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Andreu Nadal Antònia; Solé Sabaté, Maria Josep, dir. A comparative analysis of Australian English and RP monophthongs. 2016. (801 Grau en Estudis Anglesos)

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A comparative analysis of Australian English and
RP monophthongs



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20th June 2016

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ABSTRACT

Over the last decades, Australian nationhood feelings started growing in people's hearts, and they started feeling proud of their accent. Some research on Australian sounds was initiated around the 1950s, still influenced and based on the RP pronunciation. It was not until the last two decades that some scholars have been doing some research on the actual Australian English pronunciation.

The object of this paper is analyse the features of Australian monophthongs nowadays and provide a close phonetic description. This accent will be compared to the standard RP pronunciation to see how Australian English, although having originated mainly from British accents, has evolved and developed into the different accent that currently is. Specifically, the focus of this paper is on the changing quality of Australian monophthongs. A transcription of excerpts of an Australian film is presented to test theories on the changes undergone by these vowels. Further, an acoustic analysis of the AusE vowels /ɐ/ in 'but' and /ɛ:/ in 'Bart' is presented. The results show a merge in quality of these two vowels which are only differentiated by length.

1 INTRODUCTION

Received Pronunciation (RP) is considered from the mid 19th century as the Standard English accent because it was considered the most prestigious variety of English, the one spoken in the great public schools (Abercrombie, 1965). Although nowadays the percentage of native speakers that speak this variety is very small, it is still the English standard and the English variety taught and learnt as a foreign language. RP is considered by native speakers to be the variety that educated and sophisticated people use on an everyday basis. In Australia, it was not until mid 20th century that the debate on such a thing as Australian English (AusE) was started. Not until long ago, there was still to some extent the belief that British English was the ‘proper’ English and RP the accent that should be spoken by educated people.

Over the last decades, the situation has been changing and research on Australian pronunciation started being conducted around the 1950s. Although this research was mostly influenced and based on RP phonological vowels, it pioneered future research in this field for the last two decades. Different scholars have been doing some research on the actual Australian pronunciation (Cox, 2011; Durie & Hajek, 1994; Harrington, Cox, & Evans, 1997; Mitchell & Delbridge, 1965; Trudgill & Hannah, 2007; J. C. Wells, 1982), not reaching any agreement on a standard.

It is evident that languages are alive and change through time according to different circumstances or influences among speakers. The objective of this paper is to analyse the different features of Australian vowels, monophthongs in particular, and provide an exhaustive phonetic analysis, along with acoustic data. The Australian way of pronouncing vowels will be compared to RP to see how, even though Australian English originated from different British varieties, it evolved and it now differs considerably from

RP. In addition, I intend to examine how such changes in pronunciation lead to changes in vowel quality and a reduction in contrast between certain sets of words. The clearest example of this phenomenon is in words like, for instance, *but* and *Bart*, which in RP, differ in articulation (that is, quality) while in Australian pronunciation they are articulated almost the same way. Consequently, this set of words no longer differs in quality and there is only a length contrast.

The following section contains a review on the topic and related studies conducted by different scholars. Section 3 will focus on the method and procedure used to carry out this study followed by sections 4 and 5 where the results are described and analysed. Finally, the conclusions will be presented. In addition, the auditory transcription of the movie will be provided in the appendix, at the end of the paper.

2 LITERATURE REVIEW

Received Pronunciation (RP) has always been considered the most prestigious English accent and the one that should be taught and learned by foreigners. The prestige of RP makes it not only more valued by learners but also by some native English speakers. It is well known how RP is associated to a higher education and professionalism, and evidently Australia was not (and still is not) an exception.

During the first part of the 20th century, many Australians were ashamed and criticised the way Australians themselves used their own language. To begin with, some Australians did not want to believe and admit that there was such a thing as Australian English. As one correspondent from the *ABC Weekly* claimed in 1942, “The attempt to create a distinct Australian accent is mischievous. For I make bold to say at present one does not exist. There is not, and should not be, any difference in standard English as

spoken here, in the Motherland, or elsewhere in the Empire, [...]” (Mitchell & Delbridge, 1965: 67–68).

If it was the case that some Australians believed in a possible development of characteristic features, it was commonly criticised and considered mispronunciation and laziness as stated by W.J. Cleary in *the Sun* in 1941. He claimed that “[an] objectionable feature is the throatiness and distortion of the vowels, due to a tendency to speak with the lips and teeth closed[, which] is generally called ‘lip-laziness’. Sir Norman Katter also commented on the *ABC Weekly* in 1942 that “[t]he speaker does not open his mouth sufficiently, places his soft palate in the wrong position and does not use his nasal resonating cavities as he should. Moreover, he does not give his vowel sounds their true value.” (Mitchell & Delbridge, 1965: 69). At that time, Australian English was synonymous with ‘vulgarity’ and what came from Britain would always be better, especially accent and language. British English was introduced as the English standard Australians should use (Ronowicz & Yallop, 2007: 115).

Australian nationalism was present in other environments, but not in the language. It is not until the second part of the 20th century that Australians accepted their own culture and language as distinct from other English speaking countries, and comprehended they should not feel ashamed of it, but rather be proud. Even today, when Australian English is widely accepted, there are still some prejudices. RP is sometimes still considered to be the ideal pronunciation. Cultivated Australian, the kind of pronunciation closer to the standard RP, is regarded as being educated and belonging to the high class, while a broader Australian accent is regarded as being ‘bogan’, uneducated and belonging to the low class.

Mitchell was the pioneer in the field of Australian English. He was the first scholar to acknowledge the development of an Australian variety since 1788. Consequently, he

became popular in the 1940s after his detailed description and history of Australian English (Yallop, 2003). Although nobody supported his theories at that time and some people argued that if there was such a thing as Australian pronunciation, it should 'be suppressed in favour of 'correct' pronunciation' (Yallop, 2003: 129), he always believed and defended the existence of Australian English.

After him, there have been other scholars interested in this field who started their own research and theories, but his work has always been a precedent. Authors who have contributed significantly to the field are Felicity Cox (sometimes collaborating with other notable scholars) (Cox, 1999, 2008, 2011; Cox & Palethorpe, 2007; Cox, Palethorpe, & Bentink, 2014; Harrington et al., 1997), known for her passion and exhaustive research on Australian English, Trudgill (Trudgill & Hannah, 2007), and Wells (John Christopher Wells, 1996) for their respective studies in International Englishes, in which the Australian variety was obviously included.

Remarkable studies have been carried out until the present day and it has been agreed among the different scholars that a regional Australian variety is in fact present and it differs mostly in vowel quality. Nevertheless, there has been no agreement on the exact quality of the vowels, nor has an Australian Standard been established to phonetically describe and transcribe these phonemes.

As already mentioned, the phonemic vowel system that was traditionally used was the one introduced by Mitchell (1946), which was indeed imported from Britain when RP was considered the standard that Australians should pursue. According to Cox (2011), this system has been retained for a long time because apparently the RP and AusE phonemic systems are 'equivalent' and share the same phonemic contrasts. However, these systems, especially vowels, are phonetically rather different.

Mitchell and Delbridge (Mitchell & Delbridge, 1965) – henceforth MD –, in their comparison between Australian and RP vowels, state that ‘[t]he Australian vowels [ɪ], [ɛ], [æ], [ɜ], [ə], are noticeably closer than English speech¹. In addition to being closer, the Australian [ɪ] is more forward than the English vowel’ (1965: 35). Mitchell and Delbridge provide a quite exhaustive description of the differences in place of articulation and distance between the RP and AusE vowels. What they argued was that even though these vowels are represented by the same phonemic symbol, they are placed in slightly different spots inside the Cardinal Vowel System. Due to the aim of this paper and length limitations, a simpler vowel comparison by Mitchell and Delbridge (1965: 36), provided in Table 1, will illustrate the differences.

Table 1: Mitchell and Delbridge’s (1965) vowel comparison

<i>Australian</i>	<i>English</i>
Front vowels: [i], [ɪ], [ɛ], [æ], [a], [ʌ]	Front vowels: [i], [ɪ], [ɛ], [æ]
Central vowels: [ɜ], [ə]	Central vowels: [ɜ], [ə]
Back vowels: [ɒ], [ɔ], [ʊ], [u]	Back vowels: [ʌ], [ɑ], [ɒ], [ɔ], [ʊ], [u]

Even though some of these vowels are classified as front vowels, for instance, in both varieties, it does not mean that they have the same exact place of articulation, as argued by the author.

Another remarkable concept is the distinction MD make between three main types of AusE: Cultivated, General and Broad, basically identified by specific differences in the quality of some vowels. Wells (1996) definition for these 3 different types is that ‘[i]n Cultivated Australian, [...] vowels have realizations similar to those of RP, whereas in

¹ Notice how the authors refers to the different English varieties as Australian or English, as they were talking about two different varieties.

General Australian they have undergone Diphthong Shifting [...]. Broad Australian is similar to General, but has extra duration in the first element of the diphthongs' (1996: 594). Australians talking in Cultivated Australian English are, again, the ones considered to be well educated and from a high class. Because of the fact that people talking in this 'conservative' English nowadays are mostly elderly and they make up only a very small percentage of the population, the focus of the paper will be on General/Broad AusE.

Both Wells (1996) and Trudgill and Hannah (TH) (2007) describe the main differences between different varieties of English. Obviously there is a chapter dedicated to Australian English in their books. However, the focus of their studies is considerably different. Trudgill and Hannah's (2007) work is more simple. Their focus is contrasting 'General / Broad' Australian English to RP in a way that is organized by bullets or numbers and many examples are given to make everything very comprehensible. Although their explanations are not argued in detail or explained in depth, they are very clear and concise. Their vowel system is based on their own observation and research. It can be suggested that the authors aim to be objective and not influenced by other works. Most of the differences between their suggested vowels, which they claim to be the most accurate, are related to the symbols used for diphthongs. For instance, this is the only system that proposes the use of [aɪ] for the diphthong found in *day*. However, their most innovative proposal, which also makes the TH system different from the rest, is the use of diphthongs in place of a long monophthong. The authors suggest the use of [ɜɪ], [oɐ] and [uɐ] instead of [i:], [o: ~ ɔ:] or [u: ~ ʌ:] as other authors propose. It is also noticeable the fact that [uɐ] is treated as a diphthong here, formed by the same vowel.

Wells (1996), on the other hand, focuses his work mainly in contrasting the different types of AusE, and he seldom compares them to RP. His work is much more extensive and detailed in each of the three main distinctive sections: the study of the

vowel system, consonants and prosodic characteristics. The latter section is not even mentioned in TH study. Instead, they rather mention grammatical and lexical differences. Some of Wells' (1996: 599) most remarkable claims are that there is a 'general trend towards fronting' and 'raising of the front short vowels'. He also states that 'the fronting of the /ʌ/ of STRUT towards the cardinal 4 area, [a], can be seen as a drag-chain consequence of the movement of /æ/ up and away from cardinal 4'. This assertion will not only be discussed in the results and conclusion sections, where the reduction in contrast between 'but' and 'Bart' will be examined, but also confirm the change in quality of the remaining vowels, in this case produced by a chain reaction.

