CHAPTER 75

VOWEL HARMONY IN PAPUAN LANGUAGES

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75.1 INTRODUCTION

THE term 'Papuan' refers to approximately 860 languages, comprising 43 distinct families and 37 isolates (Palmer 2018: 6). It does not claim genealogical relatedness between these families.

In its prototypical form, vowel harmony (VH) involves agreement between all and only vowels in a 'word,' excluding vowels that do not have a harmonic counterpart (van der Hulst 2018: 3). Reports of such canonical cases of 'unbounded' VH in Papuan languages are extremely rare. This may be due to lack of information: Only a tiny fraction of the Papuan languages have been described (Hammarström and Nordhoff 2012). It may also indicate that canonical VH is cross-linguistically less common than is often assumed. This chapter reflects the current descriptive and/or typological asymmetry in VH processes in Papuan languages by presenting only two cases of 'unbounded' VH and five cases where VH is limited to adjacent segments.

In what follows I describe the VH patterns attested in Ngkolmpu and Komnzo of the Yam family (Section 75.2); Amele, Mian, and Umbu-Ungu of the Trans New Guinea (TNG) family (Section 75.3); and Kaera of the Timor Alor Pantar family (Section 75.4). Section 75.5 presents conclusions.

75.2 VOWEL HARMONY IN NGKOLMPU AND KOMNZO (YAM FAMILY)

The Yam family (previously known as Morehead-Maro; Ross 2005) comprises around 15–20 languages spoken in southern New Guinea (Evans et al. 2018: 678). One Yam language is Ngkolmpu (or Ngkâlmpw; Kanum: see Carroll 2016: 3–7). Ngkolmpu has seven vowels: /i, ɛ, æ, u, ɔ, ɒ, a/ (Carroll 2016: 44). Schwa is not phonemic but is used frequently

and predictably as an epenthetic vowel that breaks up illicit consonant clusters (Carroll 2016: 44–46). Ngkolmpu has some restricted backness harmony (i.e., agreement along the front–back axis), where the first vowel of the stem is the trigger and the vowel of one particular derivational verbal prefix, referred to as the 'diathetic prefix,' is the target (Carroll 2016: 54–55). The diathetic prefix has the shape of a vowel and occurs adjacent to verb stems starting with a consonant (Carroll 2016: 196). (1) contains the underived form of *wanse* 'fall'; in (2) *wanse* has the diathetic prefix *V-* in a 'middle' verb form, while in (3) the prefix derives an applicative verb. In (2)–(3), the vowel prefix *a-* and the first vowel in the stem *wanse* 'fall' form a harmonic pair. If there is an object ('undergoer') prefix, it precedes the diathetic prefix, as shown in (3).

(1) Markus-w pr pi s- wanse -y
    Markus-ERG tree 3.ABS 3.U- fall.RS -SG.A.HOD
    'Markus felled the tree.' (Carroll 2016: 138)

(2) Markus t- a- wanse -y
    Markus MID.PFV- DIA- fall.RS -SG.A.HOD
    'Markus fell (earlier today).' (Carroll 2016: 138)

(3) Markus-w pr pi nson b- a- wanse -y
    Markus-ERG tree 3.ABS 1SG.DAT 1SG.U- DIA- fall.PFV -SG.A.HOD
    'Markus felled the tree for me.' (Carroll 2016: 138)

C75P7 The vowel of the diathetic prefix may be either [a], as illustrated above, or [ɛ] or [ɔ], in harmony with the first vowel of the verb stem. This is illustrated in (4) for a front-vowel trigger and a target [ɛ], and in (5) for a back-vowel trigger and a target [ɔ].

(4) a. /V-tripin/ → [ʔɛ.tri.pin] 'scratch'
    b. /V-ke/ → [ʔɛ.ke] 'return'
    c. /V-mplæ/ → [ʔɛ.mplæ] 'hit'   (Carroll 2016: 55)

(5) a. /V-lusi/ → [ʔɔ.lu.si] 'arrange'[1]
    b. /V-wo/ → [ʔɔ.wo] 'see'
    c. /V-rkɒ/ → [ʔɔr.kɒ] 'loosen'   (Carroll 2016: 55)

C75P9 The VH of the Ngkolmpu diathetic prefix is not completely regular: Out of the 220 attested verbs, 200 have a harmonic vowel in their prefix, but for the remaining verbs the prefix vowel is assumed to be lexically specified by the verb. Examples are given in (6).

