

Vowel Values in L2 Speech: A Case Study of Faro-Danish

Sjálvhljóðavirði í føroyskum-donskum

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Abstract

In this article, we ask how asymmetrical bilinguals with Faroese (FA) as their L(anguage)1 and Faro-Danish (FADA) as their first L2 pronounce the Danish (DA) long vowels. We investigate which of the following three alternatives reflects the actual situation: 1. there is an interaction between the two phonetic subsystems; 2. speakers use Danish pronunciation; or 3. they simply impose the Faroese phonological system onto their Faro-Danish pronunciation.

By describing the vowel system of Faro-Danish, this study contributes significantly to the yet unexplored field of Faro-Danish phonetics, as well as revealing some of the linguistic dynamics that characterizes the bilingual situation in the Faroe Islands.

Úrtak¹

Her verður kannað, hvussu asymmetriskir tvímælingar við føroyskum sum M(ál)1 og føroyskum-donskum sum M2 bera fram dansk sjálvhljóð. Vit kanna, um sín-ámillum ávirkan er ímillum tær fonetisku skipanirnar, ella um talandi nýta eina danska úttalu ella ota føroyskar framburðarvanar niður yvir føroyskt-danskt.

Henda lýsing okkara av føroyskum-donskum leggur eitt klípi afturat lýsingini av hesum variantinum av danskum.

1 Background

1.1 A short overview on bilingualism on the Faroe Islands

The Reformation came to the Faroe Islands in 1540, laying the foundation of Faroese-Danish bilingualism. Speakers did not become bilingual overnight, however; rather,

1 We would like to thank J. S. Markússon for correcting our English, and one anonymous reviewer for fruitful comments. All errors are ours.

the situation was characterized by patchwork bilingualism, where speakers in various regions of the archipelago had little or no knowledge of Danish, as the language had little or no bearing on their day to day lives. In other words, it took time for the Faroe Islanders to become fluent bilinguals, with Faroese as their L1 and Faro-Danish as their L2. However, as pointed out by Petersen (2010: 35), the situation on the Faroe Islands today is a different one, and can best be characterized as one in which speakers are early sequential bilinguals (see below).

Gradually, speakers became better acquainted with Danish, and a shift from passive towards active bilingualism proves increasingly more discernable after the introduction of Danish schools on the islands in the latter half of 1800. Still, illustrative of the islanders' knowledge of Danish is a letter in the newspaper *Dimmalætting* from 1888, in which one writer claims that one-third of the Faroese population did not understand conversational Danish (Lenvig, 2008, 2009).

Hagström (1984) claims that some Faroe Islanders had only a very limited command of Danish even as late as in the 1930s. He further states that, in the thirties and after the Second World War, a change occurred regarding Faroe Islanders' command of Danish. According to Hagström, the situation had started to move towards full bilingualism after this period. One reason for this was better schools, with

another being the practical necessity of knowing Danish in a modern colonial society where the Faroese text-corpus was extremely small.

Learners of Faro-Danish are cL2 learners; that is, early sequential bilinguals. This means that the learners begin acquiring their L2 as children, from the age of 3-4 and up until puberty (Klein, 1986: 15). Note that children in the Faroe Islands receive no formal instruction in Danish before the age of 9. Despite this, speakers are exposed to Danish from early on, mainly through television (cartoons), computer-games and other media. Wolles (2018) shows that children aged 6 years understand Danish and that, from age 10, they both understand and speak Faro-Danish.

Faroese is the first language on the Faroe Islands, with Danish typically the first L2 that Faroese children learn; all native Faroe Islanders are bilingual (Petersen, 2010, 2014). A bilingual speaker is one who “speaks two languages with a reasonable level of proficiency” (Patten, 2007: 296). This definition is similar to that of Myers-Scotton's, who states that **“bilingualism is the ability to use two or more languages sufficiently to carry on a limited casual conversation”** (bold in original, 2006: 44). Patten further states that “[w]e label a society ‘bilingual’ if there are two languages spoken within the territory of that society” (2007: 296). As we will demonstrate, it is not necessary that both languages be explicitly spoken in a bilin-

gual society, see also Burridge and Bergs (2017: 189). The linguistic situation on the Faroe Islands is not one in which Faroe Islanders speak Danish on a daily basis. Nevertheless, all of them know Danish, if one's definition of "knowing a language" rests on the four language skills: being able to speak, listen, write, and read. Furthermore, speakers of Faroese are exposed to written and spoken Danish (through the media, books in school, labels on imported products in supermarkets etc.) on a daily basis. While there are individual differences in proficiency, in general, people have good command of Danish, with many continuing their studies in or moving to Denmark. There are also many family ties and personal relationships between the two countries in the federation. The situation is such that it is in fact not possible to manage daily life on the Faroe Islands without *knowledge* of written Danish, as immigrants from e.g. Asia and Eastern Europe have experienced (Petersen, 2014).