The most extensive and exhaustive research on Australian English pronunciation has been conducted by Felicity Cox. She has published a book and numerous articles on the subject. Cox (2007), (2008), (2011) argues that the Harrington, Cox and Evans (HCE) revised system represents the vowels of AusE more accurately than the system introduced by Mitchell in 1946. She goes on suggesting that sharing a phonemic system with other English varieties is less important than providing an accurate phonetic transcription. Cox (2008) and (2011), and Cox and Palethorpe (2007) claim that:

[their] revised symbol set adheres to the IPA principle of selecting symbols to represent phonemes that are closest to the corresponding cardinal vowels. It also allows for more representative picture of SAusE vowel sounds and can provide a solid basis for a detailed phonetic transcription of the variations that are present in the speech community.

(Cox & Palethorpe, 2007: 345)

Among other Cox's studies, there are some about historical phonetics in Australia, such as '*Phonetic Archeology and 50 Years of Change to Australian English /i:/*' (Cox et al., 2014) or '*Vowel Change in Australian English*' (Cox, 1999). In these pieces of research, she provides 'empirical evidence for vowel change in Australian English by

comparing acoustic vowel data collected [in the past by other scholars] with similar data collected by [her]' (Cox, 1999).

Her studies, apart from being the most recent, provide empirical evidence supporting her argument. New data is always collected and other data rescued from archives, followed by a detailed analysis of her findings. The analysis of some of the data provided in her research can be seen in Figure 1 and Figure 2:

Figure 1. F1/F2 monophthong vowel space for 60 female adolescent speakers of standard Australian English from Cox (2006)

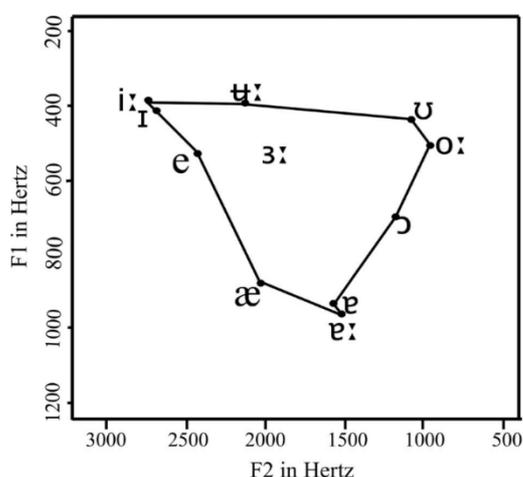
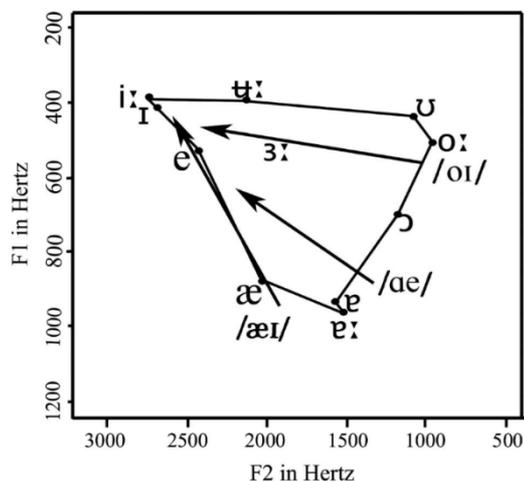


Figure 2. F1/F2 monophthong vowel space with superimposed diphthong schematic trajectories for /æɪ, æe, ɔɪ/, from 60 female adolescent speakers of Standard Australian English from Cox (2006)



The fronting and raising of [ɪ, e], relative to RP, can be observed in the figures as well as the virtually overlapping values of /ɐ/ in ‘but’ and /ɐ:/ in ‘Bart’.

In order to summarise the diverse proposals and opinions in vowel representation, a comparison between the systems proposed by the different authors is provided in Table 2.

Table 2: Comparison between phonemic vowel symbols

RP	MD ² 1946	WELLS 1982	TH ³ 1985	HCE ⁴ 1997	Example ⁵
i:	i	i:	ɜɪ	i:	beat
ɪ	ɪ	ɪ	ɪ	ɪ	bit
ɛ	ɛ	e	e	e	bet
ɛə	ɛə	eə	e:	e:	paired
æ	æ	æ	ɛ	æ	bat
ɑ:	ɑ	ɑ:	ɑ:	ɜ:	Bart
ʌ	ʌ	ʌ	ɐ	ɐ	but
ɒ	ɒ	ɒ	ɔ	ɔ	pot
ɔ:	ɔ	ɔ:	o: ~ oɐ	o:	bought
ʊ	ʊ	ʊ	ʊ	ʊ	put
u:	u	u:	uɯ	u:	boot
ɜ:	ɜ	ɜ:	ə:	ɜ:	Bert
eɪ	eɪ	ʌɪ	aɪ	æɪ	bait
aɪ	aɪ	ɑɪ	ɒɪ ~ ɒə	æe	bite
ɔɪ	ɔɪ	ɔɪ	oɪ	oɪ	buoyed
aʊ	aʊ	æʊ	æɯ ~ æ ^v ~ ɛu	æɔ	bout
əʊ	oʊ	ʌʊ	ɒɯ	əɯ	boat
ɪə	ɪə	ɪə ~ i:ə ~ i:	i:	ɪə	peered
ə	ə	ə	ə	ə	<u>a</u> head

There are a number of points where all these authors agree. They all confirm an ‘Australian avoidance of unstressed [ɪ] in favour of word-internal [ə] and word-final /i:/’ (John Christopher Wells, 1996: 595). Another common agreement is the existence of regional variation within Australia in pronouncing /ɑ:/ (as in ‘palm’) or /æ/ (as in ‘Pam’) in certain words such as *dance*.

Compared to RP, Australian front vowels tend to be articulated with the tongue closer to the palate, they are raised. Also, some diphthongs are wider, that is to say, there is more distance in the place of articulation between the production of the first and second

² Mitchell and Delbridge. This phonemic vowel symbols were part of Mitchell’s work published as *Pronunciation of English in Australia* in 1946. Later on, he continued his work collaborating with Delbridge, and in 1965 they published a revision of his work as well as undertaking a survey of the speech among young Australians. (Yallop, 2003)

³ Phonemic vowel system proposed by Trudgill and Hannah.

⁴ Harrington, Cox and Evans’ phonemic system.

⁵ Word examples are provided by Cox (2008: 328).

element. However, much social variation can be found, especially in the production of the first element. /ə/ in word final position is generally more open, being very similar to [ɐ] in ‘but’.

Some other relevant features in vowel production, phonetically speaking, are added by Cox and Palerthorpe (2007). They report that velarized /l/ ([ɫ]) changes the quality of some vowels. [əʊ] becomes [ɔʊ] before the mentioned consonant, and [u:] before [ɫ] is retracted. This is also important because, again, it reduces the contrast between some vowels and it leads to a contrast in length exclusively.

3 METHODOLOGY

3.1 DATA

The data collected for this piece of research consisted of several fragments from a selected Australian movie. As it has been already mentioned, RP is nowadays still regarded to some extent as the ideal pronunciation. As a consequence, even though Australians are not expected to change their pronunciation, it is common that Australian actors and singers attempt to adapt their pronunciation to RP as much as possible, usually helped by voice teachers (Ronowicz & Yallop, 2007). Because of this common attempt to change their accents, some problems were encountered in the movie selection process. Other issues that were tackled in the selection process were background music and noise, which would stand in the way of comprehension and hence qualitative auditory transcription.

The movie that was finally selected to carry out this paper was *The Castle*. This movie was released in 1997 and is set in Melbourne. The actors are all Australian, from the East Coast, although not all of them are originally from Melbourne. There were no

attempts at disguising their own accents, if anything some of them were emphasising it. The cast was made up of both males and females between 20 and 55 years of age at the time.

The selection was preferred to be around family moments where they could talk in a more casual and relaxed way combining male and female voices. The passages selected to analyse their pronunciation were picked avoiding background music and noise.

An auditory transcription will be briefly presented in section 3.2 followed by an introduction to the acoustic analysis in section 3.3. The latter section will present the procedure for the analysis of the vowels /ɐ/ in 'but' and /ɛ:/ in 'Bart' to test the merge in quality in Australian English.

3.2 AUDITORY TRANSCRIPTION

The movie excerpts were transcribed phonetically using the phonemic HCE vowel system. This system was chosen because it is currently the most widely used for Australian English. Cox has spent many years researching Australian English and because she presents real data in her work and always furnishes evidence to prove her point, this system was considered the most appropriate. Data is always represented in graphs and charts, and even the different formants extracted from the data are showed in the appendix in some of her publications. This is the case, for instance, of her article '*Vowel Change in Australian English*' (Cox, 1999).

While analysing Cox's system, the author of the present study found herself in disagreement with some of Cox's conclusions about the quality of certain diphthongs.

Nevertheless, Cox's system was adopted on the whole as her research is backed up by extensive evidence (that cannot be ignored).

The transcription shown in the appendix aims to give a detailed representation of the actual existing vowels produced in an informal and relaxed environment and also to represent the main speech patterns of the Australian community. The transcription also presents many challenges in representing the sounds in connected speech.

3.3 ACOUSTIC ANALYSIS

Besides the auditory transcription, an acoustic analysis was also carried out. Several types of software were used. As mentioned, the audio files chosen for the transcription and further acoustic analysis were thoughtfully selected taking into account noise and background music.

Different clips with the preferred fragments were created using the iMovie program. The aforementioned software was also used to remove noise and background sound and to later convert the video clips into audio files. Once the audio files were available to use, they were played back using the program Audacity, which facilitated the reproduction, repetition of selected sounds and the slow-motion reproduction to work on the transcription.

Afterwards, when the transcription was finished, selected words randomly chosen containing the sounds intended for analysis were extracted from the audio files. The following step, the isolation of the vowel within the word excerpt, was simplified by the use of Audacity, that allows one to see the sound not only in a waveform but also in a spectrogram format. A new external file only including the vowel sound was generated in order to be later examined with Praat.

The final step was carried out using the Praat software. The program was used to measure the first and second formants and the length of the sounds in ‘but’ and ‘Bart’, which are one of the foci of the study (see section 6). The program was also used to generate images of the sounds in spectrograms, which are also included in appendix B.

After having collected all the data for two different speakers, an average of each of the data sections was calculated and inserted in an excel sheet, shown in Appendix C. This excel sheet with the appropriate formulae generated a vowel plot chart with the exact position of each of the vowels. A different chart for each of the speakers was created in order to have more data to analyse and compare (Figures 6 and 7 below).

Although both speakers were male, the data was kept separated and not mixed due to de fact that age, origin and physical features can interfere in the pitch and quality of the values (Davenport & Hannahs, 2010; Ladefoged, 2001). In fact, the values could have been normalised in order for them to be easier to compare, but the process was too complex for the purposes of this paper. As a consequence, the final product, without normalisation, would not be exhaustive and it would lead to distorted results.

4 RESULTS

4.1 GENERAL DIFFERENCES BETWEEN BrE and AusE MONOPHTHONGS ILLUSTRATED IN THE DATA

Although diphthongs are the most significant feature to distinguish Australian English from other varieties of English, monophthongs are clearly also a contrasting feature in pronunciation. As previously mentioned, this paper will focus exclusively on monophthongs. If one has further interest in diphthongs, further reading on Australian English by the authors mentioned in the literary review is strongly recommended.