(6) a. /a-ntɔngk/ → [ʔa.ntɔngk] 'carry'
    b. /a-tor/ → [ʔa.tor] 'search'
    c. /ɔ-wnɛ/ → [ʔɔw.ne] 'drink'   (Carroll 2016: 55)

[1] The source gives [ʔu.lu.si]; the author has confirmed that this is a typo.

C75P10 Verbs with vowel-initial stems do not occur with the diathetic prefix *a-*. However, the majority of stem-initial vowels harmonize with the following vowel in the stem. This suggests that these vowels are fossilized diathetic prefixes inherent to the stem (Carroll 2016: 197).

C75P11 The other Yam language discussed here is Komnzo (Döhler 2018). Komnzo has eight vowels /i, y, u, e, œ, o, æ, a/ and schwa as a marginal phoneme. Komnzo harmonizes vowels that precede the emphatic clitic = *wæ* 'EMPH' (Döhler 2018: 72–73). Encliticization of = *wæ* causes a change in quality of the vowel of the preceding syllable, regardless of whether this syllable is part of a root (content or function word), a suffix, or another enclitic. In (7)–(9), the VH on target vowels /o, a, e/ in final open syllables preceding = *wæ* is illustrated. Harmonic pairs are /a/ and /æ/ in (7), /o/ and /œ/ in (8), and /e/ and /œ/ in (9) (Döhler 2018: 73). The process shown in (9) seems poorly motivated from a phonological point of view: The last vowel of /zafe/ gets rounded, though neither the preceding nor the following vowel is rounded. One possible explanation could be analogy—for example, to the cases in (8)—which would suggest that the process is sensitive to morphology or the lexicon.

(7) nima 'this way'   ᵢₘæ = wæ
                                this = EMPH

     bafanema 'because of that one'   baf = ane = mæ = wæ
                                RECOG = POSS = CHAR = EMPH

(8) karfo 'to the village'   kar = fœ = wæ
                                village = ABL = EMPH

     bobo 'toward there'   bobœ = wæ
                                MED.ALL = EMPH

(9) zafe 'long ago'   zafœ = wæ
                                long.ago = EMPH

     etfthme 'overnight'   etfth = mœ = wæ
                                sleep = INS = EMPH

C75P14 VH is blocked when the syllable preceding = *wæ* is closed, as shown in (10).

(10) kafar 'big'   kafar = wæ 'really big'   (*kafær = wæ)
     dœ ker 'lizard tail' dœ ker = wæ 'really the lizard tail' (*dœ kœr = wæ)

C75P15 VH only occurs across the morpheme boundary with = *wæ*: There is no harmony inside a root or a word; for example, *namæ* 'good': **namæ* is phonologically impossible (Döhler 2018: 73).

C75S3

75.3 VOWEL HARMONY IN AMELE, MIAN, AND UMBU-UNGU (TRANS NEW GUINEA FAMILY)

C75P16 The TNG family,[2] estimated to comprise 300–500 languages and many sub-families (Pawley and Hammarström 2018: 21), is spoken all across the New Guinea landmass. Amele (Roberts

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[2] The TNG family as a valid genealogical grouping is still a working hypothesis.

1987, 2016) belongs to the Madang subfamily. Amele has five vowels /i, e, a, o, u/. VH occurs in certain inflections of the verb, and in inalienably possessed nouns. The following description is based on Roberts (2016: 71–74).

