Inter- and intra-speaker /ai~ei/ variation in 'ōlelo Hawai'i: Acoustic and historicalcomparative evidence

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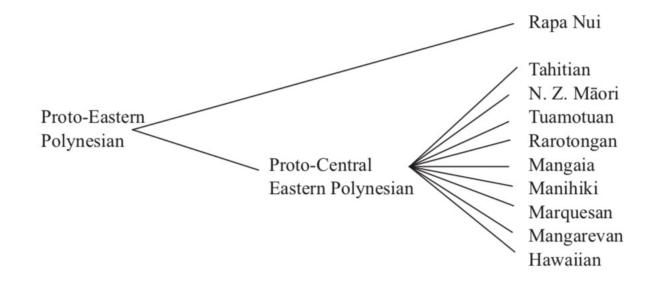
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October 13, 2023

'Ōlelo Hawai'i

- Austronesian > Malayo-Polynesian > Oceanic > Polynesian > Central-Eastern Polynesian
- 7 consonant phonemes
- 5 short mono, 5 long mono,
 25 diphthongs (prob. not phonemic)
- (C)V(V) syllable structure



Walworth (2014)

Orthography

- Developed by missionaries in 1820s
- Modern version from mid-20th c. includes 'okina (glottal stop) and kahakō (macron)
- Very regular phoneme-letter correspondence, except...



Short vs. long vowels

i	'mika	mika	'mister'	iː	'mi:ka	mīka	'meter'
	1	1	'mattress'			1	
a	'nana	nana	'a variety of taro'	a:	'na:na	nāna	'for him, her'
O	'kona	Kona					'his, hers'
u	'hui	hui	'club'	u:	'hu:i	$h \bar{u} i$	'halloo'

'Short' diphthongs

ae ai	'vaena '?ɐina	waena 'aina	'middle' 'meal'
ao	'kaona	kaona	'hidden meaning, as in Hawaiian poetry'
au	'keula	kaula	'rope'
ei	'keiki	keiki	'child'
eu	ha: peime meue	hāpaimemeue	'to praise'
iu	piula	piula	'tired'
oi	'loina	loina	'custom'
ou	mouo	тоио	'buoy'

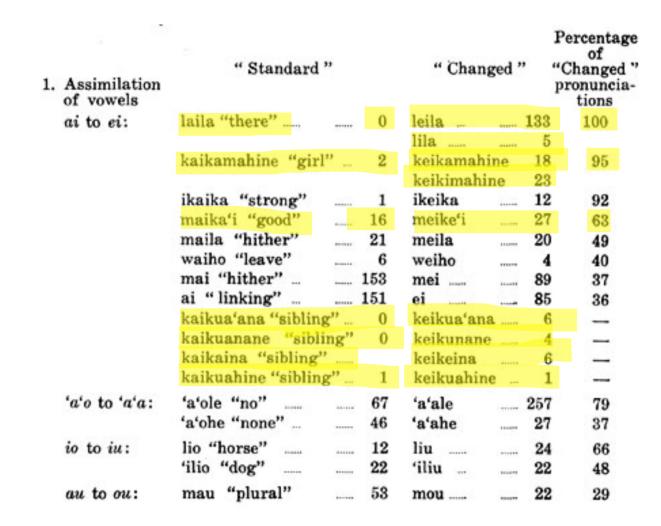
'Long' diphthongs

a:e	'ma:ea	māea	'to rise to the surface'
a:i	'?a:ina	ʻāina	'land'
a:o	'pa:oni	pāoni	'to argue'
a:u	'ha:una	hāuna	'to mend a net'
e:i	'ke:ia	kēia	'this'
o:u	'ho:una	hōuna	'scooping'

Parker Jones (2018)

Kinney (1956): Exceptions!

- Observation of ai > ei in some words
- Tape recordings on Hawai'i Island in 1955, 14 monolingual (!!) speakers, aged late 50s to early 90s
- "natural, colloquial, unconditioned responses" = interview speech



Ka Leo Hawai'i: Present source of data

- Archives of radio show preserve voices of elderly native speakers born at turn of 19th/20th century
- What does /ai~ei/ variation look like in these speakers?

