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English influence on the pronunciation of re-awakened Aboriginal languages

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Abstract

This chapter explores the influence of literacy and teaching, by first language speakers of English, on the pronunciation of Aboriginal languages in the context of language re-awakening in New South Wales (NSW). Wherever languages are learned in the absence of a generation of first language speakers we find that the learners' first language will have a major impact – the linguistic resources that you have to build on play a strong role in shaping the new language that you acquire. This paper canvasses some pronunciation changes currently taking place in NSW in the context of learning revitalised languages. It raises the need for open discussion about the authenticity of re-created languages and argues that, for re-created languages, phonemic orthographies might not be the best choice. While this paper focuses on New South Wales its arguments may be relevant to other parts of the country where re-creation-type programs are underway.

What is being learned in revitalisation programs

Language re-awakening work undertaken in NSW typically involves learners whose first language is Australian English (from standard to Aboriginal English varieties) engaged in the learning of Aboriginal languages. The input that learners receive is generally either written language in the form of wordlists, learner guides or other pedagogical materials, or spoken language samples modeled by someone else who also learned pronunciation from written sources. In some lucky cases there are still Elders with enough speaking knowledge to record words as pronunciation guides, however the usual scenario involves careful decision-making about how words should be pronounced and sentences constructed, under two serious restrictions: the absence

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of any community of first language speakers of the target language, and the paucity of the materials available.

Such learning is fundamentally different from normal second language learning. When you learn a second language you can access information to answer any questions that arise, and you have the option of immersion among first language speakers. In NSW these options are not available. The paucity of materials available for even the best documented languages (probably Awabakal, Bundjalung, Gumbaynggirr, Paakantji and Wiradjuri), provide us with basic grammatical descriptions, but tell us little about such simple things as how to have a conversation.

Learning a language under these restrictions inevitably induces changes in that language. Some changes, such as creating new vocabulary, result from deliberate language engineering. Others, such as changes to pronunciation and grammar, are likely to be less deliberate and may largely result from the inherent difficulties of learning a language in the absence of native speaker models.

For these reasons, although the goals of revitalisation programs are often worded in terms of ‘getting our old language back’, the outcomes of many are likely to be quite different from the traditional languages that they are based on. This is no criticism, just a statement of the inevitable. No language has ever ceased to be spoken and then later revived in a way that is the *same* as the earlier form. Even the much-cited example of Israeli (Zuckermann 2005) turns out to now be, although healthy, a Germanic/Hebrew hybrid language, vastly different from Hebrew as it was last spoken. We understand now that, because any language reflects the communicative needs and social world of its speakers, the same language cannot do that for two groups of people displaced in time, society and culture. With respect to pronunciation in particular, wherever a generation of learners revitalises a language in the absence of first language speakers, the learners’ first language will have a major impact on the sound system of the target language.

Details of the changes taking place

Here we consider some of the ways that changes are taking place in NSW languages in the context of revitalisation learning. We can find examples of induced change in all areas of language. Sometimes we find that verb suffixes become simplified, so that a single form of a verb is used in a non-inflecting way for all tense categories, for example in Paakantji the use of the present participle ending {-ana} on all remembered verb forms regardless of their actual tense (Thieberger 2002, p. 322). In other cases we find case marking on nouns either simplified or avoided, and even case suffixes detached and used like prepositions. Syntactically we can hear the development of simplified or fixed word order, often based on English. We also find many changes taking place in sound systems, and here we’ll focus on just four types of pronunciation change.

Neutralisation of rhotic contrasts

Most NSW languages have traditional phonemic contrasts among more than one r sound – usually a flap or trill written as rr, contrasting with a continuant (more like the English r) often written as r. Some of the northern NSW coastal languages appear to have a third r sound. Many early written sources failed to distinguish among these sounds so, in many cases, it is difficult to know which pronunciation is right. In the context of language revitalisation programs many learners have circumvented the question by adopting various simplification strategies. Some pronounce the continuant r in all cases, a quite natural conflation for anyone whose first language is a variety of English. A few learners go the other way (what’s known as *hyper-correction*) and pronounce the trill rr in all cases. Other people might adopt the strategy of using only one sound mostly, but being careful to distinguish between them for just those important minimal pairs, for example being careful to pronounce *wirri* and *wiri* differently, but otherwise just using a single r sound where it doesn’t really affect the meaning.

Loss of variation in stop

Most NSW languages have just a single series of phonemic stops (sounds that block off airflow completely). Orthographies for these languages usually use a single series of symbols, either b, dh, d, dj, g or alternatively p, th, t, tj, k. In NSW the voiced symbols happen to have predominated, though there are some exceptions like Paakantji.

