

What can the Falkland Islands tell us about Diphthong Shift?¹

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Introduction

A number of non-standard varieties of English realise the diphthong /au/, found in words such as ‘out’ and ‘down’, with a front mid-open nucleus, [ɛʊ - æʊ], and the diphthong /ai/ in words such as ‘nice’ and ‘time’ with a back mid-open one, [ɔɪ - ʊɪ]. Such varieties include the traditional accents of London and the South East of England, and also those spoken in the Southern Hemisphere Anglophone countries of Australia and New Zealand. Traditional accounts suggest that, following the completion of the Great Vowel Shift, during which Middle English \bar{u} and \bar{i} diphthongised and the nuclei of the new diphthongs lowered all the way to [aʊ] and [aɪ] respectively, the nucleus of /au/ then raised and fronted from this fully open position to reach its current location in front mid-open position and the nucleus of /ai/ underwent a parallel movement, backing and raising to its current location. These shifts from [aʊ] to [ɛʊ] and from [aɪ] to [ɔɪ] are often claimed to form part of a chain

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of vowel shifts affecting a considerable number of accents of English. Wells (1982) classifies changes to /au/ and /aɪ/, together with changes to /i: ei əi u: ou/, into a connected series of vocalic movements called Diphthong Shift (Wells 1982: 256-7)². However, Britain (2008a, 2008b) has argued that for /au/ in the Englishes of New Zealand and Southern England, this proposed route from [aʊ] to [ɛʊ] is not supported either by historical dialectological or geolinguistic evidence, demonstrating that [aʊ] as a vernacular variant is not found in the appropriate times or places to be able to account for how [ɛʊ] emerged in these varieties. In this article we examine the histories of /ai/ and /au/ in another Southern Hemisphere Anglophone community, one which was settled by Anglophones at about the same time as New Zealand, but one about which much less has been written – that of the Falkland Islands in the South Atlantic Ocean. Our analysis, presented below, of Falkland Island English (FIE) provides further evidence that proposed Diphthong Shift routes for the history of /au/ in Southern Hemisphere Englishes are problematic.

Diphthong Shift and the /ai/ and /au/ diphthongs

Diphthong shift (henceforth *DS*) is described by Wells as ‘a set of phonetic changes almost as fundamental as the Great Vowel Shift of half a millennium ago’ (Wells 1982: 256). Wells’ diagram of DS, ‘in schematic and drastically simplified form’ (Wells 1982: 256) is below in Table 1.

So:

- /i:/ in words such as ‘fleece’, ‘meet’ diphthongises, with the nucleus falling to become [əɪ];
- /u:/ in words such as ‘food’ and ‘boot’ diphthongise, with a lowering of the nucleus to [ɔʊ];
- /eɪ/ in words such as ‘take’, ‘break’ undergoes a lowering and often backing of its nucleus to become [æɪ - ɐɪ];

² Diphthong Shift forms one subset of the changes that Labov (1994) has labelled ‘Southern Shift’.

- /ʌʊ/ in ‘boat’ and ‘soak’ front and lower the nucleus (and sometimes front the offglide too) to [ɐʊ - ɐʏ - ɐɪ];
- /aɪ/ in words such as ‘price’ and ‘time’ backs and sometimes raises its nucleus to [ɑɪ - ɒɪ - ɔɪ];
- /aʊ/ in words such as ‘mouth’ and ‘down’ front and raise the nucleus to [æʊ - εʊ].
- /ɔɪ/ in words like ‘boy’ and ‘toilet’ raise their nuclei to [oɪ];

Table 1: *Diphthong Shift*, according to Wells (1982: 256).

i:		u:
↓		↓
eɪ	oɪ	əʊ
↓	↑	↓
aɪ →	ɔɪ	æʊ ← aʊ

DS is, itself, an extension of the Great Vowel Shift (GVS), since the supposed ‘starting’ point of the operation of DS, both at the front and the back of vowel space, represents some of the supposed ‘end’ points of the GVS. For example, as part of the GVS, Middle English (ME) /e:/ was raised to /i:/ in words such as ‘meet’ and ‘beech’ (and was joined by ME /ɛ:/ (‘meat’, ‘beach’) which had raised to /e:/ as part of the GVS but then merged with ME /e:/ into [i:] in, among others, those dialects that subsequently underwent DS). DS then, according to Wells, operated on /i:/ in the same way that the GVS had done on ME /i:/ hundreds of years before (which eventually became [aɪ] in standard accents of English). The aspect of DS that we will be discussing here is what happened to post-GVS /aɪ/ (as in ‘price’, ‘time’) and post-GVS /aʊ/ (as in ‘town’, ‘out’). The proposition in DS is that the GVS had brought

these diphthongs to a point where they were realised as [aɪ] and [aʊ], and DS then, in the case of /ai/, “shifts from [aɪ] to [ɔɪ] or sometimes just to [ɑɪ] or [ɒɪ]” (Wells 1982: 257) and in the case of /au/ “shifts forwards to [æʊ - æə - ɛʊ]” (Wells 1982: 257). Given that, apparently as a result of DS, the nucleus of /au/ is now front, even though it was back in ME, and the nucleus of /ai/ ends up as a back vowel, whereas it was front in ME, Wells labels this part of DS as ‘PRICE-MOUTH crossover’ (Wells 1982: 310). He (1982: 252) argues that DS was a London-based phenomenon well underway by the beginning of the 19th century and that it was exported to those colonies where significant Anglophone settlement began after that date, e.g. Australia. Some researchers have argued (erroneously in our view) that the DS of /au/ underwent a good deal of its journey in some of the postcolonial countries themselves (e.g. Woods 1997, 1999, 2000, Maclagan and Gordon 1996, Maclagan, Gordon and Lewis 1999), with Woods (esp. 2000) rejecting the view that we can account for the use of [ɛʊ] realisations in New Zealand through importation from the British Isles.

It is our contention that this route for /au/ from the GVS to DS resulting in [ɛʊ] is probably incorrect (see Britain 2001, 2008a, 2008b). In this article we present evidence from Falkland Island English, a variety spoken by just over two thousand speakers in the South Atlantic Ocean, which has post-DS-looking realisations of /au/. We argue, by examining both /aʊ/ and /aɪ/ in this variety, that the present-day Falkland realisations of /aɪ/ are almost certainly due to very minor changes following importation from the British Isles and that present-day [ɛʊ] realisations of /au/ are due largely to post-settlement fronting from a central mid-open starting point, *rather than as a result of change from [aʊ] as Diphthong Shift would predict.*

Firstly, here, therefore, we paint a brief portrait of the Falklands, focussing on their demographic history which, we argue, is crucial to understanding how we can account for their current realisations of /aʊ/ and /aɪ/. We then present an empirical

analysis of over 12000 tokens of /au/ and /aɪ/ which, we will claim, highlights the implausibility of DS being responsible for the pronunciation of /au/³.

Falkland Islands: History and Anglophone settlement

The Falkland Islands comprise a group of over 700 islands in the South Atlantic Ocean, 480 km off the east coast of Argentina. Together, the islands cover 12,173 km² (roughly half the size of Wales, and slightly larger than Jamaica), with a resident population of 2478, according to the 2006 census. There are two main islands, East and West Falkland, and the capital is Stanley, on East Falkland, where 85% of the resident population live. In addition to the resident population, around 2000 British military personnel are based at RAF Mount Pleasant, 50km west of Stanley. Politically, the Falklands are an Overseas Territory of the United Kingdom.

Although the British first set foot on the islands in 1690, uninterrupted Anglophone settlement of the Falklands dates back to 1833, making the Falklands one of the most recently developed ‘inner-circle’ Anglophone speech communities. Migration from the UK was very slow in the early years - just 45 at the time of the 1842 census⁴ and still fewer than 400 in 1851. By 1901, following a committed recruitment drive in the UK, the population had reached over 2000, according to the Falkland Islands Government Census Report. There were few migrants from South America in the 19th century – Spruce (1996:1) suggests no more than 100, and most had returned by the end of the century. We do know, however, that the 19th century population was constantly in a state of flux, partly caused by a large proportion of the workforce being contract employees, who came, served their time and then left, partly by unexpected arrivals - e.g. a good number of Scandinavians who had been shipwrecked or jumped ship on their way around Cape Horn, and partly by the return of migrants who had intended to stay but couldn’t acclimatise to life in the Falklands

³ From here, we refer to variable realisations using Wells’ 1982 lexical system which has the advantage of avoiding the impression given by the use of IPA symbols that one particular pronunciation is being privileged. /au/, therefore, will be referred to as the MOUTH variable and /aɪ/ as the PRICE variable.

⁴ 27 were English, 5 Irish, 3 “South Americans”, 2 Scots, 2 Cape Verdean, 1 Dane, 1 German, 1 Gibraltar, 1 Bermudan and 2 Falkland-born children.