Name	Gender	'Āina hānau	Episode	Recording date
Rachel Mahuiki	female	Wainiha, Kauaʻi	KLH #014	Nov. 9, 1972
Alfred Apaka Sr.	male	Hanalei, Kauaʻi	KLH #057	March 3, 1974
Ida Kapu'ihilani Feary-Milton Nāone	female	Moanalua, Oʻahu	KLH #013	Nov. 1, 1972
Henry Hanalē Machado	male	Kapālama, Oʻahu	KLH #021	Feb. 6, 1973
Lilian Victor	female	Lahaina, Maui	KLH #032	April 24, 1973
David Kaʻalakea	male	Kīpahulu, Maui	KLH #063	April 21, 1974
Sadie Kaluhi'ōpiopio Beebe	female	Kahaluʻu, Hawaiʻi	KLH #033	May 1, 1973
Joseph Maka'ai	male	Ka'ūpūlehu, Hawai'i	KLH #016	Nov. 21, 1972

Results of auditory impressionistic analysis

	kai-		laila			maika'i		
	ai	ei	ai	i	ei	ai	?	ei
RM – Kauaʻi F					1	2		
AA – Kaua'i M		6			15	13	1	
IN – Oʻahu F					7			1
HM – Oʻahu M			4		9	4		
LV – Maui F		2		1	7	5	2	2
DK – Maui M		8		11	10	6	8	
SB – Hawaiʻi F	1	5	2	3	9	3		
JM – Hawaiʻi M		6		17	10	1		1

Results: maika'i

Kinney (1956)

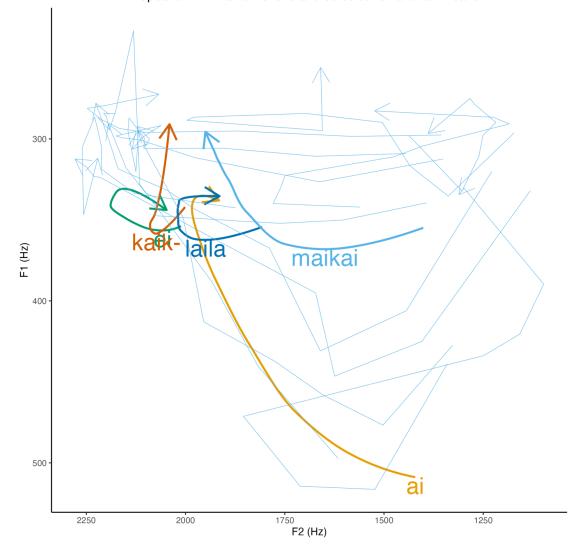
1. Assimilation of vowels	" Standard "		"Changed"	Percentage of "Changed" pronuncia- tions
ai to ei:	laila "there"	0	leila 13	3 100
			lila	5
	kaikamahine "girl"	2	keikamahine 1	8 95
			keikimahine 2	3
	ikaika "strong"	1	ikeika 1	
	maika'i "good"	16	meike'i 2	7 63
	maila "hither"	21	meila 2	0 49
	waiho "leave"	6	weiho	4 40
	mai "hither"	153	mei 8	9 37
	ai "linking"	151	ei 8	5 36
	kaikua'ana "sibling"	0	keikua'ana	6 —
	kaikuanane "sibling"	0	keikunane	4 —
	kaikaina "sibling"		keikeina	6 —
	kaikuahine "sibling"	1	keikuahine	1 —

	ka	kai-		laila			maika'i		
	ai	ei	ai	i	ei /	ai	?	ei	
RM – Kauaʻi F					1/	2			
AA – Kauaʻi M		6			15	13	1		
IN – Oʻahu F					7			1	
HM – Oʻahu M			4)	4			
LV – Maui F		2		1	7	5	2	2	
DK – Maui M		8		11	10	6	8		
SB – Hawai'i F	1	5	2	3	9	3			
JM – Hawai'i M		6		17	10	1		1	
	•		•		•				

- Most speakers use /ai/
- Several intermediate (maybe [ei]?) pronunciations
- Low number of fully [ei]-like tokens

Results: maika'i

Speaker DK: Maika'i tokens and selected /ei/ and /ai/ means



	kai-		laila			maika'i		
	ai	ei	ai	i	ei	ai	?	ei
RM – Kauaʻi F					1	2		
AA – Kaua'i M		6			15	13	1	
IN – Oʻahu F					7			1
HM – Oʻahu M			4		9	4		
LV – Maui F		2		1	7	5	2	2
DK – Maui M		8		11	10	6	8	\setminus
SB – Hawai'i F	1	5	2	3	9	3		
JM – Hawaiʻi M		6		17	10	1		1





a maita'i ta 'ai

Maika'i

 No references to alternate pronunciations in dictionaries

Andrews (1865)

MAI-HAI, adj. Externally good; handsome; beautiful; he wahine maka maikai, a handsome woman.

2. Morally good; upright; correct; ex-

The sum of external excellence in conduct.

Mai-kai, s. Beauty; external excellence of persons or things.

Beauty of personal appearance; hele-helena maikai. Eset. 1:11.

3. Goodness; that which is excellent in

moral conduct; uprightness.

4. The sum of various external excellencies ; ua like ka maikai me ka nani, ame ka hemolele, ame ka mimo, ame ka pono, ame ka panakai ole, ame ka auliiholo manu.

Mai-kai, v. To be handsome; to be externally good; to be pleasing to the sight.

