

Australian English pronunciation into the 21st century

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ABSTRACT

Australian English is traditionally considered to be the form of English spoken by people who are born in Australia or who immigrate at an early age and whose peer network consists of Australian English speakers (Bernard 1981). Such a simple definition implies that Australian English is a single form, which all native-born Australians will attain and exhibit. This paper will review segmental aspects of Australian English pronunciation today and discuss the inadequacies of the traditional definition. In addition, some current theoretical issues will be highlighted and suggestions will be made about the creation of a new model for conceptualising Australian English in the 21st century.

Introduction

The pronunciation of Australian English (AusE) was first formally described by Mitchell in 1946 and re-evaluated by Mitchell and Delbridge in 1965 (Mitchell and Delbridge 1965a). AusE was defined as a regional dialect of English spoken by non-Aboriginal people born in Australia (Blair 1993). The reference to 'non-Aboriginal' was an attempt to differentiate the standard variety from Aboriginal English (see Malcolm 2001), although it is clear that a great many Aboriginal people also use the standard form. Bernard (1981) also included the children of migrant parents in his definition of AusE because, for those who arrived at a young age (generally before early adolescence), researchers did not observe any appreciable phonological influence from the parents' language/dialect (Mitchell and Delbridge 1965b). Today, however, it is important to recognise that amongst native-born Australians at least three categories of English exist: Standard AusE, varieties of Aboriginal English and various ethnocultural AusE dialects. AusE functions as a significant symbol of national identity. It is one of the well-known World Englishes and is a mature dialect with endocentric orientation, having its own internal norms and standards (Semenets and Rusetskaya 1991). Standard AusE coexists in the community with the other varieties present amongst the native-born. All dialects reflect Australian identity but, in addition, reveal the cultural affiliation of the speaker. The label 'Australian

English' may in the future be considered a superordinate term embracing these various dialectal types rather than excluding minority forms. Such a modification to the traditional concept of AusE will help capture the linguistic landscape of the changing Australian culture.

How did Standard Australian English develop?

Our most recent understanding of the origins of the Australian dialect derives from theories of new dialect evolution (Kerswill 2002; Trudgill 2004). AusE probably began as a koine that developed as a result of contact between speakers (particularly children) of different but mutually intelligible forms of English (Kerswill 2002; Trudgill 2004). The speech of people from the south-east of England dominated in the early colony and this formed the raw material from which the new dialect evolved (Yallop 2003). New dialect formation has a number of defined stages and, depending on social circumstances, can be well developed by the second generation of native-born settlers (Kerswill 2002; Trudgill 2004). The social environment of the early white settlement in Australia was conducive to rapid new dialect formation and there is some evidence from primary written sources that a distinct form of English was present in Australia within the first 30 years of the colony (Dixon 1822; Cunningham 1827). Bernard refers to the first form as 'proto-broad' (1969), and Horvath (1985) comments that social stratification in the colony might suggest the presence of more than one new accent type. Bernard and Horvath do not elaborate on the characteristics of these prototypical forms nor, indeed, on the processes by which they differentiated and evolved. Mitchell (edited by Yallop 2003) and Leitner (2004) suggest that proto-broad may have diverged between the 1850s and 1880s, as a result of large-scale immigration from Britain, into a continuum containing three identifiable accent types; Broad, General and Cultivated (the 'Broadness Continuum'). Although evolutionary changes have occurred, these varieties can still be found in Australia and all three display properties which make them uniquely Australian.

What are the characteristics of Standard Australian English?

Standard AusE shares the same phonemic contrasts as Southern British English, but differs primarily in the phonetic characteristics of the vowels, as well as some allophonic and reduction processes. There are also suprasegmental and voice quality differences, which will not be dealt with here as they are yet to be substantially examined (but see Fletcher and Harrington 2001; Fletcher et al 2001; Fletcher, Grabe and Warren 2005 for examination of the High Rising Tune). The Standard AusE accent

is regionally very uniform by global standards (Bernard 1969); however, some geographically distributed features have been identified, such as the probabilistic occurrence of vocalised /l/, prelateral and prenasal vowel modifications, and certain other vowel characteristics (see, for instance, Cox and Palethorpe 1998; Horvath and Horvath 2002; Bradley 2004; Cox and Palethorpe 2004a).

Consonantal features

AusE consonantal features have been studied to a much lesser extent than vowel features. This is because the consonants of Standard AusE are generally considered ‘fairly unremarkable’ (Wells 1982: 603) and display the same variations present in other major dialects of English. Table 1 contains a summary of consonant phonemes. This list is identical with the consonant phonemes found in Southern British English and Standard American English.

