When is a change not a change?: a case study on the dialect origins of New Zealand English.

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Abstract:

In studying language change, variationists are, naturally perhaps, more interested in the new, innovative form than the old conservative one, and, because of the actuation problem, investigations of changes in progress very rarely are able to shed light on the change in its very earliest stages. In this article, I suggest that we should perhaps pay more attention than we have at present to the origins of the change (in addition to its route and destination) and the nature of the conservative form if we are to chart ongoing changes in an accurate way. Here, I highlight an example of a feature of New Zealand English (NZE) (realizations of the MOUTH diphthong with front mid-open onsets) that has, until recently, been assumed to have resulted from a change of the Southern Shift-kind – a raising and fronting to [ɛʊ ~ ɛᵊ] - but which, as I demonstrate using contemporary and past dialectological, as well as socio-demographic evidence, did not undergo this change in this way. Indeed, the supposedly conservative [aʊ] form has barely been used at all as a conversational vernacular variant in NZE. I argue here that the present-day NZE realization is far more likely to be the outcome of a process of dialect leveling operating on the mixture of forms brought to New Zealand by British and Irish migrants in the 19th century. The moral of the story is that if we think we observe a change in progress from A to B, we need to provide evidence not just of the existence of B, but also of the prior existence of A.

Introduction[1]:

One of the principal advances sociolinguistics has brought to the study of language change has been in trying to answer what Uriel Weinreich, William Labov and Marvin Herzog in their groundbreaking paper *Empirical foundations for a theory of language change* (1968) termed the *embedding problem*, namely the route linguistic changes take both through the language as well as through the speech community that uses that language. They convincingly argued that "the problem of providing sound empirical foundations for the theory of change revolves about…this embedding" (1968:185). Once changes are underway, some of the most sophisticated analyses have come from sociolinguistic undertakings, shedding light on changes so complex that traditional asocial models of change fail to account for them. The variationist paradigm has excelled not only at identifying these but also at detailing their considerable intricacies. One notable example is Labov's (1989, 1994) analysis of the extremely complex structure of variation and ongoing change in short (a) in Philadelphia.

Less successful, however, has been our ability to socially and linguistically locate and

[1] This paper is a pre-publication version of an article that will appear in *Language Variation and Change* in 2008. This research would not have been possible without the financial support given by the British Academy in 1996 (Small Personal Grant Number: BA-AN1594/APN3350) and The Link, a year long programme of events to celebrate and explore the relationship between New Zealand and Britain, devised by the British High Commission in Wellington and The British Council, in 1998. I would like to thank the Wellington Social Dialect Project team for allowing me access to the recordings from Porirua. I'd also like to thank audiences at the Philological Society, Max Planck Institute, Nijmegen, the 10th Methods in Dialectology Conference, Memorial University, St Johns, Victoria University of Wellington and the universities of Essex, Queen Mary (London), Leeds, Newcastle, York, Edinburgh and Oxford for useful comments which have helped in the formulation of the ideas presented here. Earlier versions of this paper were read by Peter Trudgill, Jim Milroy, Janet Holmes and Miriam Meyerhoff whose views have very much helped me reconsider some aspects and hopefully made my argument clearer in other parts of this paper.

investigate language changes that are in their infancy. Here the embedding problem overlaps with the *actuation* problem – why a particular change (and not some other change) takes place at a particular time (and not at some other time) in a particular place (and not in some other place) in a particular variety (and not some other variety). A good example is Trudgill's (1988) finding that labiodental [ʋ] as a variant of prevocalic (r), a vigorous change in contemporary Norwich English, and used by a considerable minority of young speakers in the 1980s, had been present in recordings made in the 1960s (Trudgill 1974), but had not been considered then as a change that would affect the linguistic system of the speech community as a whole. Milroy (1992: Section 6.2) makes the very important distinction between *speaker-innovations* – the 'pool' of new linguistic forms in the speech community each of which may or may not spread - and *linguistic change* – an alteration in the linguistic system which results from a speaker-innovation successfully spreading through the language and the speech community. Labiodental /r/, then, had been treated as a speaker-innovation, rather than a linguistic change – only real-time analysis of the speech community at a later date was able to identify that it was indeed change in progress (see also Foulkes and Docherty, 2000; Meuter, 2002 for other studies of labiodental /r/ in England).

Weinreich et al. (1968: 176) also argue for 'social realism' in the resolution of the embedding problem, a strong claim for a detailed and meticulous search for the social factors that are undoubtedly intertwined with linguistic variation and change. Sociolinguistics has made great advances in this direction too: consider the progress made, for example, in the deconstruction of gender (Eckert and McConnell-Ginet, 1992), style (Bell, 1984), age (Eckert, 1997) and space (Britain, 2002a) as social variables.

In the study of post-colonial varieties of English, such as those spoken in New Zealand and Australia, the need for social realism in dialectological analysis also applies to the very origins of those dialects. As I show both here and in Britain (2001a), differences between present-day New Zealand English (NZE) and British English have, in the past, sometimes been analysed *as if* the New Zealand forms necessarily must be innovations. In Britain (2001a), for example, I show how present-day NZE <-own> past participles, such as *grown*, *blown*, and *flown*, originating from Middle English **ou**, and realised today mostly as disyllabic forms, e.g. [grʌuən], have often been analysed as being the result of *a split* of a formerly merged and monosyllabic /ou/. Yet there is evidence not only that there was still considerable retention of the ME **ou - ō** distinction in mid-19th century Britain – the time that large-scale migrations to New Zealand began - but also that such disyllabic forms have been present in New Zealand English from its early days (Gordon and Trudgill, 1999), and would have been an (admittedly minority) immigrant settler variant. What has often been analysed as a split and an innovation away from a form whose phonology very much resembles that of standard accents, is, in fact, more probably the expansion of an *imported* disyllabic form swimming around in an *extremely* diverse pool of variants (see Britain, 2002b, 2005a).

Both here and in Britain (2001a, 2002b, 2005a), in a number of case studies on NZE, I therefore argue that we must pay much more attention to the social make-up of the settler speech community – as heterogeneous, with diverse geographical, social and linguistic origins (e.g. Montgomery 1989; Mufwene 1996, 1999, 2001; Siegel 1993; Trudgill 1986, 2004) – in order to fully understand the nature and course of linguistic change.

As the example of disyllabic <-own> in NZE makes clear, an important factor in the embedding/actuation interface revolves around establishing *where the innovation came from* and *what the original pre-change form was*. This appears to be so obvious that it doesn't deserve mention. This article, however, highlights a case where, I believe, too little attention has been given to where a particular change 'came from'. I therefore propose a rather simple and obvious methodological principle which addresses the embedding problem: the '*If there is a change from A to B, make sure A exists*' principle. I think it is particularly relevant to the study of post-colonial varieties of English.

(au) in New Zealand English:

The case to be investigated here is the NZE diphthong (au)[2]. It has received quite considerable discussion in the literature on variation and change in New Zealand English, especially, in fact, early New Zealand English (see for example, Gordon, 1983, 1994, 1998; Gordon and Trudgill, 1999; Gordon, Campbell, Hay, Maclagan, Sudbury and Trudgill, 2004; Maclagan and Gordon, 1996; Maclagan, Gordon and Lewis, 1999; Trudgill 2004, Trudgill, Gordon, Lewis and Maclagan, 2000a, 2000b; Woods, 1997, 1999, 2000). The variation involved - the position of the onset of the diphthong between [a] and [ɛ] – has often been noted as highly salient, and the 'non-standard' variants almost always labelled as 'strongly stigmatised' (see, for example, Gordon, 1983, 1994; Maclagan and Gordon, 1996: 7). It is somewhat surprising then, given this apparent saliency, that there exists to date no

[2] In order to distinguish between (au) as a variable and [au] as a variant of that variable, I shall often label (au) as the MOUTH variable, following Wells (1982).

published large-scale quantitative investigation of MOUTH based on *contemporary conversational data*. The analyses of MOUTH thus far (e.g. Maclagan 1982, Bayard, 1987 and Maclagan and Gordon 1996, Maclagan et al., 1999) have all looked solely at the reading of words in experimental /h_d/ frames, in lists or in reading passages, with all the usual consequences for access to informal vernacular forms of the dialect. Smaller scale studies of conversational data have been carried out by Nicola Woods (e.g. 1999, 2000) who compares: four female speakers born in Otago[3] in 1874, around 1920, 1935, and around 1960 respectively (Woods 1999), and speakers born in the 1860s and 1870s with their children (Woods 2000: 118).

Below, in Figure 1a, is a scatterplot of an analysis I conducted of MOUTH based on the 75 recordings of young and old, Maori and Pakeha, working and middle class, men and women from Porirua, a town in the south of New Zealand's North Island, for the Wellington Social Dialect Project, directed by Janet Holmes, Allan Bell and Mary Boyce (1991) in the early 1990s[4]. Each small shape on the graph represents each speaker's average onset and offglide realisations based on 5251 tokens, an average of 70 per speaker, comparing conversational data (small circle) (3666 tokens), the reading of a passage (small diamond) (1290 tokens) and a word list (small triangle) (295 tokens). Average realisations for each style are represented by the larger symbols. The X axis shows the offglide and the

[3] Otago is a region of the south of New Zealand's South Island, which saw, during the 19th century migrations from the British Isles, a higher proportion of Scottish migrants than the average for New Zealand as a whole.
[4] Holmes, Bell and Boyce (1991) outline the motivation for the Wellington Social Dialect Project, describe the data collection procedures, including the reading passage and word lists used, and present the results for analyses of some linguistic variables.

Figure 1a: (au) in Wellington New Zealand English: comparing casual, reading passage and word list styles across a 75-speaker corpus.

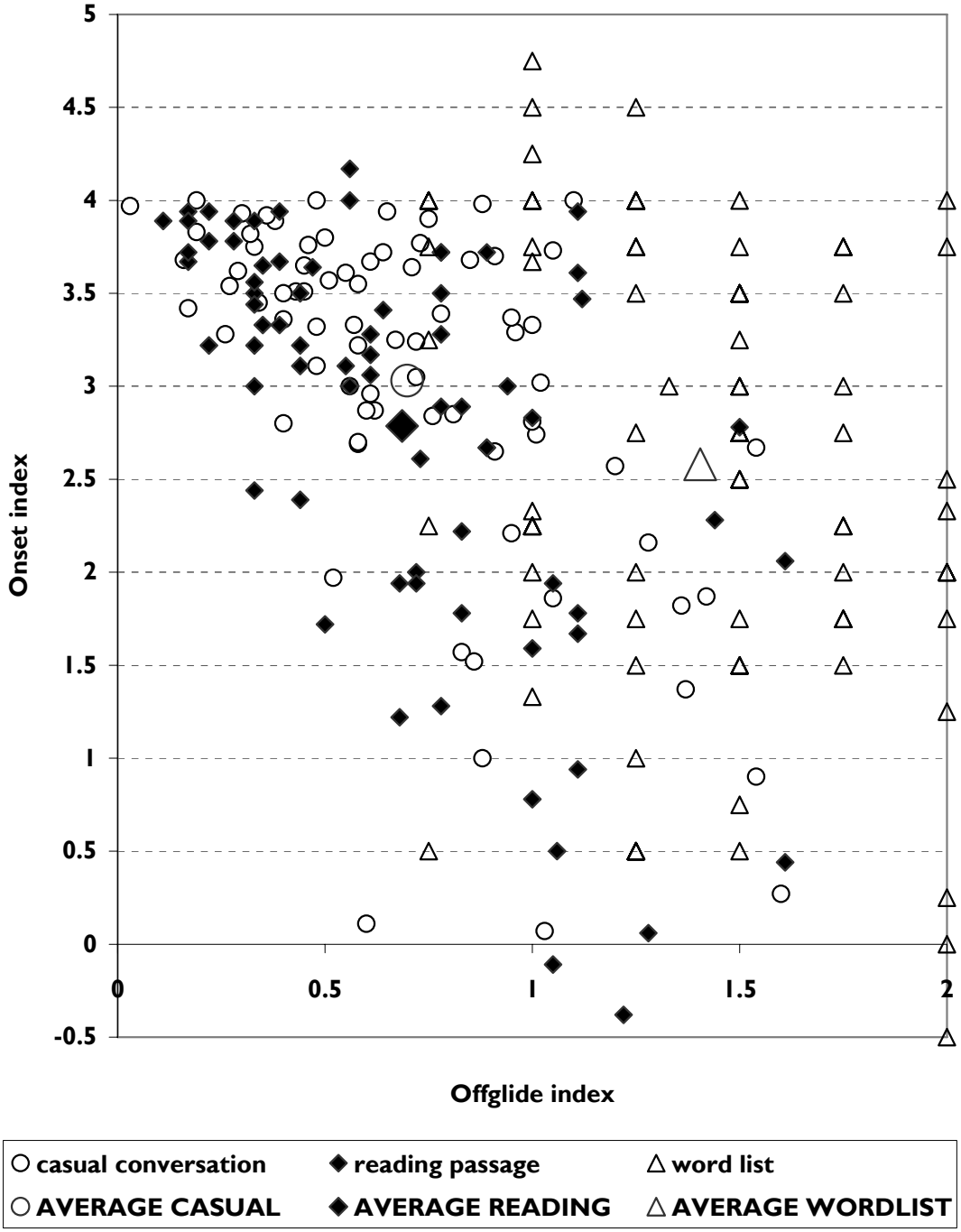


Table 1: The index scores for onsets and offglides of (au) used in analysis of variation and change in contemporary vernacular NZE.

Onsets:

Index score	Realisation
6	[ɐ]
5	[ɐ̟]
4	[ɛ]
3	[ɛ̟]
2	[æ]
1	[a̟ˌ]
0	[a]
-1	[a̠]

Offglides:

Index score	Realisation
2	[Vʊ]
1	[Və]
0	[V:]

Y axis the onset, and the variable indices for both are presented in Table 1 above. For now we can note a few important points.

Firstly, there is a tight clustering of realisations in the top left of the scatterplot, in both casual and reading passage styles, representing realisations with mid-open onsets and dramatically reduced offglides - around [ɛᵊ - ɐ̟ᵊ]. Secondly, very few speakers indeed are in the supposedly 'standard' location of (2, 0)[5], i.e. [aʊ], and those that do reach this standard, only do so consistently in word list style. Thirdly, the average realisations for the sample, and the overall pattern of the scatterplot, shows that the difference between casual

conversation (3.03, 0.698) and reading passage styles (2.788, 0.686) is one of height of the onset and both differ from word list style in terms of height and quality of offglide (2.581, 1.405). Conversational Wellington English, then, on average, uses [ɛ̝ᵊ].

Figure 1b displays group averaged variable index scores according to the age (old, middle-aged, young), ethnicity (Maori, Pakeha (= European NZ)), social class (working, middle[6]), and gender of the speakers. Each shaded or unshaded shape represents a different combination of ethnicity, gender and class, and the differing sizes of the shapes represent different age groups, the largest are old speakers, the smallest are young speakers. Variation across apparent time can be noted, therefore, by comparing the differences between the largest, medium and smallest shape for each of the gender/ethnic/class groupings. (see Key to Figure 1b below).

