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Norfolk Island-Pitcairn English (Pitkern Norfolk)

Introduction for Phonetics-Phonology

1. Introduction

1.1. What is Norfuk?

The label ‘Variety of English’ when applied to the ways of speaking of the descendants of the Bounty mutineers and their Tahitian spouses, is somewhat problematic, and the relationship of these to other varieties featuring in this volume is complex. Earlier judgments on the linguistic nature of the language (surveyed by Mühlhäusler 1998) vary considerably and include characterisations such as dialect of English, dialect of Beach-la-Mar, mixed language, patois, cant, pidgin and creole. A similar range of labels is encountered among present-day speakers and there is no agreement among them whether the variety spoken on Pitcairn Island and Norfolk Island are varieties of English, one separate language, or two separate languages. It appears that the wish to distinguish Pitkern from Norfuk as two separate named languages is growing and we have conformed to this wish. We have also opted to concentrate on the varieties spoken on Norfolk Island, as this is where the vast majority of present-day speakers reside (about 900 as against 50 on Pitcairn) and Norfolk is where Mühlhäusler has conducted fieldwork over several years. Sociopolitical problems make fieldwork on Pitcairn impractical at the moment.

The difficulties experienced in obtaining an adequate characterisation of Norfuk result from a number of factors. (a) Very patchy documentation; (b) Norfuk is not a focused language (see Le Page and Tabouret-Keller 1985), where all community members agree on norms and standards, and what is called Norfuk ranges from forms that are mutually unintelligible with English, to others that differ only by a few stereotypical expressions; (c) both Pitkern and Norfuk have always been spoken side by side acrolectal varieties of English (British and Australian on Norfolk, British and American on Pitcairn). On Norfolk, standard British English until recently served as the role-model; for educated islanders, and “murdering the King” was the local expression for speaking Norfuk. It is noted that some families spoke English only, whereas in other families, Norfuk was the preferred language; (d) code mixing is pervasive; there are virtually no examples, even from older conservative speakers, which do not involve code-switching; (e) Norfuk has been an esoteric language, not readily accessible to outsiders. It has also been a stigmatised language with a long history of persecution by the education system.

At present, the Norfolk Islanders are in the process of deciding on questions such as language name, lexical and grammatical norms, writing system and social role. To turn a large number of individual ways of speaking into a language in the sense of a modern standard language, is a difficult technical and political process which leaves much room for conflict. It would seem very unwise for an outsider to tell people what their language is, or what it should be. We have refrained from privileging any of the suggested orthographies, word-choices, word-meanings or grammatical structures. Normalising the data at this point in the history of the language could do a great deal of damage and the reader is asked to forgive instances of inconsistency and vagueness on certain points.

1.2. Geographical information

Pitcairn Island is situated in an isolated part of the Central South Pacific Ocean (24° 01'S. x 130° 06'W), the distance from New Zealand from where it is administered being greater than that between Sweden and India. Its landmass is less than five square kilometres and its present population around 50, with a possibility that it will be abandoned.

Norfolk Island is located 1,575 kilometres east of Australia in the South Pacific Ocean (24° 05'S x 167° 59'E). It occupies an area of 34.6 square kilometres and has a permanent population of about 2,600. It is visited by about 30,000 tourists per annum, with projected numbers exceeding 50,000 in the near future.

1.3. Sociohistorical background

What has been written about the social history of the language again comprises quite a few varying accounts, with certain key factors such as the early presence of a West-Indian English speaker or the impact of the Melanesian Mission generally not being discussed (Mühlhäusler, 2002a). The story of the mutiny on the *Bounty* has been popularised by numerous novels, plays and films, and Pitcairn Island where the *Bounty* mutineers settled in 1792, has come to stand as a metaphor for a South Sea Utopia. When nine British sailors, twelve Tahitian and Tubudian women and six Tahitian men arrived on Pitcairn, the island was uninhabited.

By 1800 following a period of violence John Adams was the sole survivor with 10 women and 23 children. When he died in 1829 the island had become a model Christian community of about 80. Because of food and water shortages, Pitcairn Islanders were removed to Tahiti in 1821, but returned to the island in the same year. In 1839 the population had grown to 100, by 1850 it had reached 156. As fishstocks became scarce and the island degraded, in 1853 the inhabitants solicited the aid of the British Government to transfer them to another island which had become uninhabited, Norfolk. In 1856 all 194 Pitcairn Islanders settled on Norfolk, but a number of families returned to Pitcairn shortly afterwards.

Norfolk Island was discovered by Captain Cook in 1779 and because of its ample natural resources and isolated position was made a British Penal Colony in 1877. The first penal settlement was abandoned in 1814, but a second penal settlement was built in 1825 at a location for the 'extremist punishment short of death' (Hoare 1982:35) and 'a cesspool of sodomy, massacre and exploitation' (Christian 1982:12).

Following much criticism, the settlement was closed down in 1854. The third settlement is that by the Pitcairners who arrived in 1856 and were given title to about 1/4 of the total land area rather than the entire island as they had been led to believe. One reason for this is that the Melanesian mission operating from Auckland, also had designs on Norfolk, and they were granted about 400 hectares of land in 1867. A boarding school catering for about two hundred students from different parts of Melanesia was set up and remained in operation until 1920.

Both islands thus provide laboratory conditions to study linguistic processes such as language contact, dialect mixing, creolization and languages in competition. Different linguists have tended to concentrate on only one of these, as key factor, ignoring that all of them were important at some point in the history of Pitkern and Norfuk, plus other factors such as deliberate creation of language.

Ross and Moverley (1964) characterise what they called Pitcairnese as the outcome of language mixing, and provide numerous details about Tahitian lexicon and grammar, as well as details on dialect features. They provide (page 49 and 137) details on the provenance and likely dialect affiliation of the mutineers, as most men were killed in the first years of settlement, only the following are likely to have influenced the emerging language: Matthew Quintal, (Cornishman), William McKoy (Scotsman), Edward Young (St. Kitts, West Indies) and John Adams (Cockney). The two principal linguistic socialisers for the first generation of children born on Pitcairn were Young, who contributed a number of St Kitts pronunciations and lexemes, [l] for [r] in words such as *stole* ‘story’ or *klai* ‘cry’ and *morga* ‘thin’ and John Adams created the social conditions in which standard acrolectal English against all demographic odds could prevail as the dominant language of the community.