In Figure 3 and Figure 3, the different monophthongs of both RP and AusE are illustrated in a Cardinal Vowel System. Not only its position in the chart, but also the phonemic representation, is importantly noticeable.

Figure 3 - RP pure vowels⁶

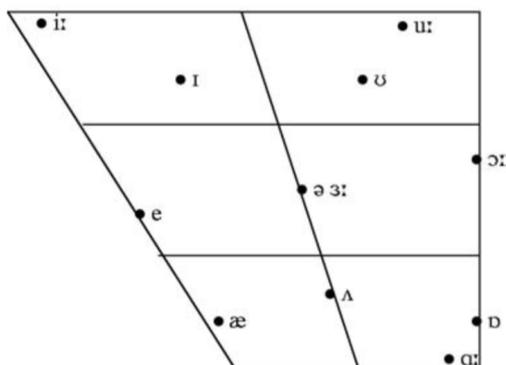
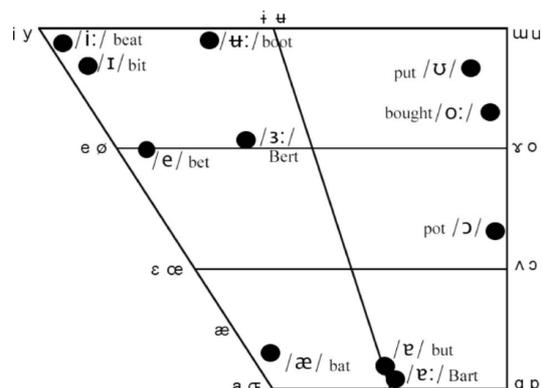


Figure 4 - Australian English monophthongs (black dots)⁷



Some of the sounds represented with the same phoneme in both varieties, as is the case of [ɪ, ʊ, e, æ, ə, i:, ɜ:], though the quality may differ as shown in the chart. The following examples, taken from the transcribed movie fragment, illustrate the use of these phonemes in the Australian English transcription followed by the comparison in RP.

These first examples focus on the sounds [ɪ, e, ə]:

- (1) dɪ'fɛndəd (line 10)
- (2) 'ɛnɪθɪŋ (line 18)
- (3) ,eɪgə̃nə'metɪk (line 73)

The sounds in bold in these words are pronounced in a very similar way to the British standard. Therefore, the same phonetic symbols are used to represent these sounds. When looking up the RP transcription⁸ of *defend* and *anything* in the Cambridge

⁶ (Roach, 2004: 242)

⁷ (Cox, 2008: 330)

⁸ The Cambridge Dictionary (McIntosh & Cambridge University Press, 2013) has been used as the source for all RP transcriptions.

Dictionary (2013) they are transcribed respectively as /dɪ'fend/ and /'eniθɪŋ/. The case of 'ergonomic' is slightly more complex because it is a non-existent word. That is to say, the correct word is 'ergonomic' and due to the intention to portrait an uneducated young man, the word is a result of the fusion between 'ergonomic' /,ɜ:ɡə'nɒmɪk/ and 'trigonometric' /,trɪɡənə'metɪk/. In any way, as a consequence of the similarities in the transcription of the mentioned vowels, it may be predicted that the vowel transcription in RP would be quite similar in this word. However, the phonetic quality /ɪ/ and /e/ differ considerably in both varieties as shown in Figures 3 and 4.

Examples (4) to (9) from the movie show the consistency of the phonemes [ʊ] and [æ] in the same sets of words as in RP. These words are found in the Cambridge Dictionary (2013) as /'kʊkɪŋ/, /lʊks/, /rʊm/ (also ru:m), /'fæmɪli/, /hæv/ and /hæŋ/.

- (4) 'k^hʊkɪŋ (line 60)
- (5) 'lʊks (line 70)
- (6) .ɪʊm (line 163)
- (7) 'fæmɪli: (line 78)
- (8) hæv (line 94)
- (9) hæŋ (line 111)

Long vowels that are represented as [i:, ɜ:] in RP do not trigger any changes in the Australian phonemic representation either. This can be seen in the examples:

- (10) bɪ:fi: (line 242)
- (11) 'wɪ:l (line 268)
- (12) 'wɜ:lɪd (line 208)
- (13) 'wɜ:d (line 216)

which are transcribed in RP as /'bi:fi/, /wi:l/, /wɜ:lɪd/ and /wɜ:d/. Example (10) also shows how a phoneme, though being the same in both varieties, can also be used in other environments. The word *beefy* is transcribed in RP as /'bi:.fi/, while in Australian English

it contains a long [i:] in final position resulting in [bi:fi:]. The same can be seen in the word *serenity*, which is transcribed as /sə'ren.ə.ti/ in RP but [sə'.ɪnəri:] in AusE (line 214 from Appendix A). This phoneme in word final position differs in length exclusively in the two varieties since the quality of the vowel is the same.

Nonetheless, it is noteworthy to mention the position of these phonemes in the IPA vowel chart (Figures 3 and 4). These sounds are transcribed using the same phonemes due to their similarities, and in fact [i:] has virtually the same position in both charts, but [ɜ:] is placed in quite different positions. This fact certifies that even though the sounds are transcribed equally, the equivalent sounds in both varieties do not share the exact vowel quality.

When comparing Figure 3 and Figure 3 it is clear that the phonemes [i:] and [ɪ] are further apart in RP than in AusE, in which [ɪ] is more fronted, closer to the [i:] pronunciation. Australian [e] and [ɜ:] are considerably higher than their equivalents in the RP variety. Australian [æ] and [ʊ] are the phonemes closest to the RP position, only [ʊ] being slightly more retracted.

The following subsections will introduce the contrast between the different monophthongs that are represented by different IPA symbols in AusE and RP, divided in short and long vowels. Some examples will help shed light on these vowel contrasts and help the reader understand some of the main Australian English characteristics.

4.1.1 DIFFERING SHORT VOWELS

As it is noticeable from Table 3 below, which shows the set of short vowels from both Standard and Australian English, there are some vowels that are transcribed with the

same phonemic symbol, but others, such as /ʌ/ - /ɐ/ and /ɒ/ - /ɔ/ are transcribed using different IPA symbols.

Table 3 - RP and Australian Short Vowels

RP	AusE
ɪ	ɪ
ʊ	ʊ
e	e
æ	æ
ʌ	ɐ
ɒ	ɔ
ə	ə

Again, comparing Figures 3 and 4, RP [ʌ] is more raised than the Australian [ɐ] and front [æ]. Both RP [ʌ] and AusE [ɐ] are always central.

The AusE transcription system therefore uses the phoneme [ɐ] to represent the vowel in the set of words *come*, *under*, *stuff* and *couple*, rather than the RP phoneme [ʌ].

(14) 'k^hɪm (line 6)

(15) 'ɪndə (line 6)

(16) 'stʌf (line 18)

(17) 'k^hɒpɪ (line 36)

Examples 14-17 show the Australian transcription while the RP transcription is shown to be /kʌm/, /'ʌndə/, /stʌf/ and /'kʌpəl/.

Similarly, the positions in the previous figures 3 and 4 for RP /ɒ/ and AusE /ɔ/ are wide apart. Thus, words from a same set of words such as *compliment*, *shop*, *tomorrow('s)* and *whopper* are, again, transcribed using different phonemes to represent the same vowel. The AusE phonetic quality for this vowel is much higher in articulation than the RP variant and consequently differing to certain extent in quality. Compare the AusE transcription using [ɔ] in:

- (18) 'kʰɪmplɪm̩ɛnt (line 60)
- (19) 'ʃɒp̩ (line 107)
- (20) t̩ð' mɔɪəʊ(z) (line 218)
- (21) 'wɒpə (line 240)

with the RP phonemic representation /'kɒmplɪmənt/, /ʃɒp/, /tə'mɒrəʊ/ and /'wɒpə/ where [ɒ] is used instead.

4.1.2 DIFFERING LONG VOWELS

When looking at Table 4 below, it is likewise noticeable that some of the phonemic representations of long vowels differ between both varieties of English indicated in boldtype:

Table 4 - RP and Australian Long Vowels

RP	AusE
i:	i:
u:	ʊ:
ɔ:	o:
ɜ:	ɜ:
ɑ:	ɐ:

Due to the location of the different vowels placed far apart from each other in the charts in Figures 3 and 4, phonemes are transcribed as /u:/, /ɔ:/ and /ɑ:/ in RP, /ʊ:/, /o:/ and /ɐ:/ respectively in AusE. Clear examples of these cases are found in the transcription provided in the appendix A.

AusE [ʊ:] is articulated much more fronted and closer to [i:] than the RP [u:]. This quality contrast is highly perceivable by a listener since [u:] has become central in AusE.

Hence, the distinction in phonemic representation, as can be seen in the transcription provided in appendix A.

As the following examples for the set of words *soon*, *loses*, *tooth*, *booties*, and *coop* show, the phoneme [ɯ:] is used in Australian English:

(22) 'sɯ:n (line 78)

(23) 'lɯ:zɔz (line 151)

(24) 'tʰɯ:θ (line 172)

(25) 'bɯ:rɪz (line 248)

(26) 'kʰɯ:p̄ (line 302)

On the contrary, the phoneme represented as /u:/ in RP since these words are transcribed as /su:n/, /lu:zɔz/, /tu:θ/, /bu:tɪz/ and /ku:p/. Nonetheless, when the AusE [ɯ:] precedes [t], the vowel becomes retracted and probably equal to RP [u:] (Cox, 2011). This can be seen in the examples:

(27) 'ɹɯ:t (line 76)

(28) 'pʰɯ:t (line 163)

The RP representation for a set of words containing the sound [ɔ:] is also different from the AusE representation, which is [o:]. As it has been already mentioned in the section 'Short Vowels' when describing the differences between [ɔ ~ ɒ], the Australian sound has undergone a change in place of articulation. The AusE back rounded vowel has been raised in comparison to the RP vowel sound. Therefore, there has been a drag-chain consequence of the movement of AusE /ɔ/ up and away from RP /ɒ/ bringing it closer to RP /ɔ:/. Consequently, the AusE long vowel has been also raised in order to keep the long vowel as is distant from the short AusE vowel.

Since the vowel sound has been raised in articulation, the quality has greatly changed and the AusE vowel is thus represented as [o:], as seen in the following examples:

- (29) 'lɒ: (line 4)
- (30) 'e:pʰɒ:t (line 6)
- (31) 'smɒ:l (line 8)
- (32) 'tʰɒ:ḳt (line 228)
- (33) 'spɒ:ṭ (line 294)

The RP transcription system uses [ɔ:] as seen in the British transcription of these same words /lɔ:/, /'eəpɔ:t/, /smɔ:l/, /tɔ:k/ and /spɔ:t/.