Table 1: Table of Australian English consonant phonemes

	Bilabial	Labio-dental	Dental	Alveolar	Post-alveolar	Palatal	Velar	Glottal
Plosive	p b			t d			k g	
Affricate					tʃ dʒ			
Nasal	m			n			ŋ	
Fricative		f v	θ ð	s z	ʃ ʒ			h
Approximant				r		j	(Labio-velar) w	
Lateral Approximant				l				

Table 1. Table of Australian English consonant phonemes

Standard AusE is non-rhotic as it does not contain prepausal or preconsonantal /r/. This is probably because Australia’s white colony was established after r-loss in Southern British English was already well advanced, if not complete (Beal 1999). However, in connected speech, linking /r/ (‘far out’, /fə:/ /æʊt/->/fə:ræʊt/) and intrusive/epenthetic /r/ (‘Tina Arena’, /ti:nə əri:nə/->/ti:nərəri:nə/) are typically used. Linking /r/



occurs when a word containing an underlying or historical /r/ is followed by a vowel. These words make use of 'r' orthographically, as in 'car', 'shore' and 'tuner' for instance. Intrusive /r/ occurs after words that do not have underlying /r/, as in 'spa', 'law' and 'tuna'. Intrusive /r/ may result from the application of the linking /r/ rule through analogy (see Hay and Sudbury 2005 for a discussion of this issue). For instance, 'draw' /dro:/, 'drawing' -> /dro:rɪŋ/ and 'draw it' -> /dro:rət/ are examples of intrusive /r/ and 'door in' /do:rɪn/ is an example of linking /r/.

The palatal approximant (/j/ 'yod') is present after coronals before /ɹ:/ (for instance, in 'news' /njɹ:z/) and when this consonant occurs in alveolar stop or fricatives clusters, yod coalescence generally takes place such that 'tune' /tjʊn/ becomes /tʃɹ:n/, 'dune' /djʊn/ becomes /dʒɹ:n/ and 'assume' /əsjʊm/ becomes /əʃɹ:m/. Horvath (1985) shows convincingly that this process is a change in progress, with younger speakers more likely to produce the coalesced form.

Stop weakening (such as flapping and glottalisation) occurs variably according to the speaker's habit of suppressing or embracing connected speech processes and/or due to stylistic requirements. Mitchell and Delbridge (1965b) observed that certain groups of speakers were more likely to suppress some connected speech processes, and it is also well known that speakers generally display hyperarticulation in formal speaking situations (Lindblom 1990). In AusE today, flapping is tolerated in post-stressed intervocalic position within words (as in 'butter' and 'water') and across word boundaries (as in 'get out'), and may also occur before syllabic /l/ and /n/ (as in 'cattle' and 'cotton'). Alternatively, glottal stops may function as allophones of /t/ before syllabic /n/ as in 'button', and when followed by a sonorant, as in 'butler' or 'not now' (Tollfree 2001). Glottal stops do not occur intervocalically or before syllabic /l/ in contrast to Estuary English (Wells 1994). Final stops may be unreleased and devoiced with voicing differentiation determined primarily by preceding vowel duration in words like 'hat' and 'had' (Cox and Palethorpe 2005).

Syllabic nasals and laterals are common, for instance in 'button' and 'cattle', and /l/ vocalisation may occur for some speakers if dark (velarised) /l/ loses its consonantal gesture to become vowel-like in certain preconsonantal or word-final contexts, such as in words like 'milk' and 'noodle' (Borowsky and Horvath 1997; Borowsky 2001; Horvath and Horvath 2002). Wells (1982) claims that /l/ in prevocalic position is 'darker' in AusE than in other varieties but this has yet to be empirically examined.

This brief review provides an indication of some typical consonantal

variations that occur in Australian English and may vary according to socio-demographic speaker characteristics or stylistic requirements.

VOWEL FEATURES

Details of the AusE vowel system have been provided through extensive empirical study by a number of researchers including Bernard (1970), Cox (1996 and in press) and Harrington, Cox and Evans (1997). Harrington, Cox and Evans (1997), in addition to detailing acoustic characteristics of the vowel system, proposed substantial revisions to the phonemic transcription system for AusE vowels on the basis of phonetic accuracy. The *Macquarie dictionary* (2005) has codified AusE lexis over the past 20 years but has retained a set of transcription symbols based on British English for detailing pronunciation. This transcription system was first proposed by Mitchell (1946). Mitchell and Delbridge (1965b) base their detailed impressionistic description of Australian English vowels on the Mitchell (1946) system, but place the following caveat on their transcription: 'where pronunciation is indicated by phonetic transcription there is no intention to suggest by the choice of symbol anything about the articulatory or acoustic nature of the sounds in question' (Mitchell and Delbridge 1965b: ix). This is a surprising qualification, as the premise behind transcription is that it should reflect something about speech production processes. A phonetic symbol is a shorthand method of representing phonetic information and such information is inherently articulatory and acoustic (*Handbook of the IPA* 1999). The phonemic transcription system proposed by Mitchell (1946) derives from the contrasts present in Received Pronunciation of British English (RP), which was, at the time, the external standard for Australian English. Mitchell's traditional system fails to capture the phonetic characteristics that differentiate Australian from British English dialects. It may be argued that Mitchell's system was never intended to capture phonetic accuracy, as phonemic transcription is merely a tool for describing contrasts. However, transcription as a technique for indicating pronunciation should reflect aspects of speech production and, as AusE no longer holds RP as its external standard, the transcription system should reflect speech patterns based on Australian norms.