There is ample evidence that the Tahitians were not regarded as full human beings by the white members of the community and that racism was strong. This is reflected for instance, in the absence of place-names remembering the non-European settlers. To date, no Tahitian woman is thus remembered by a placename on either Pitcairn or Norfolk Island, though there not is a revaluation and appreciation of the Tahitian contribution and the word *formaadha* ‘foremother’ is being used in modern Norfuk.

Tahitian dress, language and eventually diet were gradually suppressed and given up, and policies put in place that were based on British and American models. Of particular importance has been the education system, which has tended to be in the hands of outsiders (Englishmen, American Seventh Day Adventist missionaries and finally New Zealanders, on Pitcairn Island; first British and then Australian teachers on Norfolk). Evidence from language use and attitudes in the Norfolk Education System suggests that from about 1900, language became a major issue and generations of teachers were actively involved in marginalizing, suppressing and ridiculing the Norfuk Language. Children who spoke it were punished and a sense of shame remains when older islanders speak the language in front of outsiders. More positive attitudes towards Norfuk date from the late 1980s, and in the late 1990s Norfuk language was formally introduced into the school as part of Norfolk Studies. There are now plans to teach Norfuk Language from Preschool to Year 10.

The ambivalent attitudes towards Norfuk are reflected in two areas of language mixing. First, it is remarkable that words of Tahitian origin tend to be predominant in marked domains of language: taboo words, negative characterisations, undesirable and unnatural phenomena and properties. Examples include: *eyulla* ‘adolescent, immature, or not dry behind the ears’; *gari* ‘accumulation of dirt, dust, grime, grease, etc.’; *hoopaye* ‘mucous secreted in the nose’; *howa-howa* ‘to soil one’s pants from a bowel movement, have diarrhoea’; *hullo* (1) ‘a person of no consequence’, (2) ‘having nothing of any value; dirt poor’; *iti* ‘any of the wasting diseases but mainly referring to tuberculosis’; *iwi* ‘stunted, undersized’; *laha* (also lu-hu) ‘dandruff’; *loosah* ‘menses, menstruation’; *maioe* ‘given to whimpering or crying a lot, like a child, but not necessarily a child’; *nanu* ‘jealous’; *pontoo* ‘unkempt, scruffy’; *po-o* ‘barren or unfertile soil’; *tarpou* ‘stains on the hands caused from peeling some fruits and vegetables’; *tinai* (1) ‘to gaze at with envy’, (2) ‘an avaricious person’; *toohi* ‘to curse, blaspheme, or swear’; *uuaa* ‘sitting ungraciously’; *uma-oola* ‘awkward, ungainly, clumsy’.

Some of these words may have originated in the nursery context rather than being indices of negative racial attitudes but the overwhelming impression is that Tahitian words are the semantically marked forms: 98% of the forms in the 100 word standard Swadesh list

are of English origin (the exception being *aklan* ‘we’ and the form *lieg* which stands for ‘foot’ and ‘leg’ and only about 5% of all words came from sources other than English (Tahitian, St. Kitts, Melanesian Pidgin English).

A second remarkable property is that words of English, Tahitian and other languages do not differ, as they do in most contact languages, in their susceptibility to morphosyntactic rules, suggesting a full integration of the two languages.

a) progressive marker -en

Yu tuhien.

‘You are swearing’.

Mais aanti kuken fkresmes.

‘My aunt is cooking for Christmas’.

b) stages of comparison

agli — aglia — aglies

‘ugly — uglier — ugliest’

pili — pilia — pilies

‘sticky — stickier — stickiest’

meyameya — mayameyara — meyameyares ‘withered - more withered - most withered’

morga — morgara — morgares

‘thin — thinner — thinnest’

The single most important question regarding Pitkern/Norfolk remains its linguistic nature. In spite of considerable interest from dialectologists, creolists and researchers into language contact phenomena, most conclusions have been presented on the basis of very sketchy evidence and secondhand information, and the task to provide an observationally adequate account of the development and present-day use of Pitkern/Norfolk is far from completed. A particular obstacle has been the assumption that one is dealing with a single monolithic phenomenon, whereas in fact there is strong evidence for historical discontinuities, extensive idiolectal variation and a wide range of proficiencies.

For instance, the very few samples of Pitkern from the 1820s bear relatively little similarity to present-day varieties. Captain Raine (1824:37) recorded the following observations about the low level of literacy and simplicity of lifestyle:

“In their conversation they were always anxious for information on the Scriptures, and expressed their sorrow that they did not understand all they read. One of them in talking with the Doctor showed such a knowledge of the Scriptures as is worthy of remark, particularly as it evinced their simplicity and harmlessness; the subject was a quarrelling, on which he said, ‘Suppose one man strike me, I no strike again, for the Book says, suppose one strike you on one side, turn the other to him; suppose he bad man strike me I no strike him, because no good that; suppose he kill me, he can’t kill the soul - he no can grasp that, that go to God, much better place than here.’ At another time, pointing to all the scene around him, and to the Heavens, he said, ‘God make all these, sun, moon, and stars and’ he added, with surprise, ‘the book say some people live who not know who made these!’ This appeared to him a great sin. They all of them frequently said, ‘if they no pray to God they grow wicked, and then God have nothing to do with the wicked, you know’.”

Differences with present-day varieties in the areas of word order, use of relativizers and tags are evident. In common with present day Norfolk are negation, conditional clauses and code mixing.

There probably never was a totally homogenous speech community in the sense that every member believed they were speaking a language other than English, or in the sense of sharing the same linguistic role models and there are still differences in lexical choice and pronunciation among different families. The language emerged in the tension between Tahitians and British, Islanders and Outsiders, Royalists and Independence Supporters. Some of the unique factors in the history of the language include:

(a) Pitcairn Island was the first English-speaking territory with compulsory literacy (from the 1820s). John Adams towards the end of his life, invited English teachers to the island who not only ran the education system, but played a full part in many aspects of community life and were role models for community members. Proficiency in British Standard English has been held in high regard since their arrival. For speakers under the age of 30, Australian English has become the most widely accepted model.

(b) Literacy for a significant part of its history, was strongly associated with religion; the Bible and religious texts being the predominant reading materials, and Biblical language an important model. Children were exposed to Biblical English from early childhood and it seems unlikely that any child was allowed to grow up without a thorough knowledge of this variety. Literate forms of Tahitian were not employed by the Pitcairners, and Pitkern/Norfolk was never used for religious writings or discourses.

