

AYLÌ'UYÄ LETOLÄFTXUA RENU: THE NA'VI GRAMMAR

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NB: I haven't had time to fully edit Morphology and Syntax, and that is copied verbatim from Wikipedia.

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1. INTRODUCTION

This grammar was begun in the hopes of unifying the many different documents concerning Na'vi, the language of the indigenous Pandorans in James Cameron's "Avatar", as described and created by Paul Frommer. Not only was the information scattered, it was also in many cases contradictory. I have attempted at all times to check the original information. There will be cases where either I or the Learn Na'vi community, at www.learnnavi.org, have made conclusions or derivations which are not reflected in the original Frommerian information. Much of the information herein may be controversial, and some of it will be wrong. I am not making this to solve controversies, but to fully explain them. This document is certainly not made to be a learning tool, as linguistic terms are often not explained. *Caveat lector*: If you are afraid of technical speech, I would avoid this document. I refer you to the excellent Pocket Guide for more basic information. This grammar would not have been made possible without the help of Karyu Amawey's guide, Wikipedia, the Learn Na'vi community, and, as ever, all of those *lekawng-txìma aytute* over on the Skype and IRC chats.

I have, throughout the document, used the International Phonetics Alphabet (IPA) where I deemed appropriate. I have included a short segment on this in the Phonetics section, as well as an appendix on linguistic terminology. I have included phonetic transcriptions in [] brackets, phonological representations in / / brackets, Na'vi words in **bold**, and English translations in *italics*. The *italics* function is also used variably, depending on where I saw fit.

I think it would be useful for me to state that I hold that Na'vi should be allowed to grow organically by trial and error by learners themselves and not solely from a Frommerian synthetic system. I hold that it is much better to find every fact that we can about this language, to derive every questionable rule and to turn over ever tskxe than it would be to not look. I realise that this will mean future changes by Frommer. I am alright with that.

This is not a finished grammar, just as Na'vi is not a complete language. There will be inconsistencies, and there are bound to be some errors. Please, do us all a favour and post these in the thread, or contact me directly. Together, we may be able to make Na'vi not only a working language, but a living one.

Kä, ma aysmuke sì ma aysmukan, ulte tsun kxawm nìNa'vi ayoeng paylltxe!

2. SOURCING

In the Lexicon I laboriously edited every entry to include an original source for each word. I hope that this will be a final, definitive word on Na'vi grammar until Frommer gives us one of his own. Because of this precedent I've set, and it's clear use, I am going to source information here, as well. I will try to do so with the least amount of intrusion, but the constant reminders may seem a bit annoying for a while. I will be using a letter system, which will be given as follows:

- F = Frommerian information, from the blog, or from interviews.
- FE = Frommer's personal emails
- MS = the movie script
- S = the Survival Guide main text (flora and songs), or wordlist
- SG = the Survival Guide's other text
- M = transcriptions or scripts from the Avatar movie
- C = Cameron himself (from the 2007 script)
- G = The PC or Wii Avatar games
- T = Taronyu
- D = facts not derived by Taronyu
- W = Wikipedia (which has received Frommer's blessing)

I have also used a point scale system, which will follow. The lower the number, the more the information can be trusted, such that:

- 1 = Frommerian stated and attested
- 2 = Frommerian stated but not attested
- 3 = Attested, but not stated explicitly by Frommer.
- 4 = Attested and Frommerian, but contradictory
- 5 = Not attested, but assumed
- 6 = Derived
- 7 = Attested, but assumedly wrong
- 8 = Derived dubiously
- 9 = Awaiting Future Data (or where I think it needs verification from data)
- 10 = Wrong.

These will be placed after letter sourcing. Hopefully, every base will now be covered. Please let me know if anything here should be edited, amended, or otherwise changed. Likewise, for the grammar. Where something has been derived, the source and deriver is listed: such that ^{SG:T9,10}, would mean that Taronyu derived it from the Survival Guide's illegal texts, and that he is wrong to do so, and needs more data. Seeing as how I am writing this thing, and I am probably assuming the most, I will be using T often - this isn't merely being self-serving.

3. ORTHOGRAPHY

Orthography is the study of the writing systems of a language. Somewhat unfortunately, the fictitious Na'vi is unwritten. Dr. Frommer, however, used the Latin alphabet to transcribe Na'vi words, with some alterations to account for Na'vi phonetics. The letters in use are: ^{F3}

' a ä e f h i ì k l m n o p r s t u v w y z

To stop articulatory confusion amongst the actors, the digraphs *kx*, *px*, and *tx* were used for ejectives, and *ng* and *ts* were used instead of Frommer's preferred *g* and *č*. *ll* and *rr* are used to represent syllabic /l/ and syllabic trilled /r/. *ä* and *ì* were used for /æ/ and /ɪ/, respectively. An apostrophe is used to represent the glottal stop, /ʔ/. ^{F1}

The Activist's Survival Guide has a fair number of words that are not in the final dictionary, from which most of our words are derived. Most of the words in the main text are illegal: all but one of them, in fact, if you exclude the botanic words, which all sound completely authentic, and the songs. Frommer stated that *b*, *d*, *j*, and *q* never appear. ^{F1} The attested illegal letters and corresponding IPA used are, in total:

'h [ʔh], b [b], c [k], ch [tʃ] [ch], d [d], g [g], h' [hʔ], ii [i:] [ç], j [ʒ] [ç], sh [ʃ] [sh], uu [u:]

Given the regularity of phonotactic illegality, it can be argued that these words should be tossed. The game is equally controversial, as many names have characters which are not represented in the syllabary. ^{SG,G:T7} In several cases, such as **Beyral**, a word is illegal when from Cameron but stated legally in the film (as **Peyral**). ^{C,M:D3}

4. PHONETICS

Phonetics is the study of the sounds of a language. The International Phonetics Alphabet was designed to be a standard for transcription of sounds into alphabets. I have the chart below with only the Na'vi sounds that we know. The consonant chart is arranged by places of articulation and manner of articulation, while the vowel chart is arranged by height and depth of the vowel in the mouth. For more information, please consult the wikipedia page. To hear IPA sounds, see this site.

You'll notice several things about this reference Na'vi IPA alphabet, if you look long enough. I have included the uvular /N/. I do this because Frommer stated that the *ng* sound comes from the back of the throat, and this would perhaps call for backing the velar /ŋ/ - this may be allophonic, but I hold no claims towards where this might occur. ^{T8} I have not included illegal sounds. I will be using the digraph /ts/ throughout this document, but this also is not included in the chart, as it is a ligature. Frommer's preferred the use of the letter /č/ showed his "Americanist" training. ^{F1} I have not included the Na'vi sound in the canonical loan word **jakesully**. This perhaps may be transcribed as [ʒæk'suli:]. ^{T6}

There is also an issue with the approximants /j/ and /w/. I have used these frequently in the IPA transcriptions, often as part of the four diphthongs that Frommer specified. ^{F1} I do this because he did this, and since I do think that [aj] is a closer transcription to the Na'vi pronunciation than [aɪ], which would not be as severely heightened. ^{T6} /w/ may occasionally be better transcribed as /ʊ/. ^{T6}

THE NA'VI PHONETIC ALPHABET

CONSONANTS (PULMONIC)

	LABIAL		CORONAL				DORSAL			RADICAL		LARYNGEAL
	Bilabial	Labio-dental	Dental	Alveolar	Palato-alveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Epi-glottal	Glottal
Nasal	m		n					ŋ	N			
Plosive	p		t					k				ʔ
Fricative		f v		s z							h	
Approximant							j					
Trill			r									
Tap, Flap			ɾ									
Lateral fricative												
Lateral approximant			l									
Lateral flap												

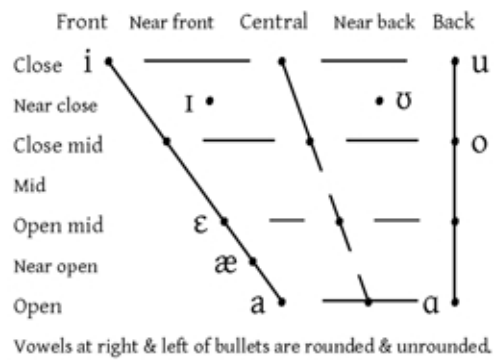
Where symbols appear in pairs, the one to the right represents a modally voiced consonant, except for murmured *h*. Shaded areas denote articulations judged to be impossible.

CONSONANTS (NON-PULMONIC)

Ejectives
<p style="margin: 0;">' Examples:</p> <p style="margin: 0;">p' Bilabial</p> <p style="margin: 0;">t' Dental or alveolar</p> <p style="margin: 0;">k' Velar</p>

W Voiced labialized velar approximant

VOWELS



Finally, there are more than the specified seven vowels.^{F1} I (formerly) held that Frommer meant for /a/ to be more back, not central,¹ and so [ɑ] might be more appropriate - his inconsistent marking of IPA symbols lead me to this conclusion. This would also hold with current speculation on maximum distinctiveness in vowels. I have transcribed /a/ as /ɑ/ throughout, however.^{T6} Frommer has also stated that /u/ can occasionally be [ʊ], although he does not specify where. He also specifies that the /ε/ is always lax.^{F1} Finally, I believe the Na'vi /ε/ to be higher than listed here, as Frommer marks it at the same height as /o/. I do not think that would justify changing it to a full /e/. Alternatively, of course, the /o/ might be more of a /ɔ/, and thus further down the chart in height.^{T6}

¹See Frommer's vowel trapezium here.

