

RULES FOR MORPHO-PHONEMIC CHANGES

UMANAKAINA LANGUAGE

by

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November, 1993

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The following is a list of rules that apply in the Umanakaina language when certain syllable types and certain contoids and vocoids are joined because of grammatical affixation. The analysis is based on data from the Main Dialect of the language as defined in the paper; "A Dialect Survey Report On The Umanakaina Language Area", by Daniel & Wei Lei Jesudason, January 1991.

In the examples below, where appropriate the phonetic form is represented by [...], the phonemic form is represented by /.../, and the orthographic form is represented by !...!. Syllable breaks are indicated with a full stop sign within the phonemic representation.

1. The phones [s] and [t]:

As discussed in the paper; "A Tentative Statement of Umanakaina (Gwedena) Phonemes", by Sigmund and Ingjerd Evensen, October, 1982, the voiceless fronted alveolar grooved fricative [s] and the voiceless fronted alveolar unaspirated stop [t] are allophones of the same phoneme /t/; [s] occurring preceding the high vocoids /i/ and /u/ and [t] occurring preceding the mid- and low vocoids /e/, /o/, and /a/. In spite of this unambiguous complementation pattern, people who have acquired literacy skills in English insist on both phones being represented in the orthography.

When certain morphemes come together through affixation the complementation pattern between [s] and [t] can be seen as illustrated by the examples below:

Examples:

[papatela]

[papata]	+	[-i]		+	[-ela]	-->	[papatela]	/pa.pa.te.ya/
shore		+ 3SG.POS + LOC						!papateya!

"on the shore"

(NOTE: The loss of the 3SG.POS marker /-i/ will be discussed under point IX below.)

[papasi]

[papata]	+	[-i]		-->	[papasi]	/pa.pa.ti/
shore		+ 3SG.POS				!papasi!

"its shore"

2
2

[qiʌaⁿtau]

[qiʌaⁿtau] /gi.ya.nta.u/
slow(SG) !giyantau!

"slowly"

[qiʌaⁿsugiqiʌaⁿsu]

[qiʌaⁿsugiqiʌaⁿsu] /gi.ya.ntu.gi.ya.ntu/
slow(RDPL) !giyansugiyansu!

"very slowly"

II. Sequence of three vocoids:

The following types of Syllable occur in Umanakaina; CV, CVV, CCV, CCVV, V, and VV. Quite frequently grammatical words ending in either a VV sequence or a V.V sequence are affixed a morpheme with an initial vocoid. The following examples affirm that phonetically sequences of three vocoids (VV.V or V.V.V) are not allowed in the language. When suffixation creates these kinds of sequences, which, by the way, doesn't happen very often, the following morphophonemic transformations take place:

- A. In cases where a sequence of vocoids within one syllable is followed by another vocoid (VV.V), the initial vocoid of the VV cluster is dropped and the final vocoid of the cluster forms one syllable with the suffix vocoid.

Examples:

[paruⁱgemei]

[parau] + [-i.ge.mei] --> [paruⁱgemei] /pa.rui.ge.mei/
greeting + -say (1PL.PR) !paruigemei!

"we are greeting"

[raⁱqubu]

[raⁱ] + [-igubu] --> [raⁱqubu] /rai.gu.bu/
ripe + -say (3PL.P) !raigubu!

"they became ripe"

- B: In cases where a sequence of vocoids across syllable boundaries (V.V) is followed by another vocoid, the final vocoid of the sequence is dropped, and the initial vocoid forms one syllable with the suffix vocoid.

Examples:

[k^uaⁱg^emei]

[k~~u~~ae] + [-igemei] --> [k^uaⁱg^emei] /k^uai.ge.mei/
do + -say (1PL.PR) !k^uaigemei!

"we are doing"

[de^ŋkoⁱg^eme^ha]

[de^ŋkoe] + [-igeme^ha] --> [de^ŋkoⁱg^eme^ha] /de.nkoi.ge.me.ya/
trap + -say (1PL.P/DUR) !denkoigemeyal

"we were putting up traps"

[kapoiqubu]

[kapoi] + [-igubu] --> [kapoigubu] /ka.poi.gu.bu/
stingy + -say (3PL.P) !kapoigubu!

"they were stingy"

III. Loss of root final high vocoids /i/ and /u/:

When a root final high vocoid /i/ or /u/ through suffixation is followed by the same high vocoid, the final vocoid of the root is lost.

Examples:

[si]

[sil] + [-i] --> [si] /ti/
name + -3SG.POS !sil

"his name"

[upiqibi]

[upi] + [-igibi] --> [upigibi] /u.pi.gi.bi/
planting + -say (1PL.P) !upigibi!