(see Sudbury 2000, 2001). The total population remained at just over 2000 throughout the 20th century, but again there was considerable demographic instability – in 1952 alone, for example, over 12% of the population emigrated from the islands and another 9% arrived to settle there (see, for example, Sudbury 2000: 26). There was a general decline in the population between the Second World War and 1982 – a fall of over 19% between the censuses of 1946 and 1980, caused by economic decline and the gradual fall of the price of wool on international markets, a key Falkland export at the time.

In April 1982, the Falklands were invaded by Argentina. Britain retook the islands 74 days later. The consequences of this Conflict for the Falklands and their people have been considerable. The establishment of a fisheries licensing zone in 1986 has generated considerable wealth for the islands, and their general prosperity has triggered an upsurge in migration, with the population rising by more than 36% since 1980. The population is becoming more and more urban, however. Today, as mentioned above, 85% of the population live in Stanley, with the rest living in ‘Camp’ – the local term used to describe settlements elsewhere on East and West Falkland, or on one of the other islands of the archipelago - up from just 58% in 1980. Sudbury (2000: 29-30) shows that the population surge occurred mostly in the 1980s, in the years immediately after the Conflict, and that since then there has been less immigration but also less emigration – the population is becoming more stable.

Accurate details of the places of birth of the earlier settlers of the Falklands are hard to come by. As Sudbury (2000: 119-121) outlines, many of the records have been lost or destroyed and those that remain are often vague and inconclusive. Although dominated by the English, the origins of the very early residents of the Falklands in the mid 19th Century were quite diverse, with small numbers of Spaniards, Irish and Scandinavians. By the late 1860s, the British government’s efforts at encouraging migration were beginning to show signs of success, leading to a steady increase in migration, especially from Somerset, Devon and other parts of the South-West of England, from Hampshire in the South of England, and from (especially Gaelic speaking areas of) Scotland (Strange 1983, Trehearne 1978). As Trehearne notes, “a great proportion...were of Scottish origin, often emigrants from the Western Highlands and Islands, especially Lewis...Applicants from the Western

Isles would have obtained favourable consideration for these free passages, coming as they did from a part of Britain not unlike the Falklands in climate and way of life' (1978: 124). Indeed William Blain, a shepherd from Dumfries, noted on his arrival in the Falklands in 1878 that 'Scotland has equally as good a claim to the Falklands as England. At the time I am speaking of, the majority of the inhabitants was Scotch or of Scotch descendants. Besides, the Scotch language was fairly well represented' (quoted in Cameron 1997). Whilst it is clear that Gaelic did not survive long in the Falklands⁵, the question of what sort of English these migrants spoke remains open. Shuken reports that in the Highlands and Islands of Scotland "English had very little impact until the end of the 19th century" (1985: 146), with English only being introduced systematically to these areas following the Education Act of 1872 making English the compulsory medium of education in schools (Sabban 1985: 124). Sudbury (2000: 129-130) provides evidence to support both those that claim they would have spoken a fairly standardish English:

"Their English, being acquired from books and occasional conversation with educated persons *is marked by no particular peculiarity* except a degree of mountain accent and Celtic idiom; so that it is more easily intelligible to an Englishman than the dialect spoken by the Lowland Scotch" (John McKenzie, *The New Statistical Account of Scotland*, vol. 15, page 51, cited in Bailey (1996: 301), our italics, see also Ó Baoill (1997: 566)).

as well as those who feel Scots would have played a greater role in the shaping of their emergent English variety:

⁵ Richards (2001: 652), writing about the somewhat earlier settlement of Highland and Islanders in Australia suggests that the 'scattering of the Highlanders...made it difficult to sustain Gaelic communities over more than a single generation', though he is very clear that most of the Highlanders were Gaelic speakers on departure for Australia. It is likely that this scattering, with poor inter-settlement communications, would have had a similar effect in the Falklands, though the Highland Scottish settlement of the Falklands was later than that of Eastern Canada and Australia, increasing the chances that the migrants may have had at least *some* competence in English as they left for the South Atlantic.

“It makes a world of difference whether people have learned English from schoolmasters or from Scots speaking neighbours. After more than a hundred years of compulsory schooling through English it is unlikely that Gaels living now would be exposed to anything other than a variety of standard English in the classroom and probably SSE (Standard Scottish English), but enough remains of what I will call the frontier zones to suggest that contact with Scots speech may once have been the norm” (Clement 1980: 14, see also Ó Baoill 1997: 566).

Of course the migrants to the Falklands from the Highlands and Islands of Scotland may well also have been Gaelic monolinguals or a mixture of monolinguals and bilinguals and may have acquired all or most of their English en route to and on arrival in the South Atlantic, suggesting a contact variety shaped by the other Englishes that had made the journey south.

Research Methods:

Our analysis of Diphthong Shift in the Falklands is based on a substantial corpus of over 100 hours of recordings of informal relaxed conversation with 87 Islanders that had been born and brought up there, collected in the late 1990s during ethnographic fieldwork by Andrea Sudbury. The construction of the corpus was strongly guided by the demographic history and present of the islands. The social variables that helped shape the sampling of informants were:

- speaker gender;
- speaker age: it was recognised, because of the rather turbulent history of the Islands over the past 30 years, that it was particularly important to choose emically justifiable age categorisations that reflected the social upheavals that the community has experienced, so that everyone within a particular age group had ‘some shared experience of time’ (Eckert 1997: 155). Table 2 below shows the age groups sampled;
- Where the speaker lived: as mentioned earlier, the Falklands have, perhaps surprisingly, an extremely urban population with 85% of the Islanders living in the capital, Stanley, with the remaining 15% living in Camp, i.e. scattered

across the rest of East and West Falkland and on the remaining islands. A number of residents, however, have spent considerable periods of time both in Stanley and Camp, so a Mixed group was also established.

Table 2: Emic age classifications in the Falkland Island English corpus.

Age	Dates of Birth	Social significance of age grouping
<20	1977-	Children aged 5 or under at the time of the Conflict with Argentina.
21-44	1953-1976	Speakers have clear memories of the Conflict and grew up during a period of increased overseas travel and contact; improved transport facilities and the spread of electricity into Camp.
45-64	1933-1952	Period of mass emigration from the islands, general depopulation, wartime.
>65	- 1933	Elderly population that would have experienced and survived all of these social changes during their lifetimes.

Social class was not considered a relevant social category in the Falklands, given the strong local egalitarian consensus amongst the small remote population of islanders (see Sudbury 2000: 143 for more details).

The breakdown of the sub-sample of recordings used for the analysis of diphthong shift is presented below in Table 3. Potential informants were contacted through social network ties, using ‘snowballing’ techniques so that the fieldworker was passed from one family group or Camp settlement to another, thereby enabling intergenerational sampling within family groups as well as a good geographical coverage across the islands. Most interviews were carried out in people’s homes, often in pairs, so as to create as informal an atmosphere as possible, with recordings

lasting between 45 and 120 minutes each. Recordings were orthographically transcribed⁶.

Table 3: Breakdown of analysed sample from the Falkland Islands, by social groups.

	Male			Female		
Age	Camp	Stanley	Mixed	Camp	Stanley	Mixed
<20	4	1	-	5	2	2
21-44	2	1	2	5	2	1
44-64	4	-	1	5	3	1
>65	5	1	2	5	3	-
total	15	3	5	20	10	4
TOTAL	23			34		

The British dialect heritage of the PRICE and MOUTH variables in the Falkland Islands:

As we mentioned earlier, given the recency of Anglophone settlement of the Falklands, it is important, if we wish to understand how Falkland Island English has developed over the past century and a half, to gauge, as fully as possible, the dialectological input to the settlement of the Islands from Britain. It was established earlier that the Falklands were predominantly inhabited in the 19th century by migrants from the South-West and South of England and from Scotland, especially

⁶ See Sudbury 2000: 134-163 for further information about the methods used to collect these data in the Falkland Islands.

the Highlands and Islands. Here, therefore, we examine the dialectological sources which will provide detail about the way PRICE and MOUTH were uttered in those British regional dialects in the mid to late 19th Century when migration, relatively speaking of course, began to rapidly expand.