(c) Pitkern/Norfolk is not a language in which all its speakers' needs can be expressed. It has a very limited vocabulary, about 1500 words, (Eira, Magdalena and Mühlhäusler, 2002), and it has not been used for public and high functions until very recently. However, since about 1990 the visibility of Norfolk has increased significantly. It features on the signage of the National Parks, the airport and departure forms, the names of businesses e.g. *Nuffka Apartments* (Kingfisher > E. Norfolk), *Wetls Daun A'Taun* (> E. Victuals down in Kingston Town) and house names *Dii el duu* 'able to do, make do', *Mais hoem* and in local songs.

(d) The extent to which Pitkern/Norfolk was socially institutionalized appears to vary with political circumstances and the desire of the population to express a separate identity. Greater use of Pitkern/Norfolk and concomitant loss of proficiency in English appear to coincide with the wish to distinguish oneself from outsiders. Laycock (1989) suggested that Pitkern/Norfolk came into being as a cant, in 1836, when the entire Pitcairn community was briefly resettled in Tahiti and found themselves at odds with the moral laxness which prevailed there at the time. However, the deliberate distancing from acrolectal English is documented even before the mutiny, when sailors mixed Tahitian expressions with English in order to taunt their unpopular captain.

The wish not to be Australian has been a strong motif in maintaining a separate form of speech on Norfolk Island, and the current conflict between Pitcairn Islanders and Britain (over a matter of police investigation) may trigger off a revival of the Pitcairn variety. Pitkern/Norfolk thus can be studied as an indicator of changing perceptions of identity. The situation on Norfolk Island today is reminiscent of Labov's observations on Martha's Vineyard (1972), where non-standard forms have become reactivated by members of the younger generation opposed to mass tourism from the mainland. The tendency of past researchers to regard the Norfolk Island language from a purely structural perspective must be regarded as problematic, as structural properties cannot easily be separated from sociohistorical forces. If anything, it is the indexical rather than the structural and referential

properties of Pitkern/Norfolk that lend this language its special character. As regards deviations from standard English, no single cause or explanation seems sufficient. Unsurprisingly, a number of features from older, eighteenth century English are retained, though contemporary varieties of British, New Zealand, Australian and American English are influencing the language today.

The fact that the language developed on a remote island has led observers to believe that it developed in isolation. The exact opposite appears to be the case, however. Apart from a brief period before 1810, outside visitors were a very common phenomenon on Pitcairn (Pitcairn Island was one of the main ports of call in the Pacific until the arrival of modern intercontinental air traffic). Outsiders (not descended from the mutineers) form a significant part of both communities. Inter-marriage is common, and both communities were actively involved in whaling, mission work and travelled for education and health purposes. Some of the generalisations about Island Creoles (Chaudenson 1998) apply to Pitkern and Norfolk as well.

The presence of a number of creole features (Harrison 1972:223 and Romaine 1988:65) in Pitkern/Norfolk has been a source of confusion as researchers have failed to distinguish between creolization in situ and the diffusion of creole features from St Kitts (typologically Pitkern/Norfolk is much closer to the Atlantic Creoles than the Pacific ones as demonstrated by Baker 1999: 315 -364). Little work has been done on the influence of Pidgin English which was widely used in the whaling industry and also by the Melanesian islanders on Norfolk. There were two possible timeframes which favoured creolization. One between about 1795 and 1815, on Pitcairn Island, and two, in some of the more remote parts of Norfolk Island, where a few families appear to have used predominantly Pitkern/Norfolk.

One of the crucial bits of evidence, informal speech of young children at these dates, is missing. The children that I have observed on Norfolk Island in recent years are dominant speakers of English. Flint and Harrison's data suggest that there was a change from Norfolk to English being the dominant language of the young generation in the 1950s.

2. Norfolk speech

Reliable observational evidence on Norfolk speech and its changing characteristics are scarce. By far and away the best source of evidence - a window on Norfolk vernacular - at a time when the language was more actively used in the community, is provided by a set of 17 tape recorded dialogues obtained by Elwyn Flint on a field trip to Norfolk Island in 1957. Elwyn Flint was a linguist at the University of Queensland from the 1950's up to the early 1970's. Flint had an abiding interest in peripheral varieties of English and language contact situations. He was a diligent collector of speech recordings from diverse communities throughout rural Queensland. Around the time when Flint was conducting his field work, Norfolk Island was coming under the influence of a second wave of massive external influence, primarily from Australian and New Zealand English. Subsequent work by Harrison and Laycock in the 1970's, indicates that the stable diglossia that pertained up until Flint's investigations no longer exists. Flint himself noted its loss, which is apparent from even cursory examination of the 17 recorded dialogues.

The following sketch represents an attempt to isolate some salient phonetic and phonological characteristics of Norfolk vernacular as it was in 1957, and to document some of the changes which have taken place up to the present day. The analysis is based on a finite corpus of data (the 17 dialogues: approx. 40 minutes of continuous recorded speech),

supplemented by keyword lists of seven present-day speakers of Norfolk vernacular. From this data base, it is possible to: a) convey in some detail the flavour of Norfolk phonetics, b) to lay a basis for further investigation into the evolution of Pitcairn-Norfolk Creole(s), c) to provide something of a yardstick for evaluating the current state of sociolinguistic variation on Norfolk Island today and d) to provide guidelines for those concerned with language revival as to the properties of 'authentic' Norfolk vernacular as it was spoken some two generations previous to the present time. Clearly, it is not possible on this data base to reconstruct a comprehensive picture of the phonology of Norfolk. An attempt to do so for present day Norfolk would probably be misconceived. Norfolk today may constitute a collection of individual speech registers that are parasitic upon the variety of standard Norfolk English which is habitually used in the daily discourse of Norfolk Islanders, outside of the circumscribed contexts in which they use the Norfolk register. Norfolk, as described here, represents a prominent feature in the topography of spoken language variation in Norfolk Island, but its linguistic significance needs to be assessed within a broader sociolinguistic context, the outlines of which are described elsewhere and are the subject of on-going research.

Two sets of speech recordings form the basis of the present analysis: i) a selection from the Flint dialogues recorded in 1957, and ii) an elicitation of a set of citation forms based on a key word list for comparison of English dialects (Wells, 1982; Foulkes and Dougherty, 1999) provided by 7 regular speakers of Norfolk recorded in November 2002.

2.1 The Flint recordings

The 17 tape recorded dialogues were obtained under conditions simulating customary Norfolk usage i.e.: two or sometimes more informants, with no interviewer present, engaged in a semi-spontaneous conversation on topics that would be expected to elicit Norfolk vernacular usage. The dialogues were partly scripted, but largely spontaneous. The conversations obtained were, for the most part, natural sounding, expressive, and seemingly unselfconscious.

