finally abandoned in favour of Lowland Scots in the course of the 18th century. Even though Norn is now an extinct language, it still lives on in the many Norn words and idioms which are one of the most well-known features of the local dialects.

Most islanders are conscious of these Norn remnants in dialect vocabulary, which have also been documented in the dictionaries of Jakob Jakobsen, Hugh Marwick and, more recently, John Graham. Orcadians and Shetlanders are also well aware of the pronunciation features which make these accents not only unique in the English speaking world, but also quite different from each other. Yet, up till now, there has been very meagre mention of the crucial dissimilarities between the two dialects in the scholarly literature.

Over the past five years, I have been investigating the differences between Orkney and Shetland pronunciation, for my PhD thesis at the University of Leiden in the Netherlands. In this article, I shall discuss some of my most important findings so far.

Vowel and consonant duration

When the famous phonetician Professor J.C. Catford visited the Northern Isles, in the 1950s, in order to collect speech material for the Linguistic Atlas of Scotland, he observed that Shetland dialect has a so-called Scandinavian syllable structure. This implies that words of one syllable ending in a consonant generally contain either a short vowel followed by a long consonant, or a long vowel followed by a short consonant. Consequently, there is an inverse relationship between vowel and final consonant duration. In Norwegian, for example, tak (roof, ceiling) is pronounced with a long vowel and a relatively short final consonant, while takk (thanks) has a relatively short vowel and a long final consonant. Note that the consonant duration is reflected in Norwegian spelling.

So, according to Catford, Shetlanders pronounce words like baet (beat) and pit (put) with a short vowel and a long final consonant, while bait and boat are said with a long vowel and a short final consonant. He concluded that this feature of Shetland pronunciation was most likely the result of the influence of Norn.

Unfortunately, Catford did not provide any precise measurements to support his argument, nor
did we learn if the phenomenon also occurred in Orkney dialect. Furthermore, as his observations were based on a survey of, for the most part, elderly speakers, about half a century ago, we were unable to tell whether this particular remnant of Norn had survived up to the present day. The aim of my study was to establish whether in present-day Shetland dialect there is indeed an inverse relationship between vowel and final consonant duration, and if an identical pattern is to be found in Orkney dialect. In addition, for comparison, I also examined vowel and consonant duration in Norwegian and Edinburgh speech.

A total of 36 volunteers were recorded for my survey: ten Shetlanders, ten Orcadians, six Norwegians and ten people from Edinburgh. Each speaker read a list of over 100 different single syllable words, such as *beat*, *dim* and *beef*. The list also included about twenty dialect items, for example, *meid* (landmark), *bide* (dwell) and *böd* (fisherman’s booth or hut); in the case of the Orkney and Edinburgh speakers, certain dialect words were replaced by others. The Norwegians read similar words but, of course, in their own language. To ensure that all words were said at a uniform speed they were included in the sentence *I say … again*. All the recorded material was then stored on computer disk.

Measurement of the vowel and consonant duration of the recorded words was done by computer, using special speech analysis software. With the sound waveform of the recorded speech displayed on screen, the boundaries between the vowel and consonants of a particular word were marked, after which the duration in milliseconds (i.e. 1/1000 of a second) was computed automatically. For each of the 100 test words, the average vowel and final consonant duration was calculated per speaker group.

For Shetland speech, the results can be summarised as follows. Across the 100 test words, we find that vowel duration is between about 80 and
250 milliseconds (ms), while final consonant duration is between 65 and 165 ms. Yet, the relationship between vowel and final consonant duration is not random: when the vowel duration is about 100 ms, final consonant duration is 150ms, whereas a relatively long vowel of 200 ms is followed by a final consonant of 100 ms in duration. So one can say: ‘the longer the vowel, the shorter the final consonant’. To the non-specialist a decrease of 50 ms may seem insignificant, but 50 ms is in fact a considerable difference in speech research.

In Orkney and Edinburgh speech, vowel duration is also between 80 and 250 ms, whereas final consonant duration is between about 50 and 125 ms. Hence, the final consonants are generally shorter than in Shetland. It is true, then, that ‘Shetland speakers seem to hold their words longer’, as some of my Orkney participants remarked. The relationship between vowel and final consonant duration in both Orkney and Edinburgh speech seems less systematic. Although long vowels are indeed generally followed by a short final consonant, short vowels can also be followed by a short final consonant.

For Norwegian speech, the inverse relationship between vowel and final consonant duration is similar to that found in Shetland. Yet, Norwegian final consonants are generally considerably longer in duration than those of Shetland. The conclusion to be drawn, therefore, is that present-day Shetland dialect appears to have preserved its typically Scandinavian (Norn) syllable structure with an inverse relationship between vowel and consonant duration. What in Shetland speech could be considered as a kind of compensatory mechanism is even more striking in Norwegian.

In Orkney and Edinburgh speech, however, the inverse relationship between vowel and final consonant is insignificant. So it seems that with respect to this pronunciation feature, Shetland is linguistically still a little closer to Norway than to Scotland. In Orkney dialect, this particular remnant of Norn has apparently been lost, and this seems most likely to be because of the strong influence of mainland Scots dialects.