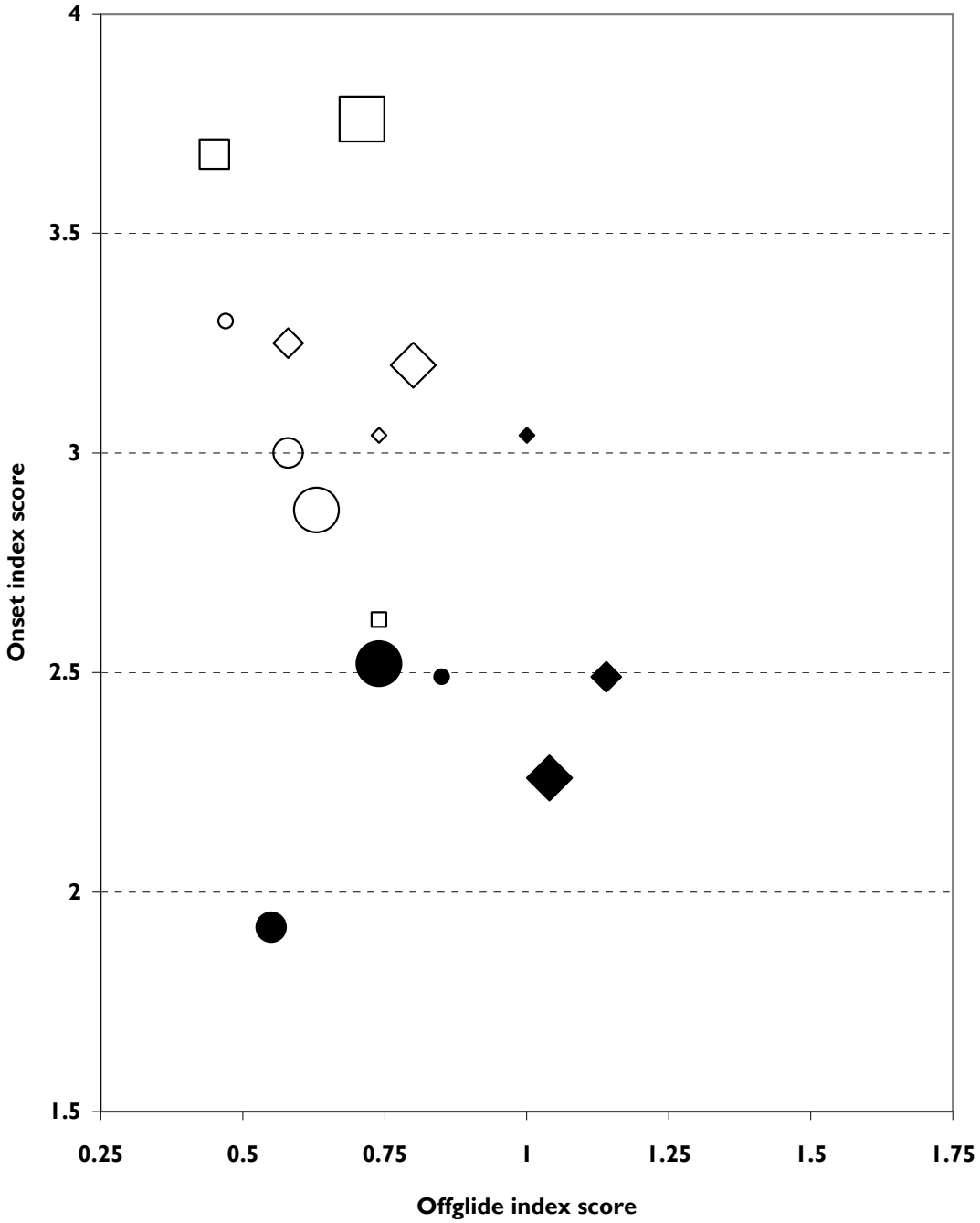
Key to Figure 1b

Large symbols denote *old speakers* (70-79 years old), medium symbols *middle aged speakers* (40-49 years) and small symbols *young speakers* (20-29 years)

Unfilled squares:	Male, working class Pakeha
Unfilled circles:	Female, working class Pakeha
Filled circles:	Female, middle class Pakeha
Filled diamonds:	Female, working class, Maori
Unfilled diamonds:	Male, working class, Maori

[5] I use the traditional convention for graph coordinates of (x, y).
[6] The Wellington Social Dialect Project only collected middle class data from Pakeha women of the three age groups (see Holmes et al, 1991 for more details).

Figure 1b: The realisation of (au) according to age, ethnicity and social class in the Wellington Social Dialect Project (conversational data only).



Female working class speakers of both ethnic groups (unfilled circles – Pakeha, filled diamonds, Maori) appear to be raising the onset across apparent time, whereas the Pakeha men appear to be lowering the onset, as do the Maori men, although less markedly. The middle class Pakeha women display behaviour typical of a stable variable that is sensitive to *marché linguistique* and progress through the life-course (e.g. Laberge and Sankoff 1978, Trudgill 1988), with young and old showing remarkably similar behaviour, and the middle-aged veering significantly towards the onset (but not offglide) values of the 'standard' form.

Figure 1c contrasts the different social groups across the three styles: conversation, from which most of the tokens were derived, reading a passage, and reading a list of words.

Here, each shaded or unshaded shape again represents the average realization for a different combination of ethnicity, gender and class, but this time the differing sizes of the shapes represent different styles, the largest being conversation, the smallest word list style, with reading passages represented by the mid-sized shapes (see Key to Figure 1c). Here,

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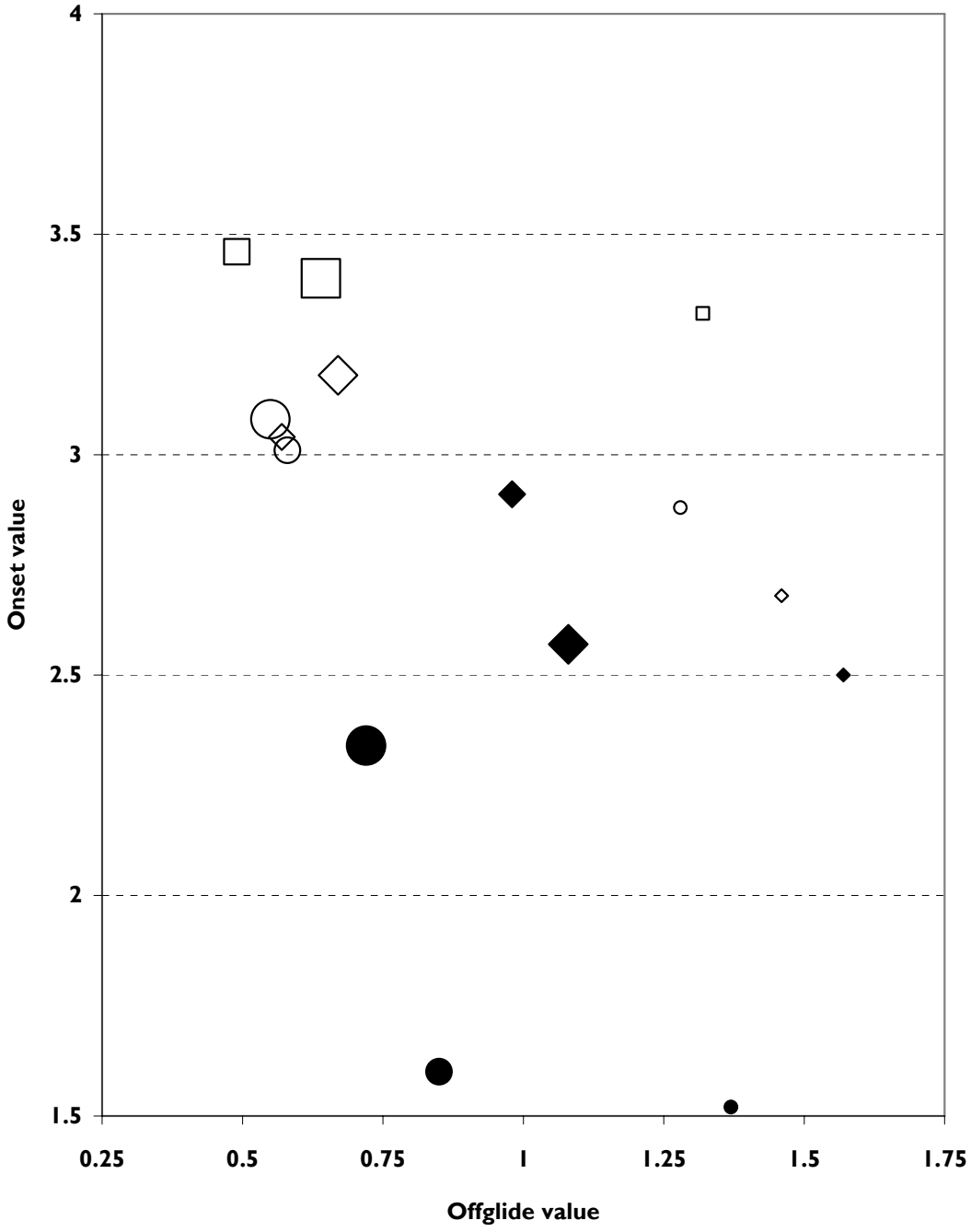
Key to Figure 1c

Large symbols denote *conversational style*, medium symbols *reading passage style* and small symbols *word list style*

Unfilled squares:	Male, working class Pakeha
Unfilled circles:	Female, working class Pakeha
Filled circles:	Female, middle class Pakeha
Filled diamonds:	Female, working class, Maori
Unfilled diamonds:	Male, working class, Maori

Figure 1c: The realisation of (au) in different styles (conversation, reading passage and word list), according to gender, ethnicity and class



variation from 'most informal' to 'most formal' can be noted by comparing the differences between the largest, medium and smallest shape for each of the gender/ethnic/class groupings. Most notably, word list data consistently behaves quite differently from the other styles, showing in every case average realizations for the group that have a more open/back onset and a fuller offglide than the conversational data, demonstrating how careful we must be if we draw conclusions about vernacular behaviour from word list data alone.

The question for this paper, though, is not the *realisation* of the variable, per se – a number of studies, whether based on informal observation or analyses of word-list data, have commented on the non-open onsets of MOUTH (see below) - *but where these non-open onsets came from*[7].

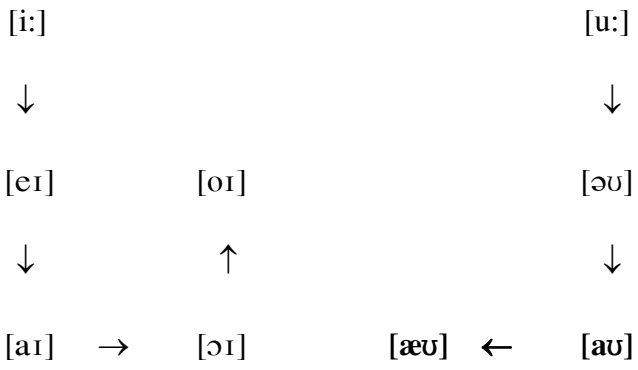
The traditional view: [ɛʊ]← [aʊ]:

A brief word is needed at this point on the history of (au) in English to date. Almost all historical accounts of the history of English claim that following the Great Vowel Shift (GVS), Middle English (ME) **ū** diphthongized and the onset of the new diphthong fully opened to [aʊ]. Given that the present-day onset of MOUTH in many varieties of English spoken in the South of England, the Anglophone Southern Hemisphere and parts of the southern US is in a position which is more close and more front than [aʊ], dialectological accounts of the origins of these varieties have proposed a change which has raised and

[7] I shall ignore the offglides from this point. I will, therefore, label the variants of the variable as if there is no variation in offglides (e.g. [ɛʊ], [æʊ], [aʊ]). This is merely for descriptive and comparative ease, and does not represent the actual position, as the scatterplot above highlights.

fronted the diphthong from [aʊ] to [ɛʊ~ ɛə~ ɛ:]. Wells (1982: 310) introduces both what he calls "PRICE-MOUTH crossover", changes altering [aɪ] → [ɑɪ] and [ɑʊ] → [æʊ], and "diphthong shift" (1982: 256), a co-ordinated set of vowel changes that effect not only MOUTH and PRICE but also FACE (/ei/), GOAT (/ou/), FLEECE (/i:/) and GOOSE (/u:/):

"Cockney, and also the local accents of much of the south of England and the Midlands, together with those of Australia and New Zealand, exhibit a set of changes almost as fundamental as the Great Vowel Shift of half a millennium ago. This is the *Diphthong Shift*" (Wells 1982: 256, his emphasis). His diagrammatic representation of the Shift is below (1982: 256).



Lass (1987: 298) supports this view, claiming that "Aus/NZ show innovatory qualities in…*out*…the following points are worth noting: (i) the 'crossover' of the first elements of the bite/out diphthongs…". And Labov includes vowel movements currently underway in NZ (and Australia and southern England) under his label 'Southern Shift' (1994: 202; Labov and Ash 1997:512-514; see also, for example, Fridland, 1999). Labov and Ash claim that the "oldest and the most widespread aspect of the Southern Shift" is *Vw fronting*' (1997: 513) - i.e. the fronting of the onsets of the GOOSE, GOAT and MOUTH lexical sets - and that the

shift "is the organizing force in the vowel systems of South Africa, Australia and New Zealand" (1997: 514)[8]. The 'advanced' nature of front mid-open variants is also argued for by Stockwell (1975: 347, 349; see also Stockwell and Minkova 1988) who suggests a historical route of archaic [əw], standard [aw], advanced [æw - ew].

Given these accounts, it is perhaps not too surprising then that many researchers of NZE go along with this 'route' proposed by Wells (1982) and others, and claim that NZE, with its mid-open and front onset of MOUTH has indeed undergone 'Diphthong shift' for this variable in order to arrive at this realization. Woods, a leading analyst of early NZE (see 1997, 1999, 2000), for example, claims that "the analysis of the vowel in the MOUTH lexical set reveals that, in line with internal principles (as detailed by Labov 1994), the nucleus of MOUTH has become fronted and closer over time" (1999: 108) and "the use of a front and close nucleus of MOUTH …is the consequence of innovative raising" (1997: 110; see also 2000: 112). Maclagan et al. (1999: 22) support the view that raising was involved. They claim that "the diphthong variants that are stigmatized are those associated with a relatively recent shift, which…was certainly not as widespread in early NZE as it is today…there are now very few…[aʊ] variants of /ɑʊ/ which earlier would have represented the most conservative, least stigmatized variants of the diphthong. Similarly, the first elements of the stigmatized variants have raised over time. For these reasons, the terms 'innovative" and "conservative" are used…for…diphthong variants" (1999: 22) and continue: "in New Zealand, the first target of /au/ is typically progressively fronted and raised by lower social

[8] In Britain (2007) I argue that we need to reconsider the route taken by MOUTH, not just in some of the other Southern Hemisphere Englishes besides NZE, but also in Southern Britain – another area claimed to be under the force of the Southern Shift.

class speakers. Tokens with a relatively open first target ([aʊ]) were classified as conservative, those that started on [æ] were classified as neutral, and those with raised first targets ([ɛ]) were classified as innovative" (1999: 29), strongly implying that these variants represent points on the trajectory of a change. Gordon and Sudbury (2002: 80) claim that "MOUTH has fronted towards /æ/", implying it was backer at some earlier stage. Watson, Harrington and Evans (1998:185) talk about "the raising and fronting of the first target of the HOW diphthong".