The older generation on the Faroe Islands may apply Faroese phonological features to their spoken Danish to varying degrees. This special variant of Danish has been described as being based on Danish orthography (Petersen, 2008), and is usually referred to as *Gøtudanskt* (lit.: Street-Danish, or: (in all probability wrongly) Danish from the Village *Gøta*) on the Faroe Islands (Poulsen, 1993). The younger generations exhibit a pronunciation closer

to Danish proper, and this reflects the different types of input (spoken and written) speakers are exposed to throughout their upbringing. According to what has become custom practice in the study of Faroese-Danish bilingualism, we will refer to the more Danish-like Danish spoken by Faroe Islanders as Faro-Danish; Debess, Saxov & Thomsen 2013; Debess, Saxov, Thomsen & Kristiansen, 2014; Debess & Saxov, 2015; Saxov, 2016).

Older generations, from approximately 50 years and upwards, received their input from books, magazines and so on, while the younger generations get their input from TV (which came to the Faroe Islands in 1984. Many or rather most programs are in Danish or in English with Danish subtitles). Danish input comes also from video games, the internet etc., but it should be mentioned that the use of English has increased considerably the last 10-15 years or more (Zieseler, 2013, 2017, 2019; Højgaard Helmsdal, 2014).

One question we address in this article is how the different input is reflected in the pronunciation of the vowels of Faro-Danish.

As the L2 (Danish) input comes from TV, media, computer games and so on, speakers have a passive interaction in their L2. This means that Faroe Islanders do not speak Danish on a daily basis, but they hear quite a lot of Danish daily. This in itself is an interesting L2 situation, which, nevertheless, has resulted in a good command of

the language ability of speaking, listening (understanding), reading, and writing.

1.2 Faro-Danish

Faro-Danish is a little known variant of Danish used as a first second language by Faroe Islanders on the Faroe Islands. The same speakers have Faroese as their first (and dominant) language. Faro-Danish is a typical case of what van Coetsem (2000) has labeled Source Language Agentivity. In Source Language Agentivity (SLAg) of the kind under consideration, Faroese is the dominant language and is the source of (relatively much) imposition of phonetic and phonological material onto the recipient language, Faro-Danish. Petersen (2010) furthermore found some imposition of morphological and syntactic patterns from Faroese onto Faro-Danish. In more detail, Petersen (2008, 2010: 181-237) lists the following characteristics of Faro-Danish, marking it different from Danish in Denmark. There is: (i) inter-sentential code switching; (ii) intra-sentential code switching; (iii) convergence where speakers may use FA syntactic constructions; (iv) nonce borrowings; (v) pronominal gender; (vi) hybrid-compounds (one part of the compound is Faroese, the other is Danish), and (vii) phonological blends.

In Petersen (2010), no distinction is drawn between Faro-Danish and what is usually called *Gøtudanskt* on the Faroe Islands. Later research has shown that

it is necessary to make a distinction between the two, as pointed out by Debess, Saxov, Thomsen and Kristiansen (2014) and Debess and Saxov (2015). *Gøtudanskt* is orthography based Danish with many features of Faroese phonology, such as preaspiration of the stops /p, t, k/ and unvoiced sonorants in front of /p, t, k/ (Debess, Saxov and Thomsen, 2013; Saxov, 2016), and we observe that there is also a lack of the glottal stop [ʔ] in *Gøtudanskt*. These features are generally not so prominent in Faro-Danish, which is much closer to Danish proper, although not quite like it. Thus, it is more correct to differentiate between the two variants.

We will concentrate here on vowel values in Faro-Danish. The matter is briefly touched upon in the appendix in Petersen (2010), where results from a study by Petersen and Rakow (2010, see Petersen, 2010: 314-315), are presented. A more detailed study of the vowels was undertaken by Debess and Saxov (2015). Furthermore, Saxov (2016) has studied preaspiration, the pronunciation of /d/ and /r/ and the devoicing of sonorants in Faro-Danish.

Both Petersen and Rakow (see Petersen, 2010) and especially Debess and Saxov (2015: 27) found that the vowels of Faro-Danish are more open and more fronted than the corresponding Danish vowels. When compared to the corresponding Faroese front vowels, the same authors showed that the Faroese vowels were more open and back than the Faro-Danish vowels.

We shall return to the vowel values in section 3 *Results* and in section 4 *Discussion and conclusion*.

1.3 Vowels in Faroese and Danish

Faroese native phonology has 13 long vowels and 10 short vowels. The vowels appear in pairs: long and short as in *gulur*MASC. [u:] ‘yellow’ and *gult*-NEUT. [ʊ] ‘yellow’ (Rischel, 1961, 1964; Árnason, 2011: 68ff; Thráinsson et al., 2012: 18). As the example shows, short vowels are in front of two or more consonants and long consonants. The system of long monophthongs in Faroese is given in table 1. See also figure 1, which shows F1 and F2 of the long vowels /i:, e:, ø:, u:, o:/ based on Rischel (1964), Petersen (2000) and Petersen and Rakow (2010).