C75P17   VH in verbs involves harmony between full vowels of certain affixes and epenthetic and unspecified vowels elsewhere in the word.[3] In Table 75.1 below, this is illustrated with the present-tense paradigm for the infinitive verb *f-eʔ* 'see-INF.' In the first-person inflection [figina], the target is an epenthetic /i/ which harmonizes with the trigger vowel in the preceding pronominal suffix *-ig* '1SG.' In the second-person form [fagana], the unspecified vowel of *-Vg* and the epenthetic /a/ between *Vg-* '2SG' and *-na* 'PRS' are both VH targets of the trigger vowel /a/ in the tense suffix. In the third-person form, [fena] has an epenthetic /e/. This vowel is a copy of the default vowel /e/ occurring in the infinitive suffix *-eʔ* (this suffix is dropped in tense inflections). In the first dualis form [fowona], the unspecified vowel in *-Vw* '1DU' is specified as /o/. This vowel is again in harmony with the default /e/ from the infinitive suffix, but is then rounded to become [o] assimilating with the labio-velar /w/ in the pronominal suffix *-Vw* '1DU.' (Compare the future form *f-ew-an*, where this assimilation process is blocked.) Next, the epenthetic /o/ in [fowona] copies the rounded vowel in *-ow* '1DU.' In the 2/3 dualis form, the vowel in *-Vsi* is specified as /e/, harmonizing with the vowel in the infinitive suffix *-eʔ*. The derivation of the first plural form is identical to the first dual form, except that the labiovelar is /ɡ͡b/ instead of /w/. The derivation of the 2/3 plural form is the same as for the 2/3 dual form except that the agreement marker is *-Vgi* instead of *-Vsi*.

C75T1   **Table 75.1 Vowel harmony with suffix *-na* 'PRS' in present-tense forms of *f-eʔ* 'see-INF'**

Person and number (NOM)		Underlying	Surface	Meaning
1sg	*-ig*	/f-ig-na/	[fig**i**na]	'I see'
2sg	*-Vg*	/f-Vg-na/	[f**a**g**a**na]	'you (sg) see'
3sg	Ø	/f-na/	[f**e**na]	's/he sees'
1du	*-Vw*	/f-Vw-na/	[f**o**w**o**na]	'we (du) see'
2/3du	*-Vsi*	/f-Vsi-na/	[f**e**sina]	'you/they (du) see'
1pl	*-Vg͡b*	/f-Vg͡b-na	[f**o**g͡b**o**na]	'we (pl) see'
2/3pl	*-Vgi*	/f-Vgi-na/	[f**e**gina]	'you/they (pl) see'

C75P18   VH in inflected verbs also occurs in forms containing the habitual past-tense suffix *-ol*, as illustrated in Table 75.2. The VH trigger is the vowel in the tense suffix, and the target is the unspecified vowel in the pronominal markers that follow it. Note that VH in habitual past-tense forms is from left to right, while it is from right to left in present-tense forms (Table 75.1).

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[3] Epenthetic vowels that are (optionally) copied from vowels elsewhere in the word are also found in Kalam (TNG) (Blevins and Pawley 2010).

C75T2

Table 75.2 Vowel harmony with affix *-ol* 'HAB.PST' in habitual past-tense forms of *f-* 'see'

Person and number (NOM)		Underlying	Surface	Meaning
1sg	*-ig*	/f-ol-ig/	[fol**i**g]	'I used to see'
2sg	*-Vg*	/f-ol-Vg/	[fol**o**g]	'you (sg) used to see'
3sg	*-Vi*	/f-ol-Vi/	[fol**oi**]	's/he used to see'
1du	*-Vw*	/f-ol-Vw/	[fol**ou**]	'we (du) used to see'
2/3du	*-Vsi*	/f-ol-Vsi/	[fol**o**si]	'you/they (du) used to see'
1pl	*-Vg͡b*	/f-ol-Vg͡b	[fol**o**b]	'we (pl) used to see'
2/3pl	*-Vig*	/f-ol-Vig/	[fol**oi**g]	'you/they (pl) used to see'

C75P19   The second domain of VH in Amele is in inalienably possessed nouns, where the trigger is the nominal stem vowel, and the target is the adjacent vowel in the possessive suffix for 2/3 dual and plural forms, as illustrated in Table 75.3. The first-person possessed forms take the suffixes *-ile* 'DUAL' and *-ige* 'PLURAL,' which remain the same for all stem forms.