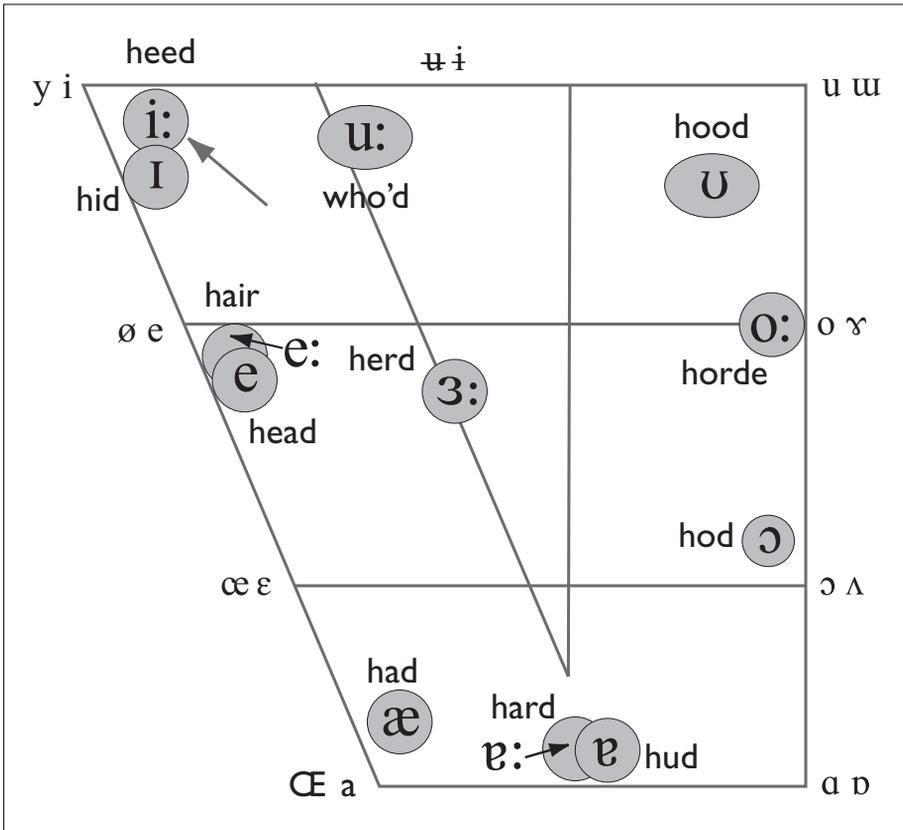


Figure 1 Australian English Monophthongs relative to the Cardinal Vowels

The monophthongs of Australian English. The vowels on this diagram indicated by the red ellipses are based on an acoustic analysis of Australian English vowels by Cox (1996). The vowel positions are displayed relative to the IPA vowel symbols. The chart is based on a diagram from Mannell and Cox: http://www.ling.mq.edu.au/speech/phonetics/phonetics/vowelgraphs/AusE_Monophthongs.html

The vowels in Figure 1 are based on an acoustic analysis of Australian English by Cox (1996). The Australian English vowels are displayed relative to the IPA vowel positions (Handbook of the IPA 1999), and revised symbols (Harrington, Cox and Evans 1997) are included within the vowel ellipses. (The figure is a modified version of one that can be found at http://www.ling.mq.edu.au/speech/phonetics/phonetics/vowelgraphs/AusE_Monophthongs.html)

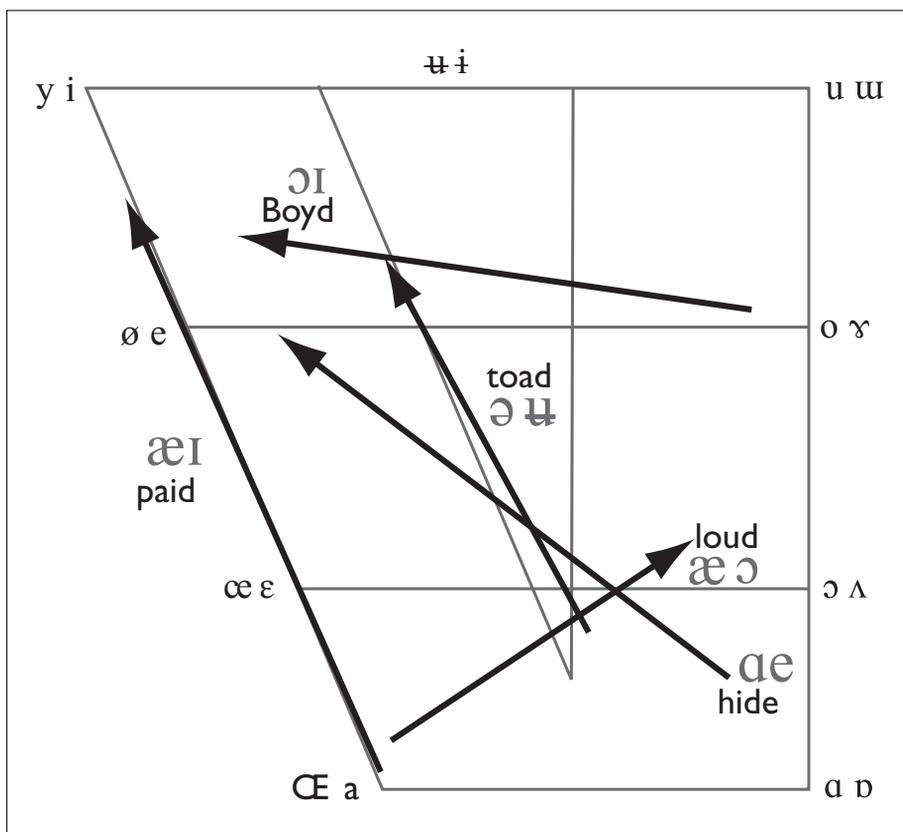


Figure 2 Australian English Non-Centring Diphthongs relative to the Cardinal Vowels