2. To be of use; to be useful; to benefit;

to be good.

3. Hoo. To make good; to repair what has been wasted, lost or destroyed. 2 Oihl. 24:4. To supply a deficiency; to set things in order; to regulate.

4. To treat kindly; to speak favorably

of. Kin. 12:15.

5. To bless; to praise, as in worship.

6. Passively, to cause to be blessed; to pronounce a blessing upon.

7. To honor; to reverence, as a worthy

character. Puk. 20:12.

To exalt; to extol; to glorify.

Pukui & Elbert (1986)

mai.ka'i. nvs. Good, fine, all right, well; good-looking; handsome, beautiful; goodness, righteousness, benefit, well-being, morality; good looks, good health. See Gram. 2.7. Pehea 'oe? Maika'i no. How are you? Fine. He wahine maika'i loa ke nana aku, a woman very good to look at. He maika'i 'olelo, goodness in speech [with implication that actions are not good]. E 'ai à pau maika'i ka i'a, eat until the fish is completely finished. ho'o.mai.ka'i. To thank, bless, render thanks, congratulate, make acceptable, praise, improve, perfect, correct; grateful, gratified, thankful. See inu ho'omaika'i, palapala ho'omaika'i, pule ho'o maika'i. Ho'omaika'i! Congratulations. 'Olelo ho'omaika'i, compliment, congratulations. Ho'omaika'i 'ana, congratulations, improvement. La Ho'omaika'i, Thanksgiving Day. Mele ho'omaika'i, song of praise; Doxology. 'O wau no me ka ho'omaika'i, 1 am very gratefully yours [in conclusion of a letter]. (PPN ma'itaki.)

Maikaʻi

- Derives from loss of /?/ in /ma?itaki/
- Mangareva,
 Marquesan, Rapa,
 Rarotongan, Tuamotu
 also exhibit /ei/
- <ai> spelling is thus conservative, but [ei] innovation shared among several sister languages

Pollex

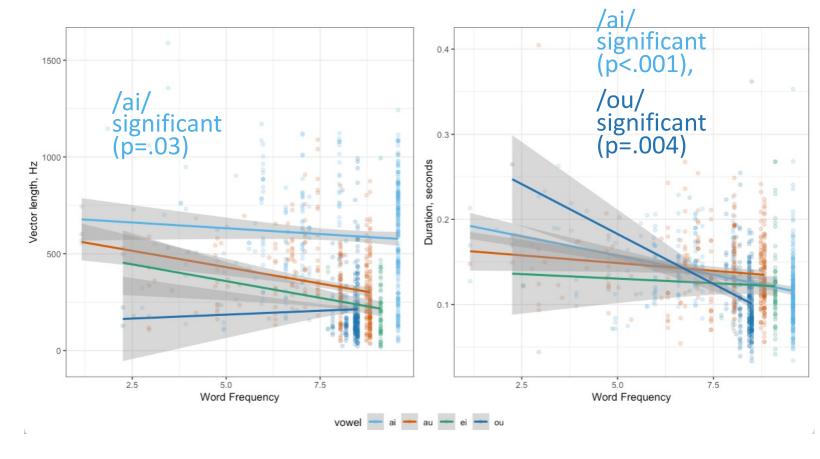
Protoform: MAQITAKI [EP] Good, pleasant

Description:	Good, pleasant
Reconstruction:	Reconstructs to EP: East Polynesian
Notes:	*8 Note. MAO meaning "good etc." is cited only in a couple of early sources; meaning "iron" it is thought to have resulted from Cook's Tahitian interpreter offering iron and saying that it was maita`i.

Language	Reflex	Description	Source					
Easter Island	Ma?itaki	Clean, clear, neat, pure, pretty etc. Muchacha linda. Clear, plain (Wbr).						
<u>Hawaiian</u>	Maika?i	Good, fine, all right, well; good-looking, handsome						
<u>Mangareva</u>	Mei/te/taki	Beau, doux (usité pour ce qui est naturel et pas fait par l'homme). Beautiful, good, soft, sweet (Tgr). Belle femme; beautiful woman (Atl). Phonologically Irregular	(<u>Rch</u>)					
<u>Manihiki-</u> <u>Rakahanga</u>	Maitaki, meitaki	Good	(<u>Krk</u>)					
Marquesas	Meita?i. Meta?i (MQN) (Atl).	Bon, agreable. Convenable, beau, vertueux, sage, commode (Lch).	(<u>Dln</u>)					
Marquesas	Meitáke, meitárre, meití	Good, pleasant, beautiful	(<u>Crk</u>)					
<u>New Zealand</u> <u>Maori</u>	Maitai	Beautiful, good, agreeable; iron (obs.) Phonologically Irregular	(<u>Wms</u>)					
Niue	Mitaki	Good Problematic	(<u>Sph</u>)					
<u>Penrhyn</u>	Maitaki	Good, kind	(<u>Sta</u>)					
Rapa	Maitaki	Good	(<u>Sks</u>)					
Rapa	Meitaki	Good	(<u>Grn</u>)					
Rarotongan	Meitaki	Good, pleasant, excellent	(<u>Bse</u>)					
<u>Tahitian</u>	Maita?i	De qualité; bon, bien, agréable; devenir bon; bonté, gentillesse;; bon, bien moral; devenir bon; beau (en parlant du temps qu'il fait)	(Lmt)					
<u>Tongan</u>	Maa?itaki	Favourite wife or concubine Problematic	(Cwd)					
<u>Tuamotu</u>	Maitaki	Good, pleasant, excellent	(<u>Stn</u>)					
<u>Tuamotu</u>	Meitaki	Good, excellent, attractive, desirable	(<u>Stn</u>)					