The last AusE vowel differing from its RP vowel counterpart is [ɜ:] which is equivalent to [ɑ:] in the RP transcription system. As it already happened to [u:] that underwent a change from back to central, the same process applied to [ɑ:]. This vowel sound has undergone a process of fronting in Australia, nowadays the sound being placed in the low central position of the vowel chart. Due to this change in fronting and in sound quality, the sound is transcribed [ɜ:] in AusE as seen in the examples

- (34) 'stɜ:ts (line 78)
- (35) 'ɜ:sɔ̣ḳɪŋ (line 111)
- (36) 'ʃɜ:k (line 172)
- (37) 'bɜ:gɔ̣n (line 373)
- (38) 'kʰɜ:nt (line 379)

while the same vowel is transcribed [ɑ:] in RP as in *start*, *ask*, *shark*, *bargain* and *can't* transcribed as /stɑ:t/, /ɑ:sk/, /ʃɑ:k/, /bɑ:gm/ and /kɑ:nt/ in the Cambridge dictionary.

5 CONSEQUENCES OF THE VOWEL QUALITY CHANGES

Changes in vowel quality have certain consequences regarding vowel contrasts in a number of words. The contrast between certain sets of words is reduced to such an extent that the vowel sounds belonging to distinct sets of words in AusE are only distinct

in length and no longer in quality. That is to say, a vowel that in RP differs (and in earlier times in Australia differed) both in quality and length, in current Australian pronunciation no longer differs in quality, but only in quantity. A further explanation illustrated with examples will make the point clear.

One of the sounds in which this phenomenon takes place is the diphthong [eə] in RP, which has not been described before because of the paper's focus on monophthongs. There are many words in RP which are pronounced with this diphthong (e.g. *pair*, *stairs* and *scarce*). This diphthong was also used in earlier times in Australia and can still be heard in some elders. However, the tendency is that more and more often young speakers substitute the diphthong [eə] for [e:]. This can be seen for instance in example (30) mentioned above. The word *airport* is seen as /'eəpɔ:t/ in RP whereas in AusE the diphthong has changed into [e:] resulting in ['e:pʰo:t].

Changing the quality of this diphthong introduces a new long monophthong to the Australian vowel chart, where already exists a short vowel with the same quality. Thus [e], already existent in the vowel inventory, and the monophthong [e:] deriving from /eə/ make these set of words differ only in vowel length, in opposition to RP where there still exists a contrast in quality and quantity⁹.

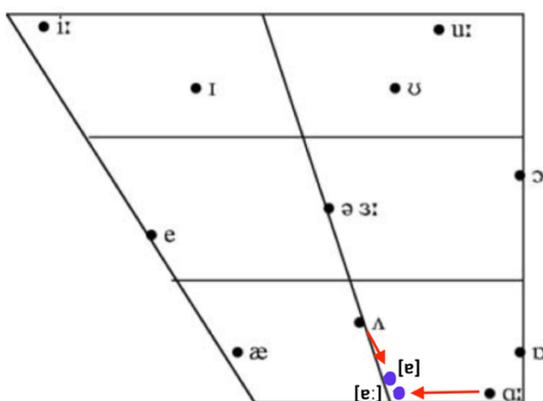
The other pair of vowels which is reduced in contrast is [ʌ:] and [ʊ] when found in certain environments. This phenomenon has already been mentioned in the section of [ʌ:] in *Long Vowels*. According to Cox (2011), this central vowel [ʌ:] becomes retracted [u:] when followed by [t], hence it is articulated in a place very close to AusE [ʊ]. See examples (27) and (28). This retracting process from the central vowel to a back vowel prevents a further distinction in quality and leads to a distinction exclusively in length.

⁹ It is worth noting that there is also a tendency to monophthong [eə] and other centering diphthongs in RP (J. C. Wells, 1982: 216)

The last pair of sounds affected by this series of changes are the Australian vowels [ɐ] and [ɐ:]. In this case it is not only the change of quality in one of the sounds that goes towards the other ‘non-changing’ sound, but both sounds are in fact approaching each other.

As seen in Figure 5, and already mentioned when describing the different vowels individually, sounds [ɐ] and [ɐ:] in AusE are both articulated in different places relative to RP. [ɐ] is the sound found in Australia in the same set of words corresponding to [ʌ] in RP. This sound has been lowered from the more central [ʌ] to the lower [ɐ].

Figure 5 - Trajectory of the vowels [ɐ] and [ɐ:] in AusE



On the other hand, AusE [ɐ:] is found in the same set of words that corresponds to [ɑ:] in RP. The Australian sound has been fronted from the back vowel [ɑ:] to the central [ɐ:]. Both processes are indicated by red arrows in Figure 5. As the evidence shows, both changes have led the vowels to the low central position in the vowel chart making them indistinguishable from each other in terms of quality. The only remaining feature that makes possible to distinguish these set of words is length vowel.

In the next section, these two vowels [ɐ] in ‘but’ and [ɐ:] in ‘Bart’ will be acoustically analysed in order to provide data on these Australian vowels quantity and quality characteristics. Data extracted from the movie fragments will be further described.

6 ACOUSTIC ANALYSIS OF [ɐ] AND [ɛ:]

After extracting words containing vowels [ɐ] and [ɛ:] from two different speakers, characters Dale and Darryl, formants of the vowels from the selected words were measured and used for the analysis.

Before starting with the analysis, there is some information worth mentioning. Speaker 1, Dale, is the youngest actor in the cast, from Melbourne (Victoria) and aged around 20 (“Stephen Curry - IMDb,” n.d.). Speaker 2, Darryl, however, is the oldest actor, from Monto (Queensland) and around 55 years of age at the time the movie was filmed (“Michael Caton - IMDb,” n.d.).

The vowels were separated from the words using the software ‘Audacity’ and the waveforms and spectrograms, which are illustrated in appendix B, were obtained through Praat. The vowel formants were measured in the centre of the vowel where there is least influence from consonant transitions. The results of these measurements are found in appendix C. The following charts were created afterwards from the data excerpted in an attempt to show and support Cox’s theory in these vowels’ proximity.

From Figure 6, speaker 1’s vowel plot, one can see that [ɐ] has in fact lowered to the same height or even lower than [ɛ:] in articulation. On the other hand, [ɛ:] has also been fronted and it is now a central vowel. The distance between both dots representing the position of these two sounds does not even reach one *Bark*, which brings both sounds to be so similar that almost no auditory distinction is made.

Figure 6 - Speaker 1 (Dale) vowel plot

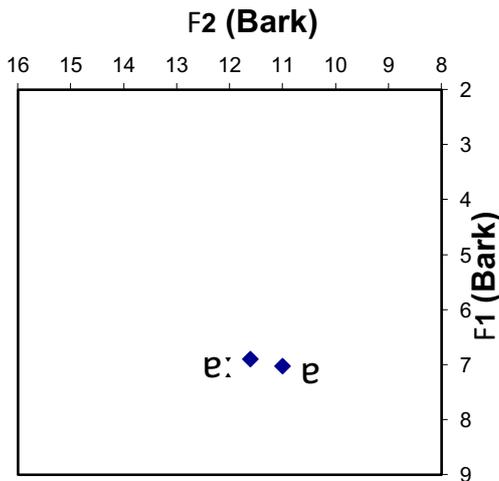


Figure 7 - Speaker 2 (Darryl) vowel plot

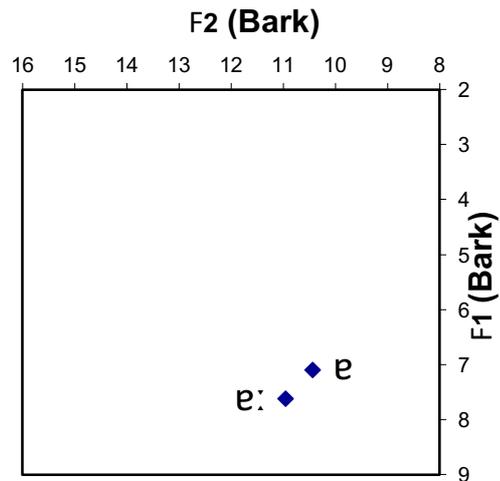


Figure 7 shows a similar scenario in which both vowels are close together, making an auditory clear distinction difficult once again. Vowel [e:] is fronted to a central position relative to RP [ɑ:] and [e] is also lower than its RP counterpart [ʌ].

Nevertheless, there are a number of interesting features in these two vowel plots. It is the case that these plots are based on a small number of measurements, only four pairs per speaker, and that the differences may not reach significance. However, it is worth noting the following. First of all, in both cases [e:] is more fronted than short vowel [e]. This is interesting from the point of view in which [e:] and [e] have originated from the British pronunciation during the early origins of Australia as the nation we know it is today. Starting from this idea, if [e] had suffered only a change of height and had only been lowered, and [e:] had been fronted to a central position, the arrangement would have been the same as Figure 5 shows. However, neither Figure 6 nor 7 show the same arrangement as Figure 5. This could mean one of the following two options: either [e], apart from being lowered, has also undergone a process of retraction or [e:] has been further fronted surpassing central [e] and becoming more fronted. In any case, the other vowels position would be needed in the chart in order to see the correlation between them.

Another remarkable feature is the position of [ɐ] in Speaker 1, which seems to be lower than [ɛ:], whereas this is not the case for speaker 2. It was previously mentioned that it was important to mention certain information such as the speaker's age and origin. Both age and geographical location could be the reason of this contrast between speakers.

It is a fact that language is alive and thus, pronunciation undergoes constant change through time. Therefore, this disparity could be understood as an ongoing process in which the [ɐ] lowering is in further development and it has not yet stopped. The vowel from the younger speaker is consequently lower than that of the older speaker's.

Nonetheless, a larger amount of data and further research would be needed in order to confirm these theories. The evidence provided has at any rate corroborated the lack of quality contrast in this set of vowels.

Furthermore, the data obtained from the results in length, also confirms that the main distinctive feature is the vowel quantity. The average length for speaker 1 short vowel is 100.96 milliseconds (ms) while the long vowel 177.39 ms. This is a difference of 76.42 ms between Dale's short and long vowels. Darryl's vowel length on the other hand is 74.15 ms for [ɐ] and 202.39 ms for [ɛ:] with a difference of 128.23 ms between the short and long vowel. Obviously, the difference in length between the two vowels in both speakers is significant.

It is also remarkable that speaker 2 short vowel is considerably shorter than the same vowel pronounced by speaker 1. Likewise, speaker 2 long vowel is substantially longer than the one uttered by speaker 1. Darryl makes a clear distinction between the short [ɐ] and long [ɛ:], whereas this distinction, albeit clear, is not as large as in the previous speaker. Once again, this could be due to a diverse number of factors.

7 CONCLUSIONS

This paper attempted to show the main differences in vowel quality between AusE and RP monophthongs. It has also reviewed a number of researchers who have approached the description of Australian vowels. A transcription of excerpts of an Australian film has been provided to test theories regarding how these vowels have changed and led to a reorganisation of the vowel system.

It is seen from the vowel trajectories in Figure 5, that due to their changes in articulation, these vowel changes are a drag-chain consequence. The change in articulation of one of the vowels causes the movement of other vowels in order to differentiate the various vowels in the diverse set of words.

The evidence has also proved a merger for the pair of vowels [ɐ]-[ɛ:] originated from British [ʌ]-[ɑ:]. The analysed data shows that both sounds have moved to such proximity that they are no longer distinguishable in quality. Thus, the two sets of words containing these vowels can only be differentiated by length.