5. PHONOLOGY

Phonology is the study of the sound structure of a language: how the sounds are organised among each other, in syllables, words, and phrasal features. To understand this, a fuller description of the nature of the sounds is necessary.

5.1. **Vowels.** There are seven simple vowels, and four diphthongs, with the following IPA transcriptions:^{F1}

Vowels		
	front	back
high	i [i]	u [u]
hi-mid	ɪ [ɪ]	ʊ [ʊ]
mid	e [ɛ]	o [o]
low	æ [æ]	a [a]

Diphthongs		
	front	back
mid	ey [ej]	ew [ɛw]
low	ay [aj]	aw [aw]

American English Equivalents					
Na'vi	AmE	Na'vi	AmE	Na'vi	AmE
i [i]	peat	u [u]	poot	ey [ej]	pay
ɪ [ɪ]	pit	–	–	ew [ɛw]	–
e [ɛ]	pet	o [o]	pope	ay [aj]	pie
æ [æ]	pat	a [a]	pot	aw [aw]	pow

Some notes: These three charts do not account for roundedness: /o/, /u/, and /w/ are rounded. The [u] sound is somewhere between English "foot" and "food". /ɛw/ does not occur naturally in general American English. /e/ is open-mid, and always lax, while the /o/ is close-mid.^{F1} Note that there is no *oy.

In addition to these vowels, there are two syllabic consonants which behave as vowels, *ll* [l̩] and *rr* [r̩], as in **plltxe'** [pl̩.tɛʔ] "to speak". When syllabic, they are lengthened. The *rr* is strongly trilled, and the *ll* is 'light', as in "leap", never a 'dark' (velarized) *[ɫ̩] as in "wool".^{F1} They are syllabic only in CV syllables.^{F9}

5.2. **Consonants.** Na'vi has three nasals: the bilabial /m/, the alveolar /n/, and the velar /ŋ/. It has two liquids, the alveolar lateral /l/, the trilled alveolar /r/, and the alveolar tap or flap /ɾ/ (which is stated by Frommer to merely be a lengthened /r/).^{F1}

Na'vi has four plosives: the bilabial /p/, alveolar /t/, velar /k/, and the glottal [ʔ].^{F1} The glottal stop may appear to be a silence, but there is in fact a small burst of air made when the pressure built up behind the constricted glottis is released. The glottal stop can thus be said at the beginning or end of a word, as it is an actual muscle movement, although it is difficult to discern its presence by ear, a fact which often leads to its deletion by the untrained speaker. Na'vi lacks voiced stops like /b d g/, but has the ejective stops /p' t' k'/.^{F1} Ejectives are made by an excessive build up of pressure behind the constriction, which, when release, adds emphasis to the sound.

Na'vi also has five fricatives: the labiodental /f/ and its voiced /v/ counterpart, and the alveolar /s/ and its voiced counterpart /z/, as well as the glottal /h/. There is an affricate, the alveolar /ts/, which sounds rather like a [t] and an [s] joined together.^{F1} This is made by releasing the air, as in a plosive, but keeping the tongue close enough to the place of articulation to provide for high friction. A second affricate is attested in some of the illegal words, as in **nikt'chey**. This might be a case for the alveopalatal [tʃ].^{G:T7} The Na'vi, as well, use the voiced alveolar fricative [ʒ] for the loan word, **jake**, which shows that it is not a biological impossibility. This follows, as the Na'vi

language was specifically designed to be identical biologically to human terrestrial languages, on Cameron's instructions.^{F1}

5.3. **Syllables.** Each Na'vi vowel counts as a syllable, so that **tsaleioae** has six syllables, [tsa.lɛ.i.o.a.ɛ], and **meoauiaea** has eight, [mɛ.o.a.u.ni.a.ɛ.a].^{F1} The syllabic consonants may also occur in sequence with a simple vowel or diphthong, as in hrrap [hɾap] "dangerous", although these are still two separate syllables. However, diphthongs before another vowel are not distinguished from the consonants /j/, /w/ between vowels. In words like **wutso**, the initial /w/ is marked as consonant, not a vowel. /w/ and /j/ in syllable final position are considered parts of diphthongs, as they only occur as [ay] [ey] [aw] [ew], but may be followed by another final consonant, as in **skxawng** *moron*.^{F1}

The fricatives, /f/ /v/ /s/ /z/ /h/, and the affricate, /ts/, are restricted to the onset of a syllable; the other consonants may occur at the beginning, while the glides /w/ and /j/, and the fricatives /v/, /z/, and /h/ cannot appear syllable finally.^{F1} However, in addition to appearing before vowels, /f/, /ts/, /s/ may form consonant clusters with any of the unrestricted consonants (the stops /p/, /t/, /k/, their ejective counterparts, the liquids /r/ and /l/, and the nasals /m/, /n/, and /ŋ/, as well as the two approximants /j/ and /w/) apart from [ʔ], making for 39 possible clusters,^{F1} all of which are attested in the lexicon.^{F9} Other sequences occur across syllable boundaries, such as **Na'vi** [naʔ.vi] *person*, **ikran** [ik.ran] *banshee*,^{F1} and **atxkxe** [at'.k'ɛ] *land*.^{F3} Some syllable constructions are ambiguous as to where the dividers are: a good example is again **wutso**, which could be [wut.so] or [wu.tso].^{T6}

The voiceless plosives /p/, /t/, /k/ and the affricate /ts/ are tenuis, meaning that they have no aspiration, and are unreleased word finally.^{F1} The /r/ is realised as a tap or flap [ɾ], not as a retroflex, interdental, rhotic vowel, or any of the other various rhotic sounds, unless it is syllabic, in which case it is an alveolar rolled [r],^{F1} although several cases of non-tap /ɾ/ are attested in the movie.^{M:T7} The rolling does not need to be excessively maintained, and there are no examples in Na'vi of biological difficulty forming the sound, as in Terrestrial languages and idiolects.^{T8}

5.4. **Sound Patterns of Na'vi (Including Lenition).** I have attempted here to make an account of the phonological rules of Na'vi, using standard SPE notation, where a sound, described using features, changes to another sound, by changing one or more of those features, in the context described, such that: $A \rightarrow B/X_Y$. + stands for morpheme boundary, # for syllable boundary, subscripts show optionality. [±tense] indicates ejectives, spread glottis indicates /h/, constricted glottis indicates /ʔ/, and [±del.rel] is used for affricates. Refer to your local Chomskian book store for more information. I will not be including an otherwise useless feature matrix. This section should be able to be understood without referring to the SPE-type rules provided.

Several phonological processes can be posited to occur in the language of Na'vi. The most obvious case is the regular lenition which occurs after plural prefixes and some prepositions (currently, only *mì* and *ftu*). These can be charted as follows, where χ stands for a leniting prefix or adpositions. It is worth noting that the plurals **ay+** and **me+** can be deleted due to redundancy, although the rule will still take effect.^{F1} Whether this sort of phonological patterning works theoretically on the otherwise diachronic timescale we've seen in Na'vi has yet to be ascertained.^{T9} Lenition does not affect continuants: fricatives, nasals, glides, and the liquids have no lenited forms. Thus **ay+ftozä** *holidays* is not a lenited form, as **ptozä** would violate Na'vi phonotactic restrictions.^{D3}

$$1. \begin{bmatrix} -cont \\ -son \\ +tense \end{bmatrix} \rightarrow [-tense] / \chi \left\{ \begin{array}{c} \# \\ + \end{array} \right\} _1 \text{---} \quad T6$$

This rule states, simply, that any /p' t' k'/ loses it's ejectivity and becomes a normal tenuis stop /p t k/. This is attested in **txe'laná** *heart* into **te'laná** *hearts*, for instance. Note that the **ay+** here has been deleted.^{F1}

$$2. \begin{bmatrix} -cont \\ +ant \\ -tense \end{bmatrix} \rightarrow \begin{bmatrix} +cont \\ -del.rel \end{bmatrix} / \chi \left\{ \begin{array}{c} \# \\ + \end{array} \right\} _1 \text{---} \quad T6$$

This rule states that any /p t ts/ becomes /f s s/, respectively.^{F1} Whether there is any distinction between an [s] that comes from a /t/ or a /ts/ is unknown.^{T9}

$$3. \begin{bmatrix} -cont \\ -ant \\ -tense \end{bmatrix} \rightarrow \begin{bmatrix} +cont \\ +spread\ glottis \end{bmatrix} / \chi \left\{ \begin{array}{c} \# \\ + \end{array} \right\} _1 \text{---} \quad T6$$