We have two sets of evidence that may shed some light on which forms were taken – these sources provide us with dialectological detail covering people born in the early to mid 19th century, somewhat before large scale migration to the Falklands, through to those born in the final quarter of the 19th century, at around the time when the Falklands population began to stabilise at just over the 2000 mark. The earliest source we can turn to is Alexander Ellis’s *On Early English Pronunciation: Volume 5* (1889). This is a traditional dialectological survey, based on evidence – usually transcriptions of reading passages and word lists - drawn from over 1100 locations in Great Britain. The data were sent to Ellis by a combination of trained linguists (e.g. Thomas Hallam, a phonetician) and interested locals and in some locations Hallam was sent off to validate the work of the local data collectors as well as investigate some features in greater depth. Since these data were collected primarily from older people, it gives us a picture of the vernacular dialects of people born in the early to mid 19th century. Although criticised by some (Dieth 1946: 76), Ellis’s work was pioneering. Charles Jones claims that it is “an unsurpassed masterpiece of philological scholarship, a work equally indispensable for information on period data, the direction of phonological change, sociolinguistic and regional distribution and, perhaps above all, a work noted for its attention to real observed data analysed through highly pragmatic eyes” (C Jones 2006: 274), while Mark Jones suggests “his data have been found to be extremely reliable when compared with modern studies of various areas” (M Jones 2002: 332). Ellis was cautious about what we could learn from educated speech, and was wary of word lists because their use removes the relevant item from its context and “alters the feeling of the speaker” (Ellis 1874, cited in C Jones 2006: 280). Bailey (1996: 72, 73) described him as “the most assiduous of the nineteenth century phoneticians...an observer of minute distinctions”. Ellis gives consistent detail for both the MOUTH and PRICE variables in each of his proposed dialect regions as well, often, at more local levels too.

Secondly, we have the evidence, for southern England only, from Kurath and Lowman (1970). This traditional dialectological questionnaire-based survey of 56 speakers was carried out in the mid-1930s, thereby giving us an insight into the language variation of those born in the mid- to late 19th century, just before migration to the Falklands was becoming more vigorous.

Figures 1a, 1b and 1c show the realisations of PRICE reported in the South and South-West of England in Ellis's 1889 survey, and Figure 2 shows what Kurath and Lowman (1970) found in their survey of southern England in the mid-1930s.

These sources, of course, cast little light on 19th century Scottish English. In *Lowland* Scotland, Ellis (1889) finds [ei] dominant before /k/, with some realisations of [əi], and he finds [ai] before boundaries. It is commonly held in studies of Scottish English that PRICE is one of the vowels subject to Scottish Vowel Length Rule

Figure 1a: Areas where [ɐɪ] nuclei of PRICE were used according to Ellis's (1889) survey.

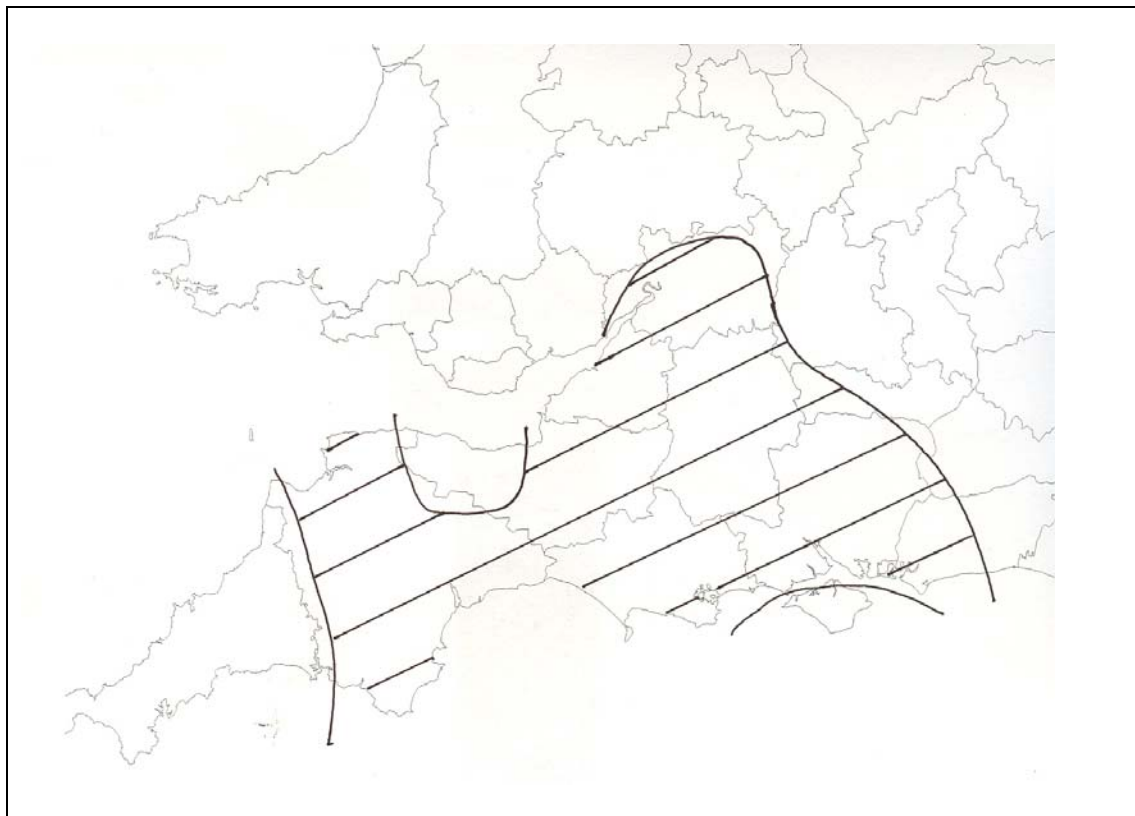


Figure 1b: Areas where [ʌɪ] nuclei of PRICE were used according to Ellis's (1889) survey.

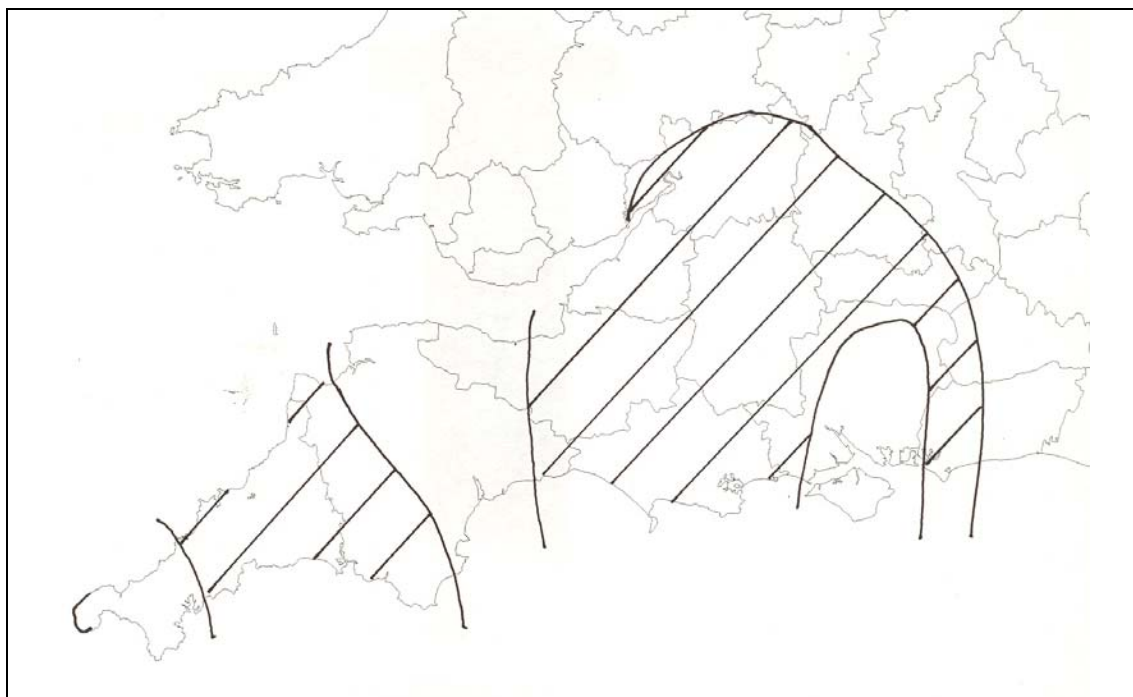


Figure 1c: The restricted scope of other nuclei of PRICE according to Ellis's (1889) survey: A = [ɑi]; B = [ɔi]; C = [ɪɪ].