Some researchers have explicitly linked the evolution of MOUTH with a set of changes also part of the Southern Shift and which are ongoing in current NZE - the movement of the front short vowels (see Labov 1994; Maclagan and Gordon 1996; Maclagan et al., 1999; Woods 1997; 1999, 2000). In other words, it is claimed that MOUTH is raising to [æʊ] and further to [ɛʊ] along the front peripheral track of vowel space, just as /æ/ is moving from [æ] to [ɛ], /ɛ/ from [ɛ] to [ɐ̞] and /ɪ/ from [ɪ] to [ə] (but see Trudgill, Gordon and Lewis, 1998). For example, Woods (1997, 1999, 2000) treats MOUTH together with the front short vowels in her analysis of change in early NZE, and Macalagan et al. (1999) explicitly compare the two in their analysis of contemporary NZE, even comparing individual speakers who have apparently raised their front short vowels more than their vowel onset in MOUTH and vice versa.

In order to ascertain if this is truly the case, if MOUTH really did raise from "[aʊ] variants of /ɑʊ/ which earlier would have represented the most conservative, least stigmatized variants of the diphthong" (Maclagan et al, 1999: 22) to [æʊ] and beyond, we

must first establish the existence of the supposed [aʊ] at some earlier period in the history of the variety. If [æʊ - ɛʊ] is the result of innovative raising, we should expect to find solid and consistent evidence somewhere of [aʊ] being used widely as a conversational variant in earlier stages of the history of these varieties. *Such evidence is almost entirely lacking*.

Reviewing the history of studies of /au/ in New Zealand English:

The earliest evidence we have of MOUTH in New Zealand English comes from Samuel McBurney's observations, published in Ellis (1889). Below in Table 2 are presented his findings from across New Zealand with respect to MOUTH, transcribed into Ellis' (1889) paleograph, and 'translated' into IPA according to Eustace's (1969) conversion method[9]. Two conclusions can be drawn from this data, I believe. Firstly, the early NZE he was describing was clearly quite mixed, with a number of variants being used across the country. Secondly, the dominant forms in that mixture are ones with front and mid-open onsets, Ellis's {éeu} and {ææ'u}, precisely the same types of variants as are dominantly used today in NZE over a century later.

Next we have the analyses of the 'Mobile Unit' recordings of old New Zealanders, born in the second half of the 19th century and recorded in the late 1940s. These have been

[9] Ellis's paleograph has been put into { } to avoid confusion with IPA realisations [ ]. Eustace (1969) is the usual source researchers have turned to for carefully considered IPA conversions of Ellis's paleograph. See also Jones (2006: 278) for a summary of vowel equivalences. Relevant here are the following: {e} = [ë ~ e̝]; {E} = [ɛ]; {æ} = [e̞]; {a} = [a ~ ɑ] (Jones 2006: 278). Ellis's paleograph symbols in the region of IPA [æ] are {ah}, {æh} and {ə reversed-h} (Jones 2006: 278), none of which are found in the transcriptions of McBurney's data.

Table 2: The realisation of /au/ in varieties of early New Zealand English according to McBurney (in Ellis 1889: 241), with IPA equivalents from Eustace (1969).

Ellis' transcription (1889: 241)	IPA equivalent, following Eustace (1969)
{éeu}	[ɛ̟ːʊ]
{ææ'u}	[ɐːʊ]
{áa$^{\text{I}}$u}	[a̟ːʊ]
{áu}	[ɑʊ]
{ə'u}	[ə̟ʊ]

Auckland	Some or several children used each of the variants
Wellington and Napier	More than half used {éeu}, some or several used {ææ'u}, and few used the other variants
Nelson and Christchurch	More than half used {éeu}, a few used the other variants in equal proportions.
Dunedin	More than half of the girls used {éeu}, more than half of the boys used {áa$^{\text{I}}$u}, some or several used {áu } or {ə'u }, a few used {ææ'u }

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analysed for MOUTH both by Woods (1997, 1999, 2000) and Trudgill (2004, Trudgill et al. 2000a, b), etc, but from different approaches.

Woods (1997: 105) analysed 10 Otago residents from the Mobile Unit corpus and, subsequently in the 1990s, recorded their children. Using a variable index score method similar to that used in my analysis of contemporary Wellington English above, she found that, where 0 = [äʊ - aʊ], 100 = [a̟ʊ - æ̟ʊ] and 200 = [æʊ - ɛʊ], men rose on average from 111 (in the Mobile Unit recordings) to 171 (among their sons) and women fell from 147

(Mobile Unit) to 116 (their daughters)[10]. A close analysis of the 5 male and 5 female speakers from the Mobile Unit recordings and their 5 sons and daughters shows scores ranging from around 75 to 145 for first generation (i.e. Mobile Unit data) men and 90 to 190 for first generation women and from 150 to 185 for second generation men and 60 to 195 for second generation women. The first generation men and especially the women have average scores well over 100, strongly suggesting front, non-fully open variants were predominant in their speech already. The averages for the second generation women actually show *lower* scores overall than the Mobile Unit women, whilst the men's scores increased significantly. These overall averages lead Woods, here and in later work (1999, 2000), to suggest that "the nucleus of MOUTH has become slightly closer over time". The data demonstrate that each of the Mobile Unit speakers has non-fully open forms as their majority variant, with 8 of the 10 first generation Mobile Unit speakers averaging forms between [ạʊ - ӕʊ] and [æʊ - ɛʊ], i.e. with scores over 100 (with 3 having the latter as the dominant form, with scores over 150) (see the data presented in Woods 2000: 122). In both the Mobile Unit data and subsequently, both sexes remain consistently with realisations above the 100 mark, i.e. *they already have 'raised' onsets*.

Later, Woods (1999) analyses MOUTH among four individual speakers: Mary, a first generation New Zealander, born in 1874 of Scottish parents; two of her granddaughters, Florence and Louise, and one of her great-granddaughters, Sarah. Whilst

[10] Woods (1997: 103) makes clear that certain linguistic environments which appeared to restrict closer fronter variants, such as words with more than two syllables and a preceding /h/, were excluded from the analysis so overall the scores suggested somewhat more close forms than would have been the case if all tokens had been included.

her data show Mary with more open variants than Florence and Sarah, in particular (1999: 95), she later comments in a footnote that perhaps Mary was not typical: "Mary reveals a rather more conservative use of MOUTH than other elderly female speakers recorded in 1948" (1999: 110).

One of the very significant contributions of Trudgill's participation in research on the Mobile Unit data was a consideration that the NZE forms may have been imported from the British Isles. Trudgill et al (2000a, b) find that MOUTH was already further to the front and closer than [aʊ]. In Trudgill et al (2000a: 313), all ten speakers that had been acoustically analysed showed 'some diphthong shift of /au/'. Trudgill et al (2000b: 118) argues that, of all six vowels undergoing the change, diphthong shift was most advanced for /au/ and was present in an overwhelming majority of the very oldest speakers in their corpus, born between 1850 and 1869. Other elements of diphthong shift dragged behind /au/ and they conclude that 'diphthong shifted vowels were indeed inherited by NZE from English English, but that it was really diphthong shift as an ongoing process which was inherited rather than the vowel qualities themselves'. Later in the paper, in an acoustic case study of two speakers, they argue 'MOUTH and PRICE have moved for both speakers, with Mrs Dudley's MOUTH having almost reached the modern NZE position" (2000b: 131). Indeed, the onset of MOUTH begins halfway between an already rather close TRAP vowel[11] and what Trudgill et al (2000b: 132) describe as 'a slightly raised DRESS vowel'. The MOUTH vowel of the other acoustically analysed speaker, Mr Dufty, has a more open onset, midway between [a] and [æ] (2000b: 132).

Gordon's ongoing analyses (see, for example, 1983, 1994) of prescriptive commentary, particularly by school inspectors and head teachers, about NZE has revealed telling detail about the state of MOUTH in NZE from the turn of the century. One commentator, in 1908, highlighted "a failure to appreciate the value of the common vowel sounds – e.g.…*teown*" (Gordon, 1983:36), another, in 1912, said that many children in Wellington talk about 'fleour' for *flour* (1983: 37), yet another in 1912, that "If you take a class of thirty at the beginning of the year, I do not think you will find more than three or four who will say 'house' correctly….the word is 'house' not 'heouse'" (1983:37), and finally another in 1924 commented on 'shout' as 'sheout' (1983: 39) (see also Bauer, 1994: 393, 394). In the 1994 article, Gordon adds more examples of the representation of MOUTH, such as *nee-ow* in 1912, *bree-aoon* in 1946 and *heyow neyow breyown ceyow* in 1948.

Woods, too, provides evidence of comment about mid-open onsets of MOUTH in the first part of the 20th century. Gray and Milne (cited in Woods, 2000: 132) suggest that to "insure the purity of vowel sounds" in NZE, words such as 'house', 'pound', 'round', and 'bounce' should be practised every day in schools. And Martyn Renner in the Education Gazette (again from Woods, 2000: 132) said that "the pronunciation of such words as 'shout' and 'now' as *sheout* and *neow* was an 'extraordinarily common defect in pronunciation'" (1924: 130).

Since then, informal observations and variationist analyses have shown front, non

[11] Gordon et al (2004) claim that there is 'clear evidence that a raised variant of the TRAP vowel was present in New Zealand from the very beginning' (2004: 105).

fully open or mid-open onsets to be dominant in vernacular NZE. Baker (1945: 442), for example, notes [ɪau] in mid-20th century New Zealand. Turner (1966: 103) suggests [æu], and later comments (1970: 89) that "*bout* is kept distinct from *boat* by a raised first element to [æ] or even [ɛ]. These developments occur in New Zealand as well as Australia". Orsman (1966: 681) suggests that "dipthong *au* of *cow* has a first element like the **e** of *very*, and a fronted second element ***eu***. Some speakers turn it into a triphthong ***eiu*** by inserting a glide between the first and second elements (*abɛut*, *abɛiut*) rather than (abɑut) for *about*." Bennett (1970: 70-71) notes a [æu-ɛə] pronunciation and suggests a parallel with American speech since he claims the form is used in New England and the southern states of the US. Bartlett (1992) shows that MOUTH in Southland is realised as [ɛʏ]. Bauer (1986:240) proposes [æə] and later (Bauer 1994: 389) suggests that [a̟ö] is the "more formal variant…or…associated with higher social class" and [ɛɨ] "less formal or lower class". Watson et al. (1998), in an experimental laboratory study of almost entirely university educated informants between the ages of 16 and 33, find "a fronted first target of HOW" (1998: 197-8) and conclude that "we arrive at [ɛɔ] for NZE HOW" (1998: 204). These results are very similar to those of my Wellington social dialect analysis, in which the word list style 'average' realisation was around [ɛ˖˕ə̟] (see Figures 1a and 1c above).

Bayard (1987) conducted the first variationist analysis on what he described as a sample "fairly biased toward the upper end of the socioeconomic scale" (1987: 6) in which "the tapes obviously reflect only upper-register usage (i.e. reading passage, word list, and minimal pair styles)" (1987: 7). He found that where 1=[æʊ], 2=[a̟ʊ] and 3=[aʊ] speakers ranged from a mean score of around 1.2 for lower working class speakers, up to around 2.5

for upper middle (1987: 10). He also found this to be a stable variable (1987: 14). Speakers are therefore using relatively non-fully open variants even in the formal styles that characterise Bayard's data.

Maclagan et al. (1999: 22) present a complex picture of the variable. They treat the variable as presently undergoing change in their analysis. Conservatism and innovation in the diphthongs /aʊ/ and /aɪ/ - sociolinguistic markers of NZE and both often endowed with the label 'stigmatised' - are explicitly contrasted with conservatism and innovation in the non-salient (at least to New Zealanders) front short vowels, in word list style. They suggest, however, that in some respects the diphthongs show a picture of relative stability. "The situation observed in NZE today with regard to the diphthongs /ai/ and /au/ may well indicate relatively stable sociolinguistic variation rather than ongoing changes, so the terms 'conservative variants' and 'innovative variants' are therefore not necessarily strictly correct… while these diphthongs seem to have represented stable sociolinguistic variation for some time, as evidenced by the long history of complaints…the pattern nevertheless seems to have shifted over time…there are now very few …[au] variants of /au/ which earlier would have represented the most conservative, least stigmatised variants of the diphthong (1999:22). In their analysis, 77.6% (788 out of 1016) of tokens were realised with onsets of [æ] or [ɛ] (based on data in Maclagan et al. 1999: 29). Their discussion here, then, is rather guarded about whether they believe a process of 'raising' to be the origin of the present-day realisations, although in an earlier paper (Maclagan and Gordon 1996: 9), they do support such a hypothesis.

The overall picture gained from this review of the history of MOUTH in NZE is that:

- In the early days of NZE, non-open front onsets of MOUTH were very common, and were the dominant vernacular forms in the early dialect mix, alongside other less widespread variants.
- These mid-open front onsets have been noted as characteristic ever since, by prescriptive observers, descriptive linguists, as well as sociolinguists.
- We have NOT found sufficient evidence of [aʊ] being used as a vernacular variant to warrant the raising hypothesis proposed by Woods (1997, 1999, 2000), Maclagan et al. (1999: 22, 29), etc.

In order to find the thus far elusive vernacular [aʊ], we perhaps need to look further back to the settlement history of New Zealand, as suggested by Trudgill (e.g. 2004, Trudgill et al 2000b).

[aʊ], [ɛʊ] and the settlers:

The discussion turns now therefore to the emigrants to New Zealand, and what forms of MOUTH they brought with them. Mufwene (1996, 2001) argues, in his detailed outline of the *Founder Principle*, that such a direction of analysis is crucial if we are to understand the genesis of dialect patterns in post-colonial speech communities. Important, he claims, in such an analysis are "the characteristics of the vernaculars spoken by the populations that founded the colonies" (1996: 84), "the ethnographic setting in which

the…displaced population has come into contact with…other populations whose structural features enter into the competition with its own features" (1996: 85) and "the demographic proportion of the newcomers relative to local populations" (1996: 86) (see also, for example, Montgomery, 1989; Mufwene, 1999; Siegel, 1993; Trudgill, 1986: 126, 161). We look here then at where the settlers came from and in what proportions during the important founder period of NZE – the mid 19th century - and follow this with an analysis of the variants of MOUTH that they would have brought and, again, in what proportions.

Who were the settlers?