This rule states that a /k/ becomes an /h/, as in **pehrr** *when*, from **krr** *time*.^{F1}

$$4. \begin{bmatrix} +constricted \\ glottis \end{bmatrix} \rightarrow 0 / \chi \left\{ \begin{array}{c} \# \\ + \end{array} \right\} _1 \text{---} \quad T6$$

This states that the glottal stop disappears.^{F1} This often happens in contracted words, as well, but given the irregularity, this rule is not to be blamed.^{T6}

In some cases we come across affectionate forms of names: **sempu** for **sempul**, **sa'nu** for **sa'nok**, and **'evi** for **'eveng**. These changes can be charted using the following rules, in the following order:^{T6}

$$5. C \rightarrow 0 / _ \# \quad T6$$

$$6. V \rightarrow [+hi] / _ \# \quad T6$$

It appears to be a rule that two of the same vowels cannot appear next to each other. This is attested both in known elisions between contracted forms, and in morpheme additions to a stem.^{T6} It is also worth noting that in the addition of the gender suffix to a disyllabic word that has primary stress on the first syllable, the suffix thereafter receives the stress, and any homogenous unstressed vowel is deleted.^{T6} Thus **tute** becomes **tutee**, and then just **tute**.^{F1} Another rule can also be submitted, that would have to be ordered before this one: that between two /i/ vowels, a /j/ is inserted, as in **s<ei>yi**, where the infix would normally be **s<ei>i**.^{MS:D4} These rules disqualify the illegal Survival Guide entries of **nuuto** and **jiit'luy**.^{F1} Whether a /w/ would be inserted is not clear.^{T9} Both of these rules go against Frommer's assertion that "Na'vi allows unlimited sequences of vowels in a word".²

$$7. 0 \rightarrow \begin{bmatrix} C \\ +hi \\ +front \end{bmatrix} / \begin{bmatrix} V \\ +hi \\ +front \end{bmatrix} \text{---} \begin{bmatrix} V \\ +hi \\ +front \end{bmatrix} \quad T6$$

$$8. \alpha V \rightarrow 0 / _ +_0 \alpha V \quad T6$$

It is also true that monosyllabic words often elide, even when the vowels are not similar, although this is only attested in the songs, and may be an artefact of metrical rules. This is attested in **sì** *and* in **s-ayzìsità kato** *and the rhythm of the years*, **lu** *to be* in **a l-ayngakip** *who is among you*, and also **nì'aw** *only* in **han'aw txo** *so only* if.^{S:D6} The phonological rule is shown below:

$$9. V \rightarrow 0 / _ +_0 V \quad T6$$

As well, the velar nasal [ŋ] usually assimilates in place to following nasals. The idiomatic **ting mikyun** *to listen* and **ting nari** *to look* therefore become [tɪmmikjʊn] and

²Stated here.

[tmnari] in casual speech. This can be shown below. It should be noted, as well, that the alveolar nasal [n] appears to assimilate in place before the leniting prefix **pe+**, as seen in **lumpe**. This rule is also given.^{W8}

$$10. \begin{bmatrix} +nas \\ -ant \end{bmatrix} \rightarrow \begin{bmatrix} +ant \\ \alpha cor \end{bmatrix} / \text{---} \# \begin{bmatrix} +nas \\ +ant \\ \alpha cor \end{bmatrix} T6$$

$$11. \begin{bmatrix} +nas \\ +ant \\ +cor \end{bmatrix} \rightarrow [-cor] / \text{---} \begin{bmatrix} -cont \\ -son \\ +ant \\ -cor \end{bmatrix} T6$$

Finally, all stops are unreleased word-finally in Na'vi.^{F1} This means that where normally an ejective or a normal stop consonant might have a small burst of air, this burst is significantly lessened to the point of auditory insignificance at the end of a word.

$$12. \begin{bmatrix} -cont \\ -son \end{bmatrix} \rightarrow [-release] / \text{---} \# T6$$

5.5. **Prosodic Structures.** Na'vi does not have vowel length or tone as far as known, it does have stress. Word stress in Na'vi is unpredictable and distinctive, and must be specified for each word.^{F1} Na'vi does have cases of contrastive stress: **túte** [tutɛ] "person", **tuté** [tu'tɛ] "female person".^{F1} Although stress may move with derivation, as here, it is not affected by inflection (case on nouns, tense on verbs, etc). So, for example, the verb **lu** "to be" has stress on its only vowel [u], and no matter what else happens to it, the stress stays on that vowel: **lolú** [lo'lu] "was" (lu), **lolängú** [lolæ'ŋu] "was (ugh!)" (l<äng>u), etc.^{W8} This however does not appear to be true for nouns or pronouns, which are stressed on the root when inflected, although it is unclear whether or not monosyllabic roots are stressed or not in normal speech.^{M:T8,9}

6. MORPHOLOGY

Na'vi is a highly inflectional language: that is, the words undergo morphological changes via affixes to represent semantic (meaning) and syntactic (grammatical function) change. It has very few cases of morphological agreement between word-classes: due to this, the grammar is best described by looking individually at each part of speech, and the inflectional changes each undergo. There are several attested types of word-classes in Na'vi: pronouns, nouns, particles, adjectives, adverbs, interjections, and verbs (although some terrestrial categories, like articles, are not present.) Given their profusion and regularity, correlatives and demonstratives will be placed in their own categories.

6.1. **Word Formation.** Na'vi is a glutinative language, meaning that words can be created by compounding, which is effected by simply joining the elements together: **kämakto** "to ride out", from **kä** "to go" and **makto** "to ride"; **eltungawng** "a brain-worm", from **eltu** "a brain" and **ngawng** "a worm"; **fteke** "lest", from **fte** "so that" and **ke** "not". In verbal compounds, it may be the second verb which inflects, as in **yomtìng** "to feed" (lit. "to give to eat"), where the first-position infix <ìy> appears instead in the second syllable: **yomtìyng**.

6.2. **Changing Parts of Speech.**

6.3. Pronouns. Pronouns

Na'vi pronouns encode clusivity. That is, there are different words for "we" depending on whether the speaker is including the person spoken to or not. There are also special forms for "the two of us" (oeng "you & me", moe "she & me"), "the three of us", etc. Pronouns do not inflect for gender; although it's possible to distinguish "he" from "she", the distinction is optional.

Pronouns				
	sing.	dual	trial	plural (4+)
Exclusive	o <u>e</u>	mo <u>e</u>	pxo <u>e</u>	ayo <u>e</u>
Inclusive		o <u>eng</u>	pxo <u>eng</u>	ayo <u>eng</u> , aw <u>nga</u>
2nd person	ng <u>a</u>	meng <u>a</u>	pxeng <u>a</u>	ayng <u>a</u>
3rd person	po	me <u>fo</u>	pxe <u>fo</u>	ay <u>fo</u> , fo

Oeng is a contraction of oe-nga, which form it reverts to when inflected: ergative oengal, etc. (See Case below.) Ayoeng and awnga are both contractions of plural *ayoenga; the latter tends to be shorter when inflected: ergative ayoengal /aj.'wɛ.ŋal/ vs. awngal /'aw.ŋal/.

The formal forms of "I" and "you" are ohe and ngenga, which likewise take the me- and ay- prefixes. The inclusive forms are derived from these with the word si "and":

Pronouns				
Formal	sing.	dual	trial	plural
Exclusive	o <u>he</u>	mo <u>he</u>	pxo <u>he</u>	ayo <u>he</u>
Inclusive		o <u>he</u> ngeng <u>asi</u>	(various combinations)	
2nd person	ngeng <u>a</u>	mengeng <u>a</u>	pxengeng <u>a</u>	ayngeng <u>a</u>

Possessive forms include oeyä "my", ngeyä "your", ohengeyä "our" (formal dual inclusive; note that the si is lost with inflection), peyä "her/his". "He" and "she" can optionally be differentiated as poan and poe; this may be done to distinguish two referents in the same context, as normally both are translated as simply po. Fo is the "short plural" form of po; ayfo is the explicit plural.

"One" as a pronoun is fko:

- (1) Zene fko n<iv>ume nì-txan.
 must one learn<SVJ> ADV-much
 "There is much to learn." (lit. "One must learn much")

Pronouns are declined for case as nouns (below) are:

- (2) Oe-l nga-ti kam<ei>e.
 I-ERG you-ACC see<LAUD>
 "I (am glad to) See you" (a greeting)

6.4. **Nouns.** Na'vi noun phrases are inflected according to the following template, not including attributives (adjectives etc.):

number+stem-(gender)-case
 There are no articles like "a" or "the".

6.4.1. *Number.* In Na'vi, plurals are only used if there are at least four objects.

Plural Prefixes		
Number		Prefix
1	Singular	-
2	Dual	me+
3	Trial	pxe+
4+	Plural	ay+, +

Nouns show greater number distinctions than human languages do: besides singular and plural, they not only have special dual forms for two of an item (eyes, hands, lovers, etc.), which are not uncommon in human language (English has a remnant in "both"), but also trial forms for three of an item, which in human languages are only found with pronouns. A plural is more than dual or trial; that is, four or more.[citation needed] For example, in "the wings of a banshee", tsyal "wing" is plural (ikranä syal), because banshees (ikran) have four wings, but in "the eyes of a banshee" nari "eye" cannot be plural, but only dual (ikranä menari), because banshees have only two eyes.