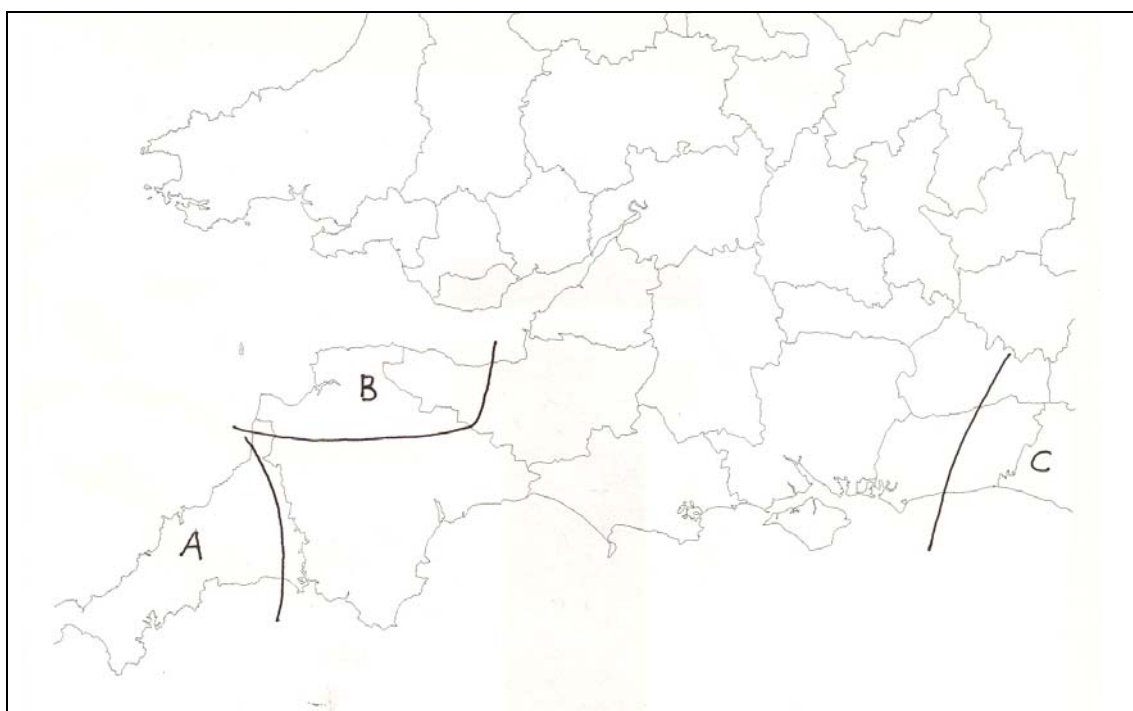
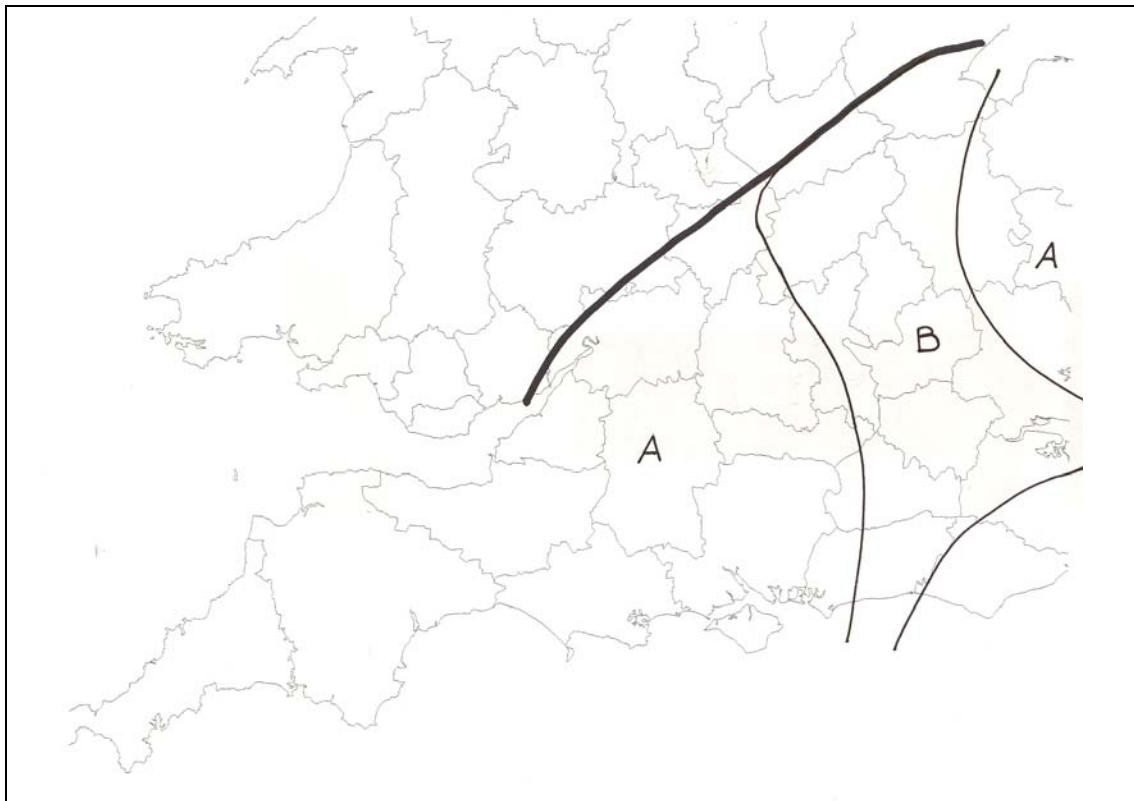


Figure 2: Realisations of PRICE found in the South of England in Kurath and Lowman's (1970) survey, carried out in the mid-1930s: A = [ɛɪ - əɪ - ʌɪ]; B = [ɑɪ].



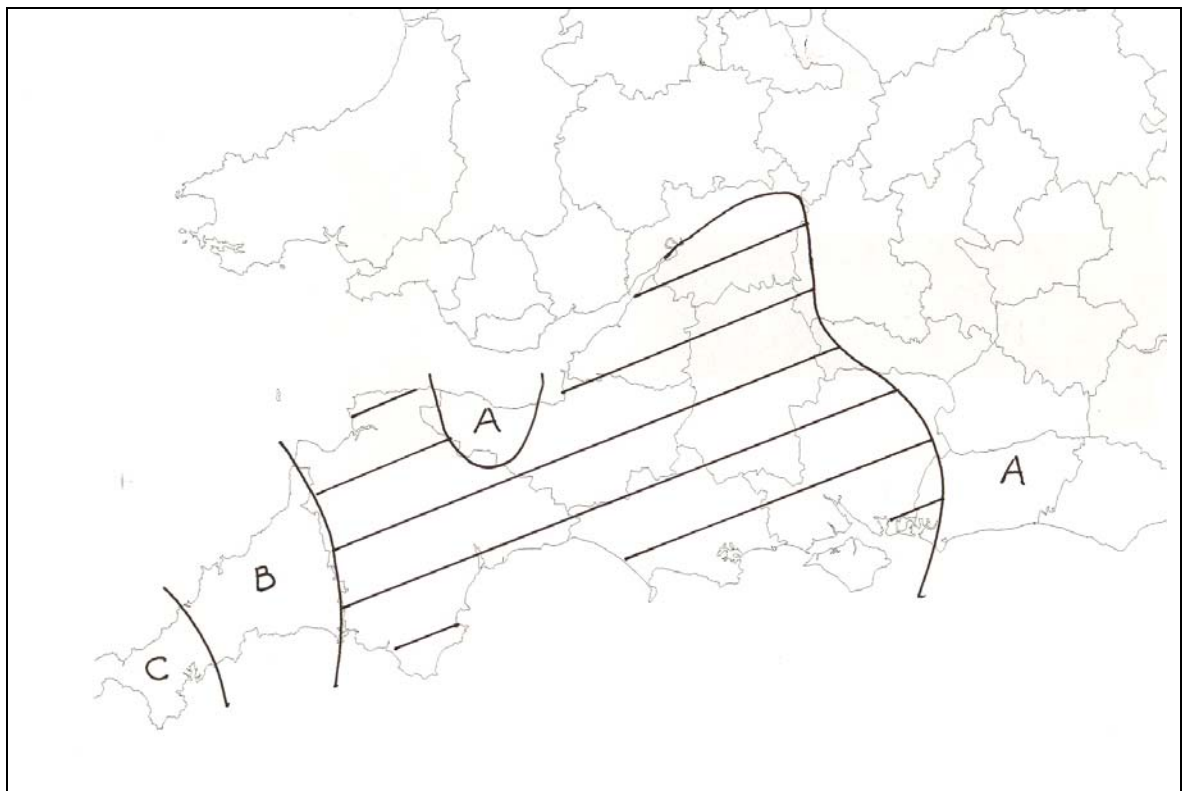
(SVLR), whereby all vowels are short in most environments, but (with the exception of /ɪ ʌ ɛ/) are always long before /r/, before the voiced fricatives /v ð z/ and before morpheme and word boundaries. Indeed PRICE undergoes quality as well as quantity changes in these environments, being realised as [əɪ] when in 'short' environments and [a'e] when in 'long' ones. It is widely acknowledged that changes to SVLR have shrunk the number of vowels affected but there is broad agreement (Johnston 2007: 114, Scobbie, Hewlett and Turk 1999: 230; Stuart-Smith 2004: 57), nevertheless, that PRICE is one of the few vowels that continues to retain this allophony.

Overall, then, given these inputs from the South and South-West of England and from Scotland, the dominant Falkland forms at the end of the 19th century would have been [əɪ], with some [a'e] in a restricted set of phonological contexts. Figures 3a and 3b show the realisations of MOUTH reported in the South and South-West of

England in Ellis's 1889 survey, and Figure 4 shows what Kurath and Lowman (1970) found in their survey of southern England in the mid-1930s.