The diphthongs of Australian English. The arrows indicate the schematic trajectories of the diphthongs from the first element to the second element. The vowels on this diagram are based on an acoustic analysis of Australian English vowels by Cox (1996). The chart is based on a diagram from Mannell and Cox: http://www.ling.mq.edu.au/speech/phonetics/phonetics/vowelgraphs/AusE_Diphthongs.html

Vowels in Figure 2 are based on acoustic analysis of Australian English (Cox 1996). Arrows represent schematic trajectories of the diphthong movement from the beginning to the end of the gliding component. Trajectories are displayed relative to the IPA vowel positions (Handbook of the IPA 1999), and revised symbols for diphthongs (Harrington, Cox and Evans 1997) are included. (This figure is a modified version of one that can be found at http://www.ling.mq.edu.au/speech/phonetics/phonetics/vowelgraphs/AusE_Diphthongs.html)

Many researchers have commented on the need to revise the transcription system to meet Australian needs (Clark 1989; Durie and Hajek 1994; Ingram 1995) and acoustic analyses have confirmed that the Mitchell (1946) system does not adequately describe Standard AusE (Cox 1996; Harrington, Cox and Evans 1997). The acoustic analyses rely on sound spectrography to provide a representation of the resonant frequencies in an acoustic speech signal. The first (and lowest) two of these frequencies (F1 and F2) provide some reflection of articulatory vowel space due to the very high correlations with vowel height (F1) and vowel fronting (F2) (Harrington and Cassidy 1999). When the F1 and F2 values for vowels are plotted on a graph with appropriately scaled and oriented axes, the result replicates the traditional vowel map of height and fronting. The position of the vowels in the acoustic space allows for the assessment of relative vowel positions in the height/front-back plane (see Figure 1) and, through this graphical representation, it is also possible to compare the relationships of actual vowel productions with the International Phonetic Alphabet (IPA) symbols for vowels.

From Figures 1 and 2 it is clear that many of the actual vowel positions do not correspond with symbols traditionally ascribed to those vowels. For instance, the vowel in 'hot' is best described as /ɔ/ (and not /ɒ/), as this is the IPA symbol that is closest to the articulatory position of that vowel. The revised phonemic transcription system of Harrington, Cox and Evans (1997) is based on closer correspondence between the actual Australian vowel productions and IPA symbols. Table 2 provides a comparison between the revised system and the traditional Mitchell (1946) system. The revised system also explicitly recognises that vowel length plays an important role in AusE phonology and represents this contrast through the use of the length diacritic. For instance, the vowel pairs /e,e:/ and /ɐ,ɐ:/ contrast by length alone in typical Standard AusE.

For diphthong transcription symbols, the Harrington, Cox and Evans (1997) system directly appeals to phonetic information about the direction and extent of articulatory movement during the diphthong production. Figure 2 shows that, for typical Standard AusE speakers, the diphthong /æɪ/ as in 'hay', begins near the monophthong /æ/ and moves up the front of the vowel space towards /ɪ/. For /æɔ/ as in 'how', the diphthong movement starts at /æ/ and travels towards the back of the space towards /ɔ/. It is also clear that the symbols used by Mitchell (1946) for these two vowels (/eɪ/ and /aʊ/) do not reflect the actual productions. As with all spoken dialects, there is a degree of variation present in the realisation of the vowel sounds for different groups of speakers (Bernard 1970; Harrington, Cox and Evans 1997); however, these variations are best represented by the revised phonemic transcription system based on Standard AusE rather than the traditional system based on RP (see Harrington,

Cox and Evans 1997 for details).

Table 2: Comparison between the revised phonemic transcription

revised	traditional	
/i:/	/i/	heed
/ɪ/	/ɪ/	hid
/e:/	/ɛə/	hair
/e/	/ɛ/	head
/æ/	/æ/	had
/ɜ:/	/ɑ/	hard
/ɐ/	/ɛ/	mud
/ɔ/	/ɒ/	pod
/o:/	/ɔ/	hoard, saw
/ʊ/	/ʊ/	hood
/ʌ:/	/ʊ/	who'd
/ɜ:/	/ɜ/	heard
/ə/	/ə/	the
/æɪ/	/eɪ/	hay
/əʌ/	/oʊ/	hoe
/aɛ/	/aɪ/	high
/æɔ/	/aʊ/	how
/ɔɪ/	/ɔɪ/	toy
/ɪə/	/ɪə/	here

system for Australian English proposed by Harrington, Cox and Evans (1997) and the traditional system (Mitchell 1946).

The following additional allophonic vowel characteristics are also present in Standard AusE. Various prenasal and prelateral vowel effects are common but not obligatory, such as the variable raising of the vowels in ‘at’ and ‘out’ when they occur before nasal consonants (‘hand’ -> ‘hend’). Vowels before laterals also display interesting variations. /əʌ/ as in ‘coat’ becomes [ɔʊ] before velarised /l/ (‘coal’). Therefore, words like ‘dole’ and ‘doll’ contrast by vowel duration rather than vowel place of articulation (Palethorpe and Cox 2003). Retraction of /ʌ:/ often occurs before /l/ so that ‘pull’ and ‘pool’ are differentiated by length alone (Palethorpe and Cox 2003). This allophone is related to age and regional variation (Oasa 1989). Lowering of /e/ before /l/ is present for some speakers, so that ‘celery’ and ‘salary’ become homophonous (Cox and Palethorpe 2004a). This characteristic is most common in speakers from Victoria and is also observed in New Zealand English (Thomas 2004). Long high front vowels and diphthongs rising towards the high front region may condition epenthetic schwa before



velarised or vocalised /l/ (Palethorpe and Cox 2003), and work is currently in progress to help explain this phenomenon.