The prefixes trigger lenition, which is indicated in the table above by the "+" signs rather than the hyphens that usually mark prefix boundaries. Trials are not common, but occur for example in pxehilvan "the three rivers" (kilvan "river"). In nouns which undergo lenition, the plural prefix may be dropped, so the plural of tokx "body" may be either aysokx (the "full plural") or sokx (the "short plural"). In the dual and trial, lenition of a glottal stop may result in a sequence of two e's, in which case they contract: 'eveng "a child", pxeveng "three children".

6.4.2. *Gender.* Na'vi does not have grammatical gender. However, masculine individuals may be distinguished by the suffix -an, and feminine ones by -e :

Masculine -an Feminine -e

For example, tsmuk or tsmuktu is "sibling", tsmukan "brother", and tsmuke "sister".

However, gender is not generally used unless there is some reason for distinguishing it.

6.4.3. *Case.* Many of the case markers have several allomorphs, the distribution of which is not entirely known:

Cases	
Intransitive	(unmarked)
Ergative	-il, -l
Accusative	-it, -t, -ti
Genitive	-ä, -yä, -eyä
Dative	-ru, -ur, -r
Topic/regarding	-iri, -ri

Nouns are not double-marked for case. Attributives do not agree, in case or number, with the nouns they modify, and this holds for possessive pronouns and genitive nouns as much as it does for adjectives. So while "my spear" in citation form is oeyä tukru, in the ergative case it is oeyä tukrul, with only tukrul "spear" marked for the ergative.

6.4.4. *Subject and object.* Nouns are declined for case in a tripartite system, which is quite rare among human languages, though found in Nez Perce. In a tripartite system, there are distinct forms for the object of a clause, as in "Neytiri hunted a hexapede";

the agent of a transitive clause which has such an object, as in "Neytiri hunted a hexapede"; and the argument ("subject") of an intransitive clause, which does not have an object, as in "Neytiri is sleeping".[15] An object is marked with the accusative suffix -it/-t/-ti, and an agent with the ergative suffix -il/-l, while an intransitive argument has no case suffix. That is, the ergative and accusative tend to occur as a pair, whereas a single argument has no case inflection. Translating our English examples:

- (3) Neytiri h<er>ahaw
 (name).NTR sleep<IPFV>
 "Neytiri is sleeping"
- (4) Neytiri-l yerik-it taron
 (name)-ERG hexapede-ACC hunt<PFV>
 "Neytiri hunted a hexapede"

The use of such case forms leaves the word order of Na'vi largely free, for example, agent-object-verb (AOV) or object-verb-agent (OVA):

- (5) Oeyä tukru-l txe'lan-it t<iv>akuk
 I-GEN spear-ERG(A) heart-ACC(O) strike<SVJ>(V)
 "Let my spear strike the heart"
- (6) kato-t täftxu oe-l
 rhythm-ACC(O) weave(V) I-ERG(A)
 "I weave the rhythm"

When evident from context, the subject need not be stated:

- (7) Oe tram na'ring-mì tarmok tsole'a syetute-t
 I.NTR yesterday forest-in was saw Trapper-ACC.
 "Yesterday I was in the forest, saw a Trapper".

6.4.5. *The genitive.* A genitive case in -ä/-yä can be seen in oeyä tukru "my spear" above. English expresses the genitive with either -'s (the pianist's hands) or with of (the hands of the clock). Unlike the other cases, the genitive shows the relationship of nouns to each other, rather than between a noun and a verb. Although sometimes called a "possessive", the genitive has a broader range of use than actual possession.

Genitives may be sequenced, as in

- (8) ay-li'u-fa awng[e]-yä 'eylan-ä a-'ewan
 PL-word-per our-GEN friend-GEN ATTR-young
 "In the words of our young friend"

6.4.6. *The dative.* The dative is prototypically used for giving something to someone, marking a recipient, or doing something for someone, marking a benefactor:

- (9) nga na'vi-ru yom+t<iy>ing
 you.NTR the.people-DAT to.eat+give-IMM
 "You will feed the people"

More generally, it is used for the direction or end point of an action, as in poru ting-nari "look at him". However, it is also used in situations, so-called dative constructions, where an English speaker might not expect it:

- (10) oe-ru txoa l<iv>u
 I-DAT forgiveness be<SVJ>
 "Forgive me"

- (11) nga-ru lu fpom srak?
 You-DAT be well.being question
 "Hello, how are you?"

Such constructions contain verbs such as *lu* "be" that involve little overt action, including more concrete concepts of having. When one has something for someone, a double dative is used:

- (12) lu oe-ru ay-li'u fra-po-r
 be I-DAT PL-word every-one-DAT
 "I have something (= words) to say, to everyone."

6.4.7. *The topic and the topical case.* A topic indicates the background context of a clause, and the topic marker *-ri/-iri* is somewhat equivalent to (though much more common than) English "as for", "concerning", "regarding", etc. Topics are not grammatically required, but are used to structure the presentation of what one has to say. The topic marker preempts the case of the noun: that is, when a noun is made topical, it takes the *-ri/-iri* suffix rather than the case suffix one would expect from its grammatical role. For example, in,

- (13) Oe-ri ontu teya l<äng>u
 I-TOP nose full be<PEJ>
 "My nose is full [of his distasteful smell]"

since the topic is "I", the subject "nose" is associated with "me": That is, it's understood to be "my nose" without stating that explicitly.[17] Note that "nose" itself is unmarked for case, as it's the subject of the intransitive verb "to be".

Such a topic-comment structure sets up the background of the sentence, what the speaker intends to speak about with the rest. (Thus the term 'topic-comment': what the speaker intends to talk about, followed by what s/he has to say about it.) This construction takes some of the pressure off of the case system, with the result that not too many nouns need to be marked with the same case:

- (14) si-pawm-iri oe nga-ru s<ei>i irayo
 PL+NMZ-ask-TOP I you-DAT do<LAUD> thank
 "Thank you for the questions" (lit. "As for the questions, I thank you")

This *-ri/-iri* can also behave as a more typical case, linking the noun phrase to the verb, rather than setting up a topic as an introduction for the rest of clause to comment on:

- (15) pxan l<iv>u txo ni-'aw oe nga-ri
 worthy be<SVJ> if ADV-one I you-TOP
 "Only if I am worthy of you" (lit. "Only if I be worthy in regard to you")

- (16) nga-ru s<ei>i oe irayo ng[e]-yã pxe+ti-pawm-iri
 you-DAT do<LAUD> I thank you-GEN TRI+NMZ-question-TOP
 "I thank you for (in regards to) your three questions"

6.4.8. *Case allomorphs.* Case suffixes have distinct forms depending on whether the noun ends in a consonant or in a vowel, with a vowel-initial form for consonant-final nouns, and a consonant-initial form for vowel-final nouns, so that adding case endings does not result in consonant or vowel clusters. (The *-ti* form of the accusative is the one

invariant exception; see below.) Syllabic consonants ll, rr and the w-, y-ending diphthongs count as consonants in this regard, as they all take the vowel-initial allomorphs of the case suffixes.

An invariant form of the accusative, -ti, is attested on both pronouns and on nouns. For instance, a quick response to the greeting oel ngati kameie "I See you", with the long form of the accusative, is kame ngat, with the short form.[18] Thus the difference would appear to be one of register rather than of grammar.[19]

The dative also has a long and short form, for instance "to me" may be either oeru or oer, but it is not known whether this also occurs on nouns.[20]

In addition, there may be changes in the noun or pronoun itself when case endings are added. For example, the inclusive pronouns based on oeng revert to their historical form *oe-nga when inflected, so that the ergative is oengal, not xoengil. Changes in the noun stem sometimes occur with the genitive as well; this can be seen in the pronouns, where the final vowel becomes e before the genitive -yä : oeyä, awngeyä, ngeyä, peyä, etc.[21]

Pronouns				
	ntr	erg	short acc	long acc
pronoun.excl	oe	oel	?	oeti
pronoun.incl	oeng	oengal	oengat	oengati
pronoun.2	nga	ngal	ngat	ngati
pronoun.3	po	pol	pot	?
N ending in V	–	tukrul	katot	swiräti
N ending in C	–	tingayil	ye'rikit, txe'lanit	ketuwongti, Kelutralti

Pronouns				
	gen	short dat	long dat	top
pronoun.excl	oeyä	oer	oeru	oeri
pronoun.incl	oengeyä?[22]	awngar	awngaru	?
pronoun.2	ngeyä	ngar	ngaru	ngari
pronoun.3	peyä	por	poru	fi'uri
N ending in V	tompayä	?	na'viru	fyawintxuri
N ending in C	xonä, zisitä, trrä, kifkeyä	tsahiku ?	'eylanur	skxawngiri

6.5. **Adpositions.** Besides case, the role of a noun in a clause may be indicated with an adposition. This may occur either as a preposition before the noun, or as an enclitic after the noun, a greater degree of freedom than human languages allow. For example, "with you" may be either hu nga or ngahu. When used as enclitics, they are much like the numerous cases found in Hungarian and Finnish. When used as prepositions, more along the lines of what English does, certain of them trigger lenition. One of the leniting prepositions is mì "in", as in mì sokx "in the body". This may cause some ambiguity with short plurals: mì sokx could also be short for mì aysokx "in the bodies". When mì is used as an enclitic, however, the noun is not lenited: tokxmì "in the body", sokxmì "in the bodies".