The historical and socio-demographic evidence we have suggests that two places will be influential in our discussions of Anglophone New Zealand settlement – *the British Isles*, since this is where the majority of migrants were born, and *Australia*, since many migrants passed through Australia for varying periods en route to New Zealand, and some migrants were Australia-born. Table 3 below presents McKinnon, Bradley and Kirkpatrick's (1997) statistics for the origins of the overseas-born of 1881.

Table 3: The origins of the overseas-born in New Zealand in 1881 (based on McKinnon et al: Plate 49)

Country of birth	Number of overseas-born	% of total
England	119224	46.1
Scotland	52753	20.3
Ireland	49363	19.1
Australia	17277	6.7
Wales	1963	0.8
Others	18000	7.0
TOTAL	258580	100.0

In order to gain an insight into the history of MOUTH, however, greater geographical precision is required. A number of sources provide us with some detail on the geographical origins of the New Zealand settlers of the 19th century. In an analysis of the birthplaces of settlers to Canterbury[12], Pickens shows that the southern counties of England, as opposed to the Midlands and the North, were more heavily represented in the early NZ population (sampled between 1851 and 1877) than we would expect given the population that these counties contributed to the country's total. Figure 2 provides a more detailed breakdown for England. In addition to settlers from England, many came to Canterbury from Scotland and Ireland. Pickens, for example, claims that whilst around 54% of mid-19th century migrants were from England, around 16% were from Ireland, and 15% from Scotland (Pickens, 1977: 70).

Following an analysis of migrants to New Zealand in 1871, Arnold (1981), in his well-known work entitled *The farthest promised land*, claims that "clearly the great majority of the emigrants came from a wide stretch of southern England, with almost all counties south of a line from Herefordshire to the Wash feeling the pull fairly strongly. North of this line, only Lincolnshire was much affected, and the industrial North was little influenced. The most fruitful counties were all rural counties" (1984: 102). And later, he claimed "New Zealand's founding stock was drawn predominantly from village life in the Old World, and the village outlook which they brought with them was sustained and reinforced by the colony's geography" (Arnold 1994: 118). Figure 3, based on Arnold's (1981) research, shows the number of settlers coming from each county of England per 100,000 residents in 1871. It shows that the west and south-west were particularly well represented in the settler

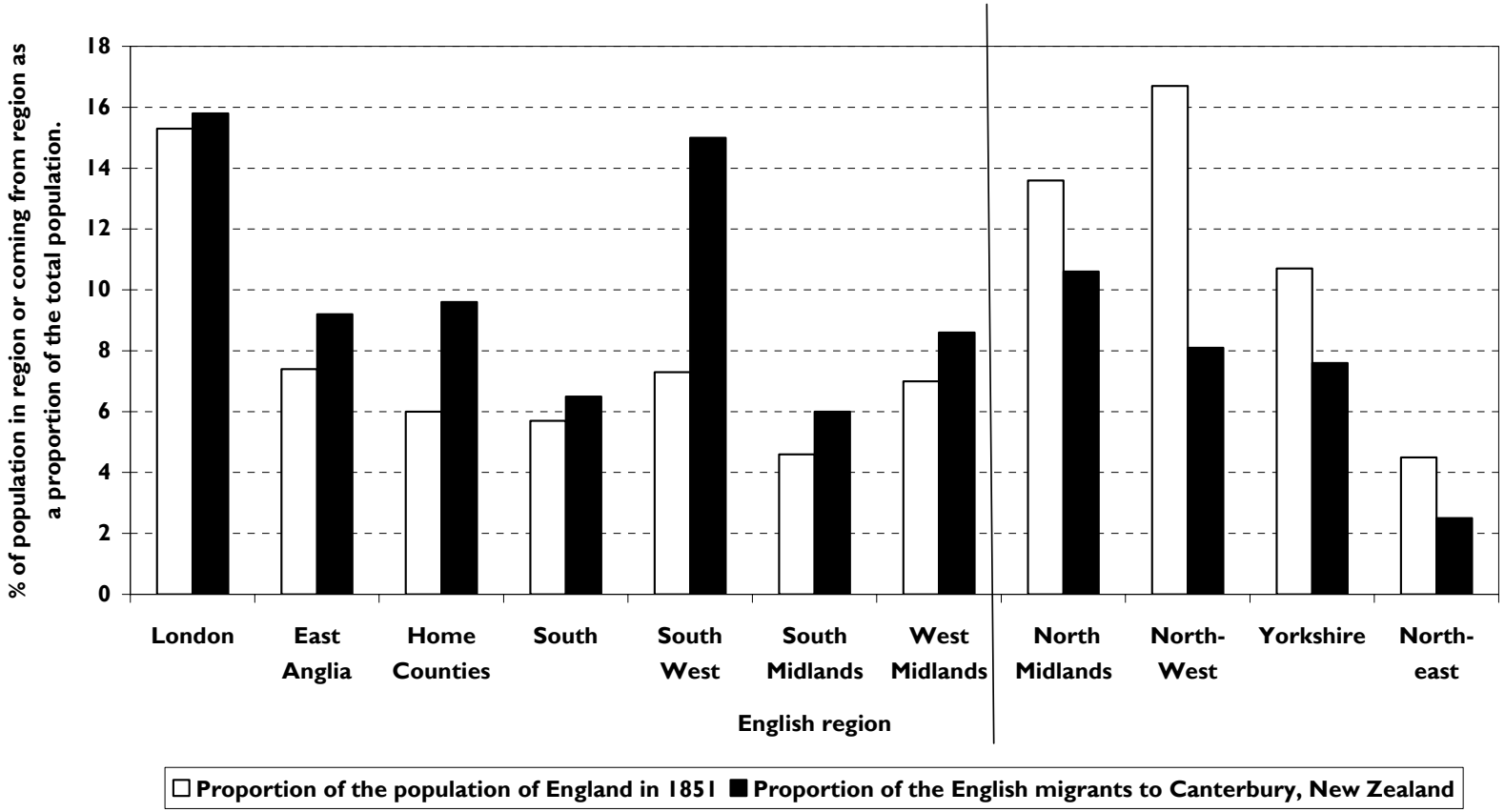
[12] A region of the east of New Zealand's South Island.

population, as were the south-east and East Anglia. The midlands were less well represented and the numbers from the north relatively low.

An analysis of New Zealand migrant origins in 1874 based on McKinnon et al.'s (1997) data is shown in Figure 4. The detail they give is patchy – only giving precise details for some places – but the overall pattern is again the same: the dominant areas of settlement are the south of England, Scotland, Ireland, and (see below) Australia. Note that the largest bar in the graph – for 12 counties selected by McKinnon et al. – does NOT include all southern English counties. East Anglia, parts of the southern Midlands, and the south and south-west are included in the Rest of England/Scotland/Wales category.

All three of these historical sources admit potential problems with the data they are drawing from. Pickens' data on birth places of migrants to Canterbury (and not the whole of New Zealand) only relates to those migrants who died after 1875, registered a birth after 1875 or were married in New Zealand after 1881, though he claims that these registration records, in comparison with information contained in shipping lists, contained 'demographic data of a far more representative kind' (1977: 69). Arnold's data focused only on assisted male and unmarried female immigrant workers and not simply all migrants. But what we can draw from these resources is the very strong agreement they all show, despite these different caveats, that migration to New Zealand was strongest from *Southern England*.

Figure 2: Where did the immigrants come from?: The populations of English regions compared to the numbers of New Zealand settlers to Canterbury (South Island) coming from the regions (Based on Pickens 1977: 72)



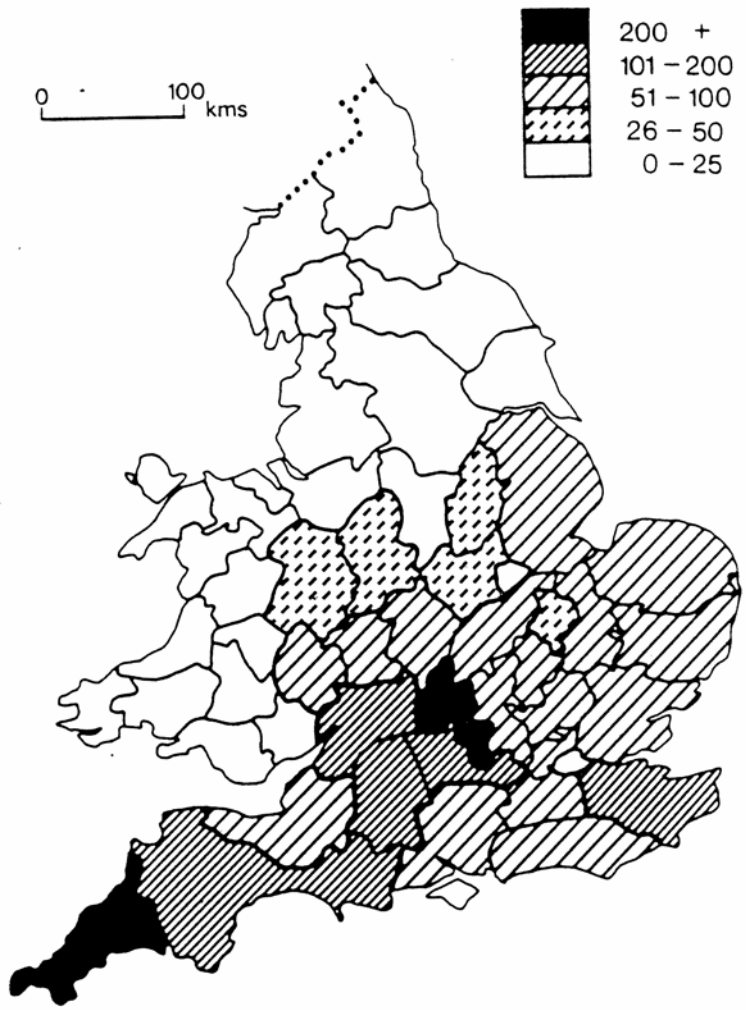
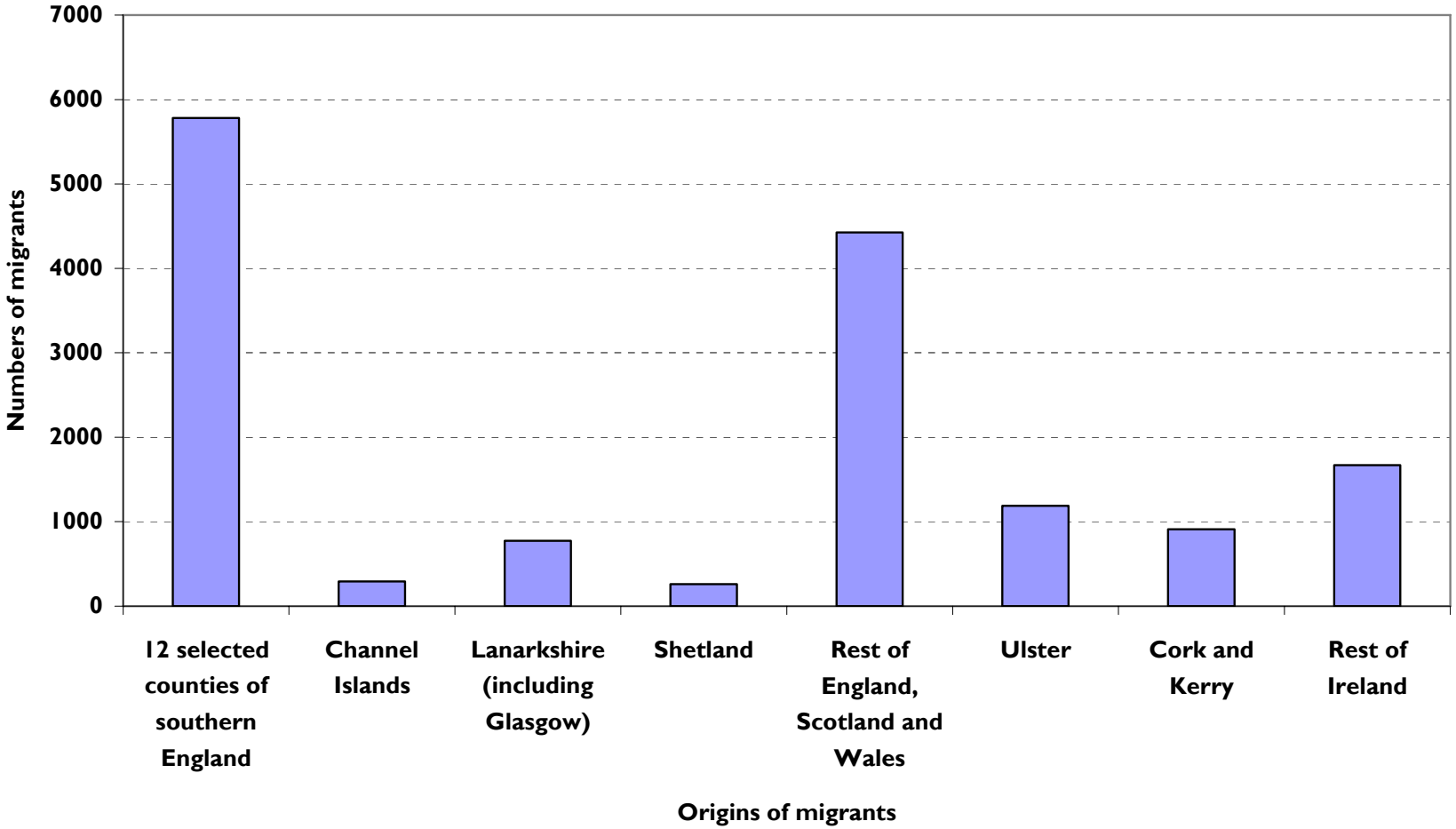


Figure 3: The origins of emigrants to New Zealand between 1873 and 1876. Figures represent the numbers of emigrants per 100,000 of the county population of 1871 (from Arnold 1981:103)

Figure 4: Migrants to New Zealand from the British Isles in 1874
(based on McKinnon et al (1997: Plate 49))



Australia was also an important source of settlement in early New Zealand. Although the figures for Australia-*born* migrants appear rather small – McKinnon et al. (1997: Plate 49) suggest the figure is around 7% of the total number of overseas-born in 1881 – many migrants spent time in Australia before moving on to New Zealand. Vaggioli ([1896] 2000:112), for example, shows that of the 12447 Europeans in New Zealand in 1844, 3464 or 27.8% lived in Auckland, the Bay of Islands or Hokianga[13], and states that "colonists who settled the upper half of the North Island were mostly migrants from Australia" ([1896] 2000: 112). In addition, McCaskill (1982: 6-7) claims that "in socio-economic terms, much of the European community in northern New Zealand in the 1830s was a 'drop-out' extension of Sydney society with escaped convicts, former convicts, debtors, traders and land speculators enjoying an early kind of 'enterprise zone' free of oversight and the law". In a detailed paper on migration between New Zealand and Australia, Carmichael (1993: 516) claims that many of the estimated 2000 first settlers to New Zealand had come from Australia: "By 1854, the European population totalled 32500…12000 in Auckland, a garrison town with probably over half its European population…having come from Australia". In addition, he quotes William Fox (a former Premier of New Zealand) who described Auckland in the early 1850s as "a mere section of the town of Sydney transplanted" (Carmichael 1993: 516; Sinclair 1959: 98). And Arnold (1994:120) suggests that "many settlers had a period of Australian experience behind them, and an intricate network of interrelationships gave a significant Australasian dimension to colonial New Zealand".