Maika'i

- High-frequency word
- /ai/ shows frequency effects – shorter trajectories, shorter durations
- /ai/ > [ei] could be phonetic reduction, or could have started that way and now be perceived as /ei/



Kettig (2023)

Results: laila

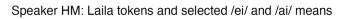
Kinney (1956)

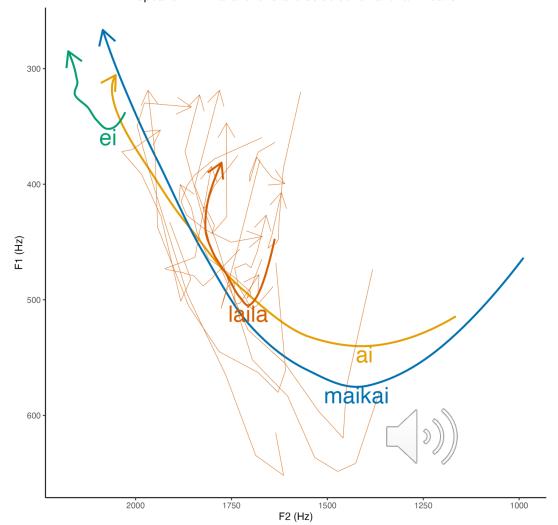
1. Assimilation of vowels	" Standard "		" Changed "	Percentage of "Changed" pronuncia- tions
ai to ei:	laila "there"	0	leila 1	133 100 5
	kaikamahine "girl"	Ž	keikamahine keikimahine	18 95 23
	ikaika "strong"	1	ikeika	12 92
	maika'i "good"	16	meike'i	27 63
	maila "hither"	21	meila	20 49
	waiho "leave"	6	weiho	4 40
	mai "hither"	153	mei	89 37
	ai "linking"	151	ei	85 36
	kaikua'ana "sibling"	0	keikua'ana	6 —
	kaikuanane "sibling"	0	keikunane	4 —
	kaikaina "sibling"		keikeina	6 —
	kaikuahine "sibling"	1	keikuahine	1 —

	ka	ıi-		laila		ħ	naika'i	
	ai	ei	ai	i	ei	ai	?	ei
RM – Kauaʻi F					1	2		
AA – Kaua'i M		6			15	13	1	
IN – Oʻahu F					7			1
HM – Oʻahu M			4		9	4		
LV – Maui F		2		1	7	5	2	2
DK – Maui M		8		11	10	6	8	
SB – Hawaiʻi F	1	5	2	3	9	3		
JM – Hawai'i M		6	\overline{N}	17	10	1		1
	-					-	•	-

- Maui and Hawaiʻi lead in *lila* production
- A few /ai/ but mostly /ei/ or /i/

Results: laila

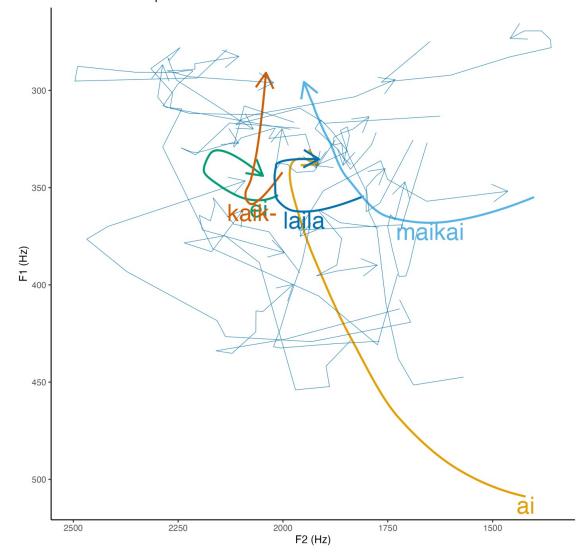




	ka	kai-		laila			maika'i		
	ai	ai ei		i	ei	ai	?	ei	
RM – Kaua'i F					1	2			
AA – Kaua'i M		6			15	13	1		
IN – Oʻahu F					7			1	
HM – Oʻahu M			4		9	<u> </u>			
LV – Maui F		2		1	7	5	2	2	
DK – Maui M		8		11	10	6	8		
SB – Hawaiʻi F	1	5	2	3	9	3			
JM – Hawai'i M		6		17	10	1		1	