C75T3

Table 75.3 Inalienable nouns with possessive suffixes showing vowel harmony in 2/3-person forms

Person	Dual	Plural	Meaning
1	*majan-ile*	*majan-ige*	'our shame'
2/3	*majan-**a**la*	*majan-**a**ga*	'your/their shame'
1	*dewen-ile*	*dewen-ige*	'our body'
2/3	*dew**e**n-**e**la*	*dew**e**n-**e**ga*	'your/their body'
1	*bin-ile*	*bin-ige*	'our aunt'
2/3	*bin-**i**la*	*bin-**i**ga*	'your/their aunt'
1	*osom-ile*	*osom-ige*	'our brother-in-law'
2/3	*os**o**m-**o**la*	*os**o**m-**o**ga*	'your/their brother-in-law'
1	*hulin-ile*	*hulin-ige*	'our encouragement'
2/3	*hulun-**u**la*	*hulun-**u**ga*	'your/their encouragement'

C75P20   The second TNG language discussed here is Mian (or Mianmin, Miyanmin; Fedden 2011), which belongs to the Ok sub-family. Mian has six vowel phonemes and six (closing) diphthongs, namely /i, ɛ, a, aˤ, o, u, ai, aˤi, aˤu, ɛi, au, ou/. Vowels and diphthongs behave identically as nuclei in syllables, which are the tone-bearing units in tone assignment (Fedden 2011: 28).

C75P21 Mian has some limited occurrences of VH. Three cases are distinguished: (a) a harmonizing vowel in the prefixes /lVb-/ and /tVb-/, which classify a noun according to certain salient characteristics of its referent; (b) a harmonizing vowel in the modal suffix /-Vm/ 'deontic'; and (c) VH inside the bound pronouns of the 'alone'-series.

C75P22 A subset of the Mian verbs (approximately 35 roots) require a classificatory prefix whose function is (a) to index the object of transitive verbs and the subject of intransitive verbs and (b) to classify the object/subject according to sex, shape, and function of its referent (Fedden 2011: 185). The vowel in two of these classificatory prefixes (those for 'singular masculine' and 'singular long') harmonizes with the first stem vowel, if the stem vowel is /e/. Other stem vowels do not trigger harmony: Compare (11), where the stem vowel is /a/ and the prefix vowel is /o/, with (12), where the stem vowel is /e/ and harmonizes with the prefix vowel.

(11)   D**o**-f**â**-[4]Ø-i-o = be
       3SG.M_CL.O -give_birth.PFV-REAL-1SG.SBJ-EP = DECL
       'I have given birth to him.'   (Fedden 2011: 45)

(12)   D**e**b-**ê**b   un-Ø-e = be
       3SG.M_CL.O-take.PFV   go.PFV-REAL-3SG.M.SBJ = DECL
       'He carried him away.'   (Fedden 2011: 45)

C75P24 In case of a zero (phonologically null) verb stem, VH in classificatory prefixes is prompted by the vowel in the following suffix—for example, the subject marker -*i* in (13), or the irrealis suffix *aamab* in (14). Only the vowels /i/ and /aˤ/ can be the trigger of this type of VH, which is optional and depends on speech tempo and speaker preference.

(13)   Naka = e   d**o**b-Øˆ-Ø-**i** = be [d**i**bibe]
       man = 3SG.M   3SG.M-CL.O-take.PFV-REAL-1SG.SBJ = DECL
       'I have taken a husband.'   (Fedden 2011: 45)

(14)   Geim = e   t**o**b-Øˆ-**a**amab-i = be [t**a**baamabibe]
       arrow = SG.N1   3SG.LONG.O-take.PFV-IRR.NANPL.SBJ-1SG.SBJ = DECL
       'I will take an arrow.'   (Fedden 2011: 45)

C75P26 The second type of VH in Mian is found in the modal suffix /-Vm/ 'deontic.' The vowel in this suffix harmonizes with the vowel in the following subject marker; see Table 75.4.[5]

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[4] The diacritic accent circumflex indicates LHL tone.

[5] A similar process is attested in Nimboran, where harmony is limited to particular suffixes (Anceaux 1965), which cause fronting of all vowels in the suffixes that precede them, while stem vowels are not affected; see Inkelas (1993b: 565).

C75T4

Table 75.4 Vowel harmony in Mian forms of the deontic mood -V*m*
(Fedden 2011: 46)

V	Subject markers	Deontic mood	Gloss
/i/	*-i* '1SG'	*nini-n-**im**-**i**=be*	'I should scrape'
	-ib '2/3PL.AN'	*nini-n-**im**-**ib**=obe*	'you (PL)/they should scrape'
/ɛ/	*-e* '3SG.M'/'3SG.N1'	*nini-n-**em**-**e**=be*	'he should scrape'
	-eb '2SG'	*nini-n-**em**-**eb**=obe*	'you should scrape'
/o/	*-o* '3SG.F'/'3PL.N1'/'N2'	*nini-n-**om**-**o**=be*	'she should scrape'
	-ob '1PL.AN'	*nini-n-**om**-**ob**=obe*	'we should scrape'

C75P27   The third case of VH in Mian is found in a particular series of bound pronouns: the 'alone'-series. This series is derived with the infix *-lV-*, which is attached to the initial (C)V-syllable of the morphologically simple bound pronouns series for animates. The vowel in *-lV* harmonizes with the preceding vowel; see Table 75.5.