Further research into the pair of vowels [ɐ]-[ɛ:] above mentioned is also recommended. The analysis of a larger quantity of data is necessary in order to prove some of the suggestions about age variation between the different speakers. It would also hint at the future trajectory of these vowels based on older and younger speakers.

To sum up, Australian English is habitually misrepresented and lacks in research since the number of scholars in this field is limited. The Australian variety of English is worth exploring in more accurate detail.

APPENDICES

APPENDIX A - TRANSCRIPTION¹⁰

- 1 - I don't know, Darryl. This isn't my area.
2 [ɛ dɔ̃'n:əʊ | 'd̥ɛ:ɹɛt̚ | 'ð̥ɪs ɪ'zɔ̃n̩t̚ 'mɛ 'e:ɹɪə]
- 3 - What do you mean this is not your area!?! This is law!
4 ['wɔ:ɹɛjə 'mɪ:n̩ ð̥ɪs ɪz 'nɔ'tʃo: 'e:ɹɪə | 'ð̥ɪs ɪz 'lo:]
- 5 - Darryl, the airport wants to buy your place. Airports come under federal law. Federal.
6 ['d̥ɛ:ɹɛt̚ || 'ð̥ɪ: 'e:p̚o:t̚ 'wɔ̃nts t̚hə 'b̥ʊɑ̃ 'jo: 'pl̥æɪs || 'e:p̚o:t̚s 'k̚h̥ɛm 'ɛ̃ndə 'fed̥ə.r̥t̚ 'lo: || 'fed̥ə.r̥t̚ ||
7 I just do small stuff: conveyancing, magistrates
8 'æ dʒəst̚ 'd̥ʌ: 'smɔ:t̚ 'stɛf || k̚h̥ɔ̃ŋ'væɪɔ̃nsɪŋ | 'mædʒɪ'fɪt̚ræɪts]
- 9 - You defended Wayne.
10 ['j̥ʌ: dr̥'fɛndəd 'wɛ̃n]
- 11 - Yeah, and he got eight years.
12 ['j̥e: | ɔ̃n 'i: gɔ:t̚ 'æɪt̚ 'j̥ɪ:z̥]
- 13 - Yeah, but you did your best! I mean you can hold your head up high.
14 ['j̥e: | 'b̥ʊətʃə 'd̥ɪdʒə 'b̥est || æ 'mɪn̩ | jə 'k̚h̥ɔ̃n 'h̥æʊt̚d̚ 'jo: 'hɛd ʌp 'haɪ: ||
15 He was the one that [...]
16 'hɪ: 'wɔz̥ ð̥ə 'wɛ̃n̩ ð̥æt̚ [...]
- 17 - no, Darryl, I don't know anything about this sort of stuff.
18 ['nɔ 'de:ɹɛt̚ | æ dɔ̃'n:əʊ 'ɛ̃nɪθɪŋ ə'bæɪt̚ 'd̥ɪ:sɔ:ɹɔz̥ 'stɛf]
- 19 - But they can't do this.
20 ['b̥ʊt̚ 'ð̥æɪ 'k̚h̥ɛ:nt̚ 'd̥ʌ: ð̥ɪs]
- 21 - I don't know. Maybe they can.
22 ['æ dɔ̃'n:əʊ | mæɪ'bi: 'ð̥æɪ 'k̚h̥ɛ̃n]
- 23 - They can't.
24 ['ð̥æɪ 'k̚h̥ɛ:nt̚]
- 25 - I'll ring around and I'll see what I can find out.
26 ['æf̥ 'ɪŋ ə'ɹəʊ̃nd̩ ən̩ 'æf̥ 'sɪ: wɔ:ɹæ 'k̚h̥ɔ̃ŋ 'faɛ̃nd̩ æʊt̚]
- 27 - Good on you, Dennis. yay...
28 ['gʊd̩ ən̩ 'jə | 'd̥ɛ̃nɪs | 'j̥æɪ]
- 29 - how is Wayne?
30 ['həʊ 'ɪz̥ 'wɛ̃n]
- 31 - Good, yeah, good. Behaving himself.
32 ['gʊd̩ || 'j̥e:ə | 'gʊd̩ || b̥ɪ'hæɪvɪŋ hɪm'self]
- 33 - Any word?
34 ['ɛ̃nɪ 'wɜ:d̩]
- 35 - Nah, nah. They reckon he's still a couple years off.
36 ['nə: | 'nə: | ð̥æɪ 'ɹekɔ̃n̩ 'ɪz̥ stɪl̩ ə 'k̚h̥ɛp̚t̚ 'j̥ɪ:z̥ 'ɔf]
- 37 - I'll let you know.
38 ['æf̥ 'let̚ jə 'nəʊ]
- 39

¹⁰ Audio files can be found at:

<https://www.dropbox.com/sh/un84wq2q7d4bx6i/AAC69toal5sPM7cuI9iCx9Q9a?dl=0>

40 But dad was never one to bring worries home. Even in the damn times he'd still
41 [bʊt 'dʌ:d wəz 'nevə 'wɛn tə 'brɪŋ 'wɛ:rɪz 'hɒm || 'ɪvən ɪn ðə 'dæ:m t'æɪmz | 'hi:d stɪl
42 tell us funny stories about his day.
43 't'heɪ əs 'fɛni: 'sto:ri:z ə'bæ:ɪrɪz 'dæɪ]
44 - it's a head-on between a mini and a volksy!
45 [ɪts ə 'hedɔn bɪ'twɪn ə 'mɪni: ɔn ə 'vɔ:ksi:]
46
47 Dad also had a way of making everyone feel important.
48 ['dʌ:d 'o:ʃəu 'hæd ə 'wæɪ əv 'mæɪkɪŋ 'ev:ɪwɛŋ 'fi:l ɪm'p'ɔ:rɔnt']
49 - Come on, Dale, tell 'em, come on, tell 'em! Dale dug a hole.
50 ['k'ɛm ɔn | 'dʌɪt | 't'heɪm || 'k'ɛm ɔn | 't'heɪm || 'dʌɪt 'dɛg ə 'hɔ:l]
51
52 Like the time I dug a hole.
53 ['læk' ðə t'æɪm 'æ 'dɛg ə 'hɔ:l]
54 - down at the patio.
55 ['dʌɔn 'æt' də 'p'æ:riə]
56 - Good on you darl(ing)
57 ['gʊd ɔn 'jʊ: 'dʌɪt]
58
59 And (h)e'd compliment mum every single night on her cooking.
60 ['ænd 'ɪd' k'ɔmplɪmɛnt' 'mɛm 'ev:ɪ: 'sɪŋɡl' 'naet' ɔn ə 'k'ɔkɪŋ]
61 - wawolow!! how's this boys!?! whoo-hoo! What d'you call this?
62 ['wə:wələu || 'həʊz 'ðɪz 'bɔɪz || wʌ'fɦ: || 'wɔ:ɔ jə 'k'ɔ:ʔ 'ðɪs]
63 - chicken.
64 ['tʃɪkɔn]
65 - it's got something sprinkled on it.
66 [ɪts 'gɔt' s'ɛmθɪŋ 'sp:ɪŋkʌd ɔn ɪt']
67 - seasoning!
68 ['si:z'ɔnɪŋ]
69 - seasoning. Looks like everybody is kicked to go! how are our backs feeling? umm
70 ['si:z'ɔnɪŋ || 'lʊks 'læk' 'ev:ɪbɪrɪz' k'ɪk't t'ə 'gəu || 'həʊ ə: æʊ' bæks 'fi:ʃɪŋ | m]
71
72 Steve did get them ergonomic chairs and mum had already started prettifying hers up.
73 ['stɪv' dɪg' geɪt' d'ɛm ,ɛ:ɡɔnɔ'met:ɪk 'tʃeəz | ɔn 'mɛm əf' o:ʔ'æ:di: 'stɛ:ɪrɔd' 'p:ɪ:ʃɪŋ 'hɜ:z 'əp']
74
75 Dad placed a great deal of importance on meal time. He had a very strict rule:
76 ['dʌ:d' pl'æɪst ə 'g:ɪɪt' 'di:l' əv ɪm'pɔ:rɪns ɔn 'mi:l' t'æɪm || 'hi: 'hæɔə 'veɪ: 'st:ɪk't 'ɪ:ɪt' ||
77 when the family starts to eat the television is definitely turned down. But as soon as we
78 'wɛn ðə 'fæmɪli: 'stɛ:ts tə 'æɪt | ðə 't'eləvɪzɪn ɪz 'd'efɪnətli: 't'hɜ:nd' 'dæɔn || 'bʊræz' s'ɦ:m æz wɪ:
79 finish eating, it's a different story.
80 'fɪnɪʃ 'i:ɪŋ | ɪts ə 'dɪf:nt 'sto:ɪ:]
81
82 - That was great!
83 ['ðæt 'wɔz 'g:ɪɪt']
84 - Dad. Seven thirty.
85 ['dʌ:d || 'sevɔn 'θɜ:ri:]
86 - Alright. Time for some fun!
87 [o:ɪ'æɪt' || 't'hæɪm 'fo: 'sɦm 'fɦn]
88