It seems that realisations with a central mid to mid-open onset $[\ə\upsilon - \lambda\upsilon - \vø\upsilon]$ are dominant in those areas of the south and south-west that were prominent departure points to the Falklands, both in the Ellis data and the study conducted by Kurath and Lowman. Both surveys also point to front mid-open onsets in the vicinity⁷, especially

Figure 3a: Geographical distribution of variable nuclei of MOUTH according to Ellis's (1889) survey: Shaded area = $[\ə\upsilon - \vø\upsilon]$; A = $[\epsilon\upsilon]$; B = $[\varepsilon\upsilon]$; C = $[\varrho\upsilon]$.



⁷ Intriguingly, Kurath and Lowman (1970: 5) say “In Norfolk and in all the western counties except Devonshire, ME \bar{u} has yielded $[\ə\upsilon]$, occasionally $[\lambda\upsilon - \vø\upsilon]$. These are areas in which the reflex of ME \bar{i} also has a centralized beginning”. They don't go on to say, however, what the Devon realisation of ME \bar{u} is. On Map 29 of Kurath and McDavid (1961), however, where they place an inset map of southern British realisations to contrast with those of the Atlantic states of the US, /au/ is shown as having a central, mid-open nucleus in Devon.

Figure 3b: Areas where [ʌʊ] realisations of MOUTH were used according to Ellis's (1889) survey.

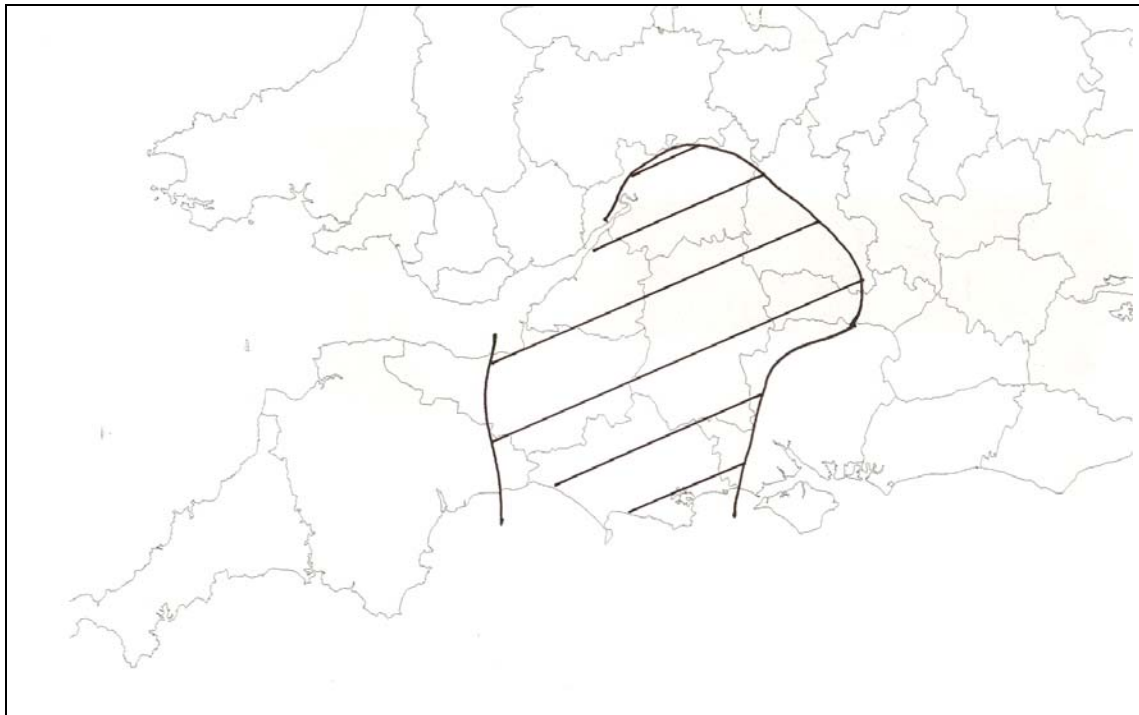
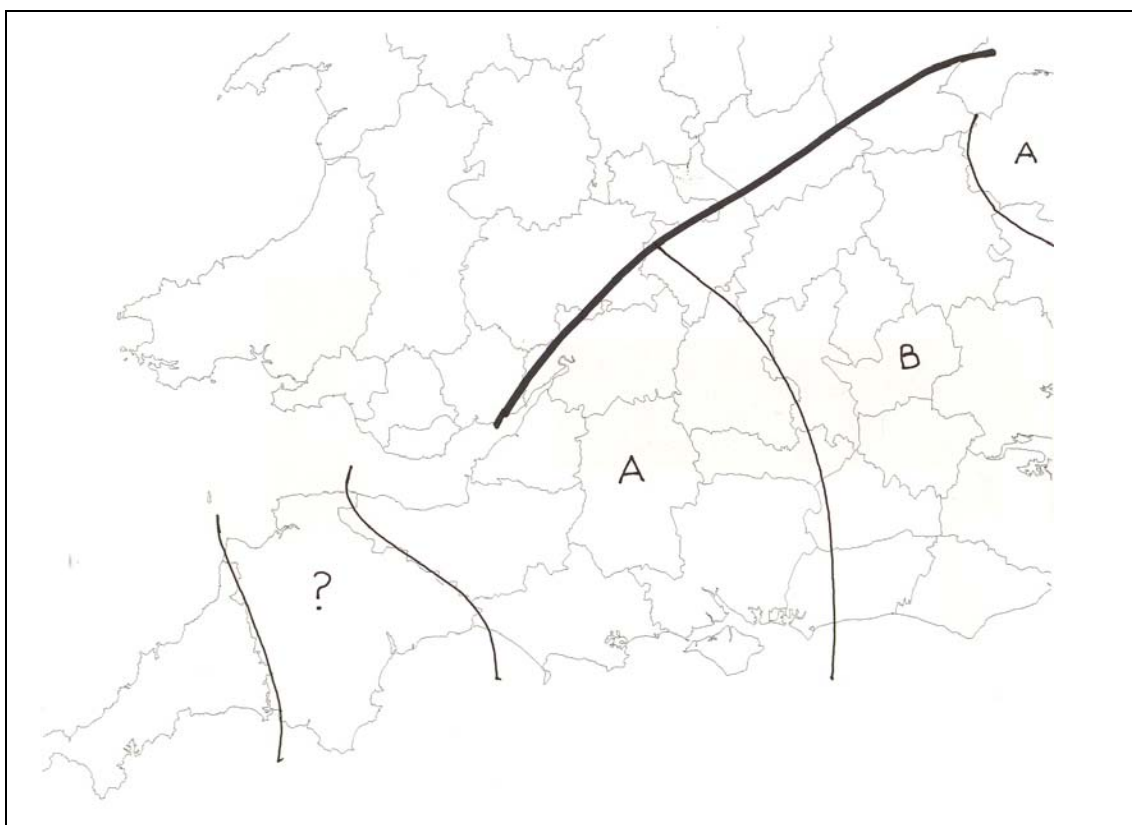


Figure 4: Realisations of MOUTH found in the South of England in Kurath and Lowman's (1970) survey, carried out in the mid-1930s: A = [əʊ - ʊʊ]; B = [ɛʊ - æʊ].



to the east. But, as Kurath and Lowman make clear (1970: 5), “it is noteworthy that the SBE [= Standard British English (1970: 4)] type [aʊ] does not occur in the folk speech of the section of England dealt with here”.

In *Lowland* Scotland, Ellis (1889) finds [u:] dominant, with a few realisations of [ʌu] in some places. More recent accounts suggest that MOUTH in the continuum between Scottish English and Scots ranges from [ʌʊ] to [ʊ] (e.g. Stuart-Smith 2004: 53-56).

Variable analysis

We conducted an auditory variationist analysis of the PRICE and MOUTH variables in the speech of the 57 speakers selected for analysis here. In order to try to ensure a consistent phonetic transcription, each token of both PRICE and MOUTH was transcribed twice, with the second transcription taking place at least one month after the first. If two transcriptions of a particular token differed, that token was discarded. In each case, the phonological environment following the PRICE or MOUTH vowel was noted and factored into the statistical analysis.

All function words were excluded from the analysis of PRICE, unless they were stressed. All triphthongs (e.g. ‘fire’, ‘wire’) were also excluded. In total, 7745 tokens of PRICE were transcribed from the 57 speakers. Five variants of PRICE were identified, and all tokens were assigned to one of these variants following the two-stage transcription process, enabling the creation of an index score for each speaker (and consequently for combinations of social groups) as well as each linguistic environment, enabling us to track phonological constraints on variability. The five variants, along with their index scores, were:

[əɪ - ə:ɪ]	4
[ɐɪ - ɐ:ɪ]	3
[aɪ - a:ɪ]	2
[a:]	1
[ɑ:]	0

Following the allocation of tokens to one of the five variants, overall average index scores were calculated for each speaker by adding all of the index scores of an individual speaker's tokens together and dividing by the number of tokens. The resulting overall index score provides an average for that speaker, and can be broken down to reflect that speaker's behaviour in different linguistic environments or amalgamated with the scores of other speakers to give group scores for a particular age, gender or location group, for example. Given our findings from the historical dialectological literature, the majority of migrants to the Falklands, it appears, would have come to the islands with scores of around 4.