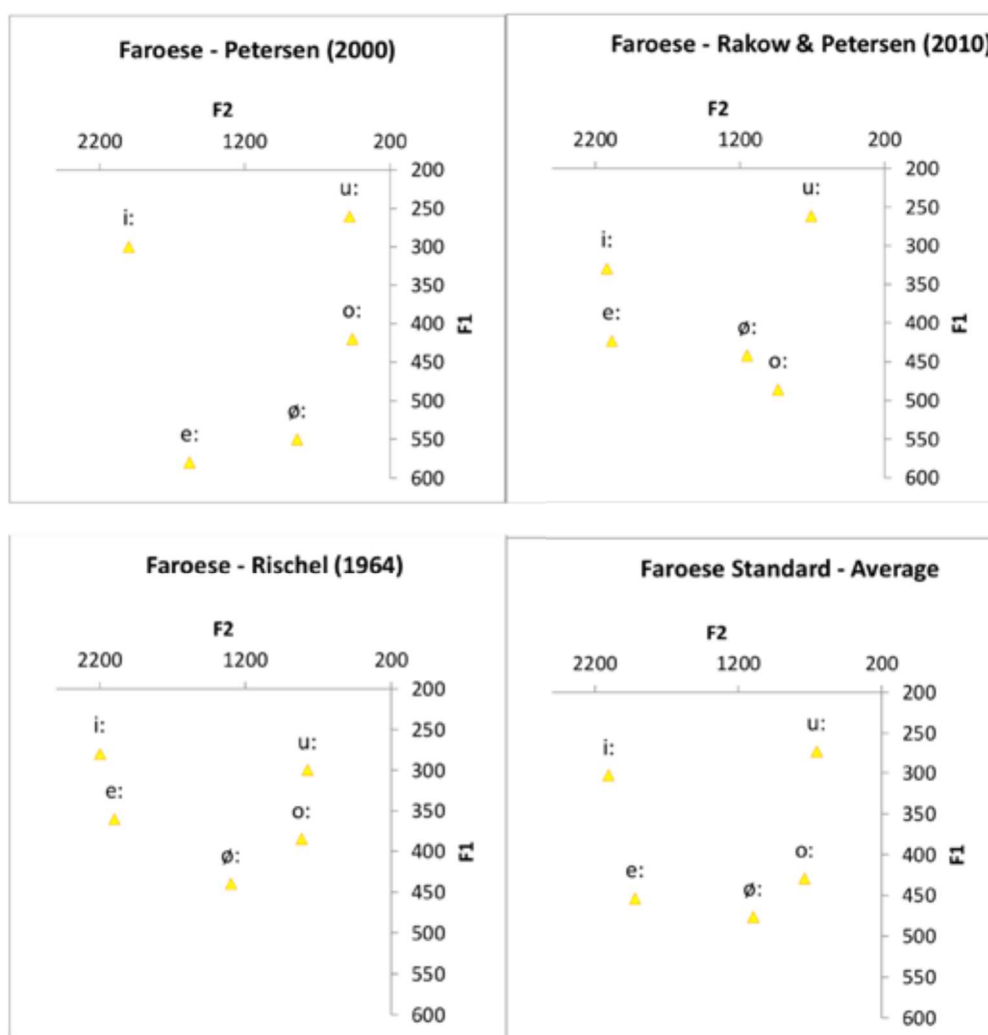
Table 1. The Faroese native long vowels (monophthongs). We have chosen not to include /y:/ and /a:/, even though they occur in spoken Faroese. The reason for not including them in the figure is that they are phonemes borrowed from Danish. Note that the exclusion of these vowels would not have altered the general conclusion in any way. Abbreviations: ur. = unrounded, r. = rounded.

	Front		Back
	ur.	r.	r.
Close	i:		u:
Close-mid	e:	ø:	o:

See Jakobsen (1891), Rischel (1964), Petersen (1995, 2000), Thráinsson et al. (2012: 3042) and Árnason (2011: 74-76), Petersen and Rakow (2010).

The Faroese data in Fig. 1 below come from three sources. One is Petersen (2000) (see also Árnason, 2011). Petersen’s study is based on his own reading of words, with the formants being subsequently measured under supervision of prof. Goldstein (Yale University; Haskins Laboratory). The work presented as Rakow and Petersen (2010) is based on the reading of nonsense words with a *b* in the onset + vowel + a coda that contained a short consonant [b̥] -*b* or a long consonant [b:] *bb*. Three middle aged male informants read *eg sigi orðið bib nú*, *eg sigi orðið bibb nú* ‘I say the word B now’ and so on. Rischel (1964) does not give any metadata on his informants. We use the mean number of these three studies in our further discussion of the data below.

Figure 1. The long vowels /i:, e:, ø:, u:, o:/ in Faroese and their values for F1 and F2. Note that we give the average of these three studies below and will use this in the discussion of our data. For more on these charts, see the section on Method.