C75T5

Table 75.5 Simple and 'alone' bound pronoun series for animates in Mian
(Fedden 2011: 129)

Person and number	Gender	Simple bound pronouns (animates)	'Alone' bound pronouns (animates)	Gloss of 'alone' pronouns
1sg		*nē-*	*nē-le-*	'I alone'
2sg	masc fem	*kēb-* *ōb-*	*kē-le-b-* *ō-lo-b-*	'you (m) alone' 'you (f) alone'
3sg	masc fem	*ē-* *ō-*	*ē-le-* *ō-lo-*	'he alone' 'she alone'
1pl.excl		*nī-*	*nī-li-*	'we (excl) alone'
1pl.incl		*nīb-*	*nī-li-b-*	'we (incl) alone'
2pl		*īb-*	*ī-li-b-*	'you (pl) alone'
3pl		*ī-*	*ī-li-*	'they alone'

The macron above vowels indicates high tone.

C75P28   The last TNG language with VH discussed here is Umbu-Ungu (or Gawi(g)l, Kaugel; Head 2011). Umbu-Ungu has five vowels: /i, u, e, o, a/. Allomorphic variation in this language is based on VH with the final vowel of verb stems. Verb stems only end in /i, u, e, o/; not in /a/. The first case of VH combines stems ending in /i, u/ with [high] suffix allomorphs, and stems ending in /e, o/ with [low] allomorphs. This is illustrated with verbs inflected for future-tense [high] allomorph *-mbe* in (15), and the [low] allomorph *-mba* in (16). Stems with final /e/ select the [low] allomorph *-mba*, as shown in (17).

(15) P**u**   -mb**e**
      go   -FUT.3SG
      'He will go.' (Head 2011: 4)

(16) T**o**   -mb**a**
      strike   -FUT.3SG
      'He will strike.' (Head 2011: 4)

(17) Ena   t**e**   -mb**a**...
      sun   do   -FUT.3SG
      'The sun will shine …' (Head 2011: 180)

C75P31   In the nominal domain, stem vowels trigger high–low harmony with the vowel in the deter-
miner enclitic as well as the (optional) enclitic coding the grammatical function of the NP
as 'actor' in the clause, as illustrated in (18). Again a stem vowel /e/ selects [low] allomorphs;
see (18).

(18) a. kong**i**   =m**u**   =n**i**   b. y**e**   =m**o**   =n**e**
          pig   =ART.SG   =ACT   man   =ART.SG   =ACT
          'the pig' 'the man' (Head 2011: 4)

C75P32   In some allomorphs, vowels only differ along the front–back axis. For example, the distant
past suffix has allomorphs *-ri ~ -ru* 'DPST' with [front] and [back] high vowels; there is no
high–low allomorphy. (19a) illustrates VH between a high front-vowel trigger in the verbal
stem which selects the [front] allomorph *-ri*, (19b) illustrates a high back-vowel trigger
selecting the [back] allomorph *-ru*. In (20), a low front vowel in the stem selects [front] *-ri*,
and a stem with a low back vowel selects [back] *-ru*.

(19) a. Si   -ri   -ndu   b. Pu   -ru   -ndu
          give -DPST -1SG   go   -DPST   -1SG
          'I gave'   'I went' (Head 2011: 5)

(20) a. Te   -ri   -ndu   b. To   -ru   -ndu
          do   -DPST -1SG   strike -DPST   -1SG
          'I did'   'I struck' (Head 2011: 5)

C75P34   Yet other suffixes in Umbu-Ungu contain an unspecified vowel and harmonize iteratively
with the final stem vowel. Examples include the present-tense suffix *-kV* and the benefactive
suffix *-ndV*; see (21)–(23). Note that in these examples, total left to right harmony stops at the
second suffix, and high–low harmony governs the choice of the final first-person-singular
suffix.