Attested adpositions:

- **äo** "under" äo Vitrautral under the Tree of Souls
- **(')em** "over, above"[23]
- **eo** "before, in front of" eo ayoeng before us

- (')im "behind, in back"
- fa "per" (with, by means of)
- fpi "for the sake of"
- ftu "from" (direction) ftu sat from that (lenition)
- hu "with, together with" (accompaniment) Eywa ngahu Gaia (be) with you
- ilä "via, along, by"
- ka "across"
- kip "among" ayngakip among you
- mi "in" mi te'lan in the heart (lenition)
- ne "to" (direction) Teriran ayoe ayngane we are walking your way
- ta "from" (generic) aungia ta Eywa a sign from Eywa
- teri "about, concerning" (stress on the i, no lenition)
- vay "until" vay set up to now, still, (with a negative verb) not yet

These may be combined for more specific location: ne'im "toward the back"; ta'em "from above". Note also neto "away (toward the distance)" and miso "away (in the distance)", both perhaps based on the particle to "than".

6.6. **Adjectives and other attributives.** Na'vi adjectives may occur either before or after the noun they modify. They are marked by a particle a, which is attached on the side closest to the noun,[24] another feature that is unusual by the standards of human languages. For example, "a long river" can be expressed either as ngima kilvan,

(17) ngim-a kilvan
long-ATTR river

or as kilvan angim,

(18) kilvan a-ngim
river ATTR-long

When more than one adjective modifies a noun, they may appear on either side, as in,

(19) oeyä ean-a txim a-tsawl
I-GEN blue-ATTR butt ATTR-big
"my big blue butt"

The a affix is optional for derived le- adjectives after a noun: trr lefpom or optionally trr alefpom "a peaceful day", but lefpoma trr.

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

(20) kilvan ngim lu
river long be
"The river is long"

Adjectives are uninflected. That is, they do not agree with the noun they modify, as in Si 'ekong te'lanä le-Na'vi "and the beat of the hearts of the People", where only the noun te'lan "hearts", not the adjective le-Na'vi "Na'vi", takes the genitive suffix -ä.

The syntactically free (discourse-determined) word order of adjectives in a noun phrase holds for all attributives: Genitives (possessives) and relative clauses can also either precede or follow the noun they modify. The latter is marked by a particle a.

Genitives (possessives) in -yä

tompayä kato "the rhythm (kato) of the rain (tompa)"

Utral Aymokriyä "the Tree (utral) of Voices (aymokri)"

Relative clauses

- (21) Ftkey 'awpo-t a Na'vi-ru yomt<iy>ing
 choose one.person-ACC which.that people-DAT to.eat+give-IMM.FUT
 "Choose one ('awpo) who will feed the People (Na'vi)"

6.7. **Numbers.** As the Na'vi have four digits per hand, they have a base-eight number system. Until recently, they only counted up to vofu 14;[dubious discuss] any number greater than that was pxay "many".

Na'vi Numbers: 0 – 31					
	0	1	2	3	4
0		vol	mevol	pxevol	tsìvol
1	'aw	volaw	mevolaw	pxevolaw	tsìvolaw
2	mune	vomun	mevomun	pxevomun	tsìvomun
3	pxey	vopey	mevopey	pxevopey	tsìvopey
4	tsìng	vosìng	mevosìng	pxevosìng	tsìvosìng
5	mrr	vomrr	mevomrr	pxevomrr	tsìvomrr
6	pukap	vofu	mevofu	pxevofu	tsìvofu
7	kinä	vohin	mevohin	pxevohin	tsìvohin

Na'vi Numbers: 32 – 63			
	5	6	7
0	mrrvol	povol	kivol
1	mrrvolaw	povolaw	kivolaw
2	mrrvomun	puvomun	kivomun
3	mrrvopey	puvopey	kivopey
4	mrrvosìng	puvosìng	kivosìng
5	mrrvomrr	puvomrr	kivomrr
6	mrrvofu	puvofu	kivofu
7	mrrvohin	puvohin	kivohin

More Na'vi Numbers						
	x1	combining	x8	x64	x512	x4096
1	'aw	-aw	vol	zam	vozam	zazam
2	mune	-mun	mevol	mezam	mevozam	mezazam
3	pxey	-pey	pxevol	pxezam	pxevozam	pxezazam
4	tsìng	-sìng	tsìvol	tsìzam	tsìvozam	tsìzazam
5	mrr	-mrr	mrrvol	mrrzam	mrrvozam	mrrzazam
6	pukap	-fu	povol	puzam	puvozam	puzazam
7	kinä	-hin	kivol	kizam	kivozam	kizazam

The series continues with mevolaw, mevomun, etc.

Short forms of the numerals are used for multiples of eight. These are mevol 16 (octal 20), pxevol 24 (30), tsìvol 32 (40), mrrvol 40 (50), povol 48 (60), kivol 56 (70), and zam 64 (100). Higher orders are vozam 512 (octal 1000) and zazam 4096 (octal 10,000).

Numerals form various derivatives, such as 'awpo "one" (an individual), (ni)'awve "first", 'awsiteng "together" (one-make-same), kawtu "no-one" (negative k-), kawkrr "never" (not-one-time), ni'aw "only", and ni'awtu "alone" from "one"; also nìmun "again" and perhaps muntxa "to mate" from mun- "two".

When a numeral is used with a noun, the plural suffix may be omitted. However, the numerals themselves required the attributive affix *a*: *zìsìt amrr* "five years", *'awa tìpawmìri* "regarding one (particular) question".

6.8. **Particles.** Various particles in Na'vi are used for negation, addressing people, and expressing emotion.

6.8.1. *The vocative.* The vocative particle *ma* occurs before a term of address when addressing someone: *Ma Neytiri, herahaw srak?* "Neytiri, are you sleeping?", rather like archaic or poetic "O!" in English. It occurs before the noun phrase: *Ma oeyä 'eylan!* "My friend!" No suffixed form is attested.

Ma is used with people, and ceremonially with animals one has killed in a hunt,[26] but not when talking to one's *pa'li* (horse). It may thus indicate a degree of politeness vs. intimacy.

6.8.2. *The negative.* The negating particle *ke* is used together with other negative words. That is, Na'vi utilizes double negatives:

- (22) *fi-ketuwong ke n<ay>ume ke-'u*
 this-alien not learn<FUT> no-thing
 "This alien will learn nothing."

A longer form, *kehe*, is used when answering "no" rather than negating a verb.

Ke "not" is only attested before the word it negates, though the adjectival forms may occur before or after a noun: *kea N, N ake* "no N".

6.8.3. *Emotive particles.* There are also emotive particles or interjections attested at the ends of phrases and clauses, such as disparaging *pak*, as in *Tsamsiyu pak?* "Hah! A warrior! (you call that a warrior?)", surprise *nang* "oh my!", as in *sevin nìtxan nang!* "my aren't you pretty!", and a particle *ko* which elicits agreement like the *eh* of Canadian English. In other dialects, it can be translated "let's", "okay?", "why don't you", "wouldn't you agree?", etc., as in *makto ko!* "Let's ride!" and

- (23) *tsun tute-t tsp<iv>ang ko*
 be.able person-ACC kill<SJV> eh
 "They can kill a person, you know."

6.9. **Verbs.** Verbs are conjugated for tense but not for person. That is, they record distinctions like "I am, I was, I would", but not like "I am, we are, s/he is". Conjugation relies exclusively on infixes, which are like suffixes but go inside the verb. "To hunt", for example, is *taron*, but "hunted" is *tolaron*, with the infix .[29]

There are three positions for infixes: two after the onset of the penultimate syllable, and a third after the onset of the final syllable. Because many Na'vi verbs have two syllables, these commonly occur on the first and last syllables, as in the examples below. In monosyllabic words like *lu* "be" and *tsun* "can", however, they all appear after the initial consonant, keeping their relative order, as in *tsolängun* [ts<äng>un] "was able to (ugh!)". If an infix appears in the first or only syllable of a verb, and there is no initial consonant, the infix comes first:[30]

- (24) *tsam-pongu-t Tsu'tey-l <iv>eyk*
 war-party-ACC (name)-ERG lead<SJV>
 "Tsu'tey will lead the war party."