For the analysis of MOUTH, again, all triphthongs ('power', 'tower', etc.) were excluded. In total 4695 tokens were dual-transcribed. Because MOUTH realisations varied in the data not just in terms of the quality of the nucleus but also in terms of the strength of the offglide⁸, it was not possible to set up an index score for MOUTH in the same way as for PRICE. Given that our focus here, considering what the Falkland evidence can tell us about Diphthong Shift, is on the nucleus, tokens were assigned to one of three categories dependent on the quality of the nucleus:

[eʊ - ε^o - ε:]: variants with front mid-open nuclei

[aʊ - a^o - a:]: variants with fully open nuclei

[ɐʊ - ɐ^o - ɐ:]: variants with central mid-open nuclei.

It is worth remembering at this point that if the DS hypothesis is correct, the classifications of variants above are ranked with the most innovative first and the most conservative last. As we saw earlier, though, these variants were represented to very varying degrees in the dialect input to 19th century Falkland Island English.

Results for PRICE

⁸ See Sudbury 2000 for an analysis of variable offglides of MOUTH in the Falklands. She finds that glide weakening is not as prevalent as it is in New Zealand (see Britain 2001), but that it is an ongoing change in progress with glide-weakened forms more likely among the young, among women and among residents of the capital, Stanley.

We divide the results for PRICE into two groups – RIGHT and TIME - because our analyses showed that following phonological environment was a determinant of variant choice: RIGHT represents PRICE before voiceless consonants and TIME before voiced consonants and boundaries. Our findings across apparent time in the Falklands data are shown in Figure 5. The picture in Figure 5 is one of stability, with few changes affecting either RIGHT or TIME across the generations. TIME, as one might expect⁹, shows slightly lower index scores than RIGHT, and analyses of individual speakers (see Sudbury 2000) shows that virtually all speakers are consistent in this allophony – only 4 of the 57 speakers analysed have higher index scores for TIME than for RIGHT. Furthermore, no speaker has an average index score below 2.5 and only 11 individuals have scores below 3. PRICE in the Falkland Islands, then, shows an allophonic distribution that often goes under the label of ‘Canadian Raising’ (Joos 1942, Chambers 1973), with higher nuclei before voiceless consonants than elsewhere¹⁰. Although the phonetics may be different in each case, the underlying phonological pattern is consistent and such a distribution is not uncommon beyond Canada and the Falklands. As Trudgill (1986) remarks, this phonological characteristic occurs ‘in nearly every form of non-creolised, mixed, colonial English outside Australasia and South Africa’ (1986: 160).

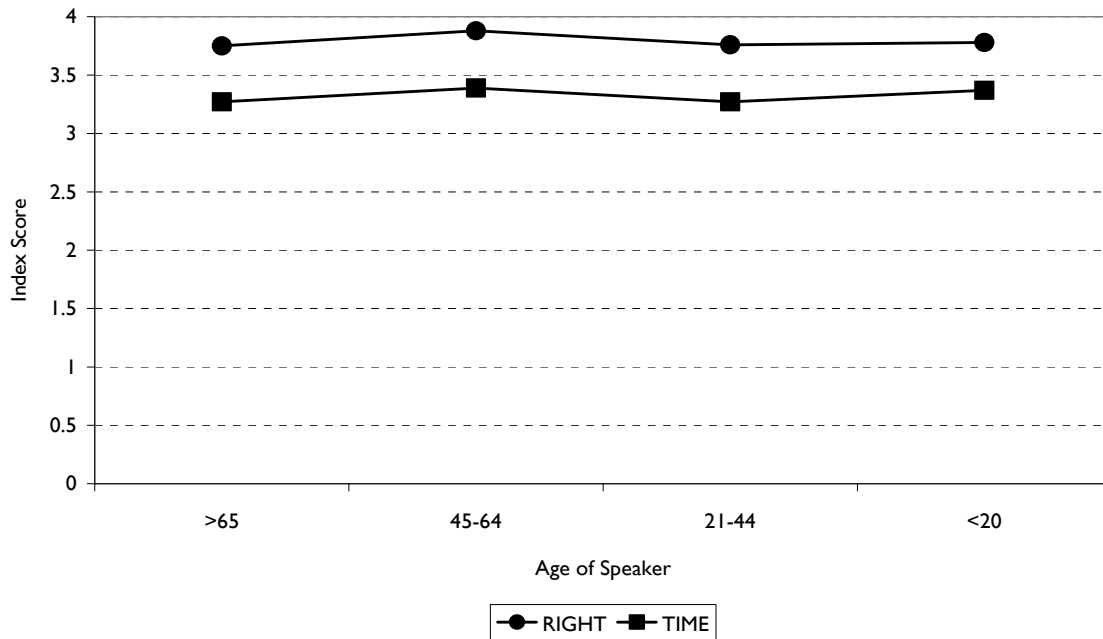
Given that, as we saw earlier, the dominant forms imported from South(-western) England and Scotland would have been [əɪ - ʌɪ - ɛɪ], the Falklands appear to have shifted little in their pronunciations of PRICE since, with forms that suggest a very conservative development with respect to the operation of the Great Vowel Shift in that the nuclei of the diphthong have yet to reach fully open position, the supposed

⁹ There is a tendency in many varieties of English to find shorter vowels before voiceless consonants and longer ones before voiced consonants (Laver 1994:446). With diphthongs the effect of following voiceless environments is to shorten the distance between nucleus and glide – consequently, for rising diphthongs, closer nuclei are expected before voiceless consonants than in pre-voiced environments.

¹⁰ However, the phonetic distance between the realisations before voiceless consonants on the one hand, and before voiced consonants and boundaries, on the other, is not as pronounced as it is in Canada (e.g. Chambers 1973, Boberg 2004) or, for example, the East Anglian Fens of England (Britain 1997a, b).

starting point for Diphthong Shift. Unlike Australian and New Zealand English, then, the Falklands do not have realisations of PRICE which appear¹¹ to have been subject to DS at all.

Figure 5: Realisations of PRICE in the Falkland Islands before voiceless consonants (RIGHT) and before voiced consonants and boundaries (TIME).



Results for MOUTH.

We divide the results for MOUTH into two groups – HOUSE and DOWN - because our analyses showed that following phonological environment was a strong determinant of variant choice for this variable too. We begin with HOUSE, the new lexical set to represent MOUTH with a following voiceless consonant. The results across apparent time are presented in Figure 6 below. In pre-voiceless position, front

¹¹ We say ‘appear’ here because it is not entirely clear whether Diphthong Shift operated on PRICE, for example, in New Zealand English by shifting a fully open [aɪ] to [ɔɪ - ɔɪ] there either (Britain 2005).

mid-open [ɛ] onsets dominate, with [a] and [ɐ] onsets showing a very parallel behaviour, and the former only rising to account for above 10% of all tokens amongst the youngest Falkland Islanders. Turning now to DOWN, the set representing MOUTH with a following voiced consonant (or following boundary), the picture is somewhat different – see Figure 7 below. Perhaps most striking, putting the behaviour of the very oldest speakers to one side, is the stability of the system – again [ɛ] is the dominant form, but, unlike for HOUSE, variability is much more robust, with [ɐ] onsets being most favoured of all among the old, and showing levels of usage in the other age groups that are intermediate between dominant [ɛ], on the one hand, and the low but stable levels of [a] on the other. These amalgamated scores for age groups hide considerable interspeaker variability, supporting claims of the ongoing diffuseness of the Falkland speech community (Trudgill 1986, 2004). For HOUSE, 34 of the 57 speakers used [ɛ] nuclei in over 90% of all possible tokens (with 14 categorical [ɛ] users), and [ɛ] use of less than 50% was only found in the speech of 7 informants; only 9 of the 57 used [a] more than 10% of the time, but for 4 of these [a] was used in more than $\frac{3}{4}$ of all tokens. Perhaps surprisingly, the most diffuse behaviour for HOUSE was shown by the youngest speakers. Of the 14 young speakers, half used [ɛ] in more than 90% of tokens, but 5 used it in less than 10% of tokens; half had no tokens of [a] at all, while 4 used it in more than $\frac{3}{4}$ of all tokens. The analysis of DOWN showed *intra*-speaker variability rather than the inter-speaker variation exhibited by HOUSE: only 4 speakers failed to use all three variants in their recording sessions (33 failed to do so for HOUSE); only 6 speakers used any one variant more than 80% of the time (41 did so for HOUSE); for DOWN 29 favoured [ɛ] onsets, 10 favoured [a] and 18 favoured [ɐ] (for HOUSE, only 6 didn't favour [ɛ]).