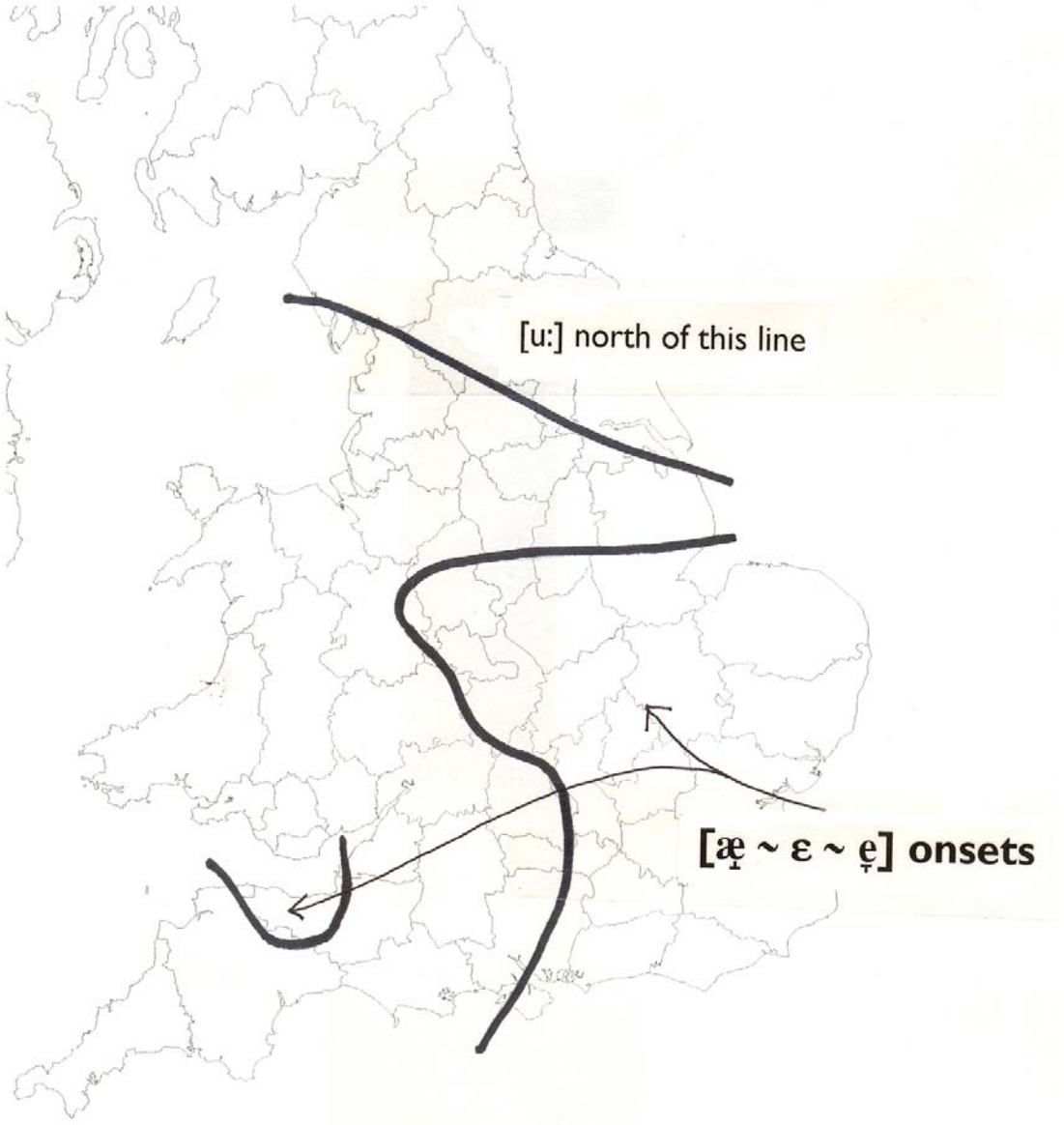
When looking at the dialect evidence from the 19th century, therefore, looking for which variants of MOUTH would have been well represented in early New Zealand English, we need to look in particular at those areas which sent relatively high numbers of settlers – the south of England generally, Ireland, Scotland and Australia. We have four sets of evidence that may shed some light on which forms were taken – these sources provide us with dialectological detail covering people born from the early 19th century, slightly before large scale migration to New Zealand, through to those born in the final quarter of the 19th century, slightly after the first substantial New Zealand-born generation. The earliest and most important source we have at our disposal for the purposes here is Ellis (1889). This is a dialect survey of the traditional type, based on information from over 1100 locations in Great Britain. Data in the form of spontaneous transcriptions of reading passages and word lists were sent to Ellis by a combination of trained dialect enthusiasts (such as Thomas Hallam) and interested locals. In some locations Hallam was sent to check the validity of the local data collectors' work and investigate some features more thoroughly. Since these data were collected primarily from older people, it gives us a picture of the vernacular dialects of people born in the early part of the 19th century. Ellis's work was pioneering. 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" (2006: 274). Unlike his predecessors he expressed due caution for what we could learn from educated speech,

[13] In addition, 5699 (or 45.8%) lived in Wellington, New Plymouth or Wanganui, and 3281 (or 26.3%) lived in Nelson or Akaroa in the South Island (Vaggioli, [1896] 2000: 112)

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 Jones 2006: 280). For the variable in question, Ellis gives consistent detail, reporting on the variants of MOUTH in each of his proposed dialect regions and usually at more local levels too. Secondly, we have the data presented in Joseph Wright's (1905: 146-7) *English Dialect Grammar*, which presents a detailed account of the different variants of MOUTH used by older speakers at the turn of the 20th century. Thirdly, we have the evidence, for southern England, from Kurath and Lowman (1970). Here, a traditional dialectological questionnaire-based data collection of 56 speakers was carried out in the mid-1930s. These data give us an insight into dialects of the mid- to late 19th century. Finally, we have the data from the Survey of English Dialects. These data were collected mostly in the 1960s of older speakers, and hence give us an indication of the vernacular speech towards the end of the 19th century.

Figures 5a, 5b and 5c show the results of my analysis of the data in Ellis (1889), where I have presented the geographical distribution in England of the three dominant types of MOUTH variant (see also Britain 2001b, 2002b, 2005a). The 'isogloss' in northern England represents the northern limit of the Great Vowel Shift for MOUTH. Areas to the north of this line – including Scotland - had, according to Ellis, yet to diphthongise the MOUTH vowel, i.e. variants such as [u:] are dominant. The south-east, East Anglia, the Midlands, and large areas of the south-west (in other words, a majority of the population of England at the time) show front non fully open [æ - ɛ - e] onsets of MOUTH as dominant, according to Ellis's data. Common also, however, in the south and west, northern parts of East Anglia, the Home Counties, the West Midlands, and small pockets in Lincolnshire, Derbyshire and

Figure 5a: The geographical distribution in England of front mid-open onsets [æ̝ ~ ɛ ~ e̝] of MOUTH, based on Ellis (1889).



South Yorkshire have a central onset of MOUTH, around [ə - ɜ]. Together these front mid-open and central onsets of MOUTH dominate the south and Midlands of England, precisely those areas which sent large numbers of migrants to New Zealand. Realisations of

Figure 5b: The geographical distribution in England of central/rounded onsets [œ ~ ɜ ~ ə ~ ʌ] of MOUTH, based on Ellis (1889).

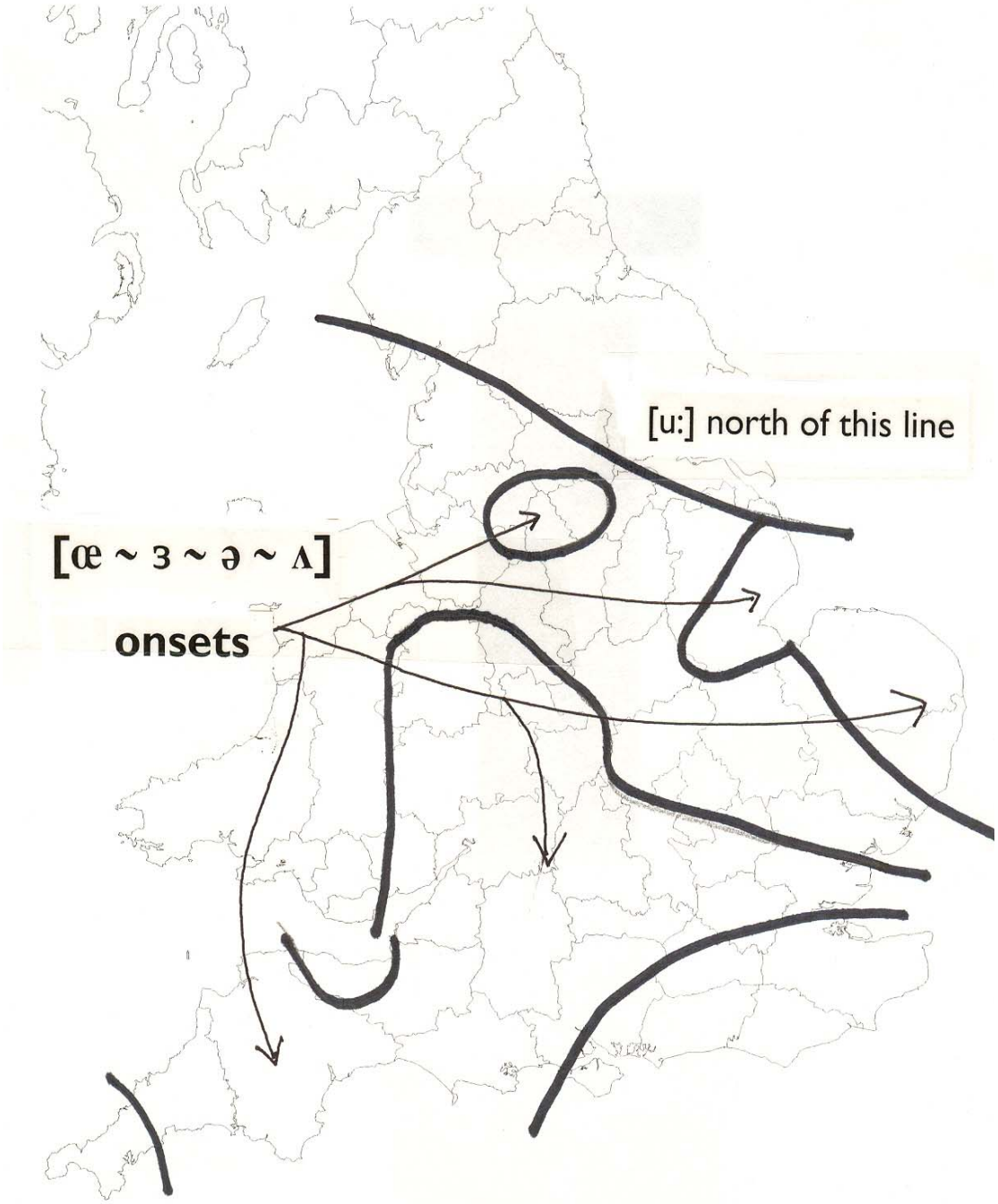
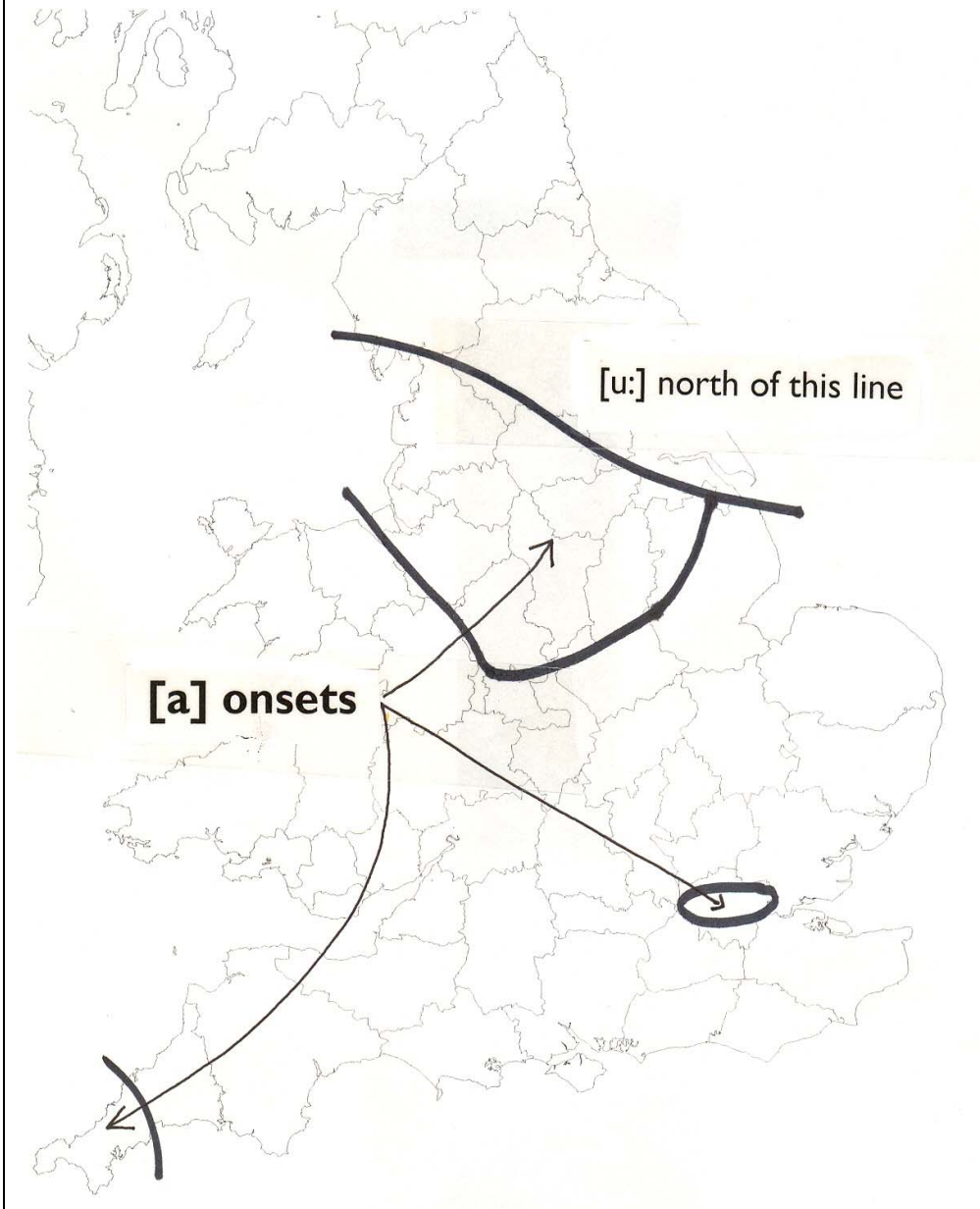


Figure 5c: The geographical distribution in England of fully open [a] onsets of MOUTH, based on Ellis (1889).