"we were planting"

[ku]

[ku] + [-u] --> [ku] /ku/
fireplace + (-LOC) !ku!

"in the fireplace"

[kaburu]

[kaburu]	+	[-u]	-->	[kaburu]	/ka.bu.ru/
lake		+ (-LOC)			!kaburu!

"in/on the lake"

IV. Government as to point of articulation:

No Umanakaina words end in closed syllables. There are, however, a very limited number of verb stems that in some environments have a stem final nasal preceding the obligatory verbal suffix. Since these stems in some environments occur without the final nasal, in some cases seem to be speaker dependant, and because this phenomenon is rather rare, we have decided to regard the occurrence of this stem final contoid as a transitional phenomenon rather than defining a completely new closed syllable category. Relevant to the discussion of morpho-phonemics, there is government as to point of articulation between the stem final nasal and the suffix initial contoid.

Examples:

[dompupu]

[dom-]	+	[-pupu]	-->	[dompupu]
bump into		+ (3SG.OBJ/3SG.P)		/do.-m-.pu.pu/
				!dompupu!

"it bumped into him"

[donsinibu]

[don-]	+	[-sinibu]	-->	[donsinibu]
bump into		+ (1SG.OBJ/3SG.P)		/do.-n-.ti.ni.bu/
				!donsinibu!

"it bumped into me"

[e(m)pani]

[e(m)-]	+	[-pani]	-->	[e(m)pani]
see		+ (3SG.OBJ/1SG.F)		/e.(-m-).pa.ni/
				!empani!

"I will see it"

[e(n)sini~~oto~~]

[e(n)-]	+	[-sini oto]	-->	[e(n)sini oto]
see		+ (1SG.OBJ/3SG.F)		/e.(-n-).ti.ni.yo.to/
				!ensiniyoto!

"he will see me"

V. Change of voice in the verb final order suffix initial consonant:

Verbal final order suffixes with suffix initial bilabial stops followed by the high vocoids /i/ or /u/ or the mid vocoid /e/ have variation in the voice of this consonant according to the following rules;

A: Following the second order Object Person Markers /-ti.ni-/ and /-ni-/ the final order suffix initial consonant is voiced. It is voiceless in all other environments, except as outlined in point B below.

B: For verbs of class (g), (d) and (y), the final order suffix initial consonant is voiced. It is voiceless for all other verb classes and in all other environments, except when the Object Person Marker is as outlined in point A above.

NOTE: We have made several attempts to come up with purely phonologically based arguments for the rules given in points A and B above. After having studied a concordance of more than six thousand entries, we have not been able to come up with any such consistent arguments on purely phonological grounds.

Examples:

Verb Class (p):

[manupuwani]

[manu] + -#- + -#- + [-puwani]	-->	[manupuwani]
ask + CLASS + 3SG.O + 1SG.P		/ma.nu.pu.wa.ni/
		!manupuwani!

"I asked him"

[manunibuwani]

[manu] + -#- + [-ni-] + [-puwani]	-->	[manunibuwani]
ask + CLASS + 2SG.O + 1SG.P		/ma.nu.ni.bu.wa.ni/
		!manunibuwani!

"I asked you(SG)"

[manutapi]

[manu] + -#- + [-ta-] + [-pi]	-->	[manutapi]
ask + CLASS + 3PL.O + 2SG.P		/ma.nu.ta.pi/
		!manutapi!

"you(SG) asked them"

[manusinibi]

[manu] + -#- + [-sini-] + [-bi]	-->	[manusinibi]
ask + CLASS + 1SG.O + 2SG.P		/ma.nu.ti.ni.bi/

"you(SG) asked me"

[manupena]

[manu] + -#- + -#- + [-pena]	-->	[manupena]
ask + CLASS + 3SG.O + CONTR.F(SG)		/ma.nu.pe.na/
		!manupena!

"I/you(SG)/he should have asked him"

[manusinibena]

/manu/ + -#- + [-si.ni-] + [-pena]	-->	[manusinibena]
ask + CLASS + 1SG.O + CONTR.F(SG)		/ma.nu.ti.ni.be.na/
		!manusinibena!

"you(SG)/he should have asked me"

Verb Class (r):

[umatapuwani]

[uma-] + -#- + [-ta-] + [-puwani]	-->	[umatapuwani]
tie + CLASS + 3PL.O + 1SG.P		/u.ma.ta.pu.wa.ni/
		!umatapuwani!