In AusE, schwa is the most common vowel in unstressed syllables. The words 'rabbit', 'carrot', 'roses' and 'Rosa's' all use schwa in the second syllable. Wells (1982) refers to this phenomenon as weak vowel merger, where /ɪ/ and schwa no longer functionally contrast in this context. 'Happy-tensing' (Wells 1982) is also characteristic, where /i:/ occurs in final position in words like 'city' and 'happy' rather than /ɪ/, which is common in Southern British English. /i:/, as in 'he', typically displays onglide, giving it a diphthongal quality; however, the degree of onglide is quite variable and is generally more pronounced amongst Broad speakers (see below).

The centring diphthong /ʊə/, previously occurring in 'pure' and 'sure', is rarely found today, and is therefore no longer included in our list of phonemes. Words such as 'pure' are now typically produced with a disyllabic structure /ʊ:ə/, and words like 'sure' are homophonous with 'shore' and use the /o:/ vowel. /e:/ as in 'hair' is often monophthongal, as is /ɪə/ in 'hear', particularly when these vowels occur in syllables closed by a consonant. In open syllables, a disyllabic structure may be present, so that 'ear' becomes /ɪ:ə/ and 'air' becomes /e:ə/.

This is certainly not a complete examination of allophonic vowel variation and it is important to acknowledge that many of these individual characteristics may appear in a number of different English dialects. It is not the individual features but the constellation of co-occurring characteristics that make each dialect unique.

Broadness

The three varieties of Standard AusE (Broad, General and Cultivated) are more similar to each other than they are to other English dialects. They share the same phonemic system, but vary in the phonetic realisation of some vowel phonemes and the degree to which speakers embrace or suppress connected speech processes. The accent types were first described in detail by Mitchell and Delbridge (1965b), based on observations from their large survey of the speech of Australian adolescents, and came to be regarded as the standard way of categorising AusE speakers. The Broadness Continuum describes a range of variation from the most distinctively local variety through to the form having some resemblance to RP. This continuum was said to account for a large proportion of the variation present in the Standard AusE accent. Mitchell and Delbridge (1965b) identified five variables that differentiated the varieties: vowel realisation, assimilation/elision (connected speech processes), pitch range, nasality and rate. Vowel

realisation was considered the most salient of the variables, with differences most likely to be found in the vowels in 'hay, he, high, hoe, how, who'. These vowel sounds were considered the major markers of broadness, and an acoustic analysis by Bernard (1970) verified that the first five of these vowels separated the accent types. All five have diphthongal quality, and broader speakers lengthen the first element of each diphthong and modify its place of articulation (see Bernard 1970; Harrington, Cox and Evans 1997 for details). Mitchell and Delbridge (1965b) suggested that there was some socially relevant variation related to accent, but they did not go so far as to identify social dialects. Social variation was found according to gender, school type, father's occupation and the city/country distinction. More recently, examination of social characteristics and the Broad/General/Cultivated distinction has revealed a reduced influence of socioeconomic group (Horvath 1985; Cox and Palethorpe 1998).

Speakers in the Mitchell and Delbridge survey (1965b) were initially classified into five accent groups based on vowel realisation (Broad, General and Cultivated, as well as two borderline categories). Speakers from the borderline groups were reassigned to the Broad and Cultivated categories on the basis of assimilation and nasality characteristics. This resulted in a distribution of 34% Broad, 55% General and 11 % Cultivated, and it could be argued that the peripheral categories were artificially inflated by the reclassification process. Twenty years later, Horvath's (1985) impressionistic study of Sydney speakers showed an increase in the General category at the expense of the Broad and Cultivated. The Broadness Continuum appeared to be contracting, with young speakers avoiding the extremities in favour of General, which has an Australian flavour without some of the less desirable characteristics that had come to be associated with Broad and Cultivated. Accent is a powerful symbol of identity, and is potent in its reflection of socio-demographic speaker characteristics (Labov 2001). Broad AusE carried connotations of masculinity, lack of culture and ockerism. Cultivated AusE, on the other hand, was associated with femininity, affectation, snobbishness and affinity with Britain. In the post-World War II era, Australia began a gradual cultural shift away from Britain. The external standard of British English began to lose power, with the result that fewer social advantages were to be gained by speaking with a British-like accent. This sociocultural change had a significant impact on the number of speakers using the Cultivated variety. Horvath (1985) made the additional claim that many adult migrants from southern Europe who arrived after World War II spoke with a form of accented English that she referred to as Ethnic Broad. She argues that the shift away from Broad could, in part, be explained by the desire for young people

(including the sons and daughters of migrants) to create distance between themselves and speakers of the Ethnic Broad variety.

By the late 1980s, General Australian had become the typical form for Australian speakers, particularly amongst the younger generations who are the initiators of change in the community (Eckert 2000; Labov 2001). It was also clear that young Australians did not sound the same as older Australians, nor did they sound like young people from previous generations. Two interrelated questions arose from these observations.

