

Malagasy interlanguage phonology

Malagasy vowels

Malagasy has a simple vowel system that consists, traditionally, of four monophthongal ('pure') vowels: /i, e, a, u/, and two diphthongs: /ai, au/ (Gregersen 1977: 33; Domenichini-Ramiaramanana 1977: 29). Formant frequency charts (Raoniarisoa 1986: 15ff) indicate that /i/ is fronter and closer than English /i:/ and matches Cardinal Vowel 1; that /e/ matches closely to Cardinal Vowel 2, but is also close to English /ɪ/; that /a/ is similar to Cardinal Vowel 4; and that /u/ is backer and closer than English /u:/ and matches Cardinal Vowel 8. The second element of the diphthongs reaches to a closer position than the equivalent English diphthongs. (Note that /i/ is orthographic <y> in final position, but otherwise <i>; /u/ is orthographic <o>; likewise final /ai/ is <ay>, and /au/ is <ao>.)

Raoniarisoa (1986) adds /ui/ (orthographic <oi, oy>), which only occurs in a few words. The seven vowels can be demonstrated as follows:

/i/	/sina/	<i>sina</i>	'silent'			
/e/	/teni/	<i>teny</i>	'word'			
/a/	/tani/	<i>tany</i>	'earth'			
/u/	/tuni/	<i>tony</i>	'quiet'			
/ai/	/saina/	<i>saina</i>	'mind'	/hai/	<i>hay</i>	'known'
/au/				/hau/	<i>hao</i>	'lice'
/ui/	/vuina/	<i>voina</i>	'calamity'	/hui/	<i>hoy</i>	'say/says'

Linguists, however, also acknowledge an eighth vowel in modern Malagasy: /o/. Its existence is usually explained in terms of 'vowel coalescence' between /a/ and /u/ in either order of juxtaposition. Raoniarisoa (1986: 29-32) illustrates both directions:

/ua/ as in

/o/	/nona/	<i>noana</i>	'hungry' (cf /hanwanana/	<i>hanoanana</i>	'hunger')
	/fona/	<i>foana</i>	'empty' (cf /fwanana/	<i>foanana</i>	'to empty')

and /au/, the diphthong, as in

/loka/	<i>laoka</i>	'relish'
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Note that the older generation has a preference for /lauka/, whereas the younger generation has a preference for /loka/. /o/ does not occur in word-final position; for instance, *tokoa* 'indeed' remains /tuku/.

Rasoloson & Rubino (2005) also add /ia, ua/ but note that /ua/ is often pronounced /o/ in base forms of words, as presented above, and that /ia/, and /ai/, are often pronounced /e/:

/e/	/de/	<i>dia</i>	focus particle
	/enau/	<i>ianao</i>	'you'
	/heno/	<i>haino</i>	'listen'

Others treat them as /ja, wa/ in inflected words, as we shall do here.

There is, thus, an eight vowel system in stressed syllables. There is no significant vowel lengthening as there is in English, but lengthening does occur allophonically before voiced consonants (Raoniarisoa 1986: 48).

There is only a three vowel system in unstressed syllables: /i, a, u/. In final position, /i, u/ reduce to /j, w/ when followed by a word with an initial vowel, and are usually elided before a following consonant. /a/ is often elided when followed by a word with an initial vowel, unless it is itself preceded by another vowel (Raoniarisoa 1986: 22). In informal, colloquial style, all three, /i, a, u/, may be elided in final position:

/mam/ *mamy* ‘sweet’
 /mam/ *mama* ‘mother’
 /mam/ *mamo* ‘drunk’

They will only be disambiguated when a vowel follows:

/mamj-/ *mamy* ‘sweet ...’
 /mam-/ *mama* ‘mother ...’
 /mamw-/ *mamo* ‘drunk ...’

In medial position, /i, u/ are usually elided between consonants, for example:

/marna/ *marina* ‘true’
 /sustra/ *sosotra* ‘angry’
 /missira/ *misy sira* ‘salted’ (with geminate /s/)
 /vunna/ *vonona* ‘ready’ (with geminate/n/; cf /vuna/ *vona* ‘knot’)

Young children often miss ‘unstressed’ <i, o> when spelling, or substitute one for the other (Raoniarisoa 1986: 53).

In the case of

/fraisana/ *firaisana* ‘unity’

a consonant cluster is produced, which otherwise are only associated with loan words, eg *Frantsay* ‘French’. In similar fashion, French *hôpital*, *bicyclette*, *cigare*, *politique* become /optali/, /biskileta/, /sgara/, /poltika/. Again, young children often insert <i, o> when spelling loan words, eg **bisikileta* (Raoniarisoa 1986: 53).

