

NUCLEAR ACCENTS IN FOUR IRISH (GAELIC) DIALECTS

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ABSTRACT

In this paper the distribution of nuclear accents in declaratives of four major dialects of Irish is described. The findings show considerable variation, particular between northern and southern dialects. Speakers of the northern dialect of Donegal show a propensity for rising nuclear accents (L^*+H) in declaratives, while speakers of the other, more southern, dialects of Mayo, South Connaught and Kerry Irish show a preference for falling nuclear (H^*+L) accents. The findings are compared with results for varieties of English.

Keywords: Irish, Gaelic, intonation, prosody, dialects.

1. INTRODUCTION

This paper describes nuclear contours in the declaratives of four Irish dialects: Donegal Irish, Mayo Irish, South Connaught Irish and Kerry Irish. It is drawn from an ongoing project on the *Prosody of Irish Dialects* [15], which aims to provide an account of the prosodic system of the main Irish dialects. The project was motivated by the fact that, despite a long tradition of segmental studies, e.g. [7, 17], there has been a major gap in our understanding of the prosodic structure of Irish. The prosodic information that was previously available was limited to rather preliminary sketches as in [1, 17].

This work gains impetus from the recent growth in cross-dialect, as well as cross language studies, e.g. [19, 20]. These studies provide us with comparative material, allowing us to consider the nature of cross-dialect prosodic differentiation, and to reconsider possible historic influences. An aspect of particular interest in this work concerns the claims in the literature concerning the possible influence of Irish Gaelic intonation on varieties of English. It has been suggested that the rising nucleus in some varieties of English reflect an influence of Irish. Such claims have hitherto been difficult to assess, given that virtually no information was available on Irish intonation. The dialects discussed here are shown in Fig. 1.

The paper presents a tonal inventory for the nuclear accents and describes the distribution of the nuclear tones across these four dialects. Furthermore, a brief comparison is made with available information on varieties of English (British and Irish varieties), based on research carried out on the IViE project [9, 10].

Figure 1: Map of Ireland illustrating the four major dialects of Irish: Donegal (Ulster), Mayo, South Connaught and Kerry



2. METHODS

The analysis is carried out within the framework of autosegmental-metrical phonology [11, 14]. The IViE labelling system [9] is employed. This is an adaptation of the ToBI system [18] but was designed specifically to account for variation within English dialects. Within IViE all accents are left-headed and there is a pool of tone labels, which can be employed depending on the dialect. IViE was chosen as it was developed specifically with cross-varietal comparisons of intonation systems in mind. For transcription and annotation we employ the PRAAT shareware [2], which provides acoustic displays of f_0 , with time-aligned labelling fields. Auditory analysis is thus aided by visual examination of the f_0 contour.

The corpus for this study is a set of twenty-five context-free sentences, containing as much voiced material as possible. These test sentences were included in a randomised set of fifty sentences, which also contained different question types. The

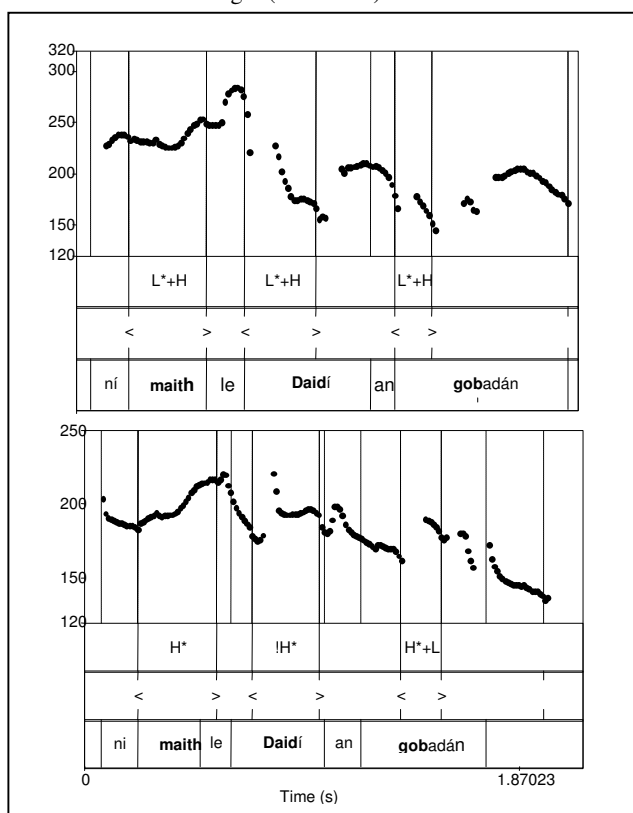
sentences elicited contain on average three accented syllables and are rather simple in structure. Since the sentences are short they tend to be uttered in a single intonational phrase.