(21) T**e** -nd**e** -k**e** -r**o**
      do -BEN -PRS -1SG
      'I am doing it for …'   (Head 2011: 5)

(22) N**i**   -nd**i**   -k**i**   -r**u**
      speak -BEN -PRS -1SG
      'I am saying it for …' (Head 2011: 5)

(23) T**o**   -nd**o**   -k**o**   -r**o**
      strike -BEN -PRS -1SG
      'I am striking it for …' (Head 2011: 5)

C75S4

75.4 VOWEL HARMONY IN KAERA (TIMOR ALOR PANTAR FAMILY)

C75P37 Kaera (Klamer 2014) belongs to the Timor Alor Pantar family, which contains approximately 25 languages (Holton and Klamer 2018). The Kaera vowel inventory is / i, iː, u, uː, ɛ, ɛː, ɔ, ɔː, a, aː/. The phonemic length distinction only applies in roots; affixes only have short vowels.

C75P38   Kaera VH occurs in (1) possessive prefixes on nouns and (2) object prefixes on verbs. In singular prefixes, the vowel is determined by the vowel of the nominal or verbal stem. (In plural prefixes the vowel is always /i/.) A possessor prefix is obligatory in inalienably possessed nouns (body part and kinship terms). Inalienable nouns that are consonant-initial select a syllabic prefix with an unspecified vowel; those that are vowel-initial select a consonantal prefix; see Table 75.6. The unspecified vowels in the syllabic inalienable possessive prefix and the initial vowel of the noun are in harmony. Alienable nouns, both consonant and vowel-initial, all select an invariant syllabic prefix with the vowel /e/, as in Table 75.7.

C75T6

Table 75.6 Kaera nouns with harmonic inalienable possessor prefix

	'father'	'intestines'	'stomach'	'tongue'	'fontanelle'	'child'
1SG	*na-mam*	*nu-duyax*	*no-toku*	*ne-leb*	*ni-dimang*	*n-uaħ*
2SG	*a-mam*	*u-duyax*	*o-toku*	*e-leb*	*i-dimang*	*Ø-uaħ*
3SG	*ga-mam*	*gu-duyax*	*go-toku*	*ge-leb*	*gi-dimang*	*g-uaħ*

C75T7

Table 75.7 Kaera nouns with non-harmonic alienable possessor prefix

	'house'	'village'	'dog'	'skin'	'breast'	'woman'
1SG	*ne-ma*	*ne-abang*	*ne-ibar*	*ne-koi*	*ne-tu*	*ne-umuħ*
2SG	*e-ma*	*e-abang*	*e-ibar*	*e-koi*	*e-tu*	*e-umuħ*
3SG	*ge-ma*	*ge-abang*	*ge-ibar*	*ge-koi*	*ge-tu*	*ge-umuħ*

C75P39 The second type of VH in Kaera occurs in transitive verbs that index their object with a prefix. Object prefixing is lexically restricted: It is obligatory in one verb class and optional in another, while still other transitive verbs do not take object prefixes at all (Klamer 2014: 132–133). Consonant-initial verbs take syllabic prefixes, while vowel-initial verbs take consonantal prefixes. There are two types of syllabic object prefixes: one with an unspecified vowel, the other with an invariant vowel /a/; see Table 75.8. (Syllabic plural object prefixes always have a vowel /i/.)

C75T8

Table 75.8 Person prefixes indexing objects in Kaera

	C-initial verb		V-initial verb
	I	II	III
1SG	*nV-*	*na-*	*n-*
2SG	*V-*	*a-*	*Ø-*
3SG	*gV-*	*ga-*	*g-*

C75P40 The unspecified vowel in the syllabic object prefix harmonizes with the initial vowel of the verb root; see Table 75.9. (*Ni-riang* 1SG-look.after is translated as 'look after me'; the other constructions follow the same pattern.)