Verbs and Infixes		
verb length	typical form without infixes	typical form with infixes
trisyllabic verb	CV.CV.CV	CV.C<1><2>V.C<3>V
disyllabic verb	CV.CV	C<1><2>V.C<3>V
monosyllabic verb	CV	C<1><2><3>V

Verbs and Infixes			
maximal form without infixes	maximal form with infixes	minimal form without infixes	minimal form with infixes
CCVC.CCVC.CCVC	CCVC.CC<1><2>VC.CC<3>VC	V.V.V	V.<1><2>V.<3>V
CCVC.CCVC	CC<1><2>VC.CC<3>VC	V.V	<1><2>V.<3>V
CCVC	CC<1><2><3>VC	V	<1><2><3>V

6.9.1. *Participles and reflexives.* The first infix position is taken by infixes for non-temporal distinctions, such as the participial <us>, which has the only attested such form.

The participial infix *us* is found in forms such as *kerusey* "dead", from *ke* "not" and *rey* "to live" (that is, "not-living"), and *txantslusam* "wise", from *txan* "much" and *tslam* "to understand" (that is, "much-understanding"). There may be other participial infixes.

6.9.2. *Tense, aspect, mood.* The second infix position is taken by infixes for tense, aspect, and mood. These follow the first-position infixes when these co-occur, but all appear in the penultimate syllable of the verb stem.

Infixes		
Aspect		
Perfective	PFV	ol
Imperfective	IPFV	er
Tense		
Future	FUT	ay
Immediate Future	IMM	ìy
Present	PRES	(unmarked)
Recent Past	REC	ìm
Past	PST	am
Mood		
Subjunctive & Optative	SJV	iv
Imperative	IMP	(intonation)

6.9.3. *Tense.* Tense is the easiest of these concepts for an English speaker. However, whereas English has three tenses, past present and future,[31] Na'vi has five, with the addition of a recent past ("just did") and an immediate future ("about to do"):

taron [hunt] "hunts"
t<am>aron [hunt<pst>] "hunted"
t<ìm>aron [hunt<rec>] "just hunted"
t<ay>aron [hunt<fut>] "will hunt"
t<ìy>aron [hunt<imm>] "is about to hunt"

Na'vi past and future are used for general statements about events in the past or future, as in English; they are not necessarily remote in time. There is no absolute time-frame involved; whether something is considered recent or immediate depends on the judgement of the speaker. An example of the immediate future *ìy* is *nì-ìnglìsì*

p<ìy>lltxe oe "I'll speak in English now", at which point the speaker switches to English. That is, by uttering those words, the speaker anticipates that the switch will take place right away.

More than one tense may be used in a verb:

- (25) Oe-l po-t tsp<ìm><ìy>ang
I-ERG s/he-ACC kill<REC><IMM>
"I was just about to kill him"

6.9.4. *Aspect*. Aspect is a more difficult concept. There are two in Na'vi, a perfective, used when one views the action as contained, as if one were on the outside of the action looking in; and an imperfective, used when one views the action as ongoing or uncontained, as if one were inside with the action.

- taron [hunt] "hunts"
t<er>aron [hunt<ipfv>] "hunts, (is) hunting"
taron [hunt<pfv>] "hunts, (has) hunted"

This distinction is not found in English but is somewhat like the distinction between (in the past tense) 'having done' and 'was doing' or 'used to do'. However, in Na'vi, either aspect may take place in the past, present, or future. An example of the perfective is tslam "got it" or "understood", from tslam "to understand" the (unmarked) tense is either present tense or irrelevant; the point being communicated is that the understanding is complete. An example of the imperfective is t<er>iran ayoe ayn-gane "we are walking your way"; here the action is in process. Although the English translation suggests present tense, the Na'vi could actually be past or future.

Aspect may be combined with the tense infixes. Only the imperfective past tenses are attested:

- t<ì<r>m>aron [hunt<rec<ipfv>>] "was just hunting"
t<a<r>m>aron [hunt<pst<ipfv>>] "was hunting"

Tense and aspect need not be marked when they can be understood by context or are established elsewhere in the sentence. For example, in

- (26) Oe-hu Txewì trr-am na'ring-mì t<a<r>m>ok. Tse'a ...
I-with (name) day-PST? forest-in exist<PST<IPFV>> see<PFV>
"Yesterday I was with Txewì in the forest, (and we) saw ..."

the first clause sets up the context of the past tense, so the verb 'saw' can be marked as simply perfective, not as past perfective.[32]

6.9.5. *Mood*. There are three attested moods in Na'vi: an unmarked mood used when making an ordinary assertion, an imperative mood used for making commands, and a subjunctive/optative used when one is stating something that is not certain. The imperative, as in English, has no affix: Kä! "go!" (This will be covered in a separate section below.) The subjunctive is little used in English, but is found in a few set expressions such as "if I were you" (not *am you), "God bless you" (not *blesses), "I move that the meeting be adjourned" (not *is adjourned), etc. The Na'vi subjunctive is formed with the infix iv, but is much more common than in English, used whenever one wishes, fears, or suspects that something might or must be so. It is found for example in

- (27) oe-ri ti-ngay-ìl txe'lan-it t<iv>akuk
I-TOP NMZ-true-ERG heart-ACC strike<SVJ>
"Let the truth strike my heart" or "that the truth may strike my heart."

The subjunctive (optative) is also used to request that someone do or be allowed to do something, by expressing one's wish that they do it, as in,

- (28) t<iv>ìran po ay-oe-kip
 walk<SV> s/he PL-I-among
 "Let her walk among us[excl],"

and it is used to give permission, for instance in responding with p<iv>lltxe "speak!" ("may you speak!") when someone announces they have something to say, or sp<iv>aw oeti rutxe "please believe me".

The subjunctive is also used after modal verbs of obligation, ability, or desire, such as zene "must", tsun "can", and new "want". (See modal verbs below.)

6.9.6. *Other*. Other temporal and aspectual forms include tovaron, tevaron, telaron, tairon. Their meaning is not known.[clarification needed]

6.9.7. *Fused tam infixes*. When tense, aspect, and mood infixes occur together, they fuse: The consonant of the aspect infixes within the tense, as recent past-imperfective <ìrm> in ìrmaron "(I) was just hunting", from <ì<er>m>; or the consonant of the tense or aspect infixes within the subjunctive mood.

Indicative Infixes			
ind		pfv	ipfv
fut	ay	aly?	ary?
imm	iy	ily?	iry?
prs		ol	er
rec	ìm	ilm?	irm
pst	am	alm?	arm
Subjunctive Infixes			
sjv		pfv	ipfv
fut	iyev, iyev		
prs	iv	ilv	irv
pst	imv		

The expected future subjunctive *iyv, however, is a problem, as *iy is not a possible syllable coda in Na'vi. This is solved by inserting an epenthetic vowel e: <iyev>; moreover, in the common expression kiyevame "see (you) soon", there is a degree of vowel assimilation; <iyev> and <ìyev> are both acceptable forms of this inflection. Note that because the vowel distinctions of the future and past tenses are lost, there are only three tenses rather than five in the subjunctive mood. Three-way combinations of tense, aspect, and mood do not occur.

6.9.8. *Affect*. The final infix position is taken by infixes for affect: Speaker attitude, whether positive or negative; formality; and evidentiality to mark for uncertainty or indirect knowledge.

Na'vi affect	
Positive attitude	ei
Negative attitude	äng
Formal	uy
Evidential	?

For example, in the greeting in the section on nouns, Oel ngati kameie "I See you", the verb kame "to See" is inflected positively as kam<ei>e to indicate the pleasure the speaker feels in the meeting. In the subsequent sentence, Oeri ontu teya längu "My nose is full [of his smell]", however, the phrase teya lu "is full" is inflected negatively as teya l<äng>u to indicate the speaker's distaste at the experience.

The formal infix goes with the formal pronouns: Ngenga ... l<uy>u set "You are now ...".

Only one affect inflection may be used per verb, so the choice depends on the speaker's priorities. For example, once formality is established, the formal infix can be dropped, clearing the way for other affectual inflections even if the formal pronouns continue to be used.

Although only one affect infix may appear, they may co-occur with first- or second-position infixes in the penultimate syllable:

- (29) oe t<irm>ar<ei>on
 I-NTR hunt<REC.IPFV><LAUD>
 "I was just hunting"

The speaker is happy about the experience, whether due to success or just the pleasure of the hunt.

- (30) po t<ay>ar<äng>on
 I-NTR hunt<FUT><PEJ>
 "He will hunt"

The speaker is anxious about or bored by the prospect.

6.9.9. *Imperatives*. There is no infix for the imperative:

Kä! Kä! "Go! Go!"
 Pot lonu! "Release him!"
 Ikranti makto. 'Eko ta'em "Take the banshee. Attack from above."

The pronoun may be stated overtly:

- (31) 'awpo-t set ftkey ay-nga-l
 one-ACC now choose PL-you-ERG
 "Now you choose one"

Negative imperatives (prohibitives) are conveyed with rä'ä "don't!":

Txopu rä'ä si! "Don't be afraid!"[33]
 Tsakem rä'ä si! "Don't do that!"