**Intonation**

The most striking difference between Orkney and Shetland dialects is the dissimilarity in intonation (speech melody). Orkney speech is characterised by a very distinctive lilting ‘sing-song’ intonation pattern. As Shetlanders put it: ‘Orcadians do not speak, they sing’. Conversely, Shetland speech sounds somewhat flat and neutral. Although it is quite easy to describe Orkney intonation in impressionistic terms – and every Shetlander is an expert in this field! – up to now, little, if anything, of a scientific nature has been written about this matter.

In my investigation I addressed two main questions. Firstly, how well are native Orkney and Shetland speakers able to distinguish between the two dialects when asked to judge very short speech fragments? And secondly, exactly what form do the Orkney and Shetland intonation patterns in fact take?

To tackle the first question, I asked 20 Shetlanders and 20 Orcadians to listen carefully to short fragments of speech pronounced by four male speakers from Orkney, four from Shetland and four from mainland Scotland. The listeners had to indicate on a response sheet whether they thought a particular speaker was from ‘Shetland’ (for Shetland listeners), from ‘Orkney’ (for Orcadians), or ‘from elsewhere’. Since, apart from the dissimilarities in intonation, some Shetland vowels and consonants clearly differ from their Orkney counterparts, this would seem to be an easy task.

Therefore, to be able to find out to what degree intonation – rather than vowel sounds – helped the listeners to tell the dialects apart, the speech was altered, using a computer, to make it almost impossible to distinguish the various vowels and consonants. All that was left of the speech was the rhythm and the melody. It sounded much as if one were eavesdropping on a conversation in an adjacent room, and trying to make out what was being said. After the participants had listened to the unintelligible fragments, the same fragments were then repeated (in a different order) as normal, intelligible speech.

Nobody reading this will find it at all surprising that it was an easy task to identify the Orkney speakers. As it turns out, the results of the listening test proved to be more complex and more interesting. The Orkney listeners identified all speech fragments spoken by Orcadians, even in the unintelligible version, as from Orkney and classified the Shetland and Edinburgh speakers as ‘from elsewhere’. However, although when listening to the unintelligible fragments the Shetland listeners had no problem in classifying the Orcadians as being ‘from elsewhere’, they were nevertheless unable to distinguish between the Shetlanders and the speakers from mainland Scotland. So, much to their amazement – and in some cases annoyance – my Shetland ‘guinea pigs’ classified sooth-mooters as Shetlanders! Of course, in the case of the intelligible speech fragments, the Shetland participants had no difficulty in telling the dialects apart.
This brings us to our second issue. Native listeners apparently find it hard to distinguish between Shetland and mainland Scots intonation – but are the intonation patterns indeed identical? And what form does the Orkney pattern take? To address these questions, I made recordings of ten male speakers from Shetland, ten from Orkney and ten from Edinburgh. They each read 20 different sentences of the type

There are many gardens in Bergen.

The recordings were analysed by computer.

We may summarise the outcome of the investigations so far as follows. Orcadians – and at least it has now been scientifically proven – do go up and down, up and down, up and down … So too, do the Shetlanders, even though they seem not to be very aware of the fact. However, there is a crucial difference. Orcadian intonation rises towards the very end of a word, whereas Shetlanders, and speakers from Edinburgh, go up right at the beginning of words. (This latter pattern is typical of the intonation of the vast majority of mother-tongue English speakers in Britain, America and elsewhere in the world – it’s also true for Dutch and German for that matter.) Incidentally, just about every Shetlander I met had no problem imitating the Orkney lilt, but I regret to say that Orcadians seemed quite incapable of copying the typical Shetland intonation pattern.

Conclusion

Now that some of the key differences between Orkney and Shetland dialects have been examined, the next step will be to try to find the origin of the dissimilarities in intonation. At this stage, it is still not yet clear just why Shetland intonation is similar to that of mainland Scots while Orcadian has its characteristic lilt. According to popular belief, there are similarities between Orcadian and Scandinavian intonation. And indeed, it is true that some dialects of Norwegian and Danish do have certain intonation patterns resembling those of Orkney dialect. Yet, it is puzzling that we should find Scandinavian intonation in Orkney – but not in Shetland. After all, as we have seen, Shetland dialect has preserved a syllable structure which is typically Scandinavian while Orcadian has lost it.

In both Gaelic and Gaelic-influenced speech (such as Highland and Ulster English) we find an intonation pattern very similar to that of Orkney. Therefore, one possible explanation of the problem could be that Orkney intonation has been in some way affected by the various Gaelic-influenced mainland dialects. For the next couple of years, then, I am going to be kept busy examining the intonation patterns of the various dialects in more detail, and, in order to keep readers of the New Shetlander up to date with what I discover, I hope to present more of my findings in a future edition of this magazine.

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Figure 1. Typical intonation contours for Shetland speech (top) and Orcadian (bottom).