottal stop. Ejectives, however, are sounds not native to English. These are more intense

Plosives, which are built up and then released in a violent manner. At first try to exaggerate these sounds so that later on you will be able to tone it down a bit. For the Na’Vi sound tx, pretend you are going to pronounce a regular t, but instead apply much more pressure. Release this sound, followed quickly by the preceding vowel. There will be a pause between the tx and vowel, but this is intended. It will actually sound not only like a very violent /t/, but also like there is a glottal stop between the tx and vowel as well. Remember, the more you exaggerate it while practicing, the easier it will be to tone it down for regular Na’Vi speech.

Voicedness

Perhaps the simplest aspect of a sound is whether it is voiced or voiceless. Take for example /b/ vs /p/. Both are produced using your upper and lower lips, and both are plosives. However, the /b/ sound is produced whilst your vocal folds are vibrating, and the /p/ is not. To examine this yourself, try comparing the /f/ sound to the /v/ sound. Start out by producing /f/, then without stopping, produce the /v/ sound. Feel your throat for the start and stop of the vocal folds vibrating.

II. All those Confusing Linguistics Terms?!

Yes, some of these terms are a bit tricky to wrap one’s head around them, especially when you speak one language for most of your life. However, once you learn these you will start to see in your own speech the different components from which grammar is constructed.

Clusivity

The pronominal system in Na’Vi incorporates the concept of Exclusive and Inclusive pronouns, along with the normal pronouns such as he, she, we, etc. Clusivity deals with whom the speaker is including when they speak. So for the 1st person exclusive pronoun ‘oe’, we can interpret it as meaning two things: “I” or “I, not anyone else”. The same goes for the dual exclusive: “Us two, not you”, and the plural “Us, not you”. Inclusive brings the speaker and listener together. Therefore the dual inclusive would mean “Us two, meaning you and me” and the plural inclusive would mean “Us, meaning all of us”.

Deferential Forms

Deferential, or ceremonial, forms are those that show much esteem, respect and authority. They are essentially extremely polite pronouns. There are only two currently known deferential forms in Na’Vi, ‘ohe’ (I) and ‘ngenga’ (you).

Lenition

For some Na’Vi nouns with strong initial consonants, such as px, t, or k, adding either plural marker ay- or me- with weaken that initial consonant. Theory behind lenition is largely thought to be easier and smoother pronunciation for the mouth. Regardless, the following sounds when found consonant initial are weakened to these following forms:

Before plural marker	After plural marker
px, tx, kx	p, t, k
p, t/ts, k	f, s, h
‘	Ø

Examples:

tsmuk	'sibling'
aysmuk/smuk	'siblings'
pxun	'arm'
mepun/pun	'arms'
kelku	'home'
mehelku/helku	'homes'

Na'Vi word class system

Perhaps the most challenging aspect of Na'Vi is the number of suffixes, prefixes, and infixes that are a large part of verb and noun construction. Unfortunately several of these aspects are rather difficult for speakers of English or any of the Romance languages at that.

Transitivity

Transitivity refers to how many arguments a verb must take in order for it to make complete sense. Some verbs do not need any more argument than a subject, and are thus titled intransitive. Verbs that do require arguments are known as transitive. Likewise, subjects of either are either intransitive subjects or transitive subjects.

E.g.

Intransitive verbs:

I slept.

I ran.

You shaved.

These verbs do not require anything else for them to make complete sense to the listener.

Transitive verbs:

I put.

(Well...what did you put?)

I put the book.

(Ookay...where did you put the book??)

I put the book on the shelf.

(Much better!)

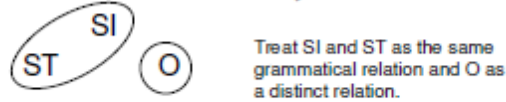
The verb "to put" not only requires a subject, but an object (here known as the patient because it is receiving the action) and a location (known as the locative, for obvious reasons).