These results confirm, apart from the general diffuseness of their linguistic behaviour, that Falkland Islanders generally have a distinct allophonic patterning for MOUTH with nuclei higher before voiceless consonants than before voiced (only two speakers had more [ɛ] in pre-voiced contexts than in pre-voiceless) – like PRICE, this represents a ‘Canadian Raising’-like distribution.

Figure 6: Realisations of MOUTH in the Falkland Islands before voiceless consonants (HOUSE).

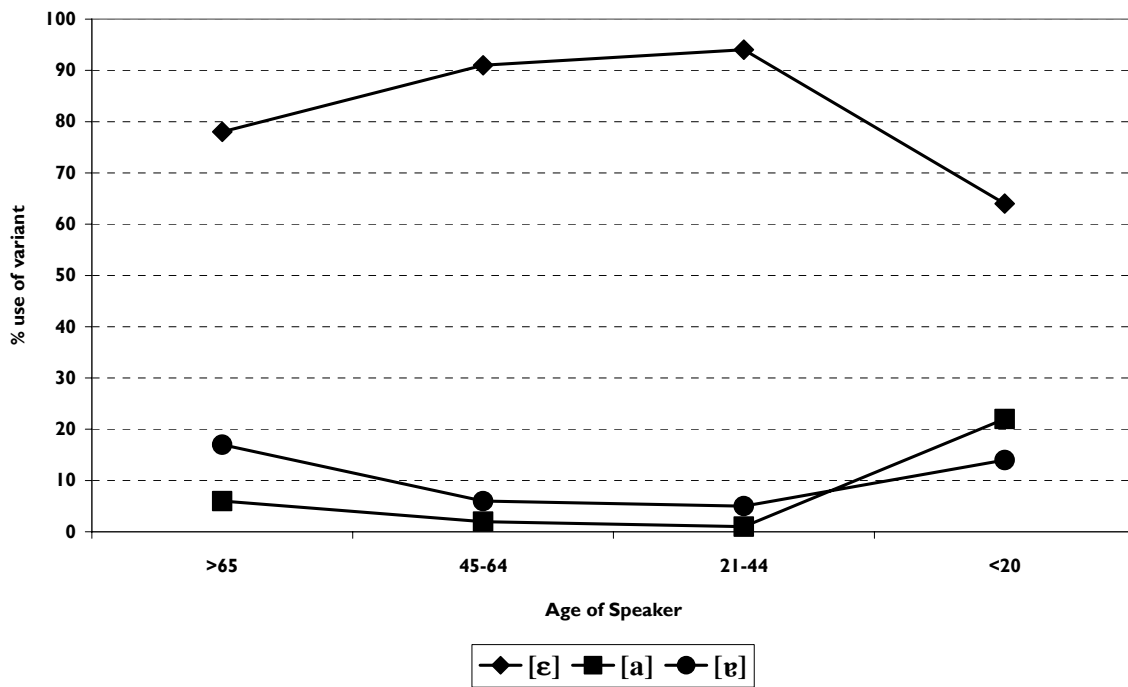
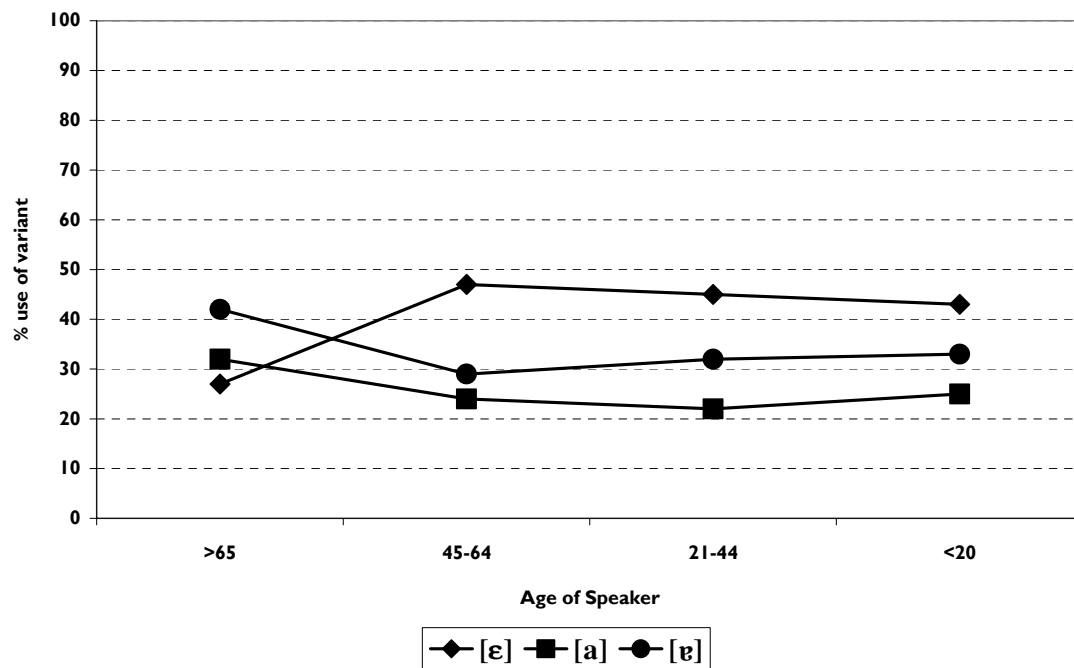


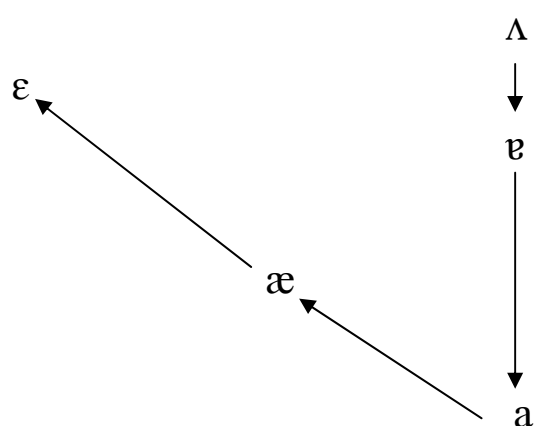
Figure 7: Realisations of MOUTH in the Falkland Islands before voiced consonants and boundaries (DOWN).



Overall, though, [ɛ] is the dominant nucleus of the MOUTH diphthong in the Falklands data, a realisation that we would perhaps not have expected given the input from 19th century British Isles dialects. We saw earlier, when considering Ellis’s 1889 survey, that the dominant variants in the early-mid 19th century were [ʌʊ - ɐʊ] in those areas which sent large numbers of migrants to the Falklands. [ɛ] nuclei were found to the east and (north)west of this core south/south-western area, with more standard nuclei only found in the far west of Cornwall. Stepping forward to Kurath and Lowman’s study of the 1930s, again standard forms are virtually absent, with [ʌʊ - ɐʊ] forms still current in the core area of the south/south-west where most settlers came from, and [ɛ] nuclei being used in London and the counties immediately surrounding it.

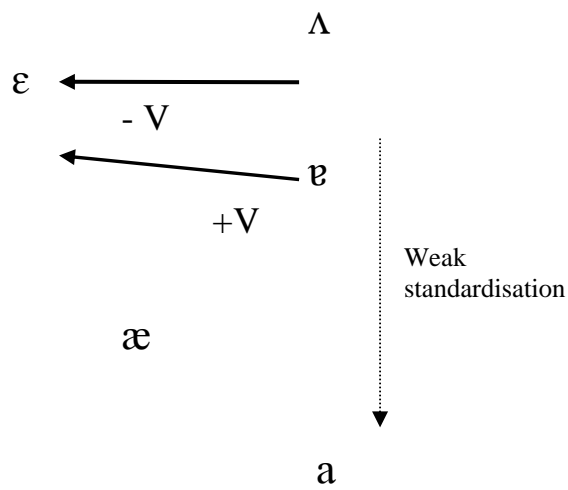
Two possibilities emerge, therefore, to account for the Falklands results. One would suggest that the central, low-mid nuclei continued to lower to fully open position and ‘Diphthong Shift’ then began to operate on those forms, fronting and raising them to [ɛ], as in Table 4 below.

Table 4: An account of route possibly undertaken by /au/ in Falkland Islands, from mid-19th century settler input, via Diphthong Shift, to present-day realisations.



The other possibility, and the one we will argue in favour of below, sees a simple fronting of the nucleus of MOUTH in vernacular speech, recognising the allophonic patterning of the variants dependent on following voicing, as in Table 5 below, alongside which there is a little evidence of standardisation towards [aʊ] forms.

Table 5: Second proposed account of the route undertaken by /au/ in Falkland Islands, from mid-19th century settler input to present-day realisations.