- 89 - I said you're a bloody ripper! yeah, ok! That's it, Sal. All fixed!
90 [æ 'sed̥ jʊəɪ ə 'blɛdɪ: 'ɪpə || 'je: k̥hæɪ || 'ðæt̥s ɪt 'sæt̥ | 'o:t̥ 'fɪkst̥]
- 91 - What did he say?
92 ['wɒt̥ 'dɪd̥ ɪ: 'sæɪ]
- 93 - He said: I have recourse to the Administrative Appeals Tribunal. All I gotta do was
94 [hi: 'sed̥ | 'æ hæy ɪ: 'k̥hɔ:st̥ tə ði: əd,mɪnɪs'trɪ: 'æɪrɪv ə'p'hɪ:ts̥ 'trɪ:bjʊ:nət̥ | 'ɔ:t̥ æ gɔrə dɔ
95 wəz
96 run up there, put my case and [...]
97 'rɛn ɛp 'ðe: | 'p'hɒt̥ mæe 'k̥hæɪs̥ ɔn [...]
- 98 - Good on you, darl.
99 ['gʊd̥ ɔn 'ju: | 'dæ:t̥]
- 100 - (He) still hasn't noticed mum...
101 [stɪl̥ 'hæzn̩t̥ 'nəʊrɪst̥ | 'mʌm]
- 102 - What? aw... It's finished.
103 ['wɛ? || ɛə | ɪts̥ 'fɪnɪʃt̥]
- 104 - Today.
105 [tə'dæɪ]
- 106 - How is that? You should open a shop.
107 ['həʊ 'ɪs̥ 'ðæt̥ || 'ju: ʃʊd̥ 'əʊpən̩ ə 'ʃɔp̥]
- 108 - Dad? Some guy's selling an overhead projector.
109 ['dæ:d̥ | sɔm̩ 'gæes̥ 'selɪŋ̩ ɔn̩ 'əʊvə'hed̥ pɹə'dʒekt̥'tə]
- 110 - Nah. ah hang on, Steve. What's he asking?
111 ['nə || ɛ'hæŋ̩ 'ɔn̩ | 'stɪ:v̩ || 'wɒts̥ ɪ: 'æ:skɪŋ̩]
- 112 - One fifty?
113 ['wɛn̩ 'fɪftɪ:]
- 114 - Tell 'im he is dreaming...
115 [t̥'hɛɪm̩ 'ɪs̥ 'dɪ:mɪŋ̩]
- 116 - Yeah...
117 ['je:ə]
- 118 - So what else did Dennis have to say?
119 [səʊ 'wɒr̩ 'els̩ dɪ'dɛnɪs̩ 'hæy tə 'sæɪ]
- 120 - Nothing. It's fixed.
121 ['nɛθɪŋ̩ | ɪts̥ 'fɪkst̥]
- 122 - Yeah, but when's the hearing?
123 ['je:ə | ɪt̥ 'wɛnz̩ ðə 'hɪ:ɪŋ̩]
- 124 - Monday. And I know exactly what I'm gonna say.
125 ['mʌndæɪ | ɔn̩ æɪ 'nəʊ əg'zæk̩ tli: 'wɒr̩ æ'm̩ 'gɔnə 'sæɪ]
- 126 - Don't rub it on, darl.
127 ['dʊnt̩ 'rʌb ɪr̩ 'ɔn̩ | 'dæ:t̥]
- 128 - I don't rub it on. When do I rub it on?
129 ['æ dɔnt̩ 'rʌb ɪr̩ 'ɔn̩ || 'wɛn̩ 'dʊ æ 'rʌb ɪr̩ 'ɔn̩]
- 130 - You do rub it on.
131 [ju: 'dʊ: 'rʌb ɪr̩ 'ɔn̩]
- 132 - All right, but I'll tell you what we're gonna do! Friday we're gonna pick up
133 [ɔt̩'raɪt̩ | ɪt̩ 'bʊt̩ 'aɪl̩ tɛl̩ ju: wɒt̩ 'wi: 'gɔnə 'dʊ || 'frɪdæɪ wɪ: 'gɔnə 'pɪk̩ 'ɛp̩
134 Trace and Con and then we're going straight up to Bonnie Doon for the weekend.
135 'træɪs̩ ɔn̩ 'k̥hɔm̩ | ɔn̩ 'ðɛn̩ wɪ: 'gəʊɪŋ̩ 'ʃtrɪ:ət̩ ɛp̩ tə 'bɒni: 'dʊ:n̩ fɔ: ðə 'wɪk̩ɛnd̩ ||
136

137 I'ma not worrying about those clowns for another second.
138 'amə nɒt 'wɜːrɪŋ ə'baʊɪ 'dɔːz 'kləʊnz fɔː ə'nʌðə 'sekʌnd]

139 - Mum! price's right's on!
140 ['mʌm || 'praɪs 'raɪts 'ɔːn]

141 - All right, dar!
142 [ɔːl'raɪt 'dɑː]

143 - I'll be ringing up Farouk and Jack and Evonne and the others and tell 'em
144 ['æf bɪ 'fɪŋɪŋ 'ɛp fə'ɪɔk ən 'dʒæk ənɔː 'ɪvɔːn ən dɪ 'eðəz ən 'tʰeləm
145 what's going on.
146 wɒts 'gəʊɪŋ ən]

147

148 - We saw it dry in the plane, that your hair actually dehydrates. Doesn't it Con?
149 [wɪː 'soː ɪt 'dɪə'ɪn də 'plæɪn | ðæt jə 'heɪr 'æktʃəliː 'diːhaɪdeɪtɪs || 'dʒɔːnɪt ɪt 'kʰɔːn]

150 - Yeah... It loses its moisture.
151 ['jeː || ɪt 'lʌzəz ɪts 'moɪstʃə]

152 - So interesting.
153 ['sɔː'ɪn'tɪrɪŋ]

154

155 We could have listened for hours, but then it was presents time.
156 [wɪː 'kʰɔːdəv 'lɪsənɔː fɔː 'aʊəz | bʌt ðen ɪt 'wəz 'preznts 'tʰaɪm]

157

158 - For you, dad. It's a samurai sword letter opener.
159 [fɔː 'juː | 'dʒæːd || ɪts ə 'sæmʊraɪ 'soːd 'letə 'æpənə]

160 - This handcrafted.
161 ['ðɪs 'hænd'kræftəd]

162 - How's that!? That is just... This is going straight to the pool room.
163 ['həʊs ðæt || 'ðæt 'ɪz 'dʒɛst || 'ðɪs ɪz 'gəʊɪŋ 'stɪrɪt tə ðə 'pʰuːl rʊm]

164 - You should use it, dad...!
165 ['juː 'ʃʊd 'juːz ɪt | 'dʒæːd]

166 - This, I'm not even taking out of the wrapper.
167 ['ðɪs | 'æm nɒt ɪvən 'tʰæɪkɪŋ 'æʊəv ðə 'ræpə]

168

169 They bought mum a genuine Rolex for fifteen bucks off a guy at the beach. He said
170 ['ðæɪ 'bɔːt 'mʌm ə 'dʒɛnjuɪn 'rɔːleks fɔː 'fɪfɪn 'bʌks 'ɔf ə 'gʌe æt ðə 'bi:tʃ || hiː 'sed
171 he'd mail the warranty later. I got a necklace with a shark tooth. They got a Walkman
172 ɪd 'mæɪl ðə 'wɔːrəntiː 'læɪə || æ 'gɔːɔ 'neɪkələs wɪð ə 'ʃɑːk 'tʰuːθ || ðæɪ 'gɔːɔ 'wɔːk'mən
173 for Steve.
174 fɔː 'stɪv]

175 'Cause it was Friday I told Trace I'd take Wayne's present to him. It was an
176 'kʰɔːz ɪt 'wəz 'frɪdaɪ æ 'tʰɔːtɪd 'tʰɪs æd 'tʰaɪk 'waɪns 'preznt 'tuːɪm || ɪt 'wəz ən
177 elephant, 'cause elephants bring good luck, especially if the trunks are up.
178 'eləfənt | 'kʰɔːz 'eləfənts 'bɪŋ ɡʊd 'lʌk | əs'pʰɛʃəliː ɪf ðə 'trʌŋks ə 'ʌp ||
179 And this trunk was up.
180 ənd ðɪs 'trʌŋk wəz 'ʌp ||
181 It really made Wayne's day!
182 ɪt 'riːliː 'meɪd 'waɪns 'dæɪ]

183

184 - She is great. Isn't she Trace?
185 ['ʃiːz 'ɡreɪt || 'ɪznt 'ʃiː 'tʰɪs]

- 186 - Yeah. It brings good luck. She is coming on Monday.
187 ['je:ə || ɪ 'bʊ.ɪŋz ɡʊd 'lək || ʃi:z 'kʰɛmɪŋ ɔn 'mɛndəɪ]
- 188 - Oh great! And when's dad gonna do that hearing?
189 [ə 'ɡræɪt || ɔn 'wɛnz 'dæ:d 'ɡɔnə 'dʊ ðæt 'hi:ɪŋ]
- 190 - On Monday.
191 [ɔn 'mɛndəɪ]
- 192 - yeah?
193 ['je:]
- 194 - Yeah... He reckons he can do it.
195 ['je: || hi: 'rɛkɔns i: kʰæ:n 'dʊ ɪt]
- 196 - Tell'im not. You're going to Bonnie Doon tonight?
197 [tʰeɪ: 'nɔ:t || jʊ ɜ: 'ɡəʊɪŋ tə 'bɔni: 'dʊ:n tʰɔ'naɪt]
- 198 - Yeah. Maybe, I don't know...
199 ['je: || 'mæɪbi: | 'æ dəʊnt 'nəʊ]
- 200
201 I didn't want to tell Wayne that we were going to Bonnie Doon. Just in case he'd feel
202 bad
203 [æ 'dɪdn̩t 'wɔnə tʰeɪ 'wæɪn ðæt we:ə 'ɡɔnə 'bɔni: 'dʊ:n || 'dʒʌst ɪn 'kʰæɪs 'hi:d 'fi:t 'bæ:d
204 that we were going to Bonnie Doon. He liked it there. We all liked it there.
205 ɔæt 'wz: 'ɡəʊɪŋ tə 'bɔni: 'dʊ:n || hi: 'læktɪt ɪt 'ðe: || wi: 'o:t 'læktɪt ɪt 'ðe:]
- 206
207 - Dale, I reckon we are the luckiest family in the world.
208 ['dæɪt | æ 'rɛkɔn wi 'ɜ: ðə 'lʌkjɪst 'fæməli: ɪn ðə 'wɜ:ld]
- 209 - Yeah...
210 ['je:]
- 211 He loved the serenity of the place.
212 [hi: 'ləvd ðə sə'reɪnəɪ: əv ðə 'plæɪs]
- 213 - How's the serenity?
214 ['hæʊz ðə sə'reɪnəɪ:]
- 215 I think he also just loved the word.
216 [æ 'θɪŋk i: 'o:tʰəʊ dʒʌst 'ləvd ðə 'wɜ:ɔd]
- 217 - So much serenity. Let's go to bed! Tomorrow is gonna be a great day!
218 ['səʊ 'mætʃ sə'reɪnəɪ: || lets 'ɡəʊ tə 'bed || tə'mɔrəʊz 'ɡɔnə 'bi: ə 'ɡræɪt 'dæɪ]
- 219 - Yeah...
220 ['je:]
- 221
222
223 - Where's Con?
224 ['weɪz 'kʰɔ:n]
- 225 - Down the shops.
226 ['dʌʊn ðə 'ʃɔps]
- 227 - You and Con talked about kids yet?
228 [jʊ: ɔn 'kʰɔ:n tʰo:k't ə'bæʊt 'kʰɪdz 'jet]
- 229 - Yeah, Con wants to start straight away, but you know, I've got a career.
230 ['je: || 'kʰɔ:n 'wɔnts tə 'stɜ:t 'ʃtɪræt ə'wæɪ | bʊt jʊ: 'nəʊ | æv 'ɡɔt ə kə'ɪ:]
- 231 - Of course.
232 [əv 'kʰɔ:s]
- 233 - So I said, I'm not having kids until I'm at least 23.
234 [sə 'æ 'seɪd | 'æm 'nɔt 'hævɪŋ 'kʰɪdz ɛn'tɪl æm æt 'li:st tʰwɛni: 'θɜ:]