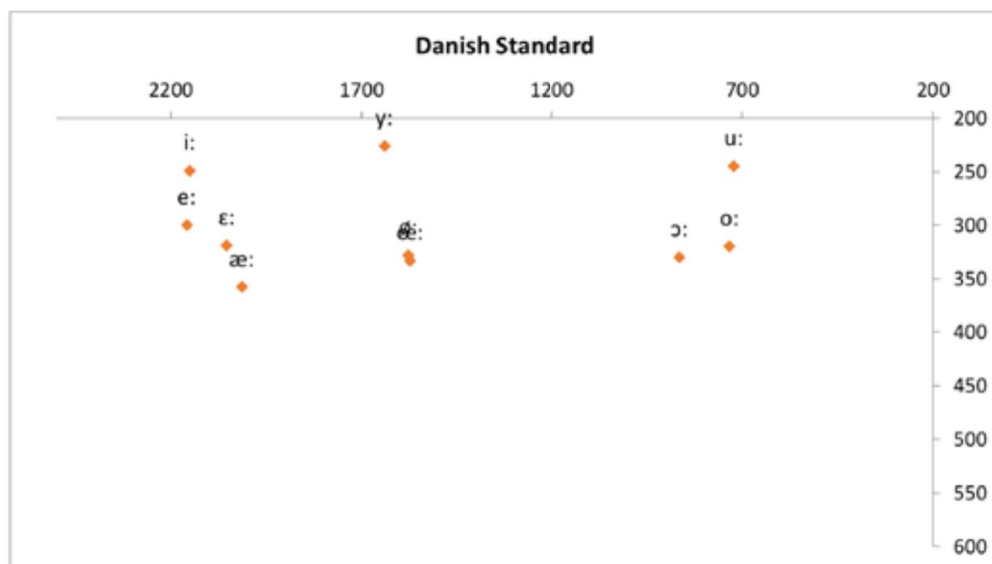
The long monophthongs in table 1 are in fact diphthongs, as previously noted by Jakobsen (1891: 441). He transcribes the second element of the vowels with a schwa

[ə], that is [eə, øə, oə] /e:, ø:, o:/. Rischel (1961: XIX) transcribes them as [i:j, u:w, e:ɘ, ø:œ, o:ɔ] /i:, u:, e:, ø:, o:/, and Árnason (2011: 74) has [eɛ:, øœ:, oo:] /e:, ø:,

o:/. This is worth bearing in mind when discussing the results of the present investigation. If influence from the Faroese vowel system is to be discerned, one could expect the vowels of Faro-Danish to be more open than the corresponding Danish vowels and diphthongized.

The system of the Danish vowels is presented in figure 2. It is based on Ejstrup & Foget Hansens (2003, 2004) measurements of spontaneous Copenhagen Speech of 3 men and 3 women between the age 18 and 28, and they normalized their data.

Figure 2. Long vowels in Danish, based on Ejstrup & Foget Hansen (2003, 2004).



See Grønnum (2005), Ejstrup and Foget Hansen (2004) and Basbøll (2005). The vowel system presented in figure 2 is not the full Danish vowel system, as we have chosen not to work with vowels that are affected by /r/. See Grønnum (2005) for information on the full Danish vowel system and the /r/-effect. In this study, we have concentrated on how informants

pronounce the Danish vowels [i:, e:, ε:, æ:, ø:, œ:, y:, ɔ:, u:, o:]. For more on this, see section 2 *Method*.

Table 2. Formant values for the F1 and F2 in Danish (Ejstrup & Foget Hansen, 2004: 94) and Faroese (mean number based on Rischel (1964), Petersen (2000) and Petersen & Rakow (2010)).

Vowel	DANISH		FAROESE	
	F1	F2	F1	F2
i:	249	2151	303	2106
e:	300	2158	454	1921
ø:	328	1578	477	1096
u:	245	722	273	654
o:	320	733	430	737
ɛ:	319	2054		
æ:	358	2014		
œ:	333	1573		
ɣ:	226	1640		
ɔ:	330	864		

Figures 1 and 2 and table 2 suggest that the Danish vowels are generally more front and less open than the vowels of Faroese.

Note that the Faroese and Danish data have not been elicited under the exact same conditions. The Faroese data mainly comes from middle aged men, while the Danish data comes from both male and female speakers at a younger age. Furthermore, the Faroese data has been elicited from speech that has been read aloud, while the Danish data has been elicited from spontaneous speech. However, as the Danish data has been normalized, the gender of the speakers should not be an issue.

The aforementioned studies on Faroese are the only ones to have investigated formant values in Faroese vowels. We could have chosen to work with another set of Danish data that is more comparable to the Faroese data. However, to the best of our knowledge, there does not exist any studies of Danish vowels totally comparable to the Faroese data. We are aware of Hernvig (2002) who investigates Copenhagen speech read aloud, but her study only includes the unrounded front vowels. In addition to that, there is Fischer-Jørgensen (1972), but her study is from 1972, and it is therefore likely that the pronunciation has changed since then. Last-

ly, there is Steinlen (2005), but her study investigates the pronunciation of vowels som Aarhus. As we wanted to compare with Copenhagen Speech (standard Danish), Ejstrup & Foget-Hansen (2003, 2004) seemed like the best choice given that they investigate alle the Danish vowels in Copenhagen Speech.