Depending on what type of language one speaks, the subjects and objects of transitive vs intransitive will be marked differently. Two systems exist: Nominative-Absolutive and Ergative-Accusative.

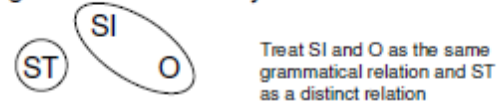
Nominative-Absolutive systems mark the subjects of intransitive and transitive sentences similarly and mark objects differently. In English, for example, we mark these concepts based on word order, with both subjects of intrans or trans coming at the start of the sentence and objects as after the verb.

Ergative-Accusative systems mark subjects of intransitive verbs and objects of transitive verbs the same, and subjects of transitive verbs differently. Since this is often times hard to imagine, I have included the illustration below for both Nominal-Absolutive and Ergative-Accusative systems:

■ **Nominative-Accusative System**



■ **Ergative-Absolutive System**



With that said, Na’Vi appears to have a split system where upon they have a three way, or tripartite, system of marking subjects and objects:

	Marker
Subject of Intransitive verb	∅
Subject of Transitive verb	-l
Object of Transitive verb	-ti

These markers do not affect the meaning of the sentence in any way, they are merely there to demonstrate a difference between subjects and objects.

Examples:

Intransitive Sentence: Oe-∅ Irrtok
 I smile

Transitive Sentence: Nga-l kin ikran-ti
 You-ERG need ikran-ACC
 “You need an ikran”

It is good to note that the Subject of a Transitive verb will receive the Ergative marker /-l/ whilst the Object of a Transitive verb receives the Accusative marker /-ti/.

To determine transitivity of a verb, put the verb in a simple sentence such as “I blank” and see if it makes sense without any other context.

Genitive (-yä)

The genitive case refers to the possessive case, or a noun that modifies another noun. In English, the Genitive marker that is typically used is the (’s):

E.g. *John’s* cheese.
Charlotte’s book.

In the case of Na’Vi, the genitive marker is typically suffixed to the end of the pronoun to show possession over another noun.

E.g. Oe-yä tımuntxa.
I-GEN mate
'My mate'

Ayoeng-yä Kelutrel
Pl.Incl.-GEN Hometree
'Our Hometree'

Dative (-ru)

The dative case is a grammatical case generally used to indicate the noun to whom something is given, or in other words, the recipient of something.

E.g. John gave **Mary** the book.
Mary was given the book from John.

Na'Vi: Amhul-1 Ralu-ru vul-ti tıng
Amhul-ERG Ralu-DAT treebranch-ACC give
'Amhul gives Ralu the treebranch'

Topic Marker (-ri)

The topic marker is used to introduce the topic of the clause, and is somewhat equivalent to (though much more common than) English "as for". It preempts the case of the noun: that is, when a noun is made topical, usually at the beginning of the clause, it takes the -ri suffix.

***This is not a substitute for the possessive case. Instead it is used to gather focus from a larger clause onto a single entity.

E.g. The play was not enjoyed by anyone.
As for John, the play was not enjoyable.

Na'Vi: tukru lu lehrrap.
spear is dangerous
'The spear is dangerous.'
Oe-ri tukru lu lehrrap
I-TOP spear is dangerous
'For me, the spear is dangerous' or since it focuses on 'oe', it would be most correct to interpret it as 'My spear is dangerous' because the topic is "I" and I am talking about a spear being dangerous.

Laudative (<ei>) vs. Pejorative (<äng>)

These infixes are placed after the consonant of the final syllable. They mark the mood of the speaker, be it a positive one, laudative, or a negative one, pejorative.

E.g. Oe tsway<ei>on ne Iknimaya
I fly-LAUD to Iknimaya
'I fly to Iknimaya (thank goodness)'

Oe tsway<äng>on ne Iknimaya
I fly-PEJ to Iknimaya
'I fly to Iknimata (darn...).'

Attributive marker (-a-)

For Na'Vi adjectives, the marker (-a-) may either precede or proceed the adjective, so long as it is between the adjective and the noun that it is modifying.