- 235 - Times have changed...
- 236 [tʰɑ̃mz ɛ:y tʃɑ̃ndʒd]
- 237 - Gail had a boy.
- 238 [ˈgɑɪl ˈhæd ə ˈbɔɪ]
- 239 - Was he a whopper?
- 240 [ˈwɒz ˈiː ə ˈwɒpə]
- 241 - hm. Ten pounds. They're gonna be a big beefy family. Tyler Jay. Now, even the
- 242 [m || tʰɛn ˈpʰæɪndʒ || ˈðæɪ ˈgɔ̃nə ˈbiː ə ˈbɪɡ biːfiː ˈfæməliː || ˈtælsː ˈdʒæɪ || nəʊ ˈɪvən ðə]
- 243 birth notice was big, stork and everything.
- 244 ˈbɜːθ ˈnɪʃɪs wəz bɪɡ || ˈstɔːk ən ˈevriθɪŋ]
- 245 - Well, Shanon was 9 pounds. What you made then?
- 246 [wɛl ˈʃɛnən wɒz ˈnaɪn ˈpʰæɪndʒ || ˈwɒt jə ˈmæɪd ˈðɛn]
- 247 - Oh I knitted a pair of booties. You always need booties.
- 248 [oː | æɪ ˈniːtəd ə ˈpʰeɪ əv ˈbuːtiːz || jə ˈoːlwæɪz ˈniːb ˈbuːtiːz]
- 249 - I reckon you should make fake flowers.
- 250 [æɪ ˈrɛkən jʊː ʃʊd ˈmæɪk ˈfæɪk ˈflaʊəz]
- 251 - Oh yeah.
- 252 [oː ˈjeː]
- 253 - Jenny makes fake flowers.
- 254 [ˈdʒɛniː ˈmæɪks ˈfæɪk ˈflaʊəz]
- 255 - Jenny?
- 256 [ˈdʒɛniː]
- 257 - Yeah.
- 258 [ˈjeː]
- 259 - Jenny Jenny?
- 260 [ˈdʒɛniː ˈdʒɛniː]
- 261 - No, Microwave Jenny. She reckons the trick is to make'em real but not too real,
- 262 [ˈnəʊ | ˈmaɪkrəweɪv ˈdʒɛniː || ʃiː ˈrɛkɔ̃nz ðə ˈtʃɪk ɪz tə ˈmæɪkəm ˈriːl bət ˈnɒt ˈtuː ˈriːl |]
- 263 just real enough to know they are fake.
- 264 ˈdʒʌst ˈriːl ɪ ˈnɒf tə ˈnəʊ ðæɪ ˈfæɪk]
- 265 - I'd like to do pottery.
- 266 [æd ˈlaɪk ˈtə dʊ ˈpɒtəriː]
- 267 - Wow! on a wheel?
- 268 [ˈwəʊ || ən ə ˈwiːl]
- 269 - Yeah. I just love mugs. Yeah, I'd like to make my own mugs.
- 270 [ˈjeː || ˈæɪ dʒʌst ˈlɛv ˈmɛɡz || ˈjeː æd ˈlaɪk ˈtə ˈmæɪk ˈmaɪ əʊn ˈmɛɡz]
- 271 - Mum?
- 272 [ˈmʌm]
- 273 - Yeah?
- 274 [ˈjeː]
- 275 - What's the matter?
- 276 [ˈwɒts ðə ˈmætə]
- 277 - Nothing.
- 278 [ˈnɛθɪŋ]
- 279 - You're worried about the house?
- 280 [ˈjuː ə ˈwɒɪɪd ə ˈbəʊt ˈdʌ ˈhaʊs]
- 281 - no...
- 282 [ˈnəʊ]
- 283

- 284 - Dad said everything is gonna be ok.
 285 ['dæ:d 'sed 'evriθiŋz 'gəʊnə 'bi: əm 'kʰæɪ]
- 286 - Of course it is, dar!
 287 [ɔy 'kʰo:s ɪr'ɪz 'dæ:t]
- 288
- 289 - Discipline, isn't it, Sal? Here are you and I relaxing, having a beer and he's still
 290 ['dɪsəplɪn | 'ɪzn ɪt 'sæt || 'hi: əɪ 'jʊ ən 'æe .ɪ'læksɪŋ | 'hævɪŋ ə 'biə | ən 'i:stɪl
 291 training.
 292 'tʃæmɪŋ]
- 293 - Yeah, he just loves that sport.
 294 ['je: || hi: dʒəst 'lɒvz ðæt 'spɔ:t]
- 295 - You gotta have a passion for something.
 296 [jʊ 'gɔtə 'hæv ə 'pʰæʃn fo: 'sɛmθiŋ]
- 297 - Yeah.
 298 ['je:]
- 299 - How's the serenity...
 300 ['hæʊz ðə sə'renəti:]
- 301 - Dad, where d'you want me to put the chicken coop?
 302 ['dæ:d || 'weɪrəjʊ 'wɔmɪ: tə 'pʰɔt də 'tʃɪkən 'kʰu:p]
- 303 - At the back, Steve!
 304 ['æt də 'bæk | 'stɪv]
- 305
- 306
- 307 - Well, let's start cooking this feast! Who wants it medium rare?
 308 ['wel | lets 'ste:t 'kʰɔkɪŋ ðɪs 'fi:st || 'hʌ: 'wɔn'ɪt 'mi:dɪəm 're:]
- 309 - Me!
 310 ['mi:]
- 311 - Good stuff!
 312 ['gʊd 'stʌf]
- 313 - Check and see if it could be a little under done. I bet they don't have places like
 314 ['tʃek ən 'si: ɪf ɪt 'kʰɔb 'bi: ə 'lɪt 'ɛndədɛn || æe 'bet dʰæɪrəʊn 'hæy 'plæɪsɪs læk
 315 this in Thailand, Con?
 316 'ðɪs ɪn 'tʰælənd | 'kʰɔ:n]
- 317 - No, Mr. Kerrigan.
 318 ['nɔ 'mɪstə 'kʰe.rɪgən]
- 319 - ay, ay, ay. Darryl now mate.
 320 ['æe æe æe || 'dʰæ:ɪt 'nəʊ 'mæɪt]
- 321 - Sorry, Darryl. It's a good place, though!
 322 ['sɔ:ɪ: | 'dʰæ:ɪt || 'ɪts ə 'gʊd 'plæɪs 'ðʊə]
- 323 - Yeah, yeah. I'm curious. Now, I know it's unfair to compare any place to
 324 ['je: || 'je: | æm 'kʰjʊrɪəs || 'nəʊ | æ 'nəʊ ɪts ɛn'feɪrɔ kəm'peɪ: ɛni 'plæɪs tʊ
 325 Bonnie Doon, but why would I wanna go there, instead of here.
 326 'bɔni: 'dʊ:n | bʊt 'wæe 'wɔræe 'wɔnə 'gəʊ 'ðe: | ɪn'steɪdə hi:ə]
- 327 - It's for young people, dad.
 328 ['ɪts fo: 'jʌŋ 'pʰi:pəl | 'dæ:d]
- 329 - Yeah, I know that Trace.
 330 ['je: | æ 'nəʊ 'ðæt 'tʃæɪs]
- 331 - It's the culture, Darryl. The place is full of culture.
 332 [ɪts ðə 'kʰʌltʃə | 'dʰæ:ɪt || ðə 'plæɪs ɪz 'fʊlɔy 'kʰʌltʃə]

- 333 - Chockers!
334 ['tʃɔkɜz]
335 - Oh yeah.
336 [ɔjə]
337
338 - Something for everyone.
339 ['sɛmθɪŋ fo: 'evɪrwɛn]
340 - What's that movie again, Con? The one that...
341 ['wɔts ðæt 'mʌvi: ə'ɡen | 'kɔ:n || ðə 'wɛn ðæt]
342 - Dale!
343 ['dæɪ]
344
345 There were so many stories.
346 ['ðewe: 'səʊ 'mɛni: 'sto:ɪz]
347 - And the hotel Trace and me were staying in, they had this one channel,
348 [ʔn̩ ðə hɔl t'hɛt 'tɹeɪs ɔ'mɪ 'we: 'stæɪɪŋ ɪn | ðəɪ 'hæd ɔs wɛn 'tʃænl |
349 kickboxing twenty-four hours a day!
350 'kɪk' bɔksɪŋ 'tʰwɛni: 'fo: 'æwɜz ə 'dæɪ]
351 It was just so interesting to hear about another country.
352 [ɪt 'wəz dʒʌst 'səʊ 'ɪntɪrɪsɪŋ tə 'hɪ:əɪ ə'bæʊə ɔ'nəðə 'kʌntri:]
353 - Meals were 5 dollars, mum. The most beautiful satays
354 ['mɪ:ɪz we: 'faef 'dɔləz | 'mɛm || ʔɔ 'mɔ:st 'bju:ɪfʊl 'særæɪs]
355 - What's that, darl?
356 ['wɔts 'ðæt | 'dæɪ]
357 - It's meat on a skewer with peanut sauce and grilled.
358 [ɪts 'mi:t ɔn ə 'skju:ə wɪθ 'pi:nʌt 'so:s ɔn 'ɡrɪɪd]
359
360 And the stories went on and on all night.
361 [ʔnd ɔə 'sto:ɪz 'wɛn ɔn ɔn ɔn 'o:ɪ 'naet]
362 - The value for money is absolutely second to none. One of the other
363 [ʔə 'vælju: fɔ 'mɛni: ɪz 'æbsəlu:tli: 'sekʌd tə 'nɛn || 'wɛn əv ði: 'eðə
364 Sony walkmans,
365 'sɔni: 'wɔ:k mɔns]
366 - with presets?
367 [wɪθ 'prezɪts]
368 - Yeah, with presets. and megabass, eighty-five dollars Australian!
369 [jɛ: | wɪθ 'prezɪts || ɔn 'megəbæs || 'æri: 'faef 'dɔləz əs'tɹæɪljən]
370 - woow...
371 ['wɛʊ]
372 - bargain?
373 ['bɜ:ɡɛn]
374 - shitty yeah...
375 ['ʃɪti: jɛə]
376 - But I reckon someone like you, Steve, could have got'im down even further.
377 [bʊt 'æ 'ɪɛkɔn 'sɛmwɛn læk jʊ: | 'stɪv | 'kɔdɔv 'ɡɔr ɪm 'dæɔn ɪvɔn 'fɜ:ðə]
378 - I can't wait to go to Bangkok.
379 [æ 'kʌnt 'wæɪt tə 'ɡəʊə bæŋ'kɔk]
380 - Great to have you two back.
381 ['ɡreɪt tə 'hæv jʊ: 'tu: 'bæk]

- 382 - It's great to be back.
383 [its 'g.ræt' tə 'bi: 'bæk']
384 - Great to be up here! They haven't got a place like this in Bangkok.
385 ['g.ræt' tə 'bi: 'ɜp 'hi:ə || ð̩æɪ 'hævnt 'gɔ:ə 'plæs laek 'ðis ~m bæŋ'kɔ:k' ||
386 - How's the serenity! Not a sound.
387 ['hæʊz ðə sə'renəti: || 'nɔ:ə 'səʊnd]

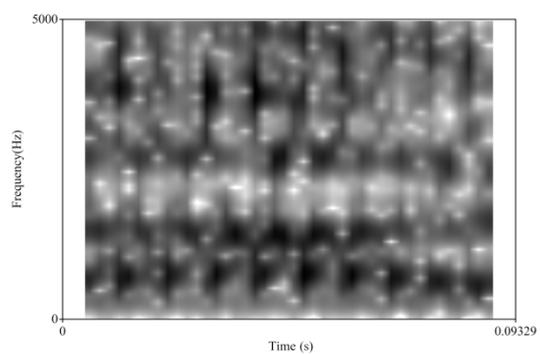
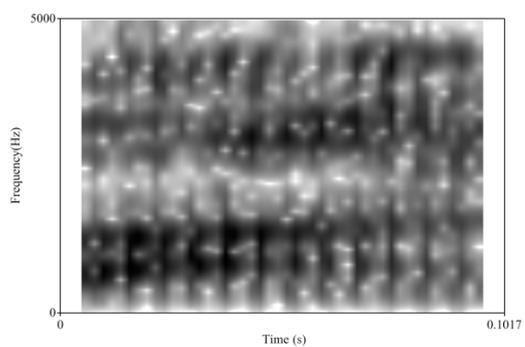
APPENDIX B - SPECTROGRAMS