Results: laila

Speaker DK: Laila tokens and selected /ei/ and /ai/ means



	kai-			laila			maika'i		
	ai	ei	ai	i	ei	ai	?	ei	
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HM – Oʻahu M			4		9	4			
LV – Maui F		2		1	7	5	2	2	
DK – Maui M		8		11	10	> 6	8		
SB – Hawai i F	1	5	2	3	9	3			
JM – Hawaiʻi M		6		17	10	1		1	



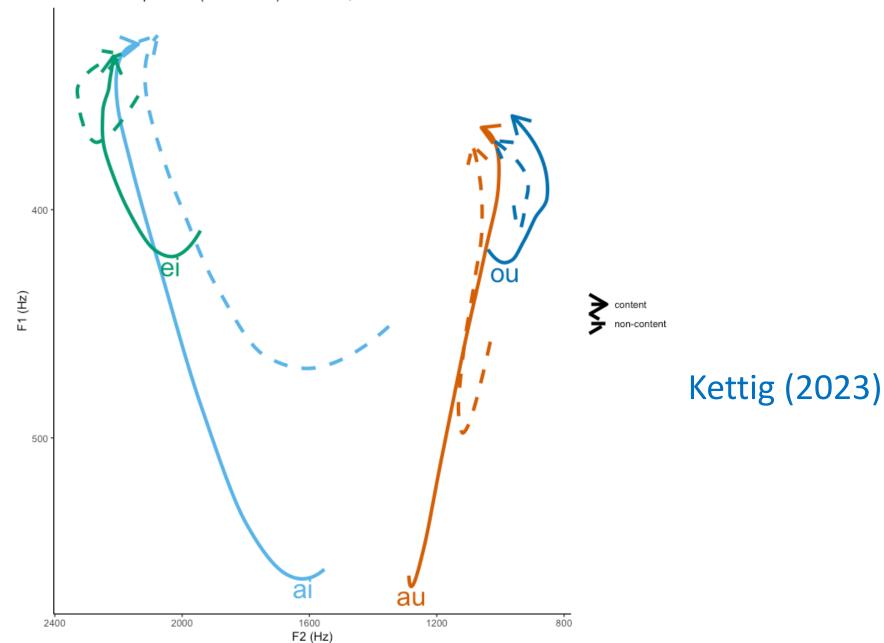
noho 'ana ma laila [i]



hele au i te kula, ma *laila* [i] male au i ka wahine, ma *laila* [ei] o Kīpahulu

Laila

 Could this be reduction of a function word?



Laila

Andrews (1865)

LAI-LA, adv. Referring to time, then; at that time; referring to place, there; at that place. It almost always takes one of the simple prepositions, a, i, o, no. ko, ka, ma or mai. See each of the compounds in their places; also, Gram. § 68 and § 165, 2d class.

 no alternate pronunciations noted

Pukui & Elbert (1986)

Iaila. loc. n. There, then (usually pronounced leila or lila; Gram. 2.7, 8.6). Laila follows particles with varying meanings: Ā laila, then. I laila, there, at that place. Mai laila mai ā hiki i keia mau makahiki, from then until the present years. Kō laila, of that place, local. He 'olu'olu kō laila po'e, the people of that locality are kind. Malaila, there. Mai laila, from there, thence. No laila, therefore, for that reason, hence, consequently; belonging to that place. O laila, of that place. 'A'ohe a'u mea makemake o laila, there is nothing I want there. (PEP l(a,e)ila.)

- /ei/ or /i/ noted as variants
- PEP option of /ai/ or /ei/ suggested



Laila

- Actually, probably *reira in PCE!
 - Widespread /ei/ in sister languages
- /ai/ appears to be Hawaiian innovation from /ei/, not an underlying historical /ai/ reducing to [ei]
- Spelling therefore based on innovative/hypercorrective form?

