

YAGHNOBI VOWELS

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This paper presents a brief preliminary survey of the vowel system of the Yaghnobi language. The vowels shown in the chart and table¹ below are not intended to be a comprehensive inventory of Yaghnobi vowels. These vowels were studied in order to have a basis for evaluating the phoneme /i/.² The vowels [i] and [e] were evaluated in greater detail than the other vowels since these sounds seemed to occur as allomorphs of /i/. I noticed this while transcribing Yaghnobi recordings with the assistance of the consultant. Frequently he would transcribe what sounded like an [e] in a final unstressed syllable as an /i/. Note that the assignment of IPA symbols to segments in the words listed in the table is based on the Yaghnobi language consultant's assessment of the sounds.

The chart shows that there is a clear separation in the F1 measurements of the sounds that the consultant considered /i/ and /e/ when these vowels occur in stressed

¹ The data in the chart and table was taken from formant measurements of four repetitions each of the Yaghnobi words listed in the table. The word was first spoken in the carrier sentence, or frame, shown below. Then the word was repeated three more times without a frame.

iʃ kalima _____ hast
this word _____ is
'This word is _____.'

² This paper was originally an appendix to a longer paper on the suffix /i/.

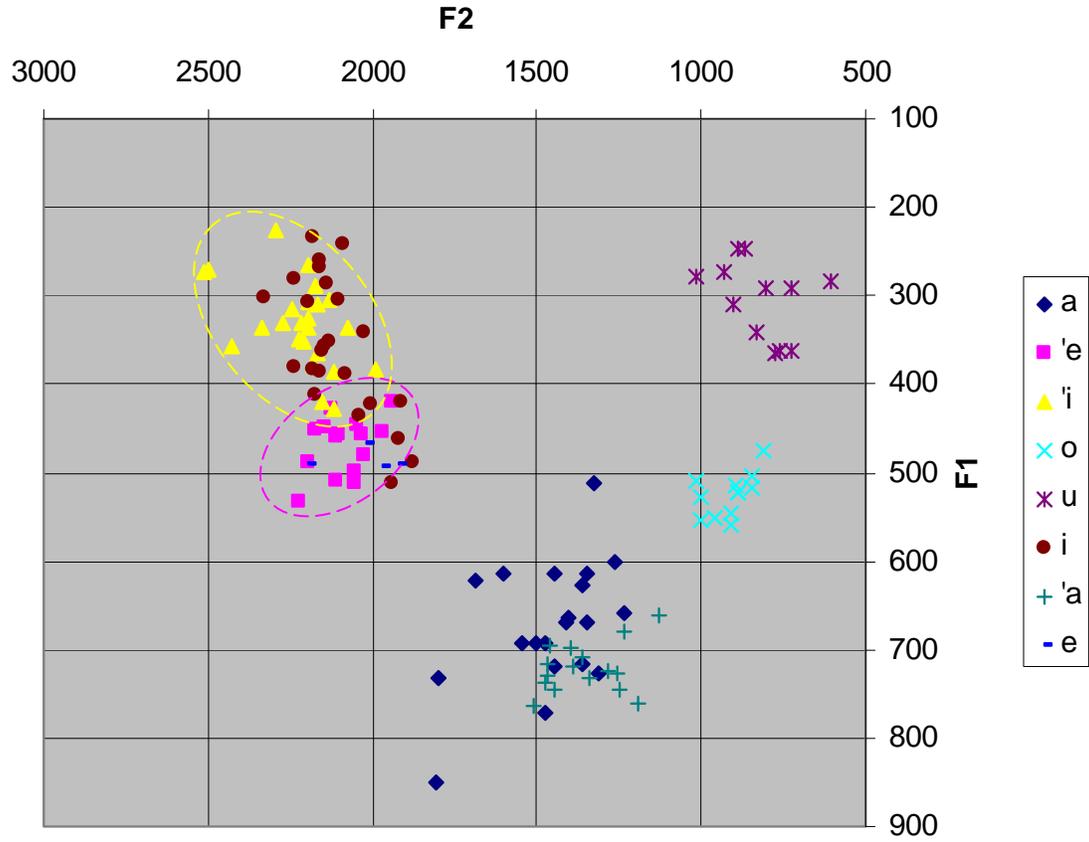
syllables, but the F1 values of the unstressed /i/ spread over the entire F1 range of the stressed [i] and [e]. From this data it appears that what the consultant considers an unstressed /i/ can be realized by either [i] or [e].