- 1 What was happening to broadness? Was homogeneity to be the result?
- 2 What other changes were occurring in the accent that could account for the generational differences?

Changes to the vowel system

Throughout the 1990s, it was becoming increasingly difficult to find variation in the marker vowels for broadness ('hay, he, high, hoe, how') among young Australians. Harrington, Cox and Evans (1997), in an acoustic analysis of vowels from the Australian National Database of Spoken Language Corpus (Millar et al 1994), found significant differentiation between Broad, General and Cultivated speakers for vowels in words like 'how' and 'hi', with only minor variation for the 'hay, he, hoe, who' vowels. This was reflective of the reduced salience of the broadness markers in the community. Cox (1996), in a stepwise regression analysis of adolescents' vowels, found that the only broadness marker to show social associations was the vowel in 'how'. However, socially conditioned variation could be seen for some vowels not previously considered markers, particularly /æ/. This new variation suggested that change was in progress and researchers began to more closely examine vowel evolution. Cox (1999) conducted an acoustic analysis that compared vowel data collected from matched groups of speakers at each end of a 25-year interval (trend analysis), and found highly significant differences in both monophthongs and diphthongs. This result provided strong evidence for vowel change, particularly for the vowels in words like 'had', 'hoe' and 'who'. Cox and Palethorpe (2001) were able to replicate these results in a synchronic (apparent time) study where speakers from different age groups were compared.

When individual vowels change as a result of external social pressure, the vowel system responds to ensure that vowels within the system remain perceptually separated (Lindblom 1986; 1990). Chain shifts (push and pull chains) and parallel shifts may result to preserve the integrity of phonemic relationships (Labov 1994), and this affects monophthongs as well as the move-

ment of diphthongs through the vowel space. As an example, research has shown that the vowel /æ/ has lowered over the past 40 years to become a very open front vowel in the speech of young Australians and we have now begun to see resulting changes to surrounding vowels. The lowering of /æ/ has made available space for the descent of /e/ via pull chain shift. This effect is still in the incipient stage but appears to be progressing rather rapidly in some groups of speakers (Cox and Palethorpe 2004b).

One of the important diphthong changes that occurred in the later part of the 20th century was a shift in the orientation of the glide in the 'hoe' vowel. This vowel was traditionally considered to be a back rising diphthong with a raised and retracted second element. In the speech of young people today, however, /əʊ/ has a trajectory that is oriented towards the high central to fronted position (see Figure 2). This change may be the result of evolutionary interdependence between the monophthong /ɜ:/ and the diphthong /əʊ/. We know that /ɜ:/ has undergone the process of fronting and the /əʊ/ movement is parallel with this shift (Cox 1999). The interdependence between monophthongs and diphthongs in change has become a recurring theme in our work. However, the principles that govern this relationship are yet to be established (Cox 1996; Cox and Palethorpe 1998; Cox 1999; Cox and Palethorpe 2001).

Ethnocultural varieties

The traditional description of AusE does not acknowledge that native-born Australians (other than Aboriginal speakers) might use a form that is different from Standard AusE. In 1992, Holmes suggested that some effect of the parents' language could be found amongst the Australian-born children from various ethnic groups. Such transference had not been previously reported. This apparent change in the dialect of English spoken by the Australian-born children of some migrant parents was a response to significant sociocultural change that occurred in the 1980s, most importantly multiculturalism.

There have been only a handful of studies to explicitly examine the phonology of native-born Australians from ethnic backgrounds. Horvath's (1985) Sydney study selected speakers from ethnic groups but did not suggest transfer features from migrant parents to their children. Warren's (1999) 'wogspeak' essay specifically explored a new English variety used by children of Greek migrants, and Kiesling's (2001) acoustic analysis compared two vowel variables in 'Anglo' and 'non-Anglo' speech. Clyne, Eisikovits and Tollfree (2001) refer to varieties used by Australian-born people to mark ethnicity as 'ethnolects'. They discuss 'stabilised transference' as the process of creating a new local dialect based on transfer

of features from the 'substratum' language or variety, and suggest that the ethnolect will contain phonemes and allophones transferred from the parents' first language giving rise to a 'non-native accent'. Ethnolects are not necessarily the result of second language learning, as many speakers of Australian ethnolect have English as their first language. In their preliminary phonetic study of Lebanese AusE, Cox and Palethorpe (2005) argue that this dialect should not be considered a foreign-accented dialect, as it retains the phonetic and articulatory vowel characteristics of Standard General AusE but contains certain suprasegmental and possibly consonantal features that may be related to Arabic. They conclude that Lebanese AusE is a co-existent dialect of AusE that displays a continuum of variation intersecting with Standard General AusE.

Conclusion

The current work on AusE has revealed new variation, which has prompted questions relating to the validity of the traditional definition of the dialect and the value of the Broadness Continuum as a relevant descriptive tool. One of the aims of our current work is to develop a new model that accurately accounts for the variations present in the speech of native-born Australians. This model must acknowledge the presence, and emergence, of new AusE dialects. It must clearly describe variation within and between the dialects, explain how socio-demographic, ethnographic and stylistic factors account for this variation, and detail how the various co-existent systems interrelate.