Flint produced two transcriptions of each dialogue with the assistance of the informants, directly following the recording session: an H form, English translation, and a broad phonetic transcription of the actual speech in the Norfolk L form. The phonetic transcription was obviously allophonic, rather than phonemic, but it was informed by Flint's extensive knowledge of Norfolk Island and Pitcairn vernaculars.

Some analysis of the material had been undertaken and reported previously (Flint, 1961) and we made use of this in selecting the materials on which the present paper is based. Flint was interested in the relative impact upon intelligibility, of phonological, lexical and syntactic features of the Norfolk Vernacular for English listeners. He employed a linguist, with considerable experience transcribing English contact vernaculars, but not specifically with Pitcairn or Norfolk, to attempt an utterance by utterance English translation, under controlled listening conditions. In this way an intelligibility score for each of the 17 dialogues was obtained. There was considerable variation in the intelligibility scores, reflecting a complex of factors, one of which was the 'depth' of Norfolk usage sustained by the participants in a given dialogue.

For the present analysis, we selected the dialogue with the lowest intelligibility rating for detailed phonetic analysis, in order to obtain the 'broadest' or most authentic samples of

Norfolk vernacular, with least contamination by code switching or interference from the standard English or H variety. The two speakers were a 60+ year old male and a 60+ female. The dialogue provided approximately 500 words for each speaker. The dialogue was originally recorded on a reel-to-reel tape recorder and subsequently dubbed onto a gramophone recording (LP 33rpm) by Flint. The gramophone recording was digitized (.wav files, 16 bit quantization, 11.2 KHz sampling rate) for the present analysis. The dialogue may be accessed on the accompanying CD.

2.2. The Keyword recordings:

The Keyword list (Appendix 1) used for eliciting contemporary pronunciation contains a proportion of words that are attested Norfolk forms (indicated in **bold** on the word list). Speakers were invited to pronounce those items on the list that they recognized as words in Norfolk. This resulted in various selections by different speakers. The recordings were obtained on a cassette recorder (Sony TCMS68) under field recording conditions. The citation forms were digitized for phonetic transcription. The phonetic transcription was undertaken by the author, with the aid of speech editing and analysis software (Sensimetrics™ Speechstation II).

3. Methodology

A combination of auditory and acoustic analysis was used to describe the phonetic characteristics of spoken Norfolk and to draw some inferences about Norfolk phonology. Some preliminary comment on the method of analysis is required.

3.1 Phonetic transcription

Phonetic transcriptions were made generally in accordance with the conventions of the I.P.A., with some slight modifications to the set of vowel symbols used, as noted below. Phonetic transcriptions were guided primarily by auditory impression and secondarily by acoustic (spectrographic) observation. It is important to take cognizance of the native reference dialect of the transcriber in evaluating vowel transcriptions, even with highly experienced phoneticians. Although he has some 25 years experience in phonetic transcription, the author and transcriber has never undergone intensive training in the use of a 'language neutral' set of reference vowels, such as Daniel Jones system of Cardinal Vowels. Furthermore, research suggests that the perception of vowel quality is inevitably coloured by native language experience (Ladefoged, 1963).

Present day Norfolk Island English falls within the 'cultivated' - 'broad' accent continuum of Australian English (Bernard, 1989). The speech of many Norfolk Islanders when they are not using Norfolk may be indistinguishable from Australian English to most ears. Contemporary Norfolk English has probably also come under some influence from New Zealand English. These influences of contemporary regional Englishes are relevant for the ecology of language use on Norfolk Island today. However, the predominant formative influence of English on Norfolk, the traditional vernacular, would have been from the variety of 18th century English spoken by the sailor Adams and the other Bounty mutineers, from the original generation of settlement on Pitcairn Island. Norfolk has its own highly distinctive accent and prosody, but it is frequently code mixed with Norfolk English. Consequently, Australian English provides an appropriate phonetic frame of reference for evaluating Norfolk speech.

In deference to traditions of Australian English phonetics and to the habits of the transcriber, certain liberties have been taken with the IPA symbols for vowel quality transcription.

- i. The symbol [a] denotes a low (open) central vowel that is distinctively long [aː] or short [a] in Australian English (*card - cud*) with no significant difference in vowel quality. (The symbol [ɪ] is traditionally employed, inappropriately for the lax vowel in AusE *cud*. A case may be made for adopting the symbol [X] for the lax low central vowel of Australian English.) Norfolk [aː] sounds identical to the long open [aː] of Aust. English (*hard*) in some speakers and closer to the more retracted [ɤː] of RP in others.
- ii. The symbol [ɔː] represents a long rounded back mid-high vowel in Aust. English (*bought, caught*). It is actually closer to cardinal [o] and to the vowel quality of Australian English [ɒ] (*put, could*) than it is to the mid-low back and rounded cardinal [ɔ]. Habit is my poor excuse for preserving this transcription practice. There is a small quality difference between these two vowels in Australian English (aside from their obvious difference in length). The lips are slightly more protruded for [ɒ] than [ɔ].

3.2. Context, coarticulation effects and undershoot in vowel transcription.

Consistent with the view that vowel sounds are interpreted by the ear as contextually coherent linguistic targets, the decision was taken to represent familiar-sounding vowels and diphthongs as they were perceived/heard in whole-word citation forms. The ear always evaluates speech sounds in context and automatically compensates for coarticulation effects and articulatory undershoot, hearing the intended target, rather than the ‘underachieved’ peak in the attained formant trajectory.

For example, in the Norfolk vowel cluster (describable as a diphthong followed by a short vowel or as a triphthong) of the word *‘fire’*, the second element is perceived as a high front vowel [i] or [ɪ] [faɪɪ]. But if one attends only to the central region of the vowel cluster, isolated from context, this segment has the auditory quality of a low or mid-low front or central vowel [æ] - [ɛ]. Clearly, this is a case of articulatory undershoot of the off-glide target of the diphthong, (as you may confirm from the example on the CD). Our speech perception mechanism automatically compensates for articulatory undershoot when listening to the vowel in whole-word context. In so doing, tacit phonetic and phonological knowledge of the listener is applied to the perception of the auditory stimulus. A more stable percept is achieved by judging vowel quality in whole word contexts, but at the possible cost of undue contamination of phonetic judgements by phonological expectations from the listener’s native language.

There was one exception to this rule of ‘ecological’ listening in the judgement of vowel quality. When attempting to determine the degree of vowel quality change from the head to the tail of a diphthong the transcriber occasionally permitted himself to listen to the two portions of the diphthong separately and in contextual isolation, using a time window of 30 - 40 milliseconds, which is sufficient to form a clear impression of vowel quality.