"I tied them"

[umanibu]

[uma-] + -#- + [-ni-] + [-pu]	-->	[umanibu]
tie + CLASS + 2SG.O + 3SG.P		/u.ma.ni.bu/
		!umanibu!

"he tied you(SG)"

[umatapi]

[uma-] + -#- + [-ta-] + [-pi]	-->	[umatapi]
tie + CLASS + 3PL.O + 2SG.P		/u.ma.ta.pi/
		!umatapi!

"you(SG) tied them"

[umasinibi]

[uma-] + -#- + [-si.ni-] + [-pi]	-->	[umasinibi]
tie + CLASS + 1SG.O + 2SG.P		/u.ma.ti.ni.bi/
		!umasinibi!

"you(SG) tied me"

[umapena]

[uma-] + -#- + -#- + [-pena]	-->	[umapena]
tie + CLASS + 3SG.O + CONTR.F(SG)		/u.ma.pe.na/
		!umapena!

"I/you(SG)/he should have tied him"

[umanibena]

[uma-] + -#- + /-ni-/ + [-pena]	-->	[umanibena]
tie + CLASS + 2SG.O + CONTR.F(SG)		/u.ma.ni.be.na/
		!umanibena!

"I/he should have tied you(SG)"

Verb Classes (d), (q), and (y):

[ug^uadubuwani]

[ug ^u a-] + [-da-] + -#- + [puwani]	-->	[ug ^u adubuwani]
stab + CLASS + 3SG.O + 1SG.P		/u.gwa.du.bu.wa.ni/
		!ugwadubuwani!

"I stabbed him"

[nuwagibi]

[nuwa-] + [-ga-] + -#- + [-pi]	-->	[nuwagibi]
say + CLASS + 3SG.O + 2SG.P		/nu.wa.gi.bi/
		!nuwagibi!

"you(SG) said it"

[mebena]

[me-] + -#- + -#- + [-pena]	-->	[mebena]
cut + CLASS + 3SG.O + CONTR.F(SG)		/me.be.na/
		!mebena!

"I/you(SG)/he should have cut him"

VI. Agreement between vocoids in the verb final order suffix and the vocoids in the stem/other affixes:

It is rather complex to describe in a general set of rules the morpho-phonemic changes that take place in the verb stem and/or affixes when certain final order suffixes are present. The following is an attempt to make the description as broad and general as possible.

- A. In situations where vocoid changes take place, the transformations are ordered from right to left.
- B. For class (p) verbs, i.e. verbs with free form verb stems, transformations only take place in the first order Class Marker Affix and the third order {-ya-} Affix. For all other verb classes changes also take place in the Stem.
- C. Where the second order Object Person Affix occurs, changes only take place to the right of this affix, except when the affix has the form /-ta.ma-/, in which case its final vocoid also is subject to change.

D. It is only the low open central spread vocoid /a/ which is subject to change. The change is governed by the vocoid of the first syllable of the final order suffix. The changed vocoids become homogenous with this vocoid.

E. Except for in a very few instances (in some irregular verbs), no change takes place in the initial syllable of the Stem.

Restrictions:

(1) Where the third order {-ya-} Affix occurs, the changed vocoids to the left of this affix become the voiced high close front unrounded vocoid /i/.

(2) Where the third order {-ya-} Affix is immediately followed by a final order suffix initial vocoid cluster (VV) or (V.V), the initial vocoid of this cluster takes the place of the low open central spread vocoid /a/ of the Affix.

(3) Where the final order suffix is #, the changed vocoids become the voiced high close front unrounded vocoid /i/.

(4) When the second order Object Person Affix /-ta.ma-/ is followed by a suffix with an initial syllable CV, where the contoid is the voiced bilabial nasal /m/, the final syllable of the Object Person Affix is dropped.

Examples:

Verb Class (p):

[kawarapani]

[kawara] + [-pa-] + -#- + [-ni]	-->	[kawarapani]
carry + CLASS + 3SG.O + 1SG.F		/ka.wa.ra.pa.ni/
		!kawarapani!

"I will carry it"

[kawarapeke~~ya~~]

[kawara] + [-pa-] + -#- + [-ke ya]	-->	{kawarapeke ya }
carry + CLASS + 3SG.O + 1SG.P/DUR		/ka.wa.ra.pe.ke.ya/
		!kawarapekeya!

"I was carrying it"

[kawatamono]

[kawara] + -#- + [-tama-] + [-mono]	-->	[kawatamono]
carry + CLASS + 3PL.O + 3PL.F/DUR		/ka.wa.ra.ta.mo.no/
		!kawatamono!