Schneider's (2003) Dynamic Model of the Evolution of New Englishes can be used to help explain the phenomenon of new variation in AusE. Australia is now in the final phase of five phases of new dialect evolution. This is the differentiation phase, where diversity appears after a period of homogeneity. Such diversity is the result of identity construction becoming increasingly based on immediate community of practice rather than national norms. Ethno-cultural and regional variability within Australia will increase as a result of the changing sociocultural structure of our complex society, but AusE will maintain its position as a powerful marker of national identity and, as such, will not be consumed by other global dialects. It will continue to evolve in response to new social pressures but always within the constraints imposed by phonetic requirements of intelligibility.

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REFERENCES

- Beal, J. (1999). *English pronunciation in the eighteenth century*. Oxford: Oxford University Press.
- Bernard, J. (1969). On the uniformity of Australian English. *Orbis*, 18, 62–73.
- Bernard, J. (1970). Towards the acoustic specification of Australian English. *Zeitschrift für Phonetik*, 213, 113–128.
- Bernard, J. (1981) Australian pronunciation. In A. Delbridge (Ed.), *The Macquarie dictionary* (pp. 18–27). Sydney: Macquarie Library.
- Blair, D. (1993). Australian English and Australian identity. In G. Schultz (Ed.), *The languages of Australia*. Occasional paper, Australian Academy of the Humanities Symposium, 14, 62–70. Canberra: Highland Press.
- Borowsky, T. (2001). The vocalization of dark /l/ in Australian English. In D. B. Blair & P. Collins (Eds.), *Varieties of English around the world: English in Australia* (pp. 70–87). Amsterdam: Benjamins.
- Borowsky, T., & Horvath, B. (1997). L-vocalisation in Australian English. In F. Hinskens, R. van Hout & W. L. Wetzels (Eds.), *Variation, change and phonological theory* (pp. 101–123). Amsterdam: Benjamins.
- Bradley, D. (2004). Regional characteristics of Australian English: Phonology. In E. W. Schneider, K. Burridge, B. Kortmann, R. Mesthrie & C. Upton (Eds.), *Handbook of varieties of English* (pp. 645–655). Berlin: Mouton de Gruyter.
- Clark, J. E. (1989). Some proposals for a revised phonetic transcription of Australian English. In P. Collins & D. Blair (Eds.), *Australian English: The language of a new society* (pp. 205–213). St Lucia: University of Queensland Press.
- Clyne, M., Eisikovits, E., & Tollfree, L. (2001). Ethnic varieties of Australian English. In D. B. Blair & P. Collins (Eds.), *Varieties of English around the world: English in Australia* (pp. 223–238). Amsterdam: Benjamins.
- Cox, F. M. (1996). *An acoustic study of vowel variation in Australian English*. Unpublished PhD dissertation, Macquarie University, Sydney, Australia.
- Cox, F. M. (1999). Vowel change in Australian English. *Phonetica*, 56, 1–27.
- Cox, F. M. (in press). The acoustic characteristics of /hVd/ vowels in the speech of some Australian teenagers. *Australian Journal of Linguistics*.

- Cox, F., & Palethorpe, S. (1998). Regional variation in the vowels of female adolescents from Sydney. *Proceedings of the fifth international conference on spoken language processing* (4 pages). Sydney, Australia: The Fifth International Conference on Spoken Language Processing.
- Cox, F., & Palethorpe, S. (2001). The changing face of Australian English vowels. In D. B. Blair & P. Collins (Eds.), *Varieties of English around the world: English in Australia* (pp. 17–44). Amsterdam: Benjamins.
- Cox, F., & Palethorpe, S. (2004a). The border effect: Vowel differences across the NSW/Victorian border. *Proceedings of Australian Linguistics Society conference*. Newcastle, Australia: Australian Linguistics Society. Retrieved February 2, 2006 from <http://www.als.asn.au/>
- Cox, F., & Palethorpe, S. (2004b, July). *A question of broadness*. Paper presented at Australian Linguistics Society Conference, Newcastle, Australia.
- Cox, F., & Palethorpe, S. (2005, December). A preliminary acoustic phonetic examination of Lebanese Australian English. Paper presented at the Australian Language and Speech Conference, Sydney, Australia. Retrieved February 2, 2006 from http://www.ling.mq.edu.au/about/staff/cox_felicity/Cox&PaleL&S05.pdf
- Cunningham, P. (1827). *Two years in New South Wales*. London: H. Colburn.
- Dixon, J. (1822). *Narrative of a voyage to New South Wales and Van Dieman's Land in the ship 'Skelton' during the year 1820*. Edinburgh: John Anderson.
- Durie, M., & Hajek, J. (1994). A revised standard phonemic orthography for Australian English vowels. *Australian Journal of Linguistics*, 14, 93–107.
- Eckert, P. (2000). *Linguistic variation as social practice*. Oxford: Blackwell.
- Fletcher, J., Grabe, E., & Warren, P. (2005). Intonational variation in four dialects of English: The High Rising Tune. In S-A. Jun (Ed.), *Prosodic typology: The phonology of intonation and phrasing* (pp. 390–409). Oxford: Oxford University Press.
- Fletcher, J., & Harrington, J. (2001). High rising terminates and fall rise tunes in Australian English. *Phonetica*, 58, 215–229.
- Fletcher, J., Stirling, L., Mushin, I., & Wales, R. (2001). Intonational rises and dialogue acts in the Australian English map task. *Language and Speech*, 45, 229–253.
- Handbook of the International Phonetic Association (IPA)*. (1999). Cambridge: Cambridge University Press.