4. Vowels

The vowel sounds are far more important than the consonants, which differ minimally from those of Australian or New Zealand English, for a characterisation of Norfolk vernacular. A preliminary analysis of two of the broadest Norfolk speakers from the Flint dialogues is presented (sections 4.1 - 4.3), followed by an analysis of the keyword citation forms from seven contemporary Norfolk speakers.

4.1. Single target vowels

To provide an initial characterisation of the Norfolk vowel space and to reference points for inter-dialect comparisons, the single target, lax (short) vowels, ([ʌ], [a], [e], [ɪ]) and long [aː] were plotted for each speaker, within the vowel space of Australian English (See figure 1). The formant values for the Norfolk vowels represent average measurements (centroids) obtained from 5 - 10 tokens per speaker. The formant values were statistically normalised to take account of differences in speakers' vocal tract size and were plotted using the Bark scale frequency transformation. The Australian English reference vowels represent centroid values of the cultivated, general, and broad varieties reported by Bernard (1989). The Norfolk formant measurements were made from stressed lexical items, that occurred in discourse where no vowel reduction was evident. Nevertheless, some shrinkage of the vowel space in relation to Bernard's measurements is to be expected, because his data were obtained from citation forms spoken in isolation and not culled from connected speech.

The somewhat lower and centralized target positions for Norfolk high vowels [ʌ] and [ɪ] are likely due to articulatory undershoot in connected speech compared with the AusE citation forms. However, the lower target position of Norfolk [e] compared with its AusE counterpart is significant. One notable instance of allophonic variation was found among these lax vowels. The short front vowel [e] lowers to [æ] before /l/. Although sometimes found as a phonetic tendency among speakers of Australian English, it seems to be more strongly marked in Norfolk vernacular, falling clearly within the vowel quality domain of [æ] (See figure 1.). Flint suggests that there is no native contrast between [æ] and [a] in the Norfolk and that [æ] forms derive from the influence of Australian English through standard Norfolk English (the H variety). However, the data from our two speakers appear to suggest otherwise. Both [a] and [æ] forms are found in lexical items of English origin, but their lexical distribution is different from that of Australian English (see Table 1).

TABLE 1. Distribution of [æ] ~ [a] in Norfolk (Flint dialogues)			
[a]	[æ]	[æC]	[e]
<i>stand</i> ¹	<i>matter</i>	<i>as</i>	<i>catch</i>
<i>that</i>	<i>and</i>		<i>glad</i>
<i>yam</i>	<i>hat</i>		<i>bank</i>
<i>than</i>	<i>am</i>		<i>glad that</i>
<i>dance</i>	<i>saddle</i>		<i>saddle</i> ²
<i>laugh</i>	<i>catfish</i>		<i>thank</i>
<i>hard</i>	<i>chapel</i>		
<i>start</i>	<i>saddle</i>		
<i>partner</i>	<i>thank</i>		
<i>darling</i>	<i>fashioned</i>		
<i>ma</i>	<i>anthem</i>		

If the standard account of the historical split of Middle English short /a/ is correct, these forms may provide a clue to the regional English dialect which had a dominant influence in the formation of the original Norfolk Island contact creole. The original split took place when ME /a/ lengthened (and in some dialects retracted) before voiceless anterior fricatives (laugh, path, grass). Subsequently, and incompletely, the change spread to nasal obstruent clusters (dance, grant, demand), resulting in the well known regional and lexical variability found in these forms today. Although the data here is limited, it suggests a southern English dialect influence in the formation of Norfuk vernacular.

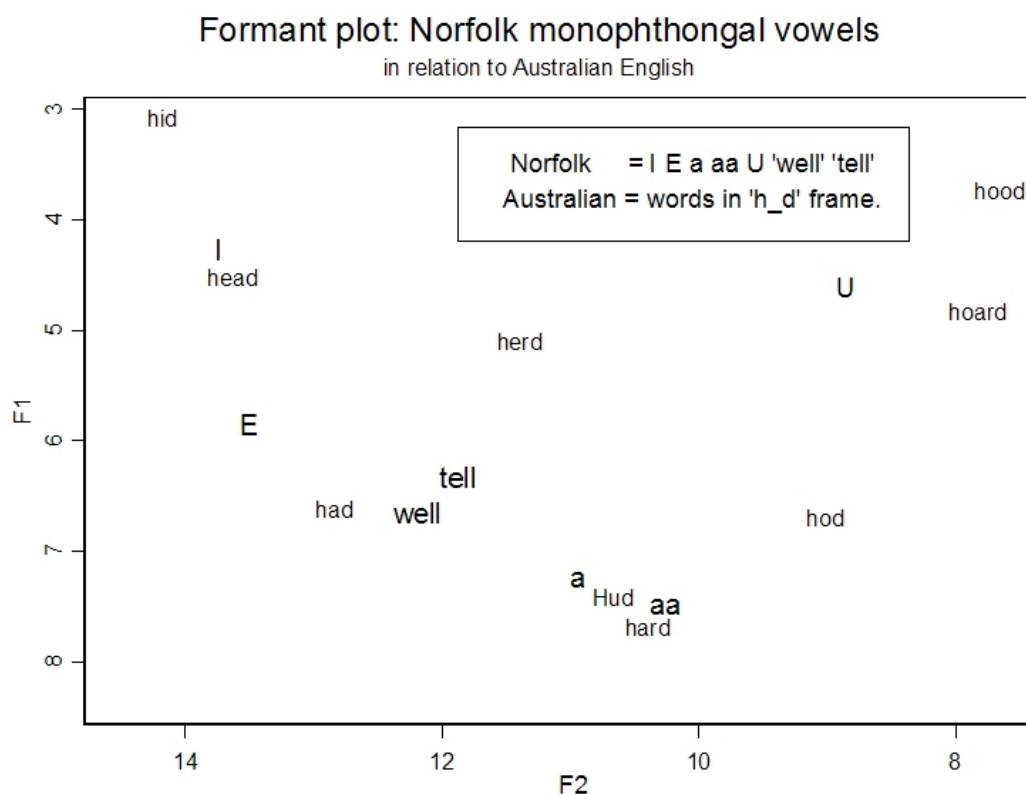


Figure 1. Some Norfuk monophthongs relative to Australian Vowels (source: Bernard, 1989). Mid vowel formant frequencies, F1 and F2, Bark scaled.