"they will be carrying them"

[kawarapupu]

[kawara] + [-pa-] + -#- + [-pu] --> [kawarapupu]
carry + CLASS + 3SG.O + 3SG.P /ka.wa.ra.pu.pu/
!kawarapupu!
"he carried it"

[kawarapi~~ei~~]

[kawara] + [-pa-] + -#- + [~~-ka-~~] + [ei] --> [kawarapi~~ei~~]
carry + CLASS + 3SG.O + PHON + 2SG.PR /ka.wa.ra.pi.yei/
!kawarapiyei!
"you are carrying it"

[kawaratami owa]

[kawara] + -#- + [-tama-] + [~~-ka-~~] + [-wa] --> [kawaratami~~owa~~]
carry + CLASS + 3PL.O + PHON + 2SG.F/DUR /ka.wa.ra.ta.mi.yo.wa/
!kawaratamiyowa!
"you(SG) will be carrying them"

[kawarapi]

[kawara] + [-pa-] + -#- + -#- --> [kawarapi]
carry + CLASS + 3SG.O + 2SG.F /ka.wa.ra.pi/
!kawarapi!
"you(SG) will carry it"

Other Verb Classes:

[umarakani]

[uma-] + [-ra-] + -#- + [-ka.ni] --> [umarakani]
tie + CLASS + 3SG.O + 1SG.F /u.ma.ra.ka.ni/
!umarakani!
"I will be tying it"

[umerei]

[uma-] + [-ra-] + -#- + [-ei] --> [umerei]
tie + CLASS + 3SG.O + 2SG.PR /u.me.rei/
!umerei!
"you(SG) are tying it"

[umani~~ono~~]

[uma-] + -#- + [-ni-] + [~~-ka-~~] + [-no] --> [umani~~ono~~]
tie + CLASS + 2SG.O + PHON + 3SG.F/DUR /u.ma.ni.yo.no/
!umaniyono!
"he will be tying you(SG)"

[pa ^u nau]	-->	[pa ^u puna ^u mupu]
[pa ^u na-] + [-u] center + LOC	-->	[pa ^u puna-] + [-mupu] center(RDPL)+ 3PL.P
/pau.na.u/ !paunau!		/pau.pu.na.mu.pu/ !paupunamupu!
"in the middle"		"they put it in the middle"
[k ^u aenewagau]	-->	[k ^u aek ^u enetaqubu]
[k ^u aene-] + [-wagau] look for + say.3SG.PR	-->	[k ^u aek ^u ene-] + [-tagubu] look for(RDPL) + say.3PL.P
/kwa.e.ne.wa.gau/ !kwaenewagau/		/kwa.e.kwe.ne.ta.gu.bu/ !kwaekwenetaqubu!
"he is looking for it"		"they are looking for them"
[paere ^u ena]	-->	[paeperetaqubu]
[paere-] + [- ^u ena] step aside + say.3SG.P	-->	[paepere-] + [-tagubu] step aside(RDPL) + say.3PL.P
/pa.e.re.we.na/ !paerewena!		/pa.e.pe.re.ta.gu.bu/ !paeperetaqubu!
"he stepped aside"		"they stepped aside"

B. Full Reduplication:

Where full reduplication of words ending in a /a.i/ or /a.u/ vocoid sequence occur, the initial vocoid of the sequence is dropped both in the initial and in the reduplicated position of the morpheme.

Examples:

[dara ^u gai]	-->	[dara ^u gidara ^u gi]
[dara ^u gai] red	-->	[dara ^u gidara ^u gi] red(RDPL)
/da.ra.ga.i/ !dara ^u gai!		/da.ra.gi.da.ra.gi/ !dara ^u gidara ^u gi!
"red"		"red(PL)"