This is the only available data, even they are not completely comparable. Further research will reveal the validity of our research.

2 Method

In order to answer our research questions, we have used acoustic analyses. More specifically, we have measured the formant values of the vowels in question. We have concentrated on the Danish vowels [i:, e:, ε:, æ:, ø:, œ:, y:, ɔ:, u:, o:] in this study. We are aware that different flanking consonants can affect vowel quality. As the effect of the Danish /r/ on vowel pronunciation is well documented, we have chosen to work around this effect by investigating material without /r/, as material with /r/ would complicate the description considerably.

The informants should read *det sidste ord er* _____ “the last word is _____” six times. The target words were *spise* “to eat”, *hele* “whole”, *hæse* “hoarse”, *base* “base”, *løse* “to loosen”, *høne* “chicken”, *dyne* “quilt”, *dåne* “to swoon”, *huse* “houses” and *tone* “tone”. The reason for using this method and not spontaneous speech was that we

wanted to make sure that we would get enough occurrences of the vowels in questions. Reading the target words moreover gave us a more distinct pronunciation of the vowels in question, which also facilitates acoustic measuring.

One criterion was that the informants should know the target words in order to avoid hesitation and elude the possibility of using some completely different vowels than the target vowels. Additionally, the consonants in the onset as well as in the coda should be as different from the vowels as possible. In that way we were able to distinguish clearly the vowels, we wanted to measure. Words like *hele* and *høne* were an exception to this, as they contain sonorants.

Each recording lasted around 8-16 minutes, and we recorded 16 informants. All the informants had Faroese as their L1 and Danish as their L2. Of these, four young and four old speakers lived in Denmark, and four young and four old speakers lived in the Faroe Islands. We recorded 8 men and 8 women. We will call the group of Faroe Islanders in Denmark the Copenhagen Group and the group on the Faroe Islands the Faroe Group. One criterion for the Faroe Group was that they should never have lived in Denmark, or, if so, then only for a shorter time period. This means that they had the general knowledge of Danish as people on the Faroe Islands have overall and likewise the same input. Informants in the Copenhagen Group

should be at least 18 when they moved to Denmark, and they had lived in Denmark for at least 3 years. The reason for choosing 18 was again that they would have had the same conditions for acquiring Faro-Danish as people in general have on the Faroe Islands. The younger informants of the Copenhagen Group had lived in Denmark for 3-7 years and are between 23 and 29 years old. The older informants of the Copenhagen Group had lived in Denmark for 19-40 years and were between 53 and 59 years old. The young Faroe Group informants were 20-27 years old, and the older were 48-59 years old.

The formants were measured using

Burg's method. The maximum formants for male speakers was set to 5700 Hz and for female speakers to 5500 Hz. For most speakers, the cut off frequency was 5500 Hz for female speakers and 5300 Hz for male speakers.

Note that we have said that input for the older generation was mainly books and written Danish, while the younger speakers in addition hear spoken Danish from e.g. television. In section 3, we will see if this has any influence on the pronunciation of the vowels in question.

All informants have Faroese as their L1 and have lived their childhood years on the Faroe Islands with Faroese parents.

Table 3. Informants and metadata.

	COPENHAGEN GROUP		FAROE GROUP	
Age	Young: 23-29	Old: 53-59	Young: 20-27	Old: 48-59
Sex	2 M; 2 W	2 M; 2 W	2 M; 2 W	2 M; 2 W
Moved to DK	18+	18+	No	No
Lived in DK	3-7 years	19-40 years	No	No

Linguistic background	L1 =FA, L2=DA	L1 = FA, L2=DA	L1 = FA, L2=DA	L1 = FA, L2=DA
Parents	Faroese	Faroese	Faroese	Faroese

3 Results

Figure 3 suggests the results of vowel formant values of spoken Faro-Danish as spoken by all informants. We then com-

pare these to the vowel formant values of Standard Danish and Standard Faroese.

Figure 3. All informants and their production of the vowels [i:, e:, ε:, æ:, ø:, œ:, y:, ɔ:, u:, o:] compared to Standard Danish Standard Faroese.