- Harrington, J., & Cassidy, S. (1999). *Techniques in speech acoustics*. Dordrecht: Kluwer.
- Harrington, J., Cox, F., & Evans, Z. (1997). An acoustic phonetic study of broad, general, and cultivated Australian English vowels. *Australian Journal of Linguistics*, 17, 155–184.
- Hay, J., & Sudbury, A. (2005). How rhoticity became /r/-sandhi. *Language*, 81, 799–823.
- Holmes, J. (1992). *An introduction to sociolinguistics*. New York: Longman.
- Horvath, B. M. (1985). *Variation in Australian English: The sociolects of Sydney*. Cambridge: Cambridge University Press.
- Horvath, B. M., & Horvath, R. (2002). The geolinguistics of /l/ vocalization in Australia and New Zealand. *Journal of Sociolinguistics*, 6, 319–346.
- Ingram, J. (1995). One step forward and two backwards: Reflections on Durie and Hajek's proposed revisions to the phonemic transcription of Australian vowels. *Australian Journal of Linguistics*, 15, 215–239.
- Kerswill, P. (2002). Koineization and accommodation. In J. K. Chambers, P. Trudgill & N. Schilling-Estes (Eds.), *The handbook of language variation and change* (pp. 669–702). Oxford: Blackwell.
- Kiesling, S. (2001). Australian English and recent migrant groups. In D. B. Blair & P. Collins (Eds.), *Varieties of English around the world: English in Australia* (pp. 239–257). Amsterdam: Benjamins.
- Labov, W. (1994). *Principles of linguistic change, volume I: Internal factors*. Oxford: Blackwell.
- Labov, W. (2001). *Principles of linguistic change, volume II: Social factors*. Oxford: Blackwell.
- Leitner, G. (2004). Beyond Mitchell's views on the history of Australian English. *Australian Journal of Linguistics*, 24, 99–125.
- Lindblom, B. (1986). Phonetic universals in vowel systems. In J. J. Ohala & J. J. Jaeger (Eds.), *Experimental phonology* (pp. 13–44). Orlando: Academic Press.
- Lindblom, B. (1990). Explaining phonetic variation: A sketch of the H&H theory. In W. J. Hardcastle & A. Marchal (Eds.), *Speech production and speech modeling* (pp. 403–439). Dordrecht: Kluwer.

- Macquarie Dictionary, The (4th ed.). (2005). The Macquarie Library: New South Wales, Australia.
- Malcolm, I. G. (2001). Aboriginal English: Adopted code of a surviving culture. In D. B. Blair & P. Collins (Eds.), *Varieties of English around the world: English in Australia* (pp. 201–222). Amsterdam: Benjamins.
- Millar, J., Vonwiller, J., Harrington, J. & Dermody, P. (1994). The Australian national database of spoken language. *Proceedings of the International Conference on Acoustics and Signal Processing*. (Vol. 2, pp. 67–100). Adelaide, Australia: International Conference on Acoustics and Signal Processing.
- Mitchell, A. (1946). *The pronunciation of English in Australia*. Sydney: Angus and Robertson.
- Mitchell, A., & Delbridge, A. (1965a). *The pronunciation of English in Australia* (rev. ed.). Sydney: Angus and Robertson.
- Mitchell, A. & Delbridge, A. (1965b). *The speech of Australian adolescents*. Sydney: Angus & Robertson.
- Oasa, H. (1989). Phonology of current Adelaide English. In P. Collins & D. Blair (Eds.), *Australian English: The language of a new society* (pp. 271–287). St Lucia: University of Queensland Press.
- Palethorpe, S., & Cox, F. (2003). *Vowel modification in pre-lateral environments*. Poster presented at the sixth international seminar on speech production, December, Sydney, Australia. Retrieved January 27, 2006 from http://www.shlrc.mq.edu.au/~felicity/vowelmod_prelateral_envIRON.pdf
- Schneider, E. (2003). The dynamics of new Englishes: From identity construction to dialect birth. *Language*, 79, 233–281.
- Semenets, O. E., & Rusetskaya, L. A. (1991). Research in progress: Research into regional and sociocultural variation of English undertaken at Kiev. *English World-Wide*, 12, 267–278.
- Thomas, B. (2004). *In support of an exemplar-based approach to speech perception and production: A case study on the merging of pre-lateral DRESS and TRAP in New Zealand English*. Unpublished MA thesis, University of Canterbury, New Zealand.
- Tollfree, L. (2001). Variation and change in Australian consonants: Reduction of /t/. In D. B. Blair & Collins, P. (Eds.), *Varieties of English around the world: English in Australia* (pp. 45–67). Amsterdam: Benjamins.

- Trudgill, P. (2004). *New dialect formation: The inevitability of colonial Englishes*. Oxford: Oxford University Press.
- Warren, J. (1999). 'Wogspeak': Transformations of Australian English. *Journal of Australian Studies*, 62, 86–94.
- Wells, J. (1982). *Accents of English*. Cambridge: Cambridge University Press.
- Wells, J. (1994). Transcribing Estuary English: A discussion document. *Speech, Hearing and Language: UCL Work in Progress*, 8, 259–267.
- Yallop, C. (2003). A. G. Mitchell and the development of Australian pronunciation. *Australian Journal of Linguistics*, 23, 129–141.