Protoform: REIRA [CE] There (a place already mentioned)

Description:	There (a place already mentioned)
Reconstruction:	Reconstructs to CE: Central-Eastern Polynesian
Notes:	*0 << PN *-ra "there"

Language	Reflex	Description		Source
East Futuna	Le-ia	That yonder	Problematic	(<u>Bgs</u>)
Easter Island	A-ira	There	Problematic	(<u>Fts</u>)
<u>Hawaiian</u>	Laila	There, aforementioned place		(<u>Pki</u>)
<u>Hawaiian</u>	Leila	The usual pronunciation of laila (Eb	t. gram.)	(<u>Pki</u>)
<u>Hawaiian</u>	Lila	Another pronunciation of laila		(<u>Ebt</u>)
Mangareva	Reira	Là (se dit d'un lieu déterminé). The some certain place) (Tgr).	ere (said of	(Rch)
<u>Manihiki-</u> <u>Rakahanga</u>	Reira	There		(Krk)
<u>Marquesas</u>	?Ei?a (MQS), keina (MQN), kei?a, eina.	There, aforementioned place. Là. Phonologic	ally Irregular	(Dln)
Marquesas	Éiya, e/keiya	There, that is the place, or way		(<u>Crk</u>)
<u>Marquesas</u>	Keina (MQN), kei?a (Ua Pou), ?ei?a (MQS)	Là. Un lieu déjà cité ou que l'on dé endroit-là.	signe: là, a cet	(Lch)
<u>Moriori</u>	Reira	There		(<u>Shd</u>)
New Zealand Maori	Reira	There, aforementioned place		(Wms)
<u>Penrhyn</u>	Reira	Referring to the time or place or sit mentioned: that, there, thus	uation already	(<u>Sta</u>)
Rarotongan	Reira	That which has been referred to or (place, time, circumstance)	is understood	(<u>Bse</u>)
<u>Tahitian</u>	Reira	Là, à cet endroit-là, à ce moment-l	à	(<u>Lmt</u>)
<u>Tuamotu</u>	Reira	There, aforementioned place		(<u>Stn</u>)

Results: *kai-*

Kinney (1956)

1. Assimilation of vowels	" Standard "		" Changed "	Percentage of "Changed" pronuncia- tions
ai to ei:	laila "there"	0	leila 13	3 100 5
<	kaikamahine "girl"	2		8 95 3
	ikaika "strong"	1	ikeika 1	2 92
	maika'i "good"	16	meike'i 2	7 63
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	ai "linking"	151	ei 8	5 36
	kaikua'ana "sibling"	0	keikua'ana	6
	kaikuanane "sibling"	0	keikunane	4 —
	kaikaina "sibling"		keikeina	6 –
	kaikuahine "sibling"	1	keikuahine	1

							_		
		ka	ui-		laila		n	naika	'i
		ai	ei	ai	i	ei	ai	?	ei
RM – Kaua'i F						1	2		
AA – Kauaʻi M			6			15	13	1	
IN – Oʻahu F						7			1
HM – Oʻahu M				4		9	4		
LV – Maui F			2		1	7	5	2	2
DK – Maui M	Γ		8		11	10	6	8	
SB – Hawai'i F	7	1	5	2	3	9	3		
JM – Hawai'i M			6		17	10	1		1

- All seem to agree on /ei/ for kinship terms, just one instance of /ai/
- So why is it spelled <ai>?

Kai-

- Pollex suggests PCE *tai-
- No /ei/ presented in other CE Polynesian languages

 Points to independent innovation in Hawaiian, after spelling standardized?

Protoform: TAI [CE] A kin term or social category: ageclass?

Description:	A kin term or social category: age-class?	
Reconstruction:	Reconstructs to CE: Central-Eastern Polynesian	
Notes:	*1 Cf. PN *tau7b 'prefix marking reciprocal kin relations'	

Language	Reflex	Description		Source		
<u>Hawaiian</u>	Kai-	Prefix to six kinship terms (kaina, kua'ana kamahine) used as terms of reference	ix to six kinship terms (kaina, kua'ana, kunaane, kuahine, ko'eke, ahine) used as terms of reference			
Mangareva	Taʔi ʔou	Nouvelle génération	uvelle génération Phonologically Irregular			
Marquesas	Tai	Epoque, génération, race, postérité, conte	Epoque, génération, race, postérité, contemporains, âge			
New Zealand Maori	Tai	Term of address to males or females (E tai); in some tribes, restricted to addressing a woman who has borne children				
<u>New Zealand</u> <u>Maori</u>	Tai/kuia	Old woman; middle-aged woman (with some tribes)				
<u>New Zealand</u> <u>Maori</u>	Tai/tamariki	Young man, young person of either sex	Young man, young person of either sex			
<u>Pukapuka</u>	Tai/tangata	Generation; birth class, group born in same year, a fellow member of the group				
Rarotongan	Tai/rua	Pair up with, team up; partner, fellow (of two)				
<u>Takuu</u>	Naa tai	A number of canoes constructed at the sar	me time	(<u>Mle</u>)		
<u>Tuamotu</u>	Tai	A class, family, species, variety, kind; sex.		(Stn)		

Kai-

Andrews (1865)

Kai-kai-na, s. The younger of two brothers or sisters; used by a brother when speaking of a brother, or a sister of a sister. But if a brother speak of a sister, or a sister of a brother, it is kaikunane.