[<u>rogobai</u>]	-->	[<u>rogobirogobi</u>]
[rogobai] short	-->	[rogobirogobi] short(RDPL)
/ro.go.ba.i/ !rogobai!		/ro.go.bi.ro.go.bi/ !rogobirogobi!
"short"		"short(PL)"\
[<u>denai</u>]	-->	[<u>denideni</u>]
[dena-] + [-i] return(SG) 3SG.POS	-->	[denideni] return(RDPL)
/de.na.i/ !denai!		/de.ni.de.ni/ !denideni!
"its return"		"return back and forth"
[<u>pirai</u>]	-->	[<u>piripiri</u>]
[pira-] + [-i] small piece + 3SG.POS	-->	[piripiri] small piece(RDPL)
/pi.ra.i/ !pirai!		/pi.ri.pi.ri/ !piripiri!
"small piece"		"small pieces(PL)"
[<u>wa[̃]rau</u>]	-->	[<u>wa[̃]ruwa[̃]ru</u>]
[wa [̃] ra] + [-u] ground + LOC	-->	[wa [̃] ruwa [̃] ru] ground (LOC)(RDPL)
/wai.ra.u/ !wairau!		/wai.ru.wai.ru/ !wairuwairu!
"on the ground"		"close to the ground"
[<u>i[̃]arau</u>]	-->	[<u>i[̃]arui[̃]aru</u>]
[i [̃] ara-] + [-u] high + LOC	-->	[i [̃] arui [̃] aru] high (LOC) (RDPL)
/i.ya.ra.u/ !iyarau!		/i.ya.ru.i.ya.ru/ !iyaruiyaru!
"up there"		"a bit high up there"

[giʎa ⁿ tau]	--> [giʎa ⁿ sugiʎa ⁿ su]
[giʎa ⁿ tau] slowly	--> [giʎa ⁿ sugiʎa ⁿ su] slowly(RDPL)
/gi.ya.nta.u/ !giyantau!	/gi.ya.ntu.gi.ya.ntu/ !giyansugiyansu!
"slowly"	"very slowly"

VIII. Occurance of the {-ya-} Affix:

As mentioned in the paper; "Umanakaina Grammar Essentials", by Sigmund & Ingjerd Evensen; July 1986, page 23, "we have not been able to find any semantic function of the {-ya-} Affix. It seems to appear transitionally between certain morphemes in certain environments, but no consistent rule has been found on morphophonemic grounds."

After having studied and analyzed a concordance with a large amount of data, we still have not found a way to state in a set of general rules what the criteria are for the occurrence of this affix. The chart given in Fig. 5 on page 23 of the above mentioned paper seems to be the best way to describe the occurrence of this affix.

IX. Person Specific Location Clitic:

As mentioned in the paper; "Umanakaina Grammar Essentials", by Sigmund & Ingjerd Evensen; July 1986, page 91, there are two forms of the Person Specific Location Clitic in third person singular. At the time of writing that particular paper, we had not discovered a rule to explain the distribution of these two forms.

After further analysis we have come to the following conclusion:

- A. Words that when inflected with the third person singular possessive suffix become three syllable words with stress on the penultimate syllable, take the form /-i.ya/ of the Person Specific Location Clitic. In all other situations the form /-e.ya/ is used.
- B. Regardless of the form of the Person Specific Location Clitic, the third person possessive suffix is dropped preceding this clitic.
- C. In all situations where the form /-e.ya/ is used (also in first- and second person singular), the final vocoid of the syllable immediately preceding the Person Specific Location Clitic is replaced by the initial vocoid of the clitic.

In the examples below the stressed vocoid(s) has/have been marked.

Examples:

[tawaiⁱʎa]

[tawai] + [-i] + [-eʎa]
house + 3SG.POS + LOC

"in his house"

--> [tawaiⁱʎa]
/ta.wai.ya/
!tawaiya!

[wateⁱʎa]

[wate] + [-i] + [-eʎa]
place + 3SG.POS + LOC

"in his place"

--> [wateⁱʎa]
/wa.te.ya/
!wateya!

[uraiⁱʎa]

[ura] + [-i] + [-eʎa]
spring of water + 3SG.POS + LOC

"at the spring of water"

--> [uraiⁱʎa]
/u.rai.ya/
!uraiya!

[ureⁱʎa]

[ura] + [-i] + [-eʎa]
side of house + 3SG.POS + LOC

"at the side of the house"

--> [ureⁱʎa]
/u.re.ya/
!ureya!

[tawaneⁱʎa]

[tawana] + [-i] + [-eʎa]
place + 3SG.POS + LOC

"in his place"

--> [tawaneⁱʎa]
/ta.wa.ne.ya/
!tawaneyya!

[rabinaneⁱʎa]

[rabina-] + /-ni/ + [-eʎa]
insides + 1SG.POS + LOC

"in my insides"

--> [rabinaneⁱʎa]
/ra.bi.na.ne.ya/
!rabinaneyya!

[tawage¹la]

[tawa] + [-gi] + [-e¹la]
house + 2SG.POS + LOC

--> [tawage¹la]
/ta.wa.ge.ya/
!tawageya!

"in your house"

This ends the description of the rules for morpho-phonemic changes in the Umanakaina language. It is hoped that the above will satisfy the requirements necessary to obtain Approved Orthography Status.