E.g. txe'lan a-tsteu
 'heart ATTR-brave'
 tsteu-a txe'lan
 'brave-ATTR heart'
 'brave heart'

The attributive affix -a- is only used when an adjective modifies a noun. Predicative adjectives instead take copular "to be" verb 'lu'.

E.g. Pe-yä txe'lan tsteu lu
 Her heart brave is
 'Her heart is brave'

Verbal Tenses

Although there appear to be more tenses for Na'Vi, they go unexplained until Dr. Frommer decided to elucidate us all upon their meaning. However, for now we shall focus on the last of the linguistic conundrums of verb tenses:

<REC><im> Refers to recent past. "I just ate."

<FUT><ay> Refers to future. "I will eat."

<IMPV><er> Refers to an incomplete/continuous action. "I am eating."

<PFV> Refers to a completed past action. "I ate."

***The present tense does not have a marker.

E.g. taron [hunt] "hunts"
 t<im>aron [hunt<REC>] "just hunted"
 t<ay>aron [hunt<FUT>] "will hunt"
 t<er>aron [hunt<IMPV>] "hunting"
 taron [hunt<PFV>] "hunted"

TABLE A

	Labial	Alveolar	Palatal	Velar	Glottal
Ejective	[pʰ]pʰ	[tʰ]tʰ		[kʰ]kʰ	
Plosive	[p]p	[t]t		[k]k	[ʔ]ʔ
Affricate		[tʃ]tʃ			
Fricative	[f]f [v]v	[s]s [z]z			[h]h
Nasal	[m]m	[n]n		[ŋ]ŋ	
Flap		[ɾ]ɾ			
Trill		[rr]r			
Liquid/glide	[w]w	[l]l or [ɭ]ɭ:	[j]j		

	Front	Back
High	[i]i [ɨ]ɨ	[u]u
Mid	[e]e	[o]o
Low	[ä]ä	[a]a

TABLE B

THE INTERNATIONAL PHONETIC ALPHABET (revised to 1993)

CONSONANTS (PULMONIC)

	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive	p b			t d		ʈ ɖ	c ɟ	k ɡ	q ɢ		ʔ
Nasal	m	ɱ		n		ɳ	ɲ	ŋ	ɴ		
Trill	ʙ			r					ʀ		
Tap or Flap				ɾ		ɽ					
Fricative	ɸ β	f v	θ ð	s z	ʃ ʒ	ʂ ʐ	ç ʝ	x ɣ	χ ʁ	ħ ʕ	h ɦ
Lateral fricative				ɬ ɮ							
Approximant		ʋ		ɹ		ɻ	j	ɰ			
Lateral approximant				l		ɭ	ʎ	ʟ			

Where symbols appear in pairs, the one to the right represents a voiced consonant. Shaded areas denote articulations judged impossible.

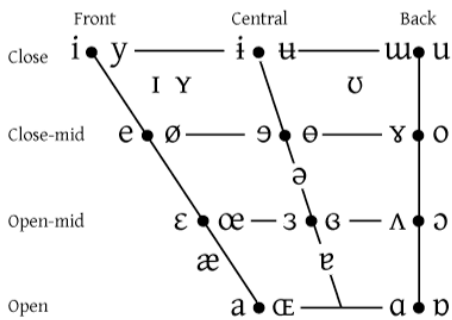
CONSONANTS (NON-PULMONIC)

Clicks	Voiced implosives	Ejectives
⊙ Bilabial	ɓ Bilabial	ʼ as in:
ǀ Dental	ɗ Dental/alveolar	p' Bilabial
ǃ (Post)alveolar	ɟ Palatal	t' Dental/alveolar
ǃ̄ Palatoalveolar	ɡ Velar	k' Velar
ǁ Alveolar lateral	ɠ Uvular	s' Alveolar fricative