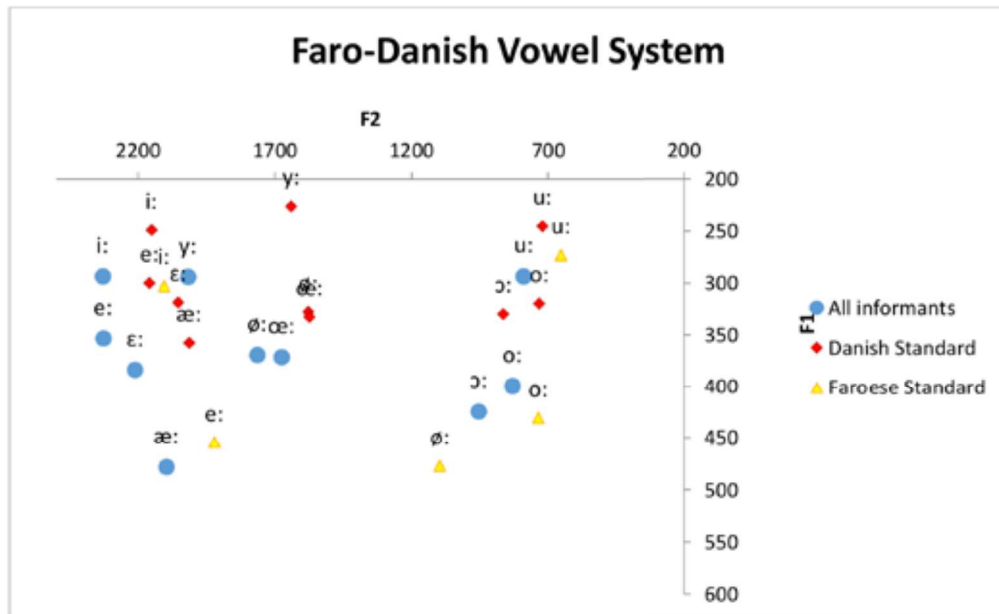


Table 4. Formant values for spoken Faro-Danish, Standard Danish and Standard Faroese.

Vowel	All informants FADA		Standard DA		Standard FA	
	F1	F2	F1	F2	F1	F2
i:	294	2329	249	2151	303	2106
e:	354	2327	300	2158	454	1921
ø:	369	1765	328	1578	477	1096
u:	294	790	245	722	273	654
o:	399	831	320	733	430	737
ε:	384	2211	319	2054		
æ:	478	2096	358	2014		
œ:	372	1675	333	1573		
y:	295	2017	226	1640		
ɔ:	424	954	330	864		

3.1 Place of residence

In the Method section, we mentioned the two groups, the Faroe Group and the Copenhagen Group. In both groups, we had younger speakers (in their twenties) and older speakers (aged: 48-59). We should in fact expect the pronunciation of the Faroe Group to be more similar in some ways to Faroese than that of the Copenhagen group, as the latter has more exposure to Danish proper.

Figure 4. Place of residence. The formant values of the vowels pronounced by the Copenhagen Group and the Faroe Group compared to Danish and Faroese Standards.

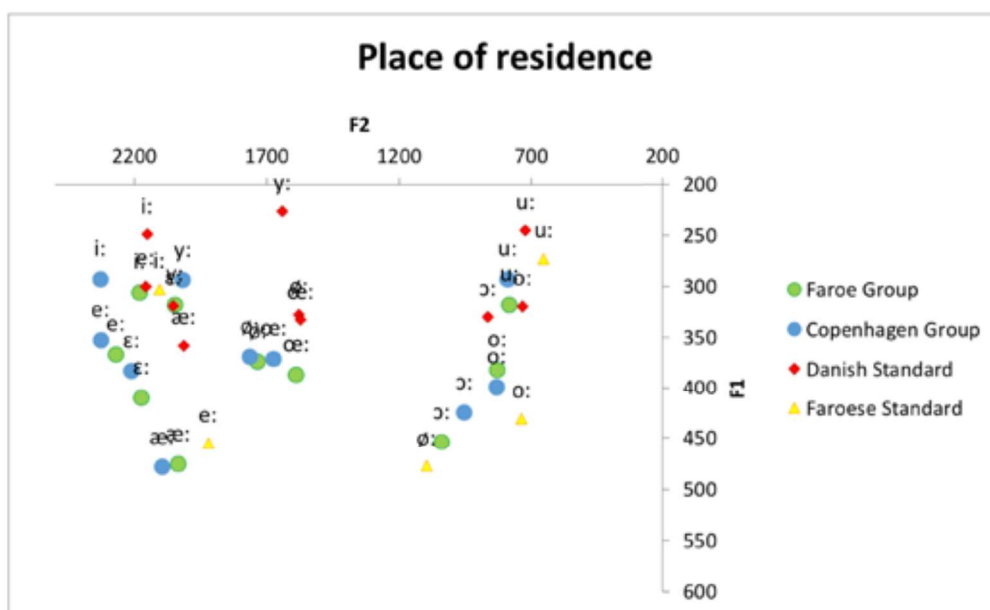


Table 5. Place of residence. The formant values of the vowels pronounced by the Copenhagen Group and the Faroe Group compared to Danish and Faroese Standards.