MOUTH with open onsets - [aʊ] – have a much more restricted geographical distribution, and are found in the northern Midlands and the north-west, as well as in the extreme west of Cornwall and as one of three variants in London[14].

Figures 6a, 6b, 6c and 6d below reproduce in map form the locales in Wright (1905) which use variants with [ɛ], [a], [ə-ɐ] and other variants ([ou], [u:]) respectively. Again, the pattern found in Ellis is reiterated: the South, East and South-West of England, as well as Ulster - areas of heavy migration to New Zealand - are characterised by [ɛ] and [ə-ɐ] onsets, with [aʊ] restricted almost entirely to the north. Of these [aʊ] realisations, Wright comments that they are "doubtless due in great measure to the influence of the literary language" (1905:146), suggesting they may be standard forms, rather than informal vernacular forms.

Figure 7 compares the data for MOUTH in Kurath and Lowman (1970). Their comments on the geographical distribution of the different variants will suffice here: "in most of the eastern counties…the reflex of ME **ū** is a diphthong starting in mid-front or lowered mid-front position and gliding up toward [ʊ]. In the central counties this [ɛʊ - ɛʉ - æʊ] is universal. In Norfolk and…the western counties ME **ū** has yielded [əu]…it is noteworthy that the Standard British English type [au] does not occur in the folk speech of the section of England dealt with here".

[14] Ellis finds all three major variants [ɛʊ], [əʊ] and [aʊ] in London, and is able to highlight variation in other parts of southern England too, where more than one variant might be found in the same location or region.

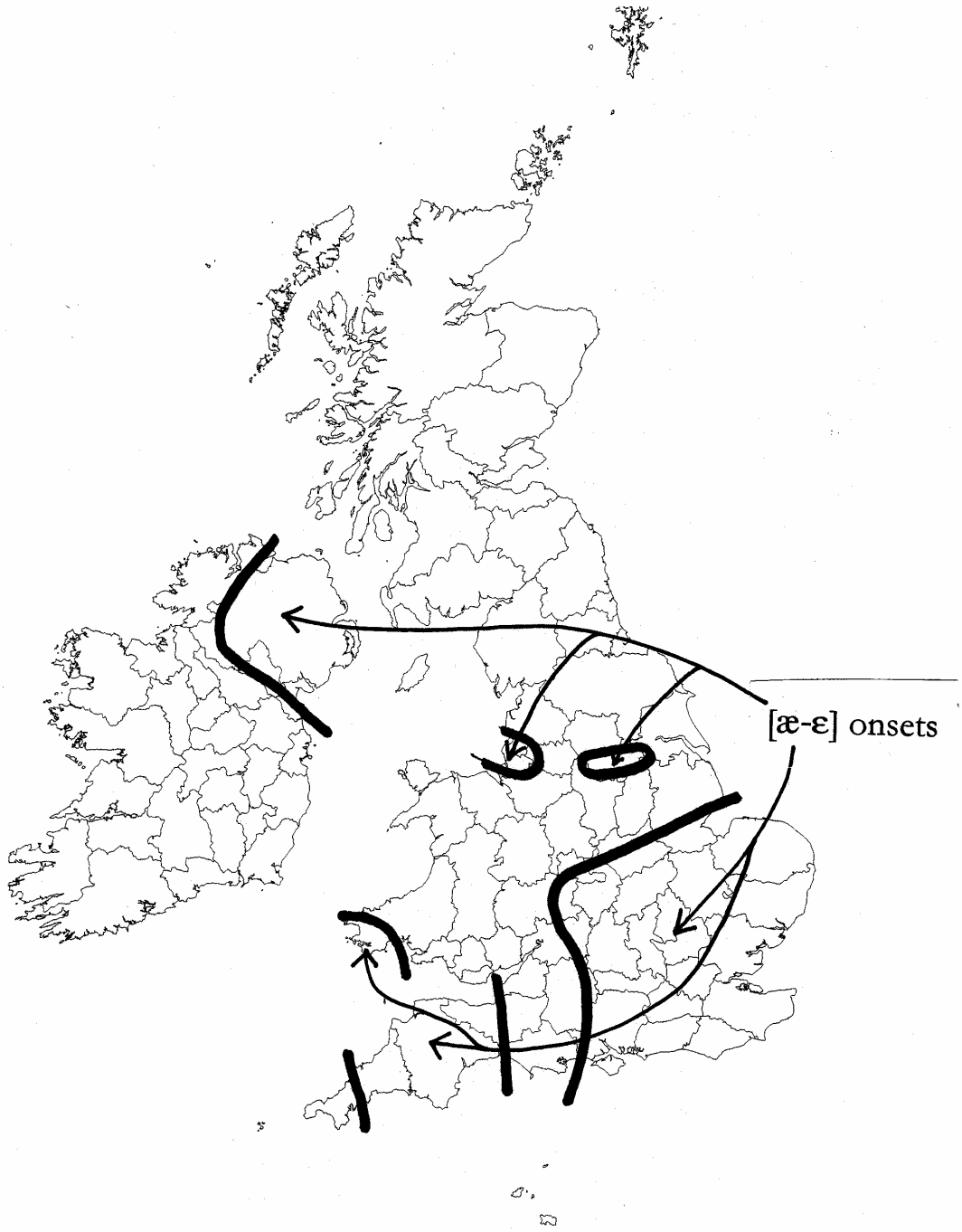


Figure 6a: Front mid-open onsets of MOUTH in Wright (1905)

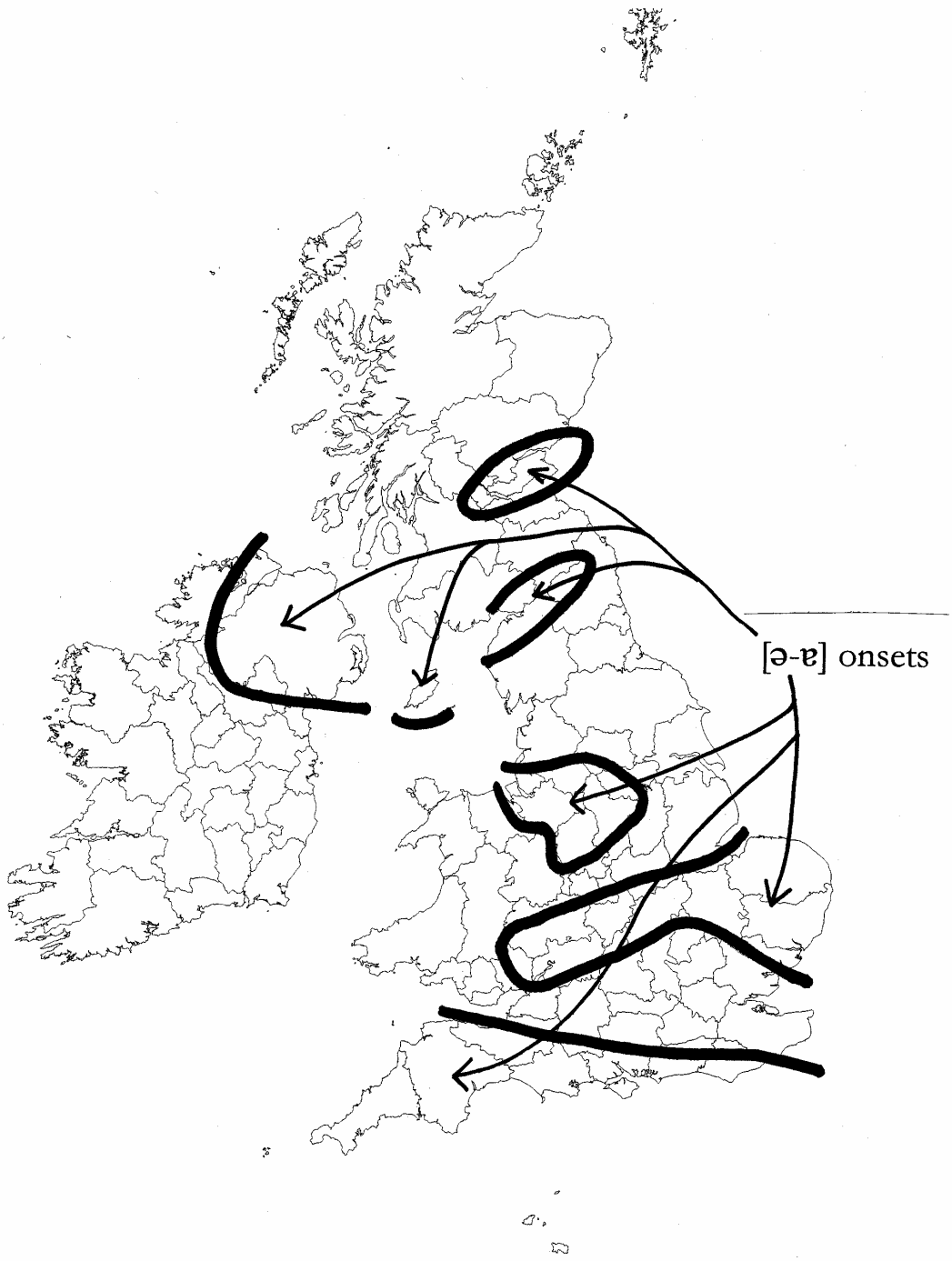


Figure 6b: Central onsets of MOUTH in Wright (1905)

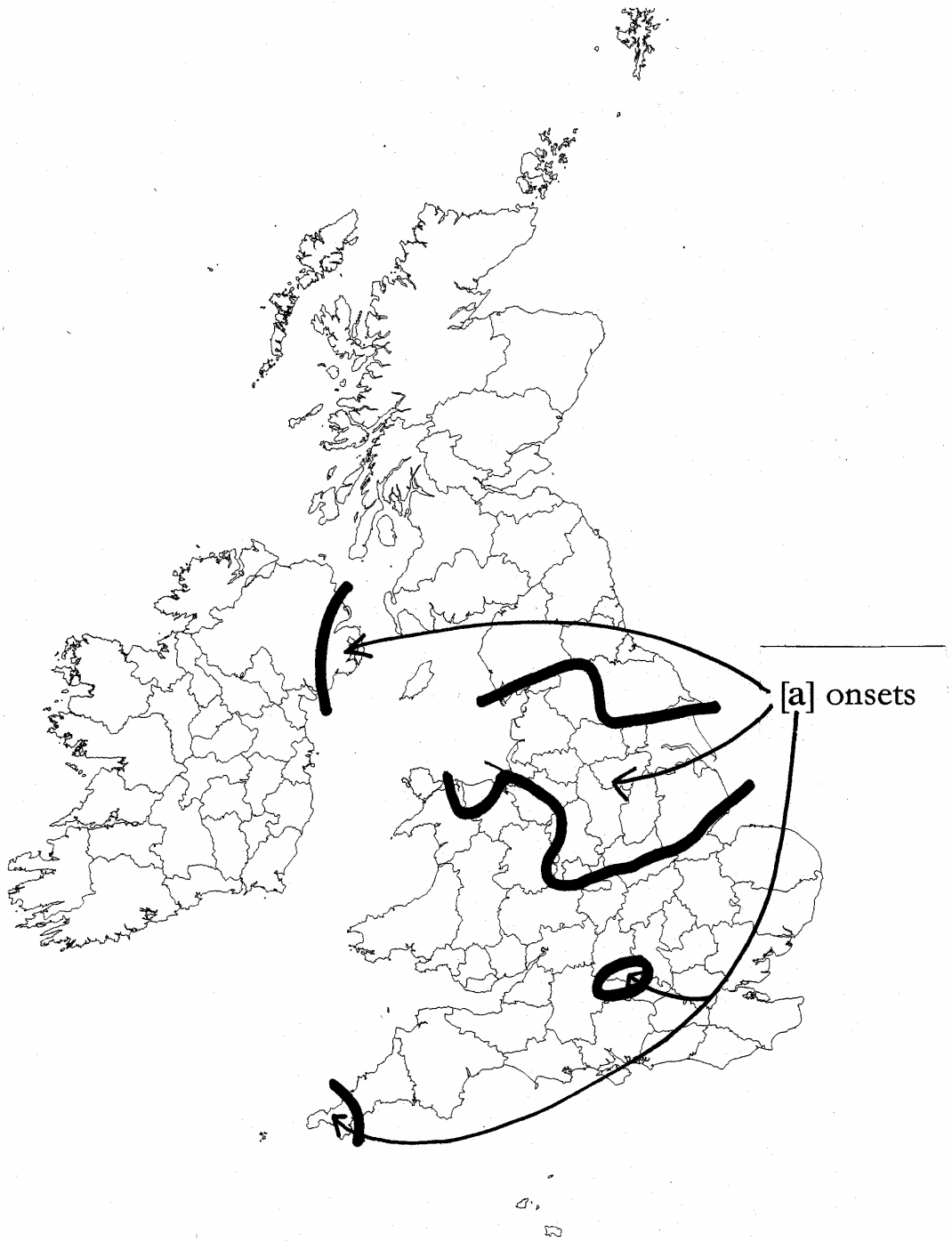


Figure 6c: [a] onsets of MOUTH in Wright (1905)