Instead of the bare root of the imperative, the subjunctive may be used in its optative role to make a request or polite command:

- (32) ay-nga ne-to r<iv>ikx
 PL-you to-away move<SVJ>
 "(May you all) step back!"

6.9.10. *To be, to have.* The verb *lu* is a copula, meaning that it links two concepts together (like an equal sign), as in *fo lu kxani* "they are forbidden (here)", where it links a noun phrase and adjective; *Na'viyã, l<uy>u hapxi* "(you) are<formal> part of the People", where it links two noun phrases ("you" being understood); and *tsahik-u txele lu* "the matter is for the Tsahik". It is the copula *lu* that makes a predicate out of an adjective: *kilvan angim* "a long river", *kilvan ngim lu* "the river is long". As with the English verb "be", *lu* is also a verb of existence; it is the "there is / there are" verb: *aungia lu* "there was a sign"; *ke fparmil oel futa lu tute a tsun ...* "I didn't think there was anyone who could ...". When used with the dative in the sense of "to have", it generally precedes that dative: *Lu oeru ikran* "I have a banshee".

However, there is also a dedicated verb of existence: *tok* "to be in a place", as in *oehu Txewi trram na'ringmi t<arm>ok* "yesterday I was with Tewi in the forest" above.

6.9.11. *To do.* *Na'vi* has an auxiliary verb *si* which means "to do" or "to make". It's used in numerous expressions, and is the primary way of turning a noun into a verb: *tsam* "war", *tsam si* "to make war", *kelku* "home", *kelku si* "to dwell" (lit., "to make (one's) home"); *tsap'alute* "an apology", *tsap'alute si* "to apologize" ("to make an apology"), *irayo* "thanks", *irayo si / si irayo* "to thank", *lrrtok* "a smile", *lrrtok si* "to smile", etc. *Si* forms idiomatic expressions with the organs of the senses: from *nari* "eye", *nari si* "to watch out, be careful"; from *eltu* "brain", *eltu si* "to pay attention, quit goofing off".

Although the *si* may occasionally come before the noun (*nga-ru irayo s<ei>yi* or *s<ei>yi irayo oe* "I thank you"),[34] the two words behave as an intransitive compound: The noun never takes the accusative suffix, and the subject of *si* never takes the ergative.[35]

Si can also be used with adjectives, such as *teya* "full" in *kato oeru teya si* "the rhythm fills me".

It is not generally used on its own, except when context makes its sense clear:

- (33) Nga tsap'alute si srak?
 you apology do-<PERF> question
 "Have you apologized?"

- (34) Si.
 do-<PERF>
 "I have."

6.9.12. *To give.* The verb "to give", *ting*, has a smaller number of idiomatic usages. It is combined with organs of the senses to indicate an attentive action of that sense. So from *nari* "eye" there is *ting nari* ("tinnari") "to look at" (cf. *tse'a* "to see"), and from *mikyun* "ear" there is *ting mikyun* ("timmikyun") "to listen" (cf. *stawm* "to hear"). Somewhat less idiomatic are *pãnuting* "to promise" (lit. "to give promise"), *yomting* "to feed" (lit. "to give to eat"), and *teswoting* "to grant" (based on an unattested root).

6.10. **Modal verbs.** As in English, *Na'vi* has modal verbs ('helping verbs') which have a distinct syntax from other verbs. These are basic verbs of obligation, ability, or desire, such as *zene* "must", *tsun* "can", and *new* "want". They are followed by a regular

verb, which must take the subjunctive mood, whereas English would use the infinitive, as above in *zene fko n<iv>ume n̄txan* "there is much to learn" and *tsun tutet tsp<iv>ang ko* "they can kill a person, you know". Likewise *oe new k<iv>ä / new oe k<iv>ä*, etc. "I want to go". The subject is not repeated if it's the same for the two verbs, but is required otherwise: *Oe new nga k<iv>ä* "I want you to go" (lit. "I want (that) you should go").[37]

Note that the subject of the modal is intransitive regardless of the lexical verb: [36]

- (35) *oe new y<iv>om teylu-t*
 I want eat<SV> grubs-ACC
 "I want to eat teylu."

If there is an overt subject to the lexical verb, then it would be inflected for case as it would without the modal.

6.11. **Questions and demonstratives.** Yes-no questions may be asked with the final question marker *srak?*, but sometimes intonation alone is used. Information questions are asked with question words based on the leniting interrogative-pronoun morpheme *pe* "which?". These need not occur at the beginning of a clause: *Oeru pelun* "why me?" They are only used for questions, not as relative pronouns as in "I don't know which to choose". Interrogative *pe* corresponds to demonstrative morphemes *fi* "this" and *tsa* "that". The morphemes that combine with these combine with others as well, such as *ke* "no", *fra* "every", *la* "other", and *teng* "same":

Interrogatives		
	Interrogative	English
thing	<i>peu, 'upe</i>	what? which thing?
person	<i>pesu, tupe</i>	who?
manner	<i>pefya, fyape</i>	how? which way?
action	<i>pehem, kempe</i>	how? which action?
time	<i>pehrr, krrpe</i>	when?
reason	<i>pelun, lumpe</i>	why?
place	<i>peseng, tsengpe</i>	where?

Demonstratives				
	Proximal	English	Distal	English
thing	<i>fi'u</i>	this, this thing	<i>tsa'u</i>	that, that thing
person	<i>fi'po</i>	this one	<i>tsatu</i>	that person
manner	<i>fifya</i>	like this		
action	<i>fikem</i>	this (action)	<i>tsakem</i>	that (action)
time	<i>set</i>	now	<i>tsakrr</i>	then
reason				
place	<i>fitseng</i>	here	<i>tsatseng</i>	there

Negatives et. all						
thing	Negative ke'u	English nothing	All fra'u	English everything	Same teng'u	English same thing
person	kawtu	no-one	frapo	everybody		
manner					tengfya	the same way
action						
time	kawkrr	never	frakrr	always	tengkrr	while, at the same time
reason						
place		nowhere		everywhere		

The forms based on kem are used when asking or telling what one is doing: *Kempe si nga?* "What are you doing?"

These are merely the more common forms; *pe*, *fi* (and its plural *fay* "these") and *tsa* may combine with any noun: *fitxep* "this fire", *tsaswirä* "that creature". For this they are unstressed and do not need the attributive *a*; compare *kea txep / txep ake* "no fire" and *ke txep* "not a fire".

7. SYNTAX

As noted above, Na'vi constituent order (subject-object-verb order) is syntactically free that is, it is determined by discourse factors rather than by syntax. The word order within a noun phrase (demonstrative-numeral-adjective-noun etc.) is similarly free.

Negation, both of noun phrases and of clauses, is made with the grammatical particle *ke*, which appears before the negated element. The vowel elides in certain lexicalized expressions, such as *kawkrr* "never" above. As illustrated above and below, double negatives are used.

7.1. Conjunctions. Various other particles such as conjunctions join phrases and clauses. Examples are *sì* and *ulte* "and", *fu* "or", *slä* "but", *na* "like, as" (*na ayoeng* "as we (do), like us"), [38] *san* (quote), *sik* (unquote), *fte* "so that, in order to", *fteke* "lest". *A* is used for relative clauses, as in *tute a tsun* "a person who can", [39] *futa* means "that", as in *ke fparmil futa ...* "(I) didn't think that ...", and *tsnì* means "that" in *ätxäle si tsnì ...* "(I) request that ...".

The difference between *sì* "and" and *ulte* "and" is not certain, but it appears that *sì* joins phrases within a clause, while *ulte* joins clauses. Attested examples include *trrä sì txonä* "of day and night", *win sì txur* "fast and strong", and *plltxe sì tiran* "to speak and walk", but *kìyevame ulte Eywa ngahu* "See you again, and may Eywa be with you".

Sì may also cliticize to the second noun phrase, as in the formal inclusive pronouns, or in

- (36) *ay-li'u-t +koren-ti-sì li'-fya-yä le-Na'vi*
 PL-say-thing-ACC PL+rule-ACC-and say-way-GEN ADJ-People
 "(describe) the words and rules of the Na'vi language"

7.2. Comparison. Comparative and superlative constructions are marked by *-to*; where this occurs, there is no need for the word *nì'ul* "more" (as in *txur nì'ul* "stronger"):

- (37) *Tse'a sye?-tute-t a-tsawl fra-to mì-sì-rei.*
 see<PFV> trap?-person-ACC ATTR-big every-than in-NMZ-live
 "(and we) saw the biggest Trapper I've ever seen" (lit. 'in (my) life')

7.3. **Reported speech.** Quoted speech is introduced with the quotative particle *san* and the unquotative particle *sik*. These only allow direct speech, not indirect (reported) speech. If the quotation occurs at either end of the sentence, then only one of the particles need be used:

- (38) plltxe oe san zene ke unil-tìran-yu ke-'u z<iv>a'u fi-tseng.
 say<PFV> I " must not dream-walk-er no-one come<SVJ> this-place
 "I have said, [quote] 'No avatar may come here'."