4.2 Back Vowels:

Norfuk may not possess as many phonemic contrasts as Australian English among its back vowels. Further analysis is needed. However, it is clear that, even if the number of contrasts is comparable, their distribution among cognate lexical forms is different, and also there are clear differences in phonetic implementation of the contrasts. Table 2 shows the phonetic correspondences that were found among cognate forms for the distinction between [Z] and [ɹ] which is found in Australian English and other non-rhotic varieties.

Norfuk [ɔ:] Aust. Eng. [ɔ:]	Norfuk [ɒ] Aust. Eng. [ɔ:]	Norfuk [ɒ] Aust. Eng. [ɒ]
(be)cause	off	form ¹
what(s)	long	horse
got	along	thought
	on	all
	strong	Norfolk
	sorry	morn(ing)
		more

¹ = *person, guy*

It is notable that the short counterpart of [ɒ] is much more restricted in its distribution in Norfuk than in Australian English. The Norfuk short [ɔ] was limited to a few closed-class items, leading one to suspect that at least in earlier varieties of Norfuk there was no productive phonological contrast between long and short (or tense and lax) non-high back vowels. The short vowel forms may simply represent phonetically reduced function words. This is supported by acoustic analysis of vowel quality differences between Norfuk [ɔ:] and [ɒ], shown in Figure 2.

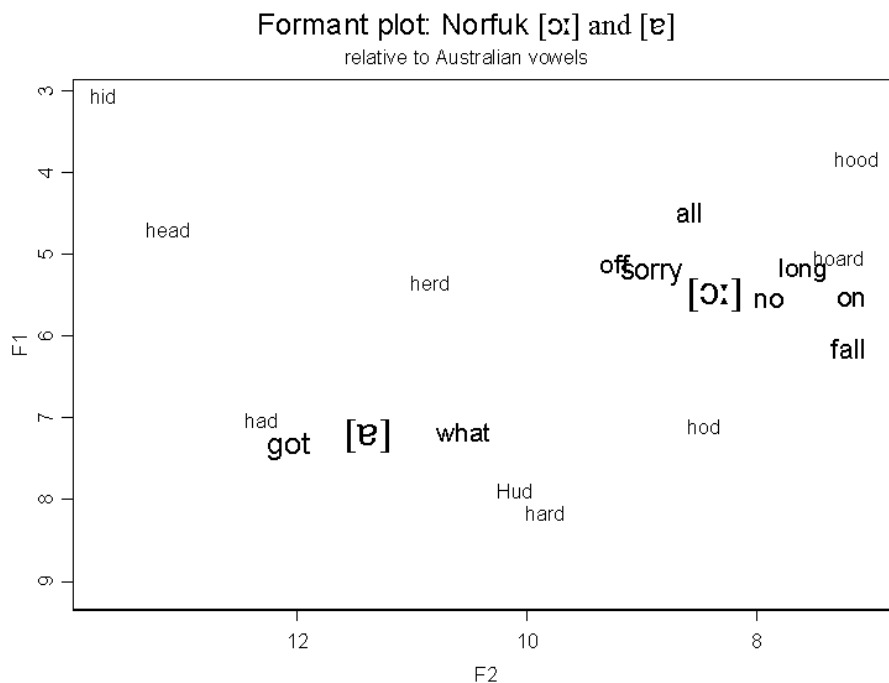


Figure 2. Formant plots for Norfuk back vowels: long [ɔ:] and short [ɒ] (plotted as [X]) shown relative to Australian English monophthongs.

Norfolk [ɪ̯] occupied a similar position in vowel space to its Australian English counterpart. The short vowel was quite centralized and more broadly scattered over vowel space than is indicated by the centroid plots for the multiple tokens of *what* and *got*. Phonetically this short vowel is more appropriately labelled [X].

4.3. Diphthongs

Norfolk /o / (*home*) has its vowel nucleus close to [ɪ̯], somewhat fronted, and usually with a perceptible schwa off-glide (see Table 3). The obvious outlier in this series (all from our male speaker), is the form *y'know*, which seems to be a borrowing from Australian or standard Norfolk English.

<i>know</i>	[n] <ɪ̯]
<i>y'know</i>	[nco̯]
<i>home</i>	[h] ɸm]
<i>most</i>	[m] <, cst]
<i>go</i>	[g] ɸ]
<i>road</i>	[<] <, cd]

With the exception of the outlier (*y'know*), the formant trajectories, for the off-glide in the diphthongs have a forward movement. This diphthong is quite a distinctive marker of Norfolk accent. However, it does not appear to be phonologically contrastive with Norfolk [ɪ̯].

Norfolk [a] (*down, now, mouth*) showed a good deal of phonetic variability. In general, it shows evidence of incomplete lowering of the nucleus, as in other conservative regional dialects (Scots English, Canadian English, etc.). The range of phonetic variation for [a] can be illustrated with the following tokens from our male speaker:

<i>down</i>	[dY n]
<i>out</i>	[Y t]
<i>down</i>	[dC n]
<i>mouth</i>	[mC 2]
<i>now</i>	[nC]]
<i>round</i>	[<C nd]
<i>out</i>	[a t]
<i>plough</i>	[pla]]

To quantify this variation, we took formant measurements of the nucleus. The degree of lowering of the nucleus in the F1-F2 space corresponded with impressionistic transcription. Clearly, the word 'plough' seems to be a borrowing from Australian English.

Norfolk [aʌ] evinces incomplete lowering of the nucleus, as also found in conservative regional English dialects. The environment for this incomplete lowering (often referred to as 'Canadian Raising' for its prevalence in Eastern Canadian English) is before voiceless obstruents in closed syllables. Our impressionistic transcriptions of [aʌ] tokens in stressed syllables showed some evidence of this rule in Norfolk.

TABLE 5. Phonetic variation in Norfolk /aʌ/			
[aʌ]	[cʌ]	[eʌ]	[eʌ]
<i>I</i>	<i>side</i>	<i>kinda</i>	<i>kinda</i>
<i>my's</i>	<i>ripe</i>	<i>like</i>	
<i>I</i>	<i>ripe</i>	<i>outside</i>	
<i>ripe</i>	<i>china</i>		
<i>china</i>	<i>sometime</i>		
<i>my's</i>	<i>right</i>		
<i>I</i>	<i>like</i>		
<i>pine</i>	<i>night</i>		
<i>mind</i>	<i>like</i>		
<i>Irish</i>			

Norfolk [eɪ] (which corresponds to Australian or standard Norfolk English [eɪ]) is either a monophthong or opening diphthong which highly recognizable (as it is in Irish English). The range of variation illustrated in Table 6. is quite large, as the following tokens suggest. There was no obvious phonological conditioning for this variation.