C75T9

Table 75.9 Kaera transitive verbs with harmonic object prefix

	'look after'	'kiss'	'leave, let loose'	'expel'	'push'
1SG	*ni-riang*	*nu-muni*	*na-dag*	*ne-tero*	*no-tobung*
2SG	*i-riang*	*u-muni*	*a-dag*	*e-tero*	*o-tobung*
3SG	*gi-riang*	*gu-muni*	*ga-dag*	*ge-tero*	*go-tobung*

C75P41 Among the root consonants intervening in Kaera VH, the glides form a special case. Glide-initial verb roots with a first- or third-person-singular object prefix take consonantal prefixes from paradigm III—for example, *n-yokung* 'shake me,' not syllabic ones from paradigm I **no-yokung*; see Table 75.10. With a second-person-singular object they select a syllabic prefix with VH from paradigm I (Table 75.8): *o-yokung*, **yokung* 'shake you.'

C75T10

Table 75.10 Combination of prefix III and prefix II with verbs with initial glide [j, w]

	'shake'		'twist, turn around'		'bathe-FIN'	
1SG	*n-*	*yokung *no-yokung*	*n-*	*yayo*	*n-*	*wey-o*
2SG	*o-*	*yokung *yokung*	*a-*	*yayo*	*e-*	*wey-o*
3SG	*g-*	*yokung*	*g-*	*yayo*	*g-*	*wey-o*

C75P42   In sum, Kaera VH is bounded and does not affect all vowels in the word. The trigger is the leftmost (first), unstressed vowel of the nominal or verbal root. The harmony applies from the root outward and involves total harmony. The target of the harmony process is the vowel in the prefix preceding the first vowel of the root. The domain of harmony is the inflected word, defined as a noun or verb with a pronominal (possessor or object) prefix. Any nominal or verbal suffixes that occur are not part of the domain (e.g., aspectual suffixes or suffixes marking the clausal position of a word; Klamer 2014: 141–143).

C75P43   There are affixes which have invariant vowels: /e/ in possessor prefixes attaching to alienable nouns (see Table 75.7) and /a/ in object prefixes attaching to a particular (lexical) class of verbs (class II in Table 75.8). Historical comparative evidence indicates that prefixes with these vowels are retentions of prefixes that marked possessors (with theme vowel /e/) and objects (with theme vowel /a/) in Proto-Alor Pantar (Klamer and Kratochvíl 2018). The modern 'disharmonic' affixes in Kaera are thus reflexes of the original system, while the Kaera prefixes that harmonize with the root vowel are an innovation.

C75S5

75.5 Conclusion

C75P44   In the enormous group of Papuan languages, canonical VH is relatively rare, and the attested patterns are diverse. In Amele and Umbu-Ungu harmony applies to all vowels within the word domain. In Mian, there is harmony affecting a set of pronouns. Mian also has harmony, but this is limited to the subject suffix and the preceding deontic affix *-mV* of verbs in the deontic mood. In Ngkolmpu, Komnzo, and Kaera, harmony does not apply to all vowels in the word.

C75P45   In Ngkolmpu and Umbu-Ungu we find harmony of one or two phonetic features: In Ngkolmpu there is agreement along the front–back axis, while in Umbu-Ungu there is agreement along the high–low and front–back axes. In the other languages discussed here, there is total harmony. While the direction of the harmony in most of the cases discussed here is leftward, it is rightward in Umbu-Ungu, and Amele displays harmony in both directions. The vowel triggering the harmony is part of the lexical root (a noun or a verb) in Ngkolmpu, Mian, Umbu-Ungu, and Kaera. In Mian and Komnzo, the trigger vowel is part of a functional (not lexical) item. Mian also has lexical items triggering VH in their prefix: verb roots with the vowel /e/. If a verb root is a zero form, the harmony trigger vowel comes from the suffix. In Amele, harmony in the verbal domain is triggered by vowels in functional (pronominal, tense, and infinitive) affixes, targeting the other affixes in the word, while harmony in the nominal domain is triggered by noun stem vowels and targets certain possessive prefixes. VH in Umbu-Ungu can spread beyond the morphological word, to include phrasal enclitics such as determiners and markers flagging the grammatical function of actors. VH is partly related to epenthesis and unspecified vowels in Amele.

C75P46   Some of the processes discussed in this chapter appear to be phonologically conditioned morphological, sometimes lexical, alternations (e.g., the examples from Ngkolmpu and Umbu-Ungu). In many cases there is a phonologically underspecified vowel in an affix,

which is realized in harmony with some feature(s) filled in based on the context, indicating that VH operates at the phonology–morphology interface.

C75S6

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