Kai-kua-a-na, s. The elder of two brothers or sisters; used by a brother when speaking of a brother, or by a sister when speaking of a sister; but when a brother speaks of an elder sister, it is kaikuwahine. When a sister speaks of an elder brother it is kaikuwane.

Kai-ku-na-ne, s. The brother of a sister. Kin. 20:5.

Kai-ku-wa-hi-ne, s. The sister of a brother. Kin. 12:13.

- No mention of pronunciation variants
- Intriguing leads: analogy with keiki or -keina?

kai.kaina. n. Younger sibling or cousin of the same sex, as younger brother or male cousin of a male, or younger sister or female cousin of a female; sibling or cousin of the same sex of the junior line, whether older or younger. Cf. kaina, Gram. 2.7. Ko'u kaikaina, my younger sibling. ho'o.kai.kaina. To claim a kaikaina relationship; to act as a kaikaina, to address and treat as kaikaina, as from affection. (PPN t(e,a)hina.)

kai.kua. nvs. Countryman; backwoodsman; sparsely inhabited place; countrified, rustic. Lit., back person. Cf. kua'āina.

kai.kua.'ana, kai.ku'ana. n. Older sibling or cousin of the same sex; sibling or cousin of the same sex of the senior line, whether older or younger. (See kua'ana.) Cf. Gram. 2.7. ho'o.kai.kua.'ana. To claim a kaikua'ana relationship, to act as a kaikua'ana, to address and treat as kaikua'ana; to address a kaikaina as kaikua'ana as a means of showing great respect. (PCP tuakana.)

kai.kua.hine. n. Sister or female cousin of a male. (See kuahine 1.) ho'o.kai.kua.hine. To claim a kuahine relationship; to address and treat as a kaikuahine, as from affection. (PPN tuafafine.)

kai.kunāne. n. Brother or male cousin of a female. (See kunāne.) Cf. Gram. 2.7. ho'o.kai.kunāne. To claim a kaikunāne relationship, to act as a kaikunāne; to address and treat as kaikunāne, as from affection. (PPN tunga'ane.)

THAT

Kai-ka-ma-hi-ne, s. A daughter; a female descendant. Kin. 20:12. Note.—According to analogy this word for daughter should be keikiwahine, like keikikane, but Hawaiians do not use it so.

Pukui & Elbert (1986)

Analogy with keiki (child)?

- Interestingly, *keiki* itself seems to have had /ai/ originally!
- Pollex suggests PCE *taiti with ai>ei in Hawaiian and Mangarevan

Protoform: TA-ITI [CE] Young male child

Description:	Young male child
Reconstruction:	Reconstructs to CE: Central-Eastern Polynesian
Notes:	*0 << PN *qiti "small" *1 Cf. NP *ata-liki "man's son"

Language	Reflex	Description	Description			
<u>Hawaiian</u>	Keiki	Child, offspring, boy, son	Child, offspring, boy, son			
<u>Mangareva</u>	Teiti	Enfant	nfant			
Mangareva	Teiti/iti	Enfant nouveau-né	nfant nouveau-né			
Marquesas	Toiti	Petit garçon, petite fille	Petit garçon, petite fille			
Rapa	Taeti, taati	Child. Boy (Grn).		(Sks)		
Rarotongan	Taiti	Fellow, person, term of endearment for cl	nild	(Sve)		
<u>Tuamotu</u>	Taaiti	Young boy or girl		(Stn)		
Tupuaki	Haiti roa	Suckling child	Phonologically Irregular	(Grn)		

Analogy with -k[ei]na?

- P&E suggest PPN *t(e,a)hina for kaikaina
- Pollex suggests PPN *tahina

Protoform: TAHINA [AN] Younger sibling of same sex

Description:	Younger sibling of same sex
Reconstruction:	Reconstructs to AN: Austronesian
Notes:	*0 >> SO *taina "same sex sibling", CE *teina *2 PCP *taji-na (Gty.1984). *4 POC *tazi (Mke. 1961). *4 POC *tarzi (Mke. 1961). *5 PMP *huaji younger sibling of the same sex" (Chg. 1991). *5 PMP *huaji younger sibling of the same sex; younger parallel cousin of the same sex" (ACD). *6 PAN *Suaji "younger sibling" (ACD). *7 PBN *tathi "younger brother" (Lvy. 1979). *8 Note. EUV form borrowed from TON but the innovated PSO meaning is retained. WEV form also borrowed but original meaning retained.