TABLE 6. Phonetic variation in Norfolk /eɪ/				
[eɪ]	[eɪ]	[e]	[ee]	[eɪ]
gate	take	take	late	away
potato	make	take	baby	baby
anyway		make	take	plain
		take	way	
		take	make	
		anyway		

4.4 Vowel variation in contemporary Norfuk

From the keyword list (Appendix 1) a number of comparisons were attempted, to try to ascertain vowel shifts or lexical changes in pronunciation that may have taken place in Norfuk over the period of the late 1950's to the present day. These comparisons are summarized in Table 7 below. The data sets are too small for any but the most tentative observations. However, they generate some useful hypotheses to guide subsequent inquiry.

There appears to be no evidence of substantial change in phonetic realization of the short lax vowels [ʍ e - a -] between the Flint (1957) samples and the keyword sample (2002). One might look for evidence that Norfuk [e] has raised towards the Australian English equivalent ([e], *bed*). But this was apparent in only one token elicitation of a word that is probably not part of Norfuk vocabulary. It is interesting to note that words in Norfuk which have cognate forms in standard English (eg.: *never*, *head*) are not only categorically distinct in length or vowel quality from the standard Australian or Norfolk English pronunciation, but are so, in ways that represent alternative phoneme categories in standard English. This is what might be expected if Norfuk speakers were using Standard English phonemic categories to differentiate lexical items of Norfuk from their cognates in standard English. Early Norfuk probably had no phonemic contrast between [e] and [æ]. Note the wide variability in [æ ~ a] English sourced Norfolk words from the Flint sample in Table 1 above.

	Standard Eng.	Norfuk
dress	/dʌes/	-----
never	/nevC/	/næwC/
head	/hed/	/heʍd/

There is possibly a lesson here for construction of a Norfuk orthography and spelling for purposes of language preservation and reclamation. A similar case of phonemic mapping between standard English and Norfuk arises in cognate forms involving the back vowels /C ,] † Z/. These sounds are usually realized in Norfuk as long [] †], often with a centering off-glide, or as short [Z]. English source words containing /C / can flag their Norfuk status by phonemicising as /] † or /Z/.

TABLE 7. Comparisons of Norfuk vowels 'then' and 'now' in relation to Australian English vowels			
Short or lax vowels			
Norfuk 1957	Norfuk 2002	Aust. English	
ʍ	ʍ	ʍ	No notable differences
e	e - æ	e	<i>dress</i> : Not a Norfuk word? <i>never</i> [næ wC] (2002) <i>head</i> : [heʍd], [heed], [he-d] (2002)
a	a	a	No notable differences
a- æ - e	ɒ - æ	æ	<i>happy</i> : [hæpʍ] [hæpʍ] (2002) wide allophonic variation (1957)
			no notable differences

In this way, as in the case of /e/ words discussed above, systematic substitutions by phonetically related sounds may be employed to mark the special status of Norfolk lexical items. Whether this is what in fact happens is a matter of speculation, but should be testable through further analysis of the phonetic forms and distributions of these sounds in the Flint corpus and further elicitation of contemporary speech samples.

4.5. Norfolk vowel phonemes

Our preliminary analysis of vowels in the speech of two broad Norfolk speakers gathered in the late 1950's reveals a wide range of phonetic variation and the nature of the available data does not permit us to pursue a conventional phonemic analysis (eliciting minimal pairs, testing informants for contrasts and in various phonological environments etc.). However, it seems that even at the time of Flint's survey, the pronunciation of Norfolk words reflected their diverse lexical origins and grammatical status. It may be useful to adopt a notion from Lexical Phonology and to distinguish between: a) a 'core stratum' of phonological contrasts which applies to the stock of P-N historical lexical items (for which 18th century English was the lexifier) and to the vestiges of the original creole grammatical forms (such as 'se', etc.), and b) a peripheral stratum of phonological contrasts which apply to more recent English loan words and 'code-switchings', which are parasitic upon the speakers' knowledge of standard Norfolk English.

Our tentative proposal for a set of core stratum Norfolk vowels is summarized in Figure 3.

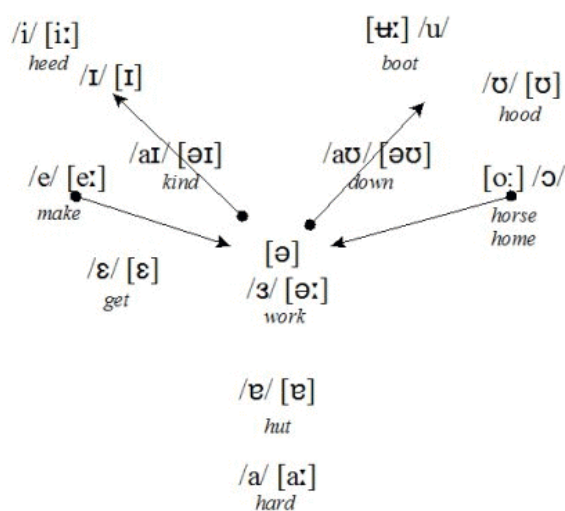


Figure 3. Core stratum Norfolk vowels and diphthongs

4.6. Norfolk Intonation

Traditional Norfolk speech is noted for its highly distinctive and engaging intonation, a characteristic that apparently is in danger of being lost. The Flint recordings provide a valuable record of this aspect of Norfolk speech. Our formal description of Norfolk intonation is even more partial and preliminary than that of the segmental phonology. However, the basic problem is the same: separating stylistic and idiosyncratic features of individual voices from the systemic aspects of Norfolk prosody. In the case of intonation, the task is complicated by the lack of a widely accepted descriptive framework. We have adopted what

might be called a ‘simplified Pierrehumbet-Beckman’ set of descriptive tags, aiming to annotate the major pitch and temporal features of the intonation contour. The tagging system used here is no substitute for a standardised system of intonation transcription such as ToBI (<http://www.ling.ohio-state.edu/~tobi/>). This is currently under development.

In the meantime, the present system aims to represent local peaks and troughs as well as the overall shape of the fundamental frequency contour, pause breaks, and regions of slowed speech delivery. The main features of the annotation are illustrated in Table 8. Table 9 illustrates the text annotation of several utterances and figures 4 and 5 illustrate how the tags are applied to the speech signal of selected utterances. Conversational Norfolk seems to an English ear to employ a wide pitch range with much expressive highlighting achieved by local changes of pitch and voice tempo. The use of temporally expanded vowels in accented syllables, or local reductions in speech tempo, is a distinctive feature of Norfolk prosody, illustrated in the second sentence of the text annotation (Table 9) and the speech signal (Figure 4).