/e, ai, au, ui, o/ do not occur in unstressed syllables.

Phonotactically, all Malagasy words end in a vowel. It is instructive to observe how loan words from English and French have been accommodated into this phonotactic limitation (Raoniarisoa 1986: 44-45) by vowel paragoge:

English	<i>school</i>	Malagasy	/sekuli/
	<i>pen</i>		/penna/
	<i>rabbit</i>		/rabitra/
	<i>slate</i>		/slaitra/
French	<i>chaise</i>		/seza/
	<i>fraise</i>		/frezi/
	<i>chauffeur</i>		/sofera/
	<i>jupe</i>		/zipu/
	<i>police</i>		/polisi/
	<i>charbon</i>		/sarbo/
	<i>jardin</i>		/zardaina/
	<i>cassette</i>		/kaseti/
	<i>téléphone</i>		/telefonna/
	<i>socialiste</i>		/sosialista/
	<i>bal</i>		/balla/
	<i>calèche</i>		/kalesi/

pêche

/paisu/

Raoniarisoa (1986) reports a small scale experiment involving a small sample of Malagasy students' pronunciation accuracy and intelligibility. In general, their production of the vowels of English was recorded as follows (p 63-4):

English	/i:/	realized as	[i]
	/ɪ/		[i]
	/ɛ/		[e]
	/æ/		[a]
	/ɑ:/		[a]
	/ɒ/		[o]
	/ɔ:/		[o]
	/ʊ/		[u]
	/u:/		[u]
	/ɜ:/		[ə]
	/eɪ/		[e]
	/əʊ/		[o]
	/ɪə/		[ɪr]
	/ɛə/		[er]
	/ʊə/		[ur]

Unsurprisingly, their production of the vowels of English is accommodated into the Malagasy system. Not all the vowels of English are listed above, but information on the missing vowels can be gleaned from incidental material in the chapter concerned.

English	/aɪ/ is realized as	[ai] (eg <i>sunshine</i> [sanʃain], p 73)
	/aʊ/	[au] (eg <i>compound</i> [kɔ̃paund], p 71)
	/ɔɪ/	[ɔi] (eg <i>enjoy</i> [ɛndʒɔi], p 68)

English /ʌ/ was variously produced as either [ʌ] or [a], or was rendered as [o] on account of spelling:

English	/ʌ/ is realized as	[ʌ]
	or	[a] (eg <i>sunshine</i> [sanʃain], <i>enough</i> [inaf], p 73)
	or	[o] (eg <i>done</i> [don], <i>love</i> [lov], <i>mother</i> [movə], <i>come on</i> [komon], <i>onion</i> [ɔnjən], p 70)

Raoniarisoa (1986: 73) notes that English *jug* and *cup* was adopted into Malagasy as [dʒɔgi] and [kopi] in the 19th century, but that may reflect contemporary Welsh and Scottish English pronunciation [dʒəg/dʒug; kəp/kup].

Raoniarisoa (1986: 66) also seeks to account for Malagasy students' [e] for English /ɛ/. It is claimed that Malagasy students are able to distinguish French /ɛ/ from /e/, but they apparently rely heavily on orthographic accents <^, `> to do so – <^> signals French /e/ – aa also do double consonants following, eg *belle* 'beautiful', *cette* 'that'. English orthography obviously does not provide accents as such a signal. However, her second explanation is debatable (p 66):

French /e/ and /ɛ/ are closely related phonemes and therefore need to be distinguished one from the other in their realization, whereas, in English, there is no phoneme that is closely related to /ɛ/ from which it is to be distinguished and, therefore, when the Malagasy speaker pronounces [e], he (*sic*) has the impression to pronounce the correct Eng. vowel. The fact that Mlg. speakers are able to produce Fr. /ɛ/ (which is close to Eng. /ɛ/) but realize Eng. /ɛ/ as a close [e] is caused by the transfer from the NL (= *native language*).

However, this does not quite hold, since English /ɛ/ has to be distinguished from learner realizations of English /eɪ/; in other words, there *is* another English vowel phoneme that has a phonetic relationship with /ɛ/. It is noteworthy that Malagasy students, according to the above list, produced both English /ɛ/ and /eɪ/ as [e]. Nevertheless, it remains true that this under-differentiation is caused by transfer from the native language.