However, if it occurs in the middle, so that there is non-reported material on either side, then both particles occur together as correlatives:

- (39) plltxe Eytukan san oe k<ay>ä sik slä oe-l po-t ke spaw
 say<PFV> (name) " I go<FUT> " but I-ERG s/he-ACC not believe
 "Eytukan said he would go (lit. 'I will go'), but I don't believe him."

7.4. **Subordinate clauses.** Some of the subordinating conjunctions, such as those indicating purpose, trigger the subjunctive in a dependent clause:

- (40) nari-si ayoe fte-ke nì-hawng l<iv>ok
 eye-make<PFV> we-EXCL so.that-not ADV-excessive close<SVJ>
 "We were careful not to get too close."
 (41) saw-tute z<er>a'u fte fo-l kel-utral-ti sk<iv>a'a
 PL+sky-person come<IPFV> so.that PL+3-ERG home-tree-ACC destroy<SVJ>
 "The humans are coming to (that they may) destroy Hometree."

However, the independent clause is not always made explicit:

- (42) txo new nga r<iv>ey oe-hu
 if want you to.live<SVJ> me-with
 "(Come) with me if you want to live."

7.5. **Relative clauses.** Na'vi does not have relative pronouns such as English *who*, *which*, *what*;^[41] instead, the attributive particle *a* is employed:

- (43) tute a tsun nì-Na'vi plltxe
 person SBRD be.able ADV-Na'vi speak
 "a person who can speak Na'vi"

It wouldn't matter if the phrase were "a thing which" (or "that"), "a time when", or "a reason why"; all would use the same particle *a* to translate the English *wh-* word. This is the same morpheme as the *a* in attributive adjectives; indeed, relative clauses can be thought of as multi-word adjectives: The example above might be more literally translated as "an able-to-speak-Na'vi person", with "able to speak Na'vi" being an attributive (adjective).

A slightly more complex example along the same lines is,

- (44) 'awpo-t set ftxey ay-nga-l a lu ay-nga-kip, 'awpo-t a
 one-ACC now choose PL-you-ERG SBRD be PL-you-among one-ACC SBRD
 Na'vi-ru yom+t<iy>ing
 People-DAT eat+give<IMM>
 "Choose one among you, one who will feed the People."
 (Lit: "you-all choose an is-among-you individual, a will-feed-the-People individual")

Here, in 'awpot a Na'viru yomtiyng "one who will feed the People", the attributive a is not adjacent to the verb, and so cannot be attached to it in writing the way it is attached to adjectives.

The attributive a is also used when a prepositional phrase modifies a noun. In English, "the cat in the hat" can be thought of as "the cat which is in the hat", with the verb 'to be' dropped. In Na'vi, though the 'be' need not be said, the a 'which' must be:

- (45) fi-po lu vrrtep a mi+tokx a-tsleng
 this-one be demon ATTR in+body ATTR-false
 "It is a demon in a false body"

In cases where English uses a stranded preposition, as in "someone to talk with", Na'vi needs to repeat the noun or a pronoun:

- (46) ke lu ke-'aw-tu a ni-ul-n<iv>ew oe po-hu
 not be not-a-one SBRD ADV-more-want<SJV> I him/her-with
 tirea-p<iv>angkxo äo vitra-utral
 spirit-converse<SJV> under soul-tree
 "There's nobody I'd rather commune with under the Tree of Souls"

Or literally, "There isn't nobody that I'd more like to commune with them under the Tree of Souls."

7.6. Clause order. This kind of subordinating strategy is common among human fixed-order verb-final languages such as Japanese, Korean, and Turkish. Indeed, though these examples followed the English word order of subordinate clause following the noun it modifies, the human verb-final order of subordinate clause preceding the noun is also possible in Na'vi:

- (47) tsun oe nga-hu ni-Na'vi p<iv>angkxo a fi-'u oe-ru
 be.able I.NTR you-with ADV-Na'vi chat<SJV> SBRD this-thing I-DAT
 prrte' lu
 pleasure be
 "It's a pleasure to be able to chat with you in Na'vi."

(Lit. "this being-able-to-chat-with-you-in-Na'vi thing is a pleasure to me")

The contrast can be seen in the following, where a relative clause is used to nominalize a clause in order for it to form a topic:

- (48) nga-l oe-eyä 'upxare-t ay+tute-ru fpe' a
 you-ERG I-GEN message-ACC PL+person-DAT send<PFV> SBRD
 fi-'u-ri nga-ru irayo s<ei>i oe ni-txan
 this-thing-TOP you-DAT thank do<LAUD> I.NTR ADV-much
 "Thank you very much for sending my message to people!"

or conversely,

- (49) fi-'u-ri-a nga-l oe-eyä 'upxare-t ay+sute-ru
 this-thing-top-SBRD you-ERG I-GEN message-ACC PL+person-DAT
 fpe' nga-ru irayo s<ei>i oe ni-txan
 send<PFV> you-DAT thank do<LAUD> I.NTR ADV-much

7.7. **Relative clauses with empty nouns.** In the previous examples, the relative clause modified a pronoun, fi'u "this", which did little except to anchor the relative clause. By inflecting pronoun for case, this allows the relative clause to play various roles in the sentence. For example, the pronoun may be in the accusative, fi'ut, which when followed by a plays the role of "that" in "I think that [X]":

- (50) ke fp<arm>il oe-l fi-'u-t=a lu tute a tsun
 not think<PST.IPFV> I-ERG this-thing-ACC=SBRD be person SBRD be.able
 nì-Na'vi set fi-fya p<iv>lltxe
 ADV-Na'vi now this-way speak<SVJ>
 "I didn't think that there was anyone who could speak Na'vi like that at this point!"

(Lit. "I didn't think this [X] thing", where [X] is "there is a can-now-thus-speak-Na'vi person".)

As an accusative form, futa is used with an ergative agent when the main verb is transitive. Tsnì is used with an intransitive main verb such as silpey "to hope" or noun + si :

- (51) ätxäle si tsnì l<iv>u ohe-ru unil-taron
 request make that be<SVJ> I.form-DAT dream-hunt
 "I (respectfully) request (that I have) the Initiation."

(If the "I" were spoken here, it would be of the form oe.)

Both the tsnì and the subjunctive may be dropped, in which case a clause like "I hope" functions as a discourse particle, coordinate to the adjacent clause:

- (52) silpey oe l<ay>u oe-ru ye'rìn siltsan-a fmawn a tsun oe ay-nga-ru
 hope I be<FUT> I-DAT soon good-ATTR news SBRD can I PL-you-DAT
 t<iv>ìng
 give<SVJ>
 "I hope I will soon have good news to give you."

Other small grammatical words than pronouns may head the relative clause. On of them, krr "time", behaves as an adverb in that it does not take case endings to show its relationship to the main verb:

- (53) tì-eyng-it oe-l tel a krr ay-nga-ru p<ay>eng
 NMZ-to.answer-ACC I-ERG receive<PFV> SBRD time PL-you-DAT tell<FUT>
 "When I get an answer, I'll tell you."

Note that the verb 'get' is perfective, even though it is not in the past, as I do not plan on telling you until the event of getting the answer is complete.

7.8. **Transitivity.** Many verbs may be either transitive or intransitive, depending on the context. For example, pay may be either "wait" (intransitive) or "await" (transitive):

- (54) nì-ay-nga oe p<er>ey nì-teng
 ADV-PL-you I wait<IPFV> ADV-same
 "Like you, I too am waiting."
 (55) oe tsun p<iv>ey trr-it a nga t<ay>ìng ay-oe-ru nì-'ul
 I can wait<SVJ> day-ACC SBRD you give<FUT> PL-I-DAT ADV-more
 "I can await the day when you will give us more."

General action, without any specific object, as in English "I ate too much", is intransitive, whereas an implied but unstated object, as in "he ate some (of it)", is transitive.[citation needed] Thus,

- (56) oe taron
I.NTR hunt
"I hunt"

Here the speaker is merely saying that hunting is an activity that they engage in; this equivalent to such intransitive clauses as "I walk". An overt object, on the other hand, requires that the agent be in the ergative case:

- (57) oe-l taron pa'li-t
I-ERG hunt<PFV> direhorse-ACC
"I hunted a direhorse"

If, however, the agent is in the ergative case, but there is no expressed object, then an omitted object is understood. So if asked about yerik, the speaker might say,

- (58) taron oe-l kop
hunt I-ERG as.well
"I hunt them too"

In the case a relative clause removed either the subject or object of a dependent clause, the case of the other, and the transitivity of the dependent verb, are unaffected:

- (59) ikran a taron oe-l tsawl lu nì-txan
banshee.NTR SBRD hunt<PFV> I-ERG big be ADV-great
"The banshee I hunted was very big."

Here ikran is in the intransitive case because it is the subject of lu "to be"; however, oel remains in the ergative, since the object ikranit is understood from the context.

8. SEMANTICS

9. EXCEPTIONS OR NOTES

10. THE SOURCES

11. UNKNOWN THINGS

12. LEXICON

Refer to this document for a Na'vi to English Dictionary.
Refer to this document for an English to Na'vi Dictionary.