Table 8. Prosodic Annotation tags	
H	Major pitch peak in f_0 contour
h	Minor pitch peak in f_0 contour
L	Major pitch trough in f_0 contour
l	Minor pitch trough in f_0 contour
ds	Downstep: a step down or lowering of accentual pitch range
cre	Crescendo: a sequence of rising pitch accents
!	A prosodic boundary-marking pitch accent
‘keeeep’	A temporally expanded syllable nucleus, in this case for word ‘keep’
br	A junctural break or pause

Table 9 Text annotation of Intonation features	
A01	LHL.....L! well darling I sorry I so late as this
B02	H.l...h.L.ds.hl ..H.....L! wha thing bin keeeep you
A03	LH.....LH!..br....lhl..lhl....lhl! well when I done a work I hurry home
A04	LH.....hl...hl! coming round our bend you know gen Ma Deil
A05	L..H..L..H..hl.....H.....LH! I see dis big form staanding down gen our gate
A06	l...h.cre h.cre...h..H.....lh!.....LH.....HL! he tell now you get down den or I’ll go up dere baarber hold you!

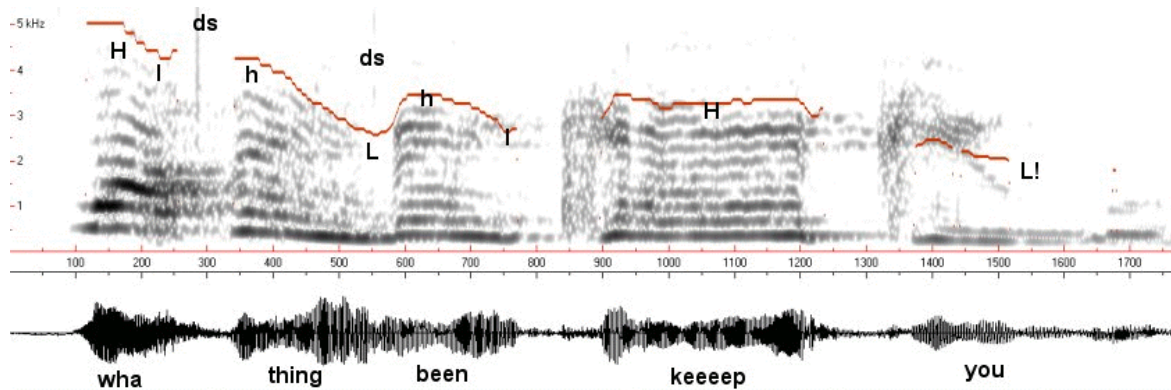


Figure 4. Prosodic annotation for dialogue utterance B03, aligned to f_0 trace

The word ‘*keep*’ achieves accentual prominence by the exaggerated length of the vowel nucleus. The interrogative expression as a whole achieves illocutionary force by starting close to the top of the speaker’s pitch range, with successive accented syllables down-stepped to the nuclear accent on the verb. There is substantial pre-pausal lengthening on ‘*you*’, as part of the phrase final boundary tone. But we have not annotated this feature, because it is a ubiquitous prosodic cue to phrase final position in English and many other languages.

Down-stepping of accented syllables within the phrase in B03 may simply be a consequence of starting at the top of the speaker’s pitch range and have no particular pragmatic significance. However, the complementary effect on the pitch contour that we have labelled ‘crescendo’, a succession of up-stepping accents, leading to a nuclear ‘hat’ accent on ‘*barber hold*’ in utterance A06¹ does seem to carry mimetic meaning as direct reported speech, mimicking the agitated state of speaker. See Figure 5.

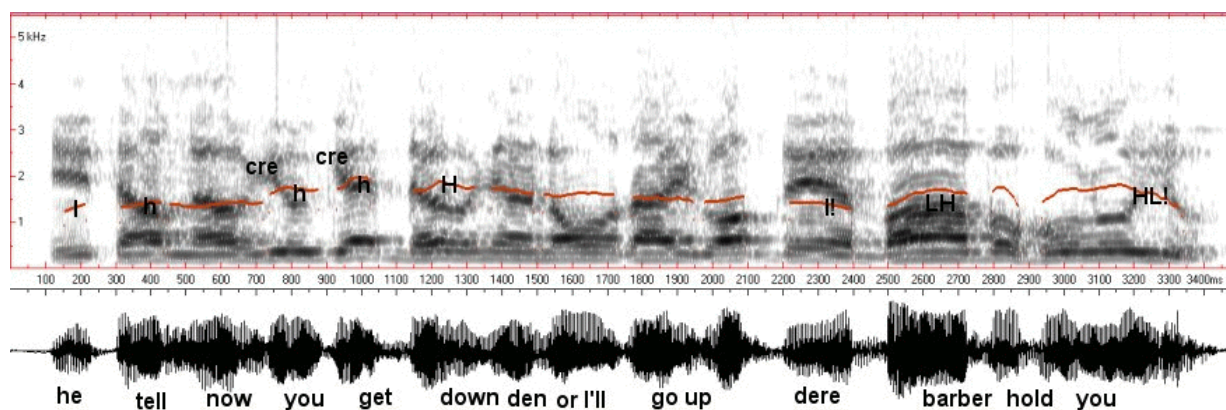


Figure 5. Prosodic annotation for A6, aligned to f_0 trace.

It is an open question whether mimetic features of intonation observed in reported speech dialogue should be regarded as part of Norfolk prosody or treated as ‘paralinguistic’ (ie.: as part of an individual speaker’s capacity for expressive elaboration or embellishment of a narrative). Our analysis of Norfolk prosody is in its infancy and these kinds of questions require more data analysis.

7. Appendix

(Separate file attachment)

8. Endnotes

1. The translation for this sentence that Flint gives is ‘He said now you get down here or I’ll go up there and give you a good hiding.’ We guess the identity of the expression ‘barber hold’, inferring that it refers to the leather strap that barbers used to sharpen razors.

9. Acknowledgement and disclaimer

Preparation of the Flint dialogue materials contained on the CDROM from Elwyn Flint’s original field notes was skillfully performed by Carolyn Fraser in consultation with the first author. A deliberate ‘normalization’ of Flint’s original phonetic transcription in the direction of a broad phonetic/phonemic transcription of standard (Australian) English was introduced in order to facilitate comparisons between Norfolk and Australian English lexical forms. Hence, the transcription provided on the CDROM should not be regarded as strictly phonetic or phonemic, but one that promotes readability and ease of morpho-lexical comparisons with standard English.

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