Vowel	Copenhagen Group		Faroe Group		Standard Danish		Standard Faroese	
	F1	F2	F1	F2	F1	F2	F1	F2
i:	293	2329	306	2181	249	2151	303	2106
e:	353	2327	367	2270	300	2158	454	1921
ø:	369	1764	374	1734	328	1578	477	1096
u:	293	790	318	782	245	722	273	654
o:	399	831	382	829	320	733	430	737
ɛ:	383	2211	409	2175	319	2054		
æ:	478	2095	475	2035	358	2014		
œ:	371	1675	387	1588	333	1573		
ɤ:	294	2017	318	2047	226	1640		
ɔ:	424	953	453	1039	330	864		

Figure 4 and table 5 suggest that informants of the Faroe Group generally have a more open pronunciation than the Copenhagen group taken together. This means that the Copenhagen group is more similar to Danish with regard to degree of opening. We do not find this surprising, as degree of opening in our opinion is a very salient feature perceptually. As a consequence, the Copenhagen Group strives to be dissimilar to Faroese in this respect, and they seem to try to establish a system that is closer to Danish on the high-low axis. Note further that the Copenhagen Group generally has a higher F2 than in Danish proper. This could suggest that speakers aim at a distinct pronunciation

and in doing so they exaggerate, as they in fact also do, when they have a higher pronunciation than the low Faroese vowels.

The question is now if there are any differences within the Copenhagen group and within the Faroe group. We will address this in the next section.

3.2 Age and place of residence

Figure 5. Age. The average formant values of the vowels [i:, e:, ε:, æ:, ø:, œ:, y:, ɔ:, u:, o:] pronounced by the group aged 20-29 years and the group aged 48-59 years compared to Danish and Faroese Standards.

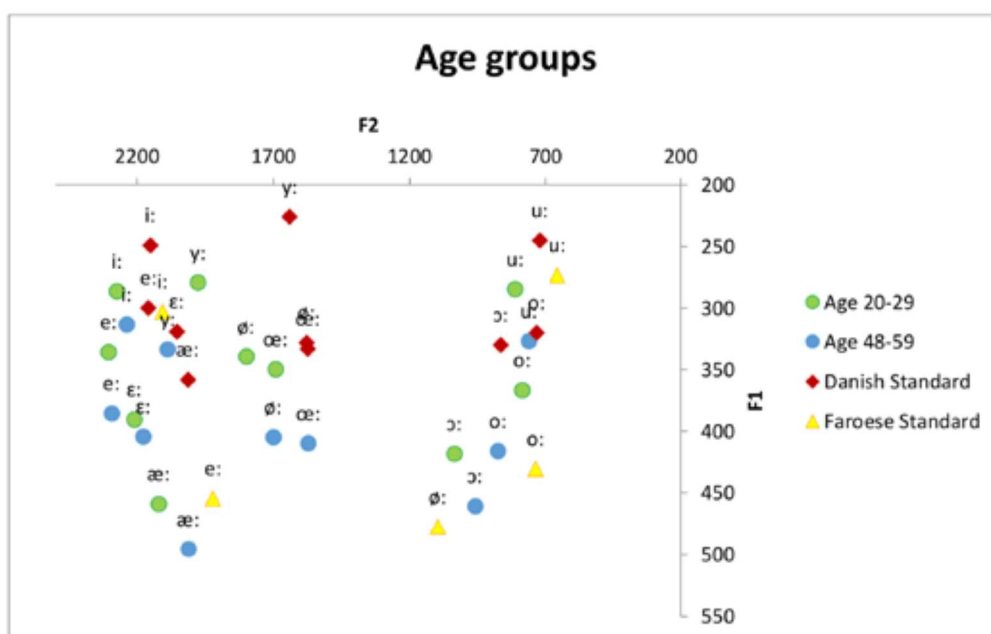


Figure 5 shows the formant values for the two age groups, including both informants from the Faroe Group and the Copenhagen Group. The figure generally suggests that all speakers pronounce the vowels more open than the Standard Danish pronunciation, and the older group has even more open vowels than the younger group. The vowels of the younger speak-

ers are also generally more front than the vowels of the older speakers (with the exception of /o:/ and /y:/).

In order to get a clearer picture of what is going on, we present the F1 and F2 as produced by the speakers, divided into categories of both age and place of residence in table 6 and table 7.

Table 6. F1 values of Faro-Danish vowels divided into categories of age and place of residence.

		Old Cph	Old FA	Young Cph	Young FA	DA St	FA St
F1	i:	334,925	292,04	252,835	320	249	303
	e:	391,565	378,73	315,635	355,42	300	454
	ø:	409,795	399,21	329,115	349,69	328	477
	u:	335,525	318,17	251,625	318,02	245	273
	o:	444,25	386,93	354,61	378,16	320	430
	ɛ:	405,165	402,14	362,75	417,38	319	
	æ:	513,375	477,59	443,365	473,1	358	
	œ:	407	411,77	336,08	362,56	333	
	y:	338,785	328	250,36	308,38	226	
	ɔ:	468,545	451,71	380	455,92	330	

For the sake of convenience, we would like to repeat: The higher the F1, the more open the vowels are. Table 6 shows that the younger speakers in Copenhagen are those who are closest to Danish Standard on the high-low axis. Next are the young speakers on the Faroe Islands. Note further that the old speakers in Copenhagen generally have a high value here. This is

indeed unexpected if exposure to Danish alone should improve their pronunciation. This suggests that the input they got when growing up on the Faroe Islands probably does matter. We shall return to this in the discussion section.