We believe that the first potential explanation, that in Table 4, for the [ε] onsets of MOUTH in the Falklands is implausible for the following reasons:

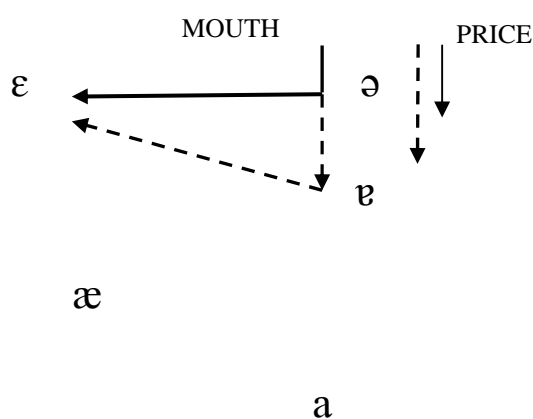
1. If this proposal is correct, we have to interpret the three variants as being ranked in terms of innovativeness: [ε] would be the most innovative, [ɐ] an extremely conservative relic form and [a] in between. We would therefore expect to find levels of [ε] increasing with ever later birthdates and [ɐ] levels decreasing likewise, with an emergent pattern over time of [ε] > [a] > [ɐ]. The cross-generational picture presented in Figures 6 and 7, however, does not support this view. [ε] is the dominant nucleus across the apparent time perspective shown here. [ɐ], far from being a highly relic, conservative form of the very oldest, is used robustly as the second most frequent form in the dataset across apparent time. If it were but the point of origin of a change that had ‘travelled’ so far through phonetic space – a vowel nucleus becoming fully open before raising and fronting – we would not expect such a form to still be so prevalent, both within the speech of individuals and within the speech community as a whole;

2. We would expect from this proposal to find a greater range of variants between [ɛ] and [a], but variant choice was discrete rather than a continuum of variants across vowel space;
3. It would be unusual, to say the least, (though not impossible) for variants of MOUTH to have travelled so far since settlement and for variants of PRICE to have barely moved at all. These two variables often behave relatively in tandem (Chambers 1973), with perhaps MOUTH *slightly* more ‘advanced’ than PRICE (Trudgill 2004: 50).
4. Other aspects of Falkland Island English show it to veer, in general terms, towards being a relatively conservative variety of English, when compared to others formed at roughly the same time, or with others with origins in the South of England. Unlike Australian and New Zealand English, for example, it has virtually no Diphthong Shifting of /eɪ/ and /oʊ/, with typical variants being [eɪ - ɛɪ] and [əʊ - ʌʊ] respectively (see Sudbury 2000: 179, 180). It would be unusual, though again not impossible, for such a variety to undergo change which would mean that, for that variable alone, it would be one of the most innovative varieties of English in the world, whilst being relatively conservative with respect to many other features;
5. Seeing as the Falklands today have a Canadian Raising-like allophonic distribution of MOUTH, with closer nuclei before voiceless consonants, we need to explain how that system emerged (or was retained) if it is the result of Diphthong Shift. Given that, in general, pre-voiceless nuclei of MOUTH (and PRICE) are less open (i.e., in this case, more conservative) than before voiced consonants and boundaries, if [ɛ] nuclei emerged as a result of lowering and subsequent fronting and raising, they would, in order to eventually retain less open nuclei again, have had to ‘overtake’ the slightly more advanced nuclei before voiced consonants and boundaries (i.e. become the most innovative of the two environments, from having been the most conservative) along the [ɐ] > [a] > [ɛ] route of MOUTH, which, although still preferring [ɛ] nuclei, show a more robust usage of other variants, especially [ɐ].

Taking these counter-arguments to the Diphthong-shift proposal seriously, we propose that the route outlined in Table 5 – *a simple fronting of the nucleus from mid-open position* - is a more plausible one for the history of MOUTH in the Falklands:

1. Under the proposal in Table 5, we only need to argue that [ɛ] is *relatively* innovative in comparison with [ɐ], but not that, diachronically, the two variants are separated by an extremely long and circuitous route through vowel space, with the two variants being at either end of a long ‘journey’. The change is relatively simple and unsubstantial. This suggestion is also better supported than the alternative by the apparent time picture of the [ɛ] and [ɐ] variants, with [ɐ] used most among older speakers (albeit at lower levels than [ɛ]) and [ɛ] used least among the older speakers. We would argue, furthermore, that the use of standard-like [a] nuclei, whose very low frequency across apparent time in the Falkland data is problematic for the diphthong shift proposal, represent the result of sporadic uses of standard forms. This can perhaps account for the small ‘surge’ in the use of standard forms amongst the very youngest speakers who have benefited from more intensive educational support following the economic boom of the post-Conflict years.
2. Given the relatively restricted movement of PRICE since settlement, a fronting-in-progress analysis of MOUTH recognises that MOUTH has advanced *somewhat* more than PRICE as the literature suggests, but also that it has not advanced *much* further. The relative positions and rates of change of the two variables (with MOUTH slightly leading) are retained, therefore. A schematic outline of the changes to MOUTH and PRICE can be seen in Table 6 below.
3. The more subdued levels of change implied by our proposal do not sit uncomfortably with the general conservativeness of Falklands English: MOUTH has moved somewhat, but not a great deal; PRICE less and the other DS variables implicated in this story, such as GOAT and TAKE even less;
4. Moreover, in British English terms, [ɛ] onsets of MOUTH are relatively conservative too, restricted *these days* in the South of England to the more isolated rural dialects (e.g. the Fens (Britain 2003), Mersea Island in Essex

Table 6: Projected routes of MOUTH and PRICE in Falkland Island English. Dashed lines represent variables before voiced consonants and boundaries; full lines represent variables before voiceless consonants.



(Amos, forthcoming)) and undergoing attrition in the more innovative south-east where [aʊ] is becoming a dominant realisation of MOUTH (e.g. Kerswill and Williams 2000, Torgersen and Kerswill 2004, Amos, forthcoming).

5. Falkland Island English has a Canadian Raising-like phonological distribution of variants, where allophony is dependent on the voicing (or not) of the following environment. A fronting analysis of the emergence of [ɛ] in this variety is consistent with the Canadian Raising allophony as it presents itself in the data highlighted here. If MOUTH before voiceless consonants (HOUSE) was somewhat closer than MOUTH before voiced consonants (DOWN), as the phonetics of the change would predict, the fronting process would have begun at a closer point in vowel space in pre-voiceless position and a more open one elsewhere, ensuring that the allophony was retained throughout the process of the change (with, understandably, fewer tokens of [aʊ] found before voiceless than before voiced consonants, with the pre-voiceless fronting occurring both higher in vowel space, and further away from the temptations of standardisation).

If this were a lone example of allophonically distributed fronting of MOUTH, one may wish to be somewhat more cautious about proposing such a change for this small variety. However, such a fronting of Canadian Raising is, of course, not limited to the Falklands but has been reported by Chambers and Hardwick (1986) for Canada itself, as well as by Roberts (2007) for Vermont in the north-eastern United States. What is more, whilst Canadian English has undergone fronting of MOUTH, like the Falklands it has not done so for PRICE. The phonetics of the fronting there are somewhat different, but this example highlights that such a change cannot be dismissed as being unusual because of the (apparent) insular nature of the community under investigation here.

The discussion here has examined where [ɛ] onsets of MOUTH, the dominant variant in Falkland Island English, have come from, and compared the results of an analysis of MOUTH with those of an analysis of PRICE, a variable that seems to have undergone almost no change since settlement of the islands. One conclusion that we can draw from this analysis is that it is unlikely that this variety has undergone Diphthong Shift of MOUTH, as traditionally conceived, in order to arrive at these front mid-open onsets. We have seen that such a view would be inconsistent with the realisations of other diphthongs in the Falklands, especially PRICE, inconsistent with the results gained from the analysis of the contemporary corpus of data and inconsistent with the Canadian-Raising-like allophonic distribution of variants. The important finding, from our perspective, especially given the debates surrounding how some other Southern Hemisphere varieties came to have front mid-open variants of MOUTH (see Britain 2008b), is that these variants *can* readily arise without passing through a standard accent-like [aʊ] stage. Britain (2001, 2008b, 2008c) and Trudgill (2004) have shown that in New Zealand and Australian Englishes realisations of MOUTH with [ɛ] nuclei would have been the dominant forms brought by settlers in the 19th century, and that this fact substantially helped determine the current dominance of these forms in these accents today. In the case of the Falklands, however, [ɛ] nuclei were likely, in the 19th century, to have been a minority form in a settler mix of rather different geographical origins to that of Australia and New

Zealand. Our discussions here highlight the fact that similar outcomes of change can be arrived at by often very different routes, and comparisons between the Falklands and these other Southern Hemisphere Anglophone countries make it clear that a one-explanation-fits-all approach (such as Diphthong Shift) is not sufficient even to account for developments in this small and rather typologically similar subset of the world's Englishes. One question, of course, that leads from this research (Britain 2008b) concerns what happened in (southern) England itself, how did *it* get its [ɛ] onsets of MOUTH?

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