Language	Reflex	Description	Source
<u>Anuta</u>	Taina	Sibling of same sex; sibling-in-law of opposite sex	(<u>Fbg</u>)
East Futuna	Taina	Sibling of the same sex	(<u>Mfr</u>)
East Uvea	Tehina	Frère, cousin (par rapport à une personne du sexe masculin); soeur, cousine (par rapport à une personne du sexe féminin) Borrowed	(Rch)
Easter Island	Taina	Brother, sister. Cousin (Wbr).	(<u>Fts</u>)
<u>Fijian</u>	Taci-na	His/her younger sibling of same sex	(Cpl)
<u>Hawaiian</u>	Kai/kaina	Younger sibling or cousin of the same sex	(<u>Pki</u>)
<u>Mota</u>	Tasi/u	Younger sibling same sex	(Cdn)
<u>New Zealand</u> <u>Maori</u>	Taina	Younger sibling of the same sex [Eastern Maori Dialect]	(<u>Bgs</u>)
Niuafo?ou	Tehina	Younger sibling same sex Borrowed	(<u>Dye</u>)
<u>Niue</u>	Tehina	Younger brother of a man, younger sister of a woman	(<u>Sph</u>)
<u>Pukapuka</u>	Taina (pl. taaiina)	Younger sibling of the same sex	(<u>Bge</u>)
Rennellese	Taina	Younger sibling of same sex; cross-sex cross-cousin	(<u>Ebt</u>)
<u>Tongan</u>	Tehina	Male's younger brother or male cousin; female's younger sister or female cousin	(Cwd)
<u>Tongan</u>	Tehina	A brother	(<u>Mar</u>)
<u>Vaeakau-</u> <u>Taumako</u>	Teina	Younger sibling of same sex Problematic	(<u>Hvn</u>)
<u>Vaeakau-</u> <u>Taumako</u>	Tuku teina (TAU)	Younger brother	(Fox)
<u>Waya</u>	Taci-	Younger (classificatory) sibling of the same sex	(<u>Ply</u>)
West Uvea	Tehina	Puiné/e, frère/soeur cadet/tte Problematic	(Hmn)

Analogy with -k[ei]na?

- P&E suggest PPN *t(e,a)hina for kaikaina
- Pollex suggests PPN *tahina
- Pollex suggests PCE *teina

 Possibility of kai- > kei- by analogy in this form?

Protoform: TEINA.* [CE] Younger sibling or cousin of the same sex

Description:	Younger sibling or cousin of the same sex
Reconstruction:	Reconstructs to CE: Central-Eastern Polynesian
Notes:	*0 << PN *tahina *1 Cf. SO *taina.b "same-sex sibling"

Language	Reflex	Description	Source
Mangareva	Teina	Frère ou cousin cadet d'une personne du sexe masculin; soeur ou cousine cadette d'une personne du sexe féminin. Younger sister or brother (Tgr).	(Rch)
<u>Manihiki-</u> <u>Rakahanga</u>	Teina	Younger (brother)	(<u>Krk</u>)
<u>Marquesas</u>	Teina	Younger sibling same sex. Frère cadet, soeur cadette; cousin, cousine (Lch).	(Dln)
Marquesas	Tai ner	Younger brother or sister	(<u>Rbs</u>)
Marquesas	Téina	Man's younger brother, woman's younger sister	(Crk)
<u>Moriori</u>	Teina, tchein?	Younger brother	(<u>Bke</u>)
New Zealand Maori	Teina	Younger sibling of the same sex [Western Maori Dialect]	(<u>Bgs</u>)
<u>Penrhyn</u>	Teina	Younger sibling or cousin of the same sex	(<u>Cbl</u>)
<u>Penrhyn</u>	Teina	Brother, cousin	(<u>Lmt</u>)
Rapa	Teina	Younger sibling, same sex	(<u>Sks</u>)
Rarotongan	Teina	Younger sibling of same sex	(<u>Bse</u>)
Samoan	Tei	Affectionate term for one's small brother or sister Problematic	(<u>Prt</u>)
<u>Tahitian</u>	Teina	Jeune frère d'une personne du sexe masculin; jeune soeur d'une personne du sexe féminin	(<u>Lmt</u>)
<u>Tuamotu</u>	Teeina	Younger sibling same sex	(<u>Stn</u>)
<u>Tupuaki</u>	Teina	Man's younger brother, woman's younger sister	(Atn)

In sum:

- Maika'i (good)
 - Orthography = conservative
 - /ai/ > [ei] could be high-frequency reduction reanalyzed or perceived as /ei/
 - /ai/ > [ei] in this word may have occurred in other Polynesian languages
- Laila (there)
 - Orthography = innovative, limited to Hawaiian (?)
 - /ei/ > /ai/ is possibly hypercorrective from PPN *reira
- Kai- (relationship words)
 - Orthography = conservative
 - /ai/ > [ei] possibly by analogy with semantically close keiki or -keina

Mahalo i ko 'oukou ho'olohe 'ana mai!

Thank you for listening!