DISTRIBUTION OF /i/ AND /e/. I searched a Yaghnobi lexicon³ of over 1000 words and found only 7 words with word final /e/, and 81 with /i/ word finally. It is essential to note that stress in Yaghnobi is generally on the first syllable and three of the seven words with word final /e/ were single syllable. In addition, one of the remaining four words was borrowed from Tajik. This leaves just three Yaghnobi words with word final /e/, all following voiceless consonants.

Word initially there are 26 occurrences of /i/, and only 4 occurrences of /e/, all before voiceless consonants. Word medially /i/ and /e/ both appear frequently without any apparent complementary distribution. I also searched the lexicon for any minimal pairs that differed only by /i/ and /e/, and found one: /nema/ ‘direction’ and /nima/ ‘half’. More research needs to be done on the distribution of [i] and [e]. Specifically, the search for minimal pairs and complementary distribution needs to be done on a lexicon with phonetic transcriptions! But, based on this limited survey, it appears that /i/ and /e/ are separate phonemes, although /e/ (and perhaps [e]?) has a more limited distribution, it mainly occurs word medially. /i/ on the other hand, occurs word initially, medially, and finally.

³ Most of the words in this lexicon do not have phonetic transcriptions, only phonological transcriptions based on the language consultant’s interpretation of the sounds.

Yaghnobi Vowels



vowel	word	In frame		1st repetition		2nd repetition		3rd repetition	
		F1	F2	F1	F2	F1	F2	F1	F2
'a	'avd 'seven'	679	1231	662	1129	762	1195	709	1363
	'ald 'straight'	732	1337	727	1257	746	1248	723	1287
	'anoka 'another place'	737	1472	745	1446	696	1463	730	1467
	ka'paʃ 'lap'	717	1467	763	1507	699	1395	720	1392
a	'anoka 'another place'	772	1473	664	1404	669	1411	615	1445
	ka'paʃ 'lap'	720	1443	694	1546	694	1476	693	1506
	o'vora 'busy'	615	1346	511	1323	627	1363	600	1263
	za.'ifa 'woman'	731	1802	849	1805	614	1602	623	1684
	za.'ifa 'woman'	668	1348	727	1311	659	1233	717	1364
'e	'ex 'ice'	487	2193	481	2027	452	2176	456	2100
	ku'sel 'send'	454	1970	498	2057	457	2031	420	1940
	'te 'he/she'	533	2221	460	2112	457	2102	509	2108
	'neki 'but'	512	2057	449	2147	447	2048	427	2127
e	'kanse (proper noun)	494	1966	468	2016	492	2194	491	1918
'i	'inkir 'oven'	357	2426	272	2513	337	2337	271	2502
	'virak 'to appear'	348	2224	304	2133	227	2294	266	2198
	ni'pidak 'to sleep'	325	2198	330	2273	311	2166	419	2152
	adi'vi: 'he/she fell'	385	2120	335	2076	307	2193	378	2184
	'i: 'one, a'	337	2195	330	2213	316	2246	290	2175

vowel	word	In frame		1st repetition		2nd repetition		3rd repetition	
		F1	F2	F1	F2	F1	F2	F1	F2
i	'neki 'but'	387	2161	381	2238	413	2174	382	2178
	ni'pidak 'to sleep'	267	2160	304	2100	281	2240	260	2162
	'naiyaxftʃi 'didn't appear'	286	2138	235	2182	361	2151	356	2143
	'osirak 'to get cold'	488	1879	513	1940	461	1919	421	1913
	zi'vok 'language'	388	2084	342	2028	435	2038	422	2003
	'ani 'another'	241	2092	306	2196	302	2329	352	2130
	'inkir 'oven'	383	1989	352	2207	428	2119	366	2166
	y	'yag 'one'	339	2279	389	2159	354	2145	356
o	'ovora 'busy'	504	848	521	885	517	849	559	913
	'ovora 'busy'	474	809	514	897	521	891	546	909
	'tʃo 'what?'	510	1014	555	998	550	962	527	999
u	'urak 'to bring'	283	606	362	758	364	772	362	728
	'inur 'today'	279	1014	272	933	248	888	292	728
	dau'du 'wanderer'	340	831	292	803	311	903	248	869