SUPRASEGMENTALS

	TONES & WORD ACCENTS
	LEVEL CONTOUR
ˈ Primary stress	ˈfounəˈtʃən
ˌ Secondary stress	ˌ
ː Long	eː
ˑ Half-long	eˑ
◌̥ Extra-short	e̥
◌̩ Syllable break	ji.ækt
◌̯ Minor (foot) group	e̯
◌̰ Major (intonation) group	ḛ
◌̰ Linking (absence of a break)	ḛ
	↓ Downstep
	↑ Upstep
	↗ Global rise
	↘ Global fall

VOWELS



Where symbols appear in pairs, the one to the right represents a rounded vowel

OTHER SYMBOLS

M Voiceless labial-velar fricative	ɕ ʑ	Alveolo-palatal fricatives
W Voiced labial-velar approximant	ɹ	Alveolar lateral flap
ɥ Voiced labial-palatal approximant	ɥ	Simultaneous ʃ and X
H Voiceless epiglottal fricative		Affricates and double articulations can be represented by two symbols joined by a tie bar if necessary
ʕ Voiced epiglottal fricative		
ʡ Epiglottal plosive		

k̟p̟ t̟s̟

DIACRITICS

Diacritics may be placed above a symbol with a descender, e.g. ɲ̥

◌̥ Voiceless	◌̤ Breathy voiced	◌̦ Dental	◌̧
◌̦ Voiced	◌̨ Creaky voiced	◌̩ Apical	◌̪
◌̧ Aspirated	◌̨ Linguolabial	◌̫ Laminar	◌̬
◌̨ More rounded	◌̩ Labialized	◌̪ Nasalized	◌̫
◌̩ Less rounded	◌̪ Palatalized	◌̫ Nasal release	◌̬
◌̪ Advanced	◌̫ Velarized	◌̬ Lateral release	◌̭
◌̫ Retracted	◌̬ Pharyngealized	◌̭ No audible release	◌̮
◌̬ Centralized	◌̭ Velarized or pharyngealized		
◌̭ Mid-centralized	◌̮ Raised		
◌̮ Syllabic	◌̯ Lowered		
◌̯ Non-syllabic	◌̰ Advanced Tongue Root		
◌̰ Rhoticity	◌̱ Retracted Tongue Root		

TABLE C

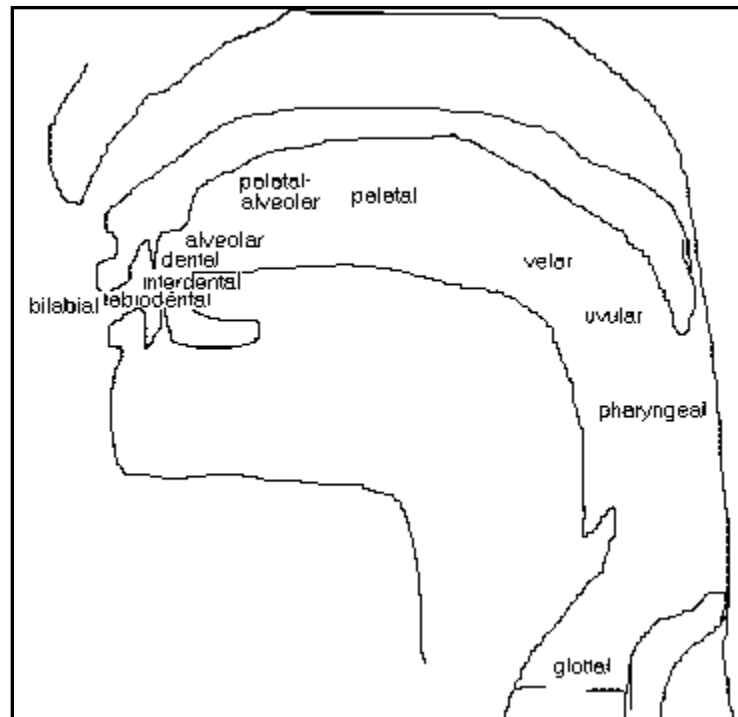


TABLE D