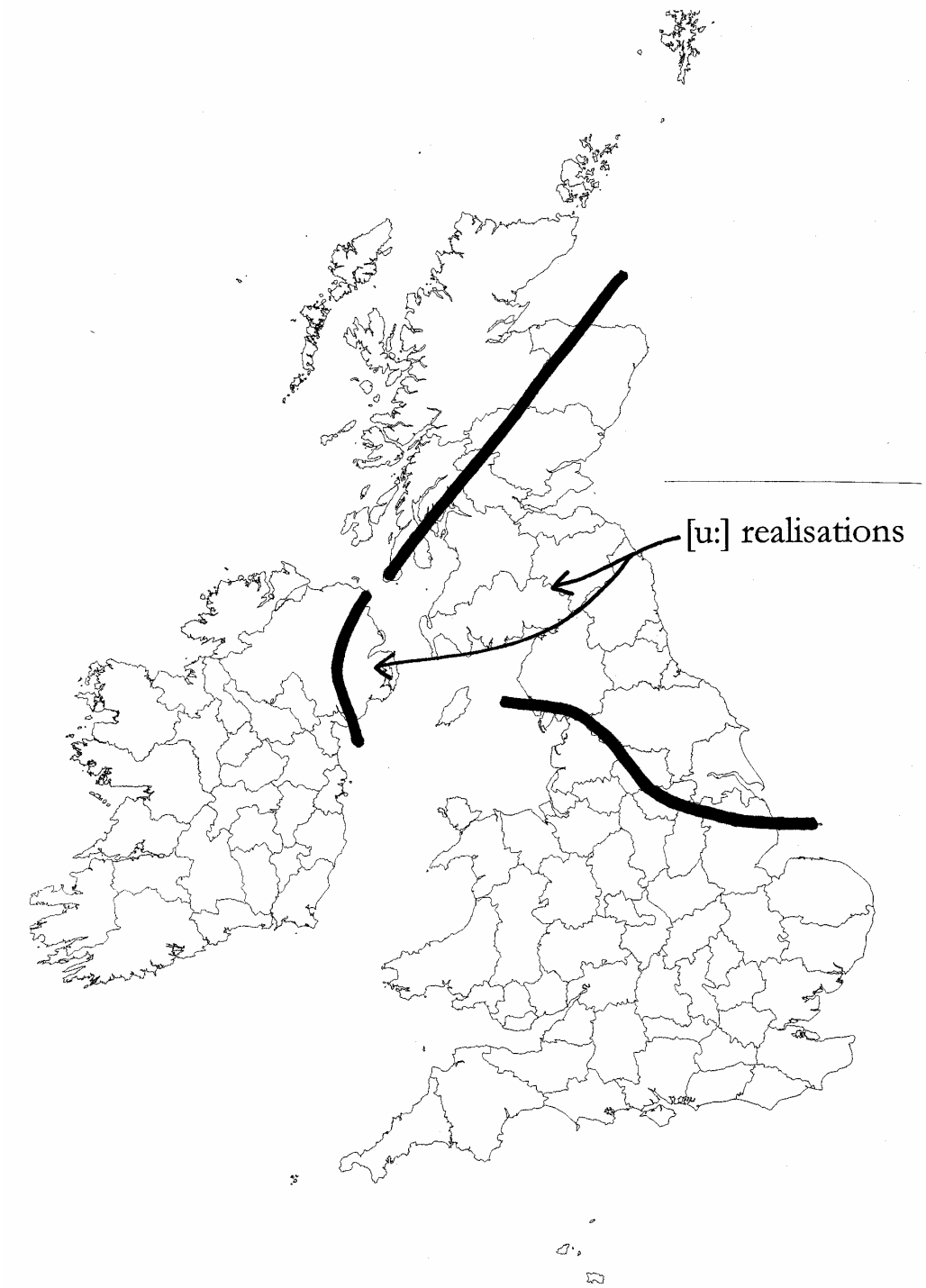


Figure 6d: [u:] realisations of MOUTH in Wright (1905)

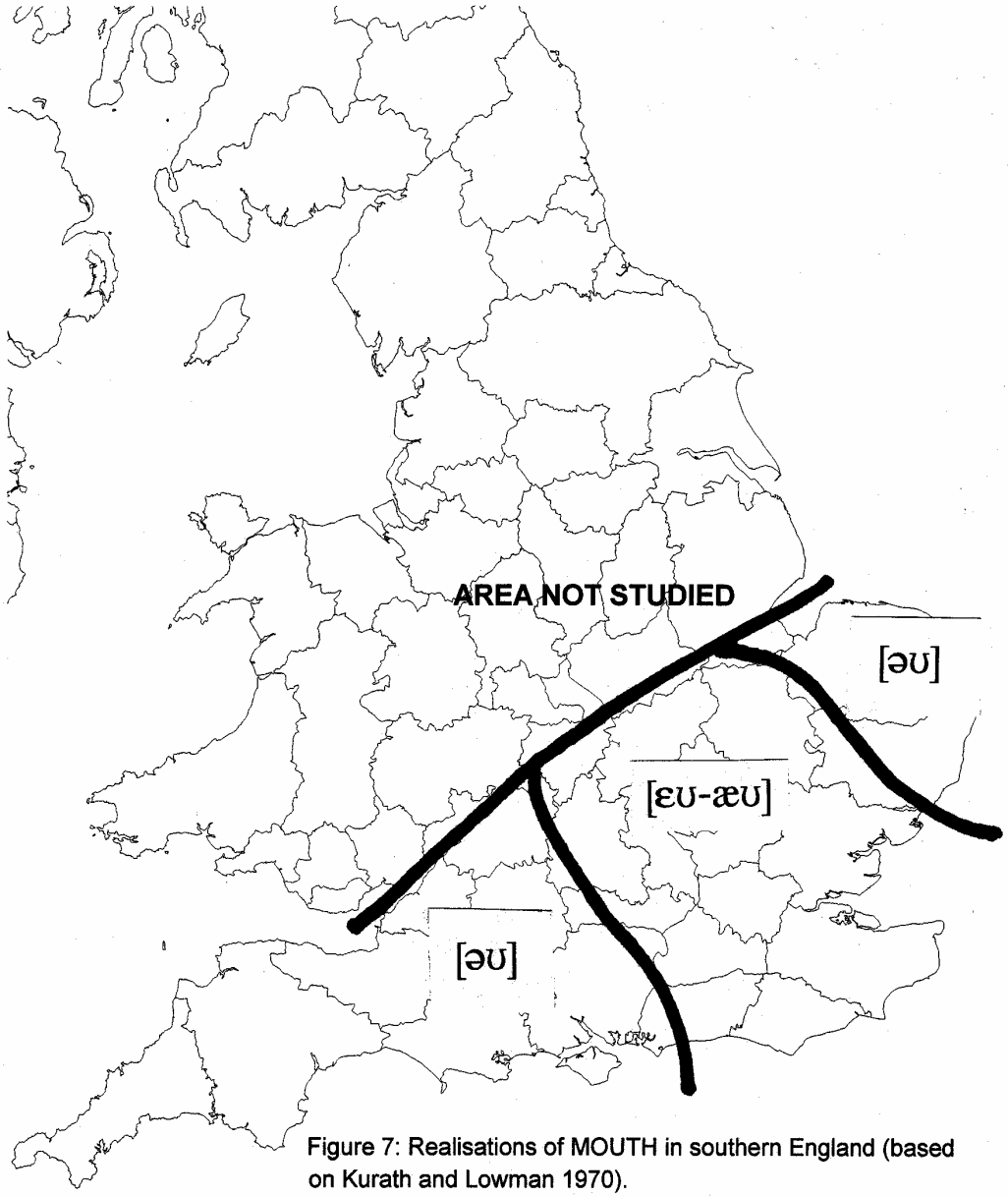


Figure 7: Realisations of MOUTH in southern England (based on Kurath and Lowman 1970).

Finally, Figure 8 presents the geographical distribution of the dominant variants in the SED, based on Anderson (1987). He suggests that "the commonest reflex of ME /u:/ [was] the [ɛω - æω - ɛʏ] type …the Standard English development (to [aω - ɑω]) is relatively

uncommon in the dialects…it is rather surprising that Standard English has selected this type. Probably it indicates the conservative nature of the standard language and its relative isolation from the sound systems of neighbouring dialects" (1987: 41). The 'commonest reflex', once more, is found in those areas that were heavy providers of NZ migrants. On the basis of an analysis of the SED in relation to New Zealand English, Bauer agrees, claiming that "the distributions…show NZE to be based firmly on southern rather than northern varieties of British English" (1999: 298). What is again reassuring about these dialectological studies, all conducted at different times and with often different aims, is their broad agreement – that front mid-open onsets dominate the South of England and that [aʊ] is barely used as a vernacular variant there.

Other early researchers who have conducted smaller scale locality studies have also noted mid-open onsets in various parts of the British Isles. Wyld (1907:328) claims "Various vulgarisms and provincial forms of this diphthong exist, such as (æu, ɛu)" and later (1953) finds raised onsets in Lancashire and, notably, in London, where he claims "In Middle Class London Cockney, the first element of the diphthong has been fronted, and a typical mark of the beast, as Lord Chesterfield would call it, in certain circles, is the pronunciation [hæus]" (1953: 230). And Matthews (1938: 63) investigating Cockney claimed that *mountain* was pronounced 'meowntain'. Sivertsen claimed that "by far the most common" (1960: 67) realisation in London was [ɛə - ɛʊ]. Collins (1964:42) found [ɛʊ] in South Warwickshire, Kökeritz (1932: 65) remarked that [ɛʊ] was a "very stable diphthong" in Suffolk, and noted (1932: 67) Thomas Albrecht as claiming [æʊ] - [ɛʊ] for Essex in 1916. Wakelin (1986:28)

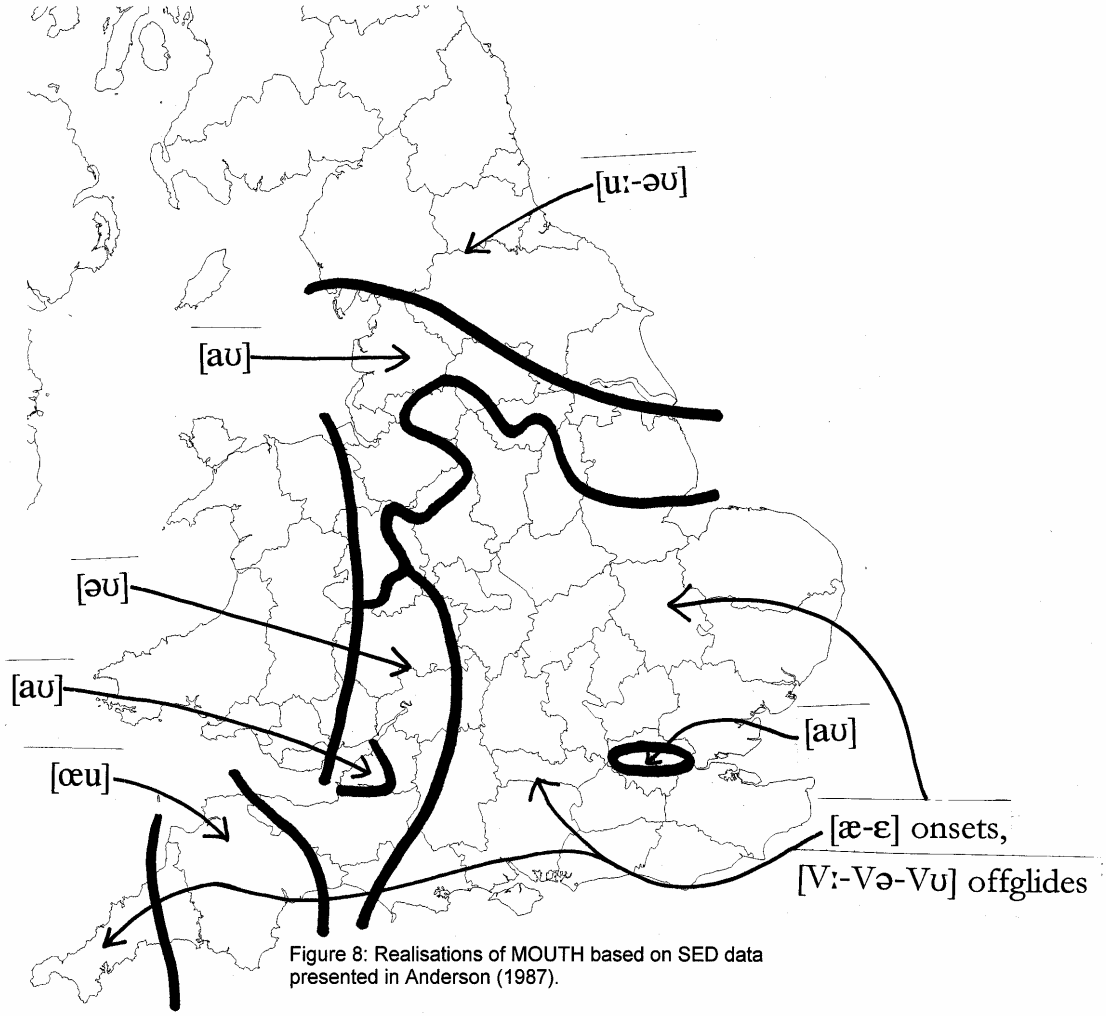


Figure 8: Realisations of MOUTH based on SED data presented in Anderson (1987).

shows onsets that are either front mid-open or slightly centralised [ɛu - ëʉ - ëʏ] for Cornwall, Devon and Somerset[15].

In sum, all the dialectological survey evidence, from Ellis (1889) right through to the

[15] Interestingly, in mid to late 20th century Southern England, mid-open onsets of MOUTH seem to be becoming *less* common, with [aʊ] forms emerging, especially in areas of relative demographic turbulence (e.g. Kerswill and Williams 2000), though many rural areas retain them. The Fens, for example, shows varying degrees of glide weakening, but the onset remains mid-open: [ɛː ~ ɛʊ] (Britain 2003).

most recent nationwide survey of the dialects of England, the SED, confirms that the dominant variants in those areas which sent most migrants from England to New Zealand are those with front mid-open onsets, similar to those used in New Zealand today.

We have relatively little evidence of the pronunciation of MOUTH in Scotland and Ireland in the 19th century, beyond evidence presented by Ellis (1889) that the Great Vowel Shift had not begun in the far north of England and Scotland (and hence had forms such as [u:] or possibly [ʊu]) and Wright's evidence for the British Isles as a whole. Descriptions of present-day Scottish and Irish English suggest that these 19th century descriptions were largely accurate for MOUTH, since Lass, Wells and others all show relatively conservative central onsets for many locations even today. Lass (1987: 269) finds Mid Ulster [əʉ], Southern Hibernian [ʌʊ] and Standard Scots [ʌʉ]. Bird (1997: 297) reports [ɛʉ] on the Hebridean island of Barra. Hickey has suggested that 19th century Dublin had [ɛʊ] (personal communication; see also Hickey 1999: 212).

The earliest evidence we have of MOUTH variants in Australian English comes from McBurney, whose comments on NZE were examined earlier (Ellis 1889). His findings for MOUTH are presented in Table 4 below. Perhaps even more so than in New Zealand, diphthongs with front mid-open onsets dominate. Ellis (1889: 237), commenting on McBurney's description, suggested that "on the whole…a visitor from England to Australasia finds great resemblance to the mode of speech he has left behind him". He claims that a characteristic of Cockney is "alteration of the first factor of *ow* in cow, so that it is written *kyow* or *caow* {kjɛ'*u*, kæ'*u*}…[which] has nearly naturalised itself in Australia". In

a rarely cited article, Gunn (1975:11), talking about the role of the early settlers in the formation of Australian English, stated that "/æu/, the form established in Australia, must have been very common in these general or advanced speakers". Subsequently, writers have agreed, as in New Zealand, that the dominant vernacular form in Australian English has had onsets in the area of [æ] or [ɛ]. Baker, back in 1945, suggested that Australia has [æu - əɑu - ɛɑu - ɐiɑu], Mitchell and Delbridge (1965) proposed [æu - æ̟ʊ], etc (see also Bernard, 1989; Clark, 1989; Cochrane, 1989; Lee, 1989; Hammarström, 1980: 15; Harrington et al (1997: 179).

Table 4: The realisation of /au/ in varieties of early Australian English according to McBurney (in Ellis 1889: 240-241), with IPA equivalents from Eustace (1969).