One might suppose, however, that this under-differentiation might be countered by the students' second language, French, which distinguishes /ɛ/ from /e/. However, their reliance on the orthographical clues alluded to above suggests that their competence in maintaining that contrast is suspect; if they are, for instance, required to read aloud from printed material, they could consciously convert those orthographic signals into traditionally 'correct' articulations, but otherwise maybe not. Furthermore, current changes in Metropolitan French pronunciation reinforce this under-differentiation: MacCarthy (1975), Coveney (2001) and Price (2005) all report a significant shift in French phonology to the effect that /e/ and /ɛ/ are becoming allophones of one phoneme, with complementary distribution: in open and closed syllables respectively. Since Malagasy syllable structure is basically open, there will be a tendency to perceive only /e/ in the French they hear, and produce, accordingly, only /e/. Students today will be exposed mainly to this 'new' phonology of French (perhaps even to the dismay of the more traditionally French teachers in Madagascar).

A parallel development is observed by MacCarthy (1975), Coveney (2001) and Price (2005) in Metropolitan French pronunciation, in respect of /o/ and /ɔ/: they are becoming allophones of one phoneme with the complementary distribution of [o] in open syllables and [ɔ] in closed, with corresponding perceptions and articulations for Malagasy students.

A third development involves the contrast of French /a/ and /ɑ/. Once again, MacCarthy (1975), Coveney (2001) and Price (2005) all report the virtual disappearance of this distinction; indeed, the informant for the description of French in the *IPA Handbook* does not make it, with the consequence that Fougeron & Smith (1999) have no /ɑ/ in their French vowel chart.

The significant point of these phonological changes in contemporary French is that whereas the former contrasts of /e - ɛ/, /o - ɔ/ and /a - ɑ/ might have laid the 'interlanguage' foundations for perceiving and articulating the English contrasts of /eɪ - ɛ/, /əʊ - ɔ:, ɒ/ and /æ - ɑ:/, they can no longer be relied upon to do so. Thus the 'intervening' language (French) no longer reliably helps. (The front rounded vowels and the nasalized vowels of French do not significantly impinge on Malagasy students' engagement with English vowel perception and production.)

It is now possible to produce a Malagasy student phonological profile and compare it with the target phonology of English. What follows is the conventional list of vowel phonemes of Southern England Standard Pronunciation (SESP) of English, compared with those of the Malagasy student phonological profile: Malagasy and French (including reference to the current changing pattern noted above). A brief commentary is added in terms of acceptable transfers.

SESP	Mal	French	notes
i:	i	i	i acceptable, if not i:
ɪ			no transfer
eɪ	e	e ([e - ε])	e acceptable, if not eɪ
ε		(ε)	(ε maybe available)
æ	a	a ([a - ɑ])	a acceptable
ɑ:		(ɑ)	(ɑ maybe available)
ɒ			no transfer
ɔ:	o	(ɔ)	(ɔ maybe available)
əʊ		o ([o - ɔ])	o acceptable, if not əʊ
ʊ			no transfer
u:	u	u	u acceptable, if not u:
ʌ			no transfer
ɜ:		ø	ø acceptable, if not ɜ:
aɪ	aɪ		aɪ acceptable
aʊ	au		au acceptable
ɔɪ			o.i acceptable, if not ɔɪ
ɪə			ɪ.ə acceptable, if not ɪə
ɛə			ɛ.ə acceptable, if not ɛə
(ʊə)			u.ə or ɔ acceptable, if not uə or ɔ:
	ui		relevant for a few words with u:ɪ eg <i>ruin</i>
		y	not directly relevant
		œ	not directly relevant
		ẽ, ã, õ (œ̃)	not directly relevant

Weak vowels			
ə	(ə)	ə	ə
ɪ	ɪ	ɪ	ɪ
ʊ	u	u	u

This table, along with the results of Raoniarisoa's experiment mentioned above (Raoniarisoa, 1986), suggests an expectation of problems with SESP /ɪ, ɒ, ʊ, ʌ/ for most students, and /ε, ɑ:, ɔ:/ for many. To these, /ɜ:/ might possibly be added, since /ø/ is actually different by tongue position and lip-rounding; indeed, Raoniarisoa indicated that the students' production of /ɜ:/ resembled /ə/, rather than the French /ø/.

References

- Coveney, A (2001) *The Sounds of Contemporary French*. Exeter: Elm Bank
- Domenichini-Ramiariramanana, B (1977) *Le Malgache: Essai de description Sommaire*. Paris: SELAF
- Fougeron, C & Smith, C L (1999) 'French'. In *Handbook of the International Phonetic Association*, 78-81. Cambridge: CUP
- Gregersen, E A (1977) *Language in Africa; an Introductory Survey*. New York: Gordon and Breach
- MacCarthy, P (1975) *The Pronunciation of French*. London: Oxford UP
- Price, G (2005) *An Introduction to French Pronunciation*. Rev ed. Oxford: Blackwell
- Raoniarisoa, N H (1986) *A Synchronic Phonology of Malagasy Vowels*. Unpublished MA dissertation, University of Wales, Bangor