Table 7. F2 values of Faro-Danish vowels divided into categories of age and place of residence.

		Old Cph	Old FA	Young Cph	Young FA	DA St	FA St
F2	i:	2259,85	2214,89	2398,75	2148,15	2151	2106
	e:	2238,79	2348,21	2415,71	2193,46	2158	1921
	ø:	1680,88	1718,5	1848,725	1749,55	1578	1096
	u:	777,125	744,87	803,335	819,53	722	654
	o:	897,375	852,33	765,495	806,13	733	737
	ɛ:	2102,8	2250,83	2319,96	2100,71	2054	
	æ:	1955,29	2066,96	2236,11	2004,31	2014	
	œ:	1606,04	1537,55	1744,875	1639,04	1573	
	y:	2000,21	2239,22	2034,28	1918,38	1640	
	ɔ:	929,96	987	977,955	1091,29	864	

The higher F2, the more front the vowels are, and the values of all the speakers generally show a more front pronunciation of the vowels compared to Danish Standard. Note that Faroese Standard pronunciation is unlikely to influence the speakers' pronunciation, as F2 is generally not as front in Faroese. The table furthermore shows that the young speakers in Copenhagen have a pronunciation that is even more front than the three other groups.

4. Discussion and conclusion

In general, the findings suggest

- For all speakers: Faro-Danish vowels are more open and fronted than the Danish vowels; compared to Faroese, they are more fronted and close. The distance between the

Faro-Danish vowels is larger than in Danish; they are, in other words, more distinct.

- Place of residence: The Faroe Group has more open vowels than the Copenhagen group. This means that the Copenhagen group strives to be as similar to Standard Danish as possible. They do this by having a system that is similar to Danish with regard to aperture, which is understandable, as aperture is, in our opinion, a very salient feature perceptually. It is possible to conclude that the Copenhagen Group exaggerates both with regard to aperture and with regard to place of articulation.
- Age: We found that the younger

speakers generally are closer to Standard Danish than the older speakers with regard to aperture. The younger speakers residing in Copenhagen are even closer to Standard Danish than the younger speakers residing in the Faroe Islands.

- The pronunciation of the younger group of speakers is also characterized by higher values than that of the older in relation to frontness. It is also the case here that the younger speakers from Copenhagen have the highest values and thereby the most fronted pronunciation.

In general, the vowel system that speakers use for Faro-Danish is different from Danish and Faroese. It is closer than the FA system and more open than the DA system. It is more fronted than either the FA or the DA system.

The high-low dimension can be explained by influence from Faroese, as the Faroese vowels are considerably lower than the Danish vowels. Given that speakers try to approximate Danish pronunciation, we conclude that they exaggerate, as with the front-back axis also.

The different age groups exhibited different acquisition scenarios. Younger speakers have had more exposure to spoken Danish than the older generation, which is reflected in the fact that the system of the younger speakers is character-

ized by an increased degree of aperture compared to that of the older speakers. We do not find this surprising. After all, the younger speakers have been exposed to spoken Danish from early on, as opposed to the older speakers who have mainly acquired Danish through exposure to written language. There are even differences between speakers of the younger group. Of all the investigated groups, the Copenhagen group has a system that is, more or less, closest to Danish Standard, compared to younger speakers on the Faroe Islands, who have a more open pronunciation, probably due to influence from Faroese and lack of exposure to spoken Danish.

But surprisingly, if we look at the older speakers of the Copenhagen group in isolation, we find that they have high values with regard to F1, that is, they have an open pronunciation. We should expect a pronunciation more similar to that of the younger speakers of the Copenhagen group. As the speech of the older speakers of the Copenhagen group suggests influence from Faroese, it indicates, in our opinion, that exposure to proper Danish later in life influences pronunciation to a lesser degree, than early exposure does, or more specifically: early exposure combined with later exposure. This is reflected in how the younger speakers of the Copenhagen group pronounce the vowels in question. A final remark is necessary though. In order to get an optimal picture of the matter under investigation, new re-

cordings and analysis of Faroese and Danish under the same conditions would be required. This means, recordings taken under the same conditions, with both long /y:/ and long /a:/ added (both borrowed phonemes). This would afford the opportunity of investigating whether there is any statistical significance between the speakers. On the other hand, given e.g. Rischel's analysis and comparing it with Petersen, we see no considerable changes in pronunciation of the vowels compared to Danish, that is, the Faroese vowels are pronounced further back while being more open than the Danish ones. These characteristic features of the system in question are likely to remain stable over many generations to come. It is thus not unreasonable to compare data as has been done in this article, i.e., to compare Danish as presented in Ejstrup and Foget Hansen with Rischel (1964), Petersen (2000) and Petersen & Rakow (2010). We are aware of the fact that the different background studies presented here are not completely comparable. However, we believe that our findings can function as some sort of pilot project indicating some results that can be further corroborated or invalidated by further investigations.

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