Dale

[v]

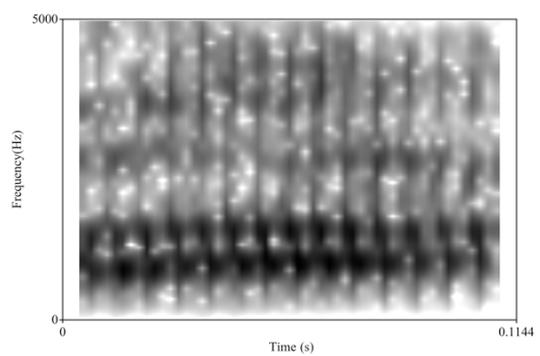
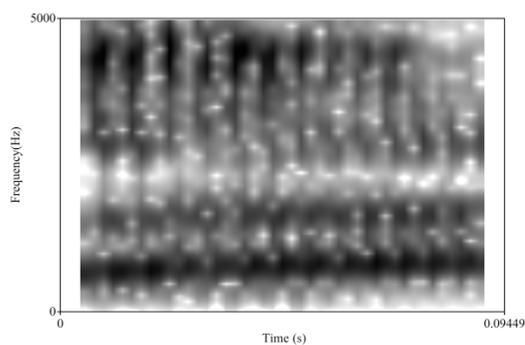
funny

dug



up

bucks

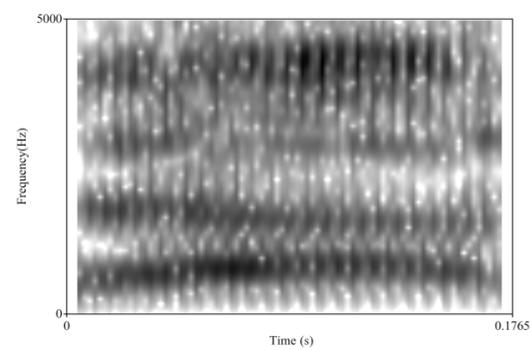
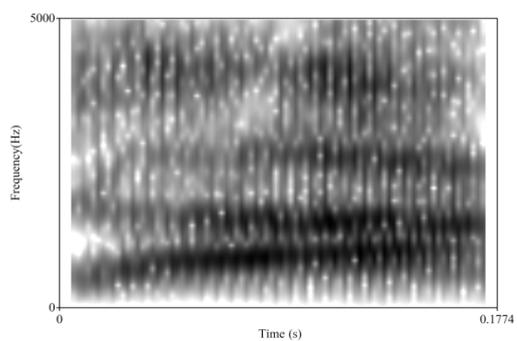


Dale

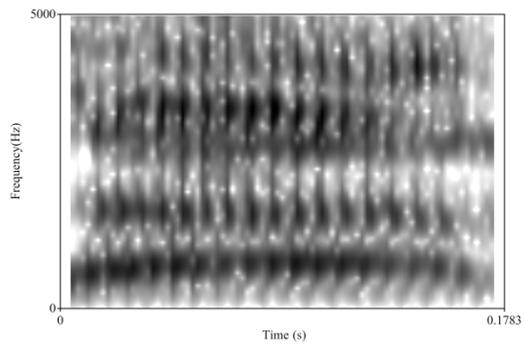
[v:]

shark

starts



started

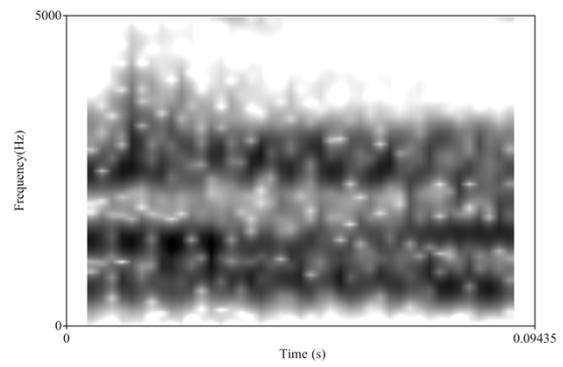
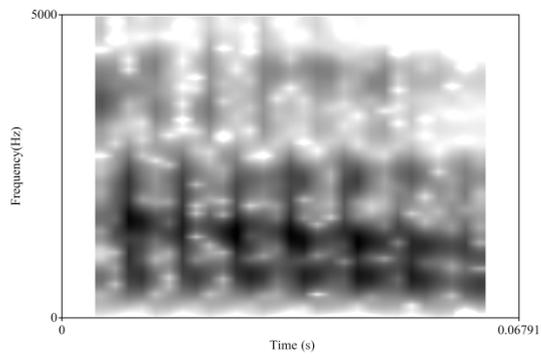


Darryl

[ɹ]

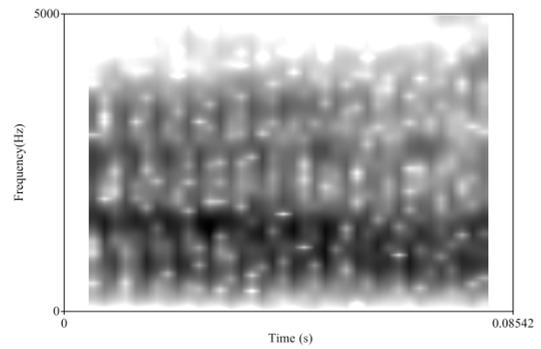
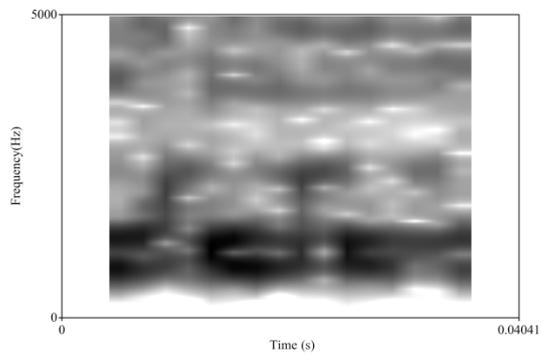
couple

dug

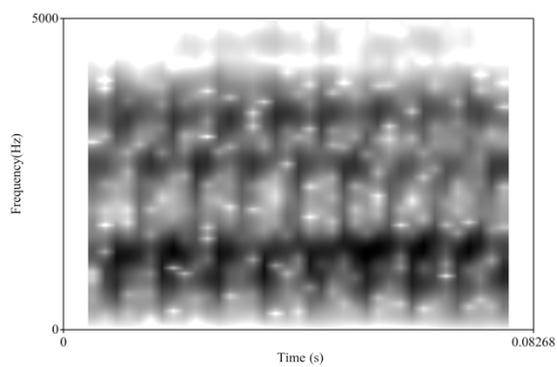


some

nothing

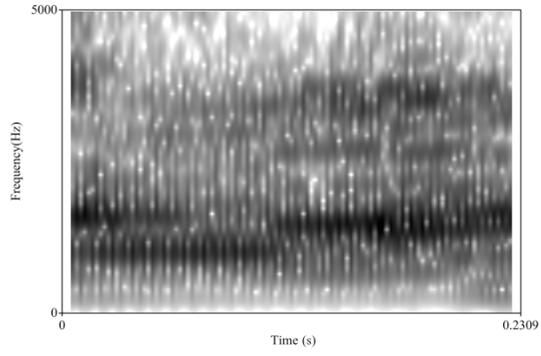


Monday



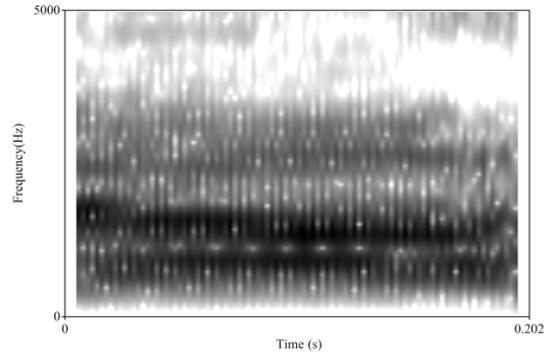
Darryl

can't

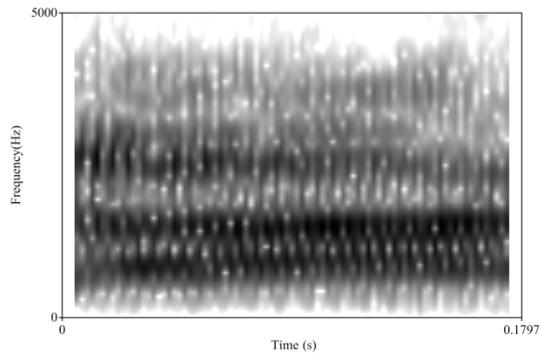


[ɜ:]

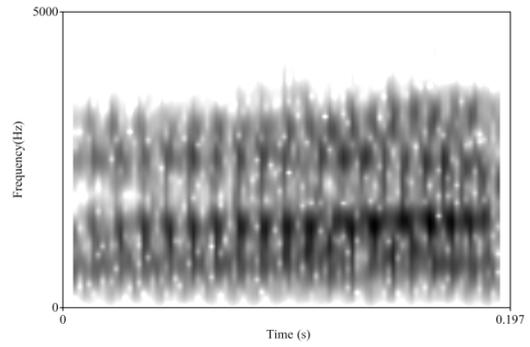
asking



start



bargain



APPENDIX C - FORMANTS AND LENGTH DATA EVIDENCE

[e]	DALE		
	F1	F2	Length (s.)
funny	775.7164252	1361.070378	0.101678005
dug	709.0266749	1401.574502	0.093287982
up	755.109386	1595.253466	0.094489796
bucks	899.8151495	1460.478409	0.114399093
MEAN	784.9169089	1454.594189	0.100963719

[e:]	DALE		
	F1	F2	Length (s.)
shark	829.9674312	1505.529651	0.177437642
starts	748.1214592	1618.974953	0.176462585
started	722.2394704	1659.848706	0.178276644
MEAN	766.7761203	1594.784437	0.17739229

[e]	DARRYL		
	F1	F2	Length (s.)
couple	728.5606508	1347.859189	0.067913832
dug	742.0642595	1350.665927	0.094353741
some	847.8332319	1317.988074	0.040408163
nothing	817.5142141	1399.169549	0.085419501
Monday	834.6292488	1283.161129	0.082675737
MEAN	794.120321	1339.768774	0.074154195

[e:]	DARRYL		
	F1	F2	Length (s.)
can't	997.2097518	1550.63954	0.230884354
asking	815.3558871	1434.387867	0.201950113
start	862.9931556	1448.246134	0.179705215
bargain	795.0429963	1354.189737	0.197029478
MEAN	867.6504477	1446.865819	0.20239229

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