The speakers recorded for this study were all native speakers of each dialect, aged between 21 and 45. None of the informants were professional speakers (actors, radio announcers, etc.) and all of them speak Irish as their first language. Four female speakers of each dialect were recorded and analysed.

3. RESULTS

In drawing up a tonal inventory of nuclear accents in Irish declaratives, cross-dialect variation is apparent. Results here indicate a major North-South divide in terms of the nuclear patterns of the dialects. It is also worth noting that the prenuclear accents of these dialects also differ in tonal structure. The two declaratives in Fig. 2 provide evidence of this cross-varietal difference in intonational structure.

Figure 2: f0 trace of the utterance “Ní maith le Daidí an gobadán” (Daddy doesn’t like the sandpiper) displaying a typical contour for a Donegal (upper half) and South Connaught (lower half) Irish declarative



The contour in the upper part of the Figure shows a typical Donegal Irish declarative, while the contour of the lower part of the Figure is a typical South Connaught Irish declarative. The exact distribution of nuclear contours in each of the four dialects is presented in Table 1.

Table 1: Distribution of nuclear accents in declaratives of four major dialects of Irish.

Dialect	Nuclear accent	%
Donegal	L*+H 0%	68%
	L*+H L%	9%
	L* 0%	23%
South Connaught	H*+L 0%	97%
	H*+L H%	3%
Mayo	H*+L 0%	100%
Kerry	H*+L 0%	100%

3.1. Donegal Irish

Melodically Donegal Irish is strikingly different from that of the other Irish dialects. It is generally assumed that declaratives in most languages have a falling nuclear contour. Donegal stands out in that it is characterised by a very distinctive rising intonation pattern, whereby the rise occurs either late in the accented syllable or even after it.

Rising nuclei in Donegal Irish account for approximately 68% of nuclear accents. This final rising accent is followed by a plateau, and there is no following boundary tone. This lack of boundary tone at the end of the intonational phrase is transcribed with a 0%.

There are two other nuclear contours employed by speakers of Donegal Irish in declarative sentences. One of these nuclear contours is a rise-fall contour, whereby the nuclear accent (L*+H) is followed by a low boundary tone, labelled L%. Just 9% of declaratives in this corpus are produced in this way. The remaining nuclear contour type employed by Donegal speakers is a low level nucleus, labelled L* 0%. These low nuclear contours account for 23% of nuclear accents in the Donegal corpus.

3.2. South Connaught Irish

As illustrated in Fig. 2, the intonation patterns of declaratives in the South Connaught dialects are strikingly different to those of the northern dialect of Donegal. The investigation of declarative sentences in this dialect suggests that in the

majority of South Connaught Irish declaratives there is a falling nuclear accent, labelled H*+L. Speakers of South Connaught generally employ the “no-tone” option at the intonational phrase boundary, so that 93% of nuclear contours are labelled H*+L 0%. In the remaining 7% of declaratives this falling nuclear accent is followed by a high boundary, labelled H*+L H%.

3.3. Mayo Irish and Kerry Irish

In this corpus speakers of both Mayo Irish and Kerry Irish employed only falling nuclear contours in declarative sentences and both employed the “no tone” option. This was labelled H*+L 0%.

To sum up, speakers of the more northerly dialect of Donegal Irish show a preference for rising nuclear accents in declaratives, while speakers of the more southern dialects, on the other hand, demonstrate a propensity for falling nuclear accents. It should be noted however that despite these seemingly similar nuclear accents in the southern dialects, there can be consistent differences in the realisation of these phonologically similar tones across the three dialects. Differences in these southern dialects, pertaining to the timing of the melodic contour relative to the segmental string are described in [4, 5, 6, 18].