Ellis' transcription (1889: 241)	IPA equivalent, following Eustace (1969)
{éeu}	[ɛ̟ːʊ]
{ææ'u}	[ɐ̟ːʊ]
{áaˈu}	[a̟ːʊ]
{áu}	[ɑʊ]
{ə'u}	[ə̟ʊ]

South Yarra, Collingwood, Frankton, Dunolly, Ballarat, Tasmania,	Almost all use {éeu}
Sydney, Mornington	Almost all use {éeu}. A few use {ææ'u} and {áaˈu}.
Maryborough	Almost all use {éeu}. Boys possibly use mostly {ææ'u}
Brisbane	Equal proportions of {éeu}, {ææ'u} and {áaˈu} are used.

The demographic and historical sociolinguistic analysis of the New Zealand migrant population highlights a number of points very clearly indeed:

- Firstly, by far the most dominant variant of MOUTH among the settlers to New Zealand would have had an onset which was front and not fully open. This is shown by the fact that those very areas which saw heavy migration to New Zealand are those areas which, as agreed by several dialect surveys, predominantly used mid-open onsets. These include the south of England, parts of Ireland, and Australia.
- The [aʊ] realisations of MOUTH, necessary for us to support the hypothesis that /au/ completed the Great Vowel Shift before fronting and raising via 'Diphthong Shift', are found very sparsely indeed in areas which sent significant numbers of migrants, and are more popular in areas which sent relatively few migrants – the North of England.
- Other variants would have also been present in the dialect mix: these include variants with central onsets [əʊ], found far more extensively across England than [aʊ], as well as in Scotland and Ireland, and noted as a minority form in New Zealand by McBurney (Ellis, 1889: 241), and pre-Great Vowel Shift [u:]-type variants from Scotland and the far north of England.

It appears clear, I believe, from all this evidence, that [aʊ] would not have been found in sufficient quantity to have constituted the early dominant vernacular form, undermining proposed raising and fronting hypotheses.

Challenges

Woods (1997, 1999, 2000) is the only linguist who seriously provides some challenge to the view that the present-day realizations of MOUTH can be accounted for by importation from the British Isles (2000: 113)[16]. She presents a considerable amount of evidence in favour of the presence of non-open onsets of /au/ from the early days of NZE. However, she ultimately rejects the idea of 'preservation', and so it is important in the context of the discussion of the origins of /au/ in NZE, therefore, to consider the reasoning behind her counter-arguments. These include:

- The similarities between NZE and other post-colonial varieties: Woods claims, for example, that "the direction of the shift in MOUTH … mirrors changes which have occurred in other colonial varieties of English" (2000: 133), and "the fact that Australian English and South African English also display similar vowel structures, when the input dialects would have been of a different and divergent 'mixture', may be taken as further evidence in favour of this hypothesis: these varieties show similarities not, or at least not solely, because they have retained elements from the original input dialects, but rather because they have undergone innovative parallel developments in their vowel structures which are governed by universal principles of change" (2000: 142).

[16] Maclagan et al. (1999: 22) briefly suggest that the form may have been brought by migrants, but seemingly reject it as the main impulse for the present-day pronunciation. They argue: "the diphthongal variants that are stigmatized are those associated with a relatively recent shift, which, while it may have occurred in Britain and been brought to New Zealand by settlers, was certainly not as widespread in early NZE as it is today".

It is true that some post-colonial varieties of English have seen change in the MOUTH diphthong similar to that which Woods claims for New Zealand. Labov (1994: 71), for example, clearly demonstrates change in apparent time in Philadelphia. But other more neighbouring varieties with more similar socio-demographic backgrounds, e.g. Australian English, have similar histories of stable use of front mid-open onsets from the very beginnings of their English speech community[17]. As far as MOUTH is concerned, migrants to Australia would have imported a largely similar mix of variants, since the dominant areas of emigration were similar to those from which New Zealand drew migrants, namely southern England, Scotland and Ireland (see Britain 2007).

- Labov's (1994) Principle 1 of language change - in chain shifts, tense nuclei tend to rise along a peripheral track: Woods sees the cross-varietal similarities not as evidence of a similar source but as evidence of parallel and independent developments. She claims that "fronting and raising of MOUTH is predicted by Labov's internal principles of language change" (2000:133). She contrasts "conservative dialects of British and American English (e.g. northern New Jersey, Detroit and Chicago) [which] are noted to have a low nucleus [æʊ], while more innovative dialects and more innovative speakers (e.g. Cockneys and young speakers in the southern states of the USA) are found to use a higher variant [eːʉ]. This latter variant is, of course, extremely similar to the articulation of the MOUTH diphthong characteristic of NZE, and this may indicate, therefore, that NZE is located towards the innovative end of the archaic-progressive continuum"

[17] In fact, as noted above, the data from McBurney (Ellis 1889) shows that Australia, settled by substantial numbers of Anglophones *before* New Zealand, shows the dominance of front mid-open onsets even more clearly.

(2000:133). Similarly, she argues that "the fact that many similarities between Cockney and NZE can be explained by reference to patterns of the 'Southern Shift' suggests that, in general, the correspondences between these two varieties may best be explained by reference to parallel independent developments rather than to patterns of retention of particular phonological features" (2000: 141); "thus…internal principles of change, and particularly those related to the Southern Shift, may account for the similarities between early NZE and Cockney…this seems a more feasible hypothesis than one of retention of features from a variety which was only used by a small percentage of the population" (2000: 142)

Labov's (1994) principles of sound change are obviously an attractive source of explanation in variation studies. However, if they are to be used to support evidence of change it must be demonstrated in each case that the particular speech community in question *actually underwent those changes* and *at the appropriate time* for them to be relevant to the argument. As we have seen, there is very little empirical evidence indeed that NZE underwent this raising and fronting change in this way – were this change really to have taken place, we would have found more robust signs of [aʊ] being used as a vernacular variant in the early days of the English speech community in New Zealand. Similarly, Labov's principle may have applied to Cockney[18] but if that change took place in Southern England *before* the British settlement of New Zealand (as appears to be the case if we consider the evidence from Ellis 1889, see Figure 5a above), and given New Zealand was predominantly settled not just by Cockneys, but by people from right across the South of England bearing

[18] I argue in Britain (2007), however, that even this is highly doubtful.

mid-open onsets of MOUTH, then we have to propose a rather contorted chain of events in order to posit that NZE underwent a Principle 1 change for that feature. If the majority front mid-open forms brought by thousands of migrants from the British Isles were not a driving force behind the evolution of MOUTH in New Zealand, where did they go? Of course, showing a synchronic similarity in a number of different varieties doesn't necessarily mean they all underwent similar changes to get there. Some may have changed, but others may have imported the form from elsewhere.

Another challenge to the direct importation of variants dominated by mid-open variants is the proposal that *diphthong shift was inherited as an ongoing process* (e.g. Trudgill et al 2000b, 2004). Certainly, for a number of the other elements that formed part of diphthong shift, this seems a reasonable claim. Britain (2002b) considers, through an analysis of Ellis (1889), the importation of British and Irish variants of FACE (/ei/) and shows that while many British dialects in the early to mid 19th century would have had lowering of the onset of FACE, suggesting diphthong shift was underway, those dialects did not dominate the dialectological landscape of southern England quite as much as front mid-open onsets of MOUTH (2002: 27). And 'diphthong shifted' variants of FLEECE (/i:/) were *much* more restricted in 19th century Britain (2002: 30). However, 'diphthong shifting' of *MOUTH*, if such a thing occurred in the way Wells (1982) describes, was in its latter stages of expansion in England by the time of Ellis (1889). A comparison of mid-open front onsets of MOUTH in Ellis (Figure 5a above) with data collected three-quarters of a century later, the SED data portrayed in Figure 8 shows a relatively small expansion in the geographical distribution of those forms. Recall also McBurney's finding (above in Table 4 and in Ellis 1889) that, in the

earlier-formed Australian English, MOUTH (drawn from slightly different, but similar migrant origins) was even more dominantly front and mid-open than in New Zealand English. Consequently, what was imported from the British Isles was not diphthong shift of MOUTH as a vigorously *ongoing process*, but as a*n almost completed one*.

I turn, finally, to what I consider the most plausible explanation for the history and current position of the MOUTH diphthong in NZE, one which incorporates Woods' insistence that there was change, but which recognises the role played by the dominant forms of MOUTH transported to New Zealand by mid-19th century migrants.

Koineisation and front mid-open MOUTH

As a number of authors have shown (Britain 1997a, 1997b, 2004; Kerswill and Williams 2000; Siegel, 1985, and, especially, Trudgill, 1986, 2004; Trudgill and Britain forthcoming), one characteristic of speech communities like New Zealand that have witnessed high levels of dialect contact between speakers of distinct but mutually intelligible varieties is *koineisation*. Koineisation can have a number of different outcomes, perhaps the most common of which is levelling, whereby marked or minority linguistic variants in a dialect mix are eradicated in favour of more common, less marked variants which have a wider social currency in the locale (see Britain 1997b and Sudbury 2001, for example).

The demographic and linguistic evidence presented here for 19th century New Zealand, I would claim, provides solid evidence of koineisation-in-progress. The early

speech community, as highlighted by McBurney, is characterised by a) dialect mixture – a range of variants of MOUTH in use in the early years of settlement[19], but b), in this case, one overwhelmingly dominant variant of MOUTH – with a front mid-open onset. This mixed situation is a genuine reflection of the variety and proportions of forms imported by migrants from the British Isles and Australia. As the post-contact levelling process progressed, so the mid-open onsets of MOUTH gradually eradicated minority vernacular variants such as [əʊ] and [aʊ], with speakers accommodating to the local dominant variant, until a situation was reached when the dominance of front mid-open onsets in vernacular varieties of New Zealand English reached its present strength. In doing so, it would not be surprising – in fact we'd expect it (Trudgill 1986, 2004, Britain 1997b, 2005b) – if interdialect forms such as variants between [aʊ] and [ɛʊ ~ ɛᵊ] were found and this may account for some of the intermediate forms found in some studies – leveling-in-progress rather than fronting-and-raising-in-progress, given that fairly swiftly minority conversational vernacular variants would be replaced by the dominant ones.

So, importantly, I am not claiming that [aʊ]-type variants were not present in New Zealand, but that they were present in such insignificant proportions that they were levelled away as vernacular variants. Of course, they would have been retained somewhat among some speakers in some styles as 'prestige' variants, demonstrating, I would like to claim, that the relationship between [aʊ] and [ɛʊ] in present-day New Zealand English is not one of parent and child but one of standard and non-standard. And I'm not claiming that there has been

[19] For example, Gordon et al (2004: 152) show that about 20% of speakers in the Mobile Unit data produced non-front, non-fully open dialect forms such as [ɜu ~ œu ~ ɐu], and 10% produced fully open forms.

no change in MOUTH in NZE, but that the change is of a different nature to that usually proposed: externally-driven leveling under circumstances of extreme dialect contact, where, for this particular variable (and not necessarily for others), there was an overwhelmingly dominant variant imported from the British Isles, rather than a gradual neogrammarian internally-driven raising and fronting that somehow soldiered on despite the demographic turmoil in the community at large. The relevant process which led to the dominance of [æʊ - ɛʊ] therefore is one of dialect levelling rather than vowel raising.

In fact, a very similar argument has been put forward by Trudgill (2004, Trudgill et al, 1998) to account for another characteristic of NZE – the raised front short vowels TRAP and DRESS. He argues that in the dialect mix that arrived in New Zealand was a good proportion of variants that were already relatively close (see also, for example, both Woods 1997 (for a very interesting account of the role speaker gender plays in focusing and new dialect formation) and Gordon et al 2004 for discussions of TRAP and DRESS raising) and that once in New Zealand, rather than this closeness becoming obsolescent (which is what has largely happened in Southern England), the vowels became more close over time to reach the present-day extremely distinctive qualities, leading consequently to NZE diverging rather than converging with British English. The same can be said for MOUTH – front mid-open variants were brought in abundance (perhaps in greater abundance than close variants of TRAP and DRESS), and while they have retreated somewhat in England (though retreated much less than close variants of DRESS and TRAP), they have flourished in NZE, and, following the course of the front short vowels, may well be becoming closer. Certainly in the Wellington data reported above, some of the younger female speakers (of both

ethnicities) had variants of MOUTH with onsets closer than [e]. NZE, in this respect also, has diverged and continues to diverge from Southern Britain.

Conclusions:

The history of MOUTH in NZE has previously been analysed as if it has undergone a fronting and raising – some suggest this alteration is an imported change-in-progress, other work does not really lend much credence to the possibility that it is not New Zealand-born. I have argued here that NZE imported a fairly dominant front mid-open variant of MOUTH which leveled away other minor competitors on New Zealand soil. There is evidence to suggest the already close onset of the diphthong is perhaps becoming closer, and given the (slow) retreat of front mid-open variants in England, it represents a(nother) case of NZE diverging from English English. In the case of MOUTH, the settler dialects showed patterns which were not only quite *unlike* standard varieties (indeed, note the comments above of Kurath and Lowman, 1970 and Anderson, 1987), but which showed a dominance of the variants which prevail in the country today. The leveling in the early colonial period left front mid-open onsets 'victorious' at the vernacular level, but engaged in a much longer battle with more prestigious variants at the stylistically more formal level. Figures 1a and 1c appear to suggest that the fully open [aʊ] forms may be slowly losing this battle too.

At a more general level, this case study highlights the need to attend as carefully as possible to the initial stages of change as well as to the direction and outcome of change. Our ability, of course, to highlight levelling as a dominant koineisation process relies quite crucially on

us having detailed and explicit knowledge both of the structures of the dialects in the input and of the demographics of their users. Kuo's (2005) study of the development of Taiwanese Mandarin (TM) (which has formed over the half century since the flight of Chinese Nationalists from the Mainland after the Chinese Civil War (1945-9)) provides another reminder of the importance of understanding who brought which dialects to the mix. The previous literature on TM had suggested strongly that this new variety was different from Standard Beijing Mandarin because of the second language acquisition failures of the non-Mandarin speaking population of Taiwan (mostly speakers of the majority Southern Min) who were forced to learn and speak Mandarin after the Nationalists arrived from the Mainland. Earlier researchers pointed to the fact, for example, that whilst Standard Beijing Mandarin had 4 retroflex consonants in its inventory, Southern Min had none, and so, when learning Mandarin, the Southern Min speakers merged the retroflexes with corresponding non-retroflex sounds, and diffused these non-retroflex consonants to, amongst others, the children of original mainlanders. Through a very careful analysis both of the structure of Chinese dialects in the middle of the 20th century, and census information on the regional origins of the migrant mainlander population, Kuo demonstrated that whilst retroflexes were common in central Beijing, they were rarely found elsewhere in China, and were in a tiny minority of the mid-20th century migrant population to Taiwan. She argued, therefore, that the lack of retroflexes in TM was a simple result of them not having been brought to Taiwan in sufficient numbers in the first place, and the few that were brought, being highly marked, were swiftly levelled away. This and the New Zealand case study above, reiterate the importance of looking behind us as well as in front when analyzing

change, since we might find the journey already undertaken has been rather different than we had first imagined.

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