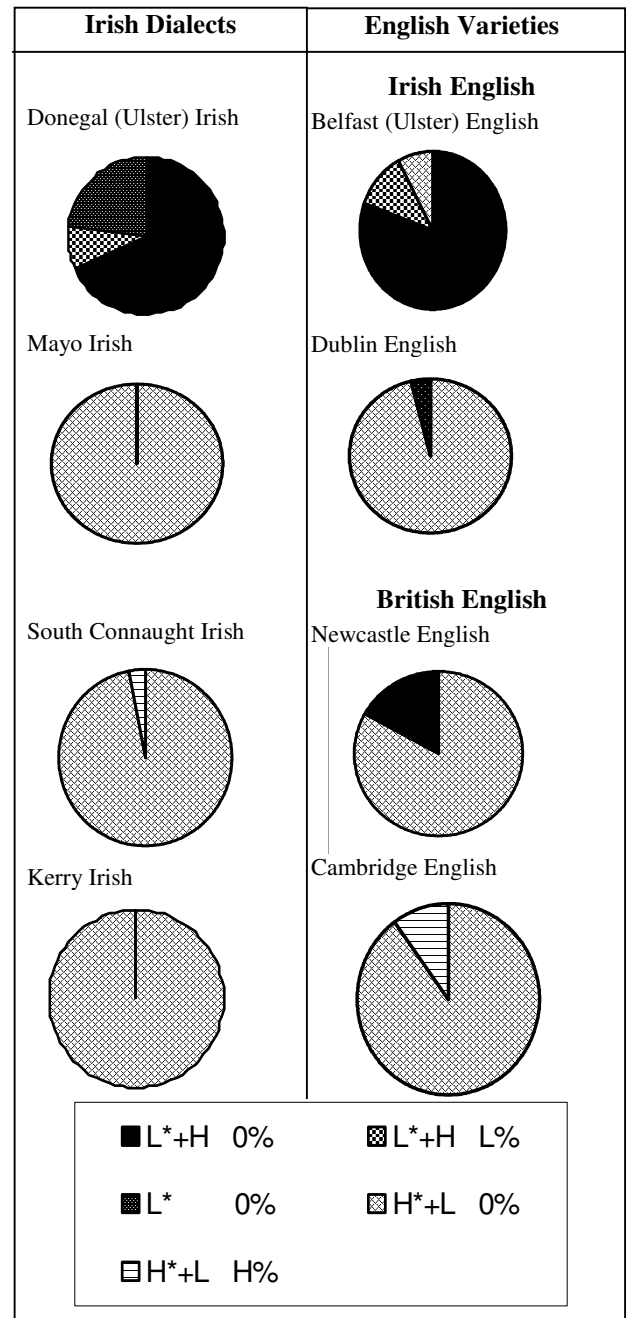
4. COMPARISON WITH ENGLISH DIALECTS

These results invite comparison with results reported for varieties of English. The question has long been discussed in the literature [3, 12, 13, 21] as to whether an Irish influence lies behind the rising nucleus found in the declaratives of some varieties of English, such as Belfast and Liverpool English [3, 12, 13]. Fig. 3 indicates the nuclear tones found in the declaratives of the four Irish dialects, compared with some findings from the IViE project [10] on declaratives in varieties of English.

Of particular interest here are the similarities between nuclear contours of the Irish dialect of Donegal and Belfast English. Both of these dialects show a preference for a rising nuclear accent in declarative sentences. Furthermore, in both the present Donegal Irish data and in Belfast English this final rising accent is followed by a plateau, and there is no following boundary tone. The “no tone” option 0% was demonstrated in the IViE project to be necessary to cover the range of possibilities at

the intonational phrase boundary for Belfast English [8]. The “no tone” feature is also needed to capture boundary options in Donegal Irish.

Figure 3: nuclear accents in declaratives of four Irish (Gaelic) dialects and four varieties of English. Results for the Irish dialects are shown on the left and results for the English dialects are shown on the right.



The similarity between Belfast English and Donegal Irish is unlikely to be coincidental given their geographical location. These consistent rising nuclei in declaratives appear to be a feature associated with Ulster. Fig. 3 also indicates that the

more southern varieties of both Irish and English (in Ireland) are very different, and all show a preference for falling nuclear accents. As such, they pattern rather with the majority of British English varieties, although there can be striking realisational differences (see [16]).

The similarity of the nuclei declaratives in Belfast variety of English and Donegal Irish does appear to lend some support to suggestions in earlier studies that rising nuclei in British English varieties may be due to an Irish influence.

However, the picture is complex, and the question of influences is not one we can yet give a clear answer on, given the dominant trend towards falling nuclear accents in the declaratives of the southern varieties of Irish analysed here. So, if rising nuclei can be considered an Irish influence, it could entail (if we go by the present data on Irish dialects) that it would need to have been an Ulster-Irish influence.

Such conclusions would be premature however. It should be noted that rising (and falling) nuclei have been reported for one southern dialect of Irish Gaelic, the Muskerry dialect of Cork, a dialect not included in the present study [1, 17]. Furthermore, additional information on many more varieties of Irish English would help shed light on this issue. A full consideration of this question would require consideration of the historical immigration patterns from regions of Ireland to the cities where rising nuclei have been reported.

5. CONCLUSIONS

The distribution of nuclear tones has been described for declaratives of four major dialects of Irish. Intonationally, there is a major difference between northern and southern varieties. Speakers from Donegal generally produce nuclear accents with a distinctive low-rise accompanied by a plateau. Speakers of the other more southern dialects of Irish speakers do the opposite. They produce nuclear contours predominantly with a falling accent. The results, when compared with the English data, show some support for suggestions that rising nuclei in varieties of English are an influence from Irish. However, as yet there is still not enough evidence to decide on such issues, but future work on other dialects such as Muskerry Irish, and on varieties of Irish English should yield more insight. Additionally there is a need for a more sociological and historical dimension to any future comparative work.

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