Being phonemes means that these stops function as contrasting sounds in the minds of their first language speakers. But choosing to write them with either b, dh, d, dj, g or with p, th, t, tj, k tells us nothing about how they would have been traditionally pronounced. In any given language it was likely that both voiced and unvoiced stop sounds could be heard, depending on what part of the word they appeared in and what other sounds surrounded them. To use a made-up example, a word [pabap] with unvoiced stops initially and finally but voiced stops medially, could be written phonemically as *babab* in one language but as *papap* in another, even though it is pronounced identically.

In NSW revitalisation programs, phonemic orthographies have been widely adopted under considered input from linguists who tend to promote them as being the best linguistic practice. They *are* best practice for first language and second language literacy, however phonemic orthographies tempt Aboriginal people trying to re-awaken a language in the absence of first language speakers, falling back on their knowledge of English orthography, to pronounce such words ‘as they are spelled’. So *babab* tends to be pronounced as [babab], and *papap* tends to be pronounced as [papap].

This is happening quite widely in NSW, so we tend to now hear that Paakantji begins with a [p], and Gamilaraay with a [g], regardless of how they might have once been pronounced. Where previously in each language the phonetic realisation of stops depended on word position and preceding or following sounds, now that pattern is

being replaced by one where stop sounds, at all places in a word, are more likely to be either all voiced or all voiceless. Because the voiced symbols have predominated in NSW, we are currently hearing an escalation of voiced stop pronunciations; that is, orthography is driving change in pronunciation.

Affricated realisation of palatal stops

While the finer articulatory details of the realisation of palatal stops can vary considerably across Aboriginal languages (see Butcher 1995), it is likely that when most NSW languages were spoken as first languages their palatal stops were unaffricated stops made with tongue tip down and blade raised. Now it is increasingly common to hear palatal stops (International Phonetic Alphabet [IPA] symbol [ɟ] and [c]) realised as palato-alveolar affricates (the j of English jam, IPA symbol [dʒ], or the ch of English chew, IPA symbol [tʃ]), so putative word *badjanu* is pronounced [bʌdʒʌnu] rather than [bʌɟʌnu]. This is phonetically a fairly natural shift, so a link to English is not necessary. However the influence of English is the likely explanation here. A contributing factor is the many, well-intended, learner pronunciation guides (see Reid 2008, p. 5 for an example) that casually describe palatal stops as being ‘like ch in English ‘chew’”.

Neutralisation of unstressed vowels

Vowel inventories differ in only small ways across NSW with typically three vowel places and often also a short/long vowel contrast, yielding systems of six phonemic vowels, typically written as a, aa, i, ii, u, uu. As is fairly typical of small vowel systems (Butcher 1994) in NSW languages we find the traditional pattern of some minor allophony, but generally vowel phonemes are quite discrete. There is little evidence of any vowel sound being an allophone of more than one phoneme. Nor is there widespread evidence of the centralisation of unstressed vowels. This can be contrasted with English where schwa [ə] is an allophone of most vowel phonemes, and the common realisation of vowels in unstressed syllables.

The traditional patterns of word stress also varied, but there is evidence that stress on either the first syllable of a word or on long vowels were the most common patterns. This can be seen in the following Gamilaraay examples, where the length contrast between short i and long ii distinguishes two words with distinct meanings, and stress (indicated by bolding) is on the first syllable except where a non-first syllable is long:

<i>yili</i>	lip
<i>yīili</i>	savage
<i>gunii</i>	mother

Under contemporary language revitalisation it is common to hear schwa-like vowels and English-like stress patterns in the pronunciation of words in the languages of

NSW. English is the likely source of this. Of course it is not a new phenomenon that has just arisen in the context of language revitalisation, as all loanwords from Aboriginal languages into Australian English have long been pronounced this way. So, for example, well-known loanwords such as placenames assume typical English-like patterns of vowel neutralisation and primary and secondary stress, for example [pæɪəmætə] Parramatta, [jægúnə] Yagoona, and [wəlárə] Woollahra. It is no surprise then that the pronunciations arising in revitalisation classes have often followed the pattern of loanwords into English, dovetailed with learners' first language patterns, and resulted in new significantly different pronunciations of words where they are used as Aboriginal language words, for example [əwʌbəgəl] Awabakal for what was probably once [ʌwʌbʌgʌl].

Vowel length contrasts are also changing under interference from English, although the picture here is complex. English vowels do not *systematically* involve length contrasts, and a quick look at the typical quadrilateral of Australian English vowels in a standard linguistics textbook suggests that each vowel occupies a unique space. The implication here, that all vowels involve different tongue configurations, is a simplification of the facts and in reality pairs like [i] and [ɪ], [u] and [ʊ], and especially [ʌ] and [a], do involve quasi-systematic differences in length. In language revitalisation contexts we can hear the traditional length contrast being reinterpreted in various ways. In some cases it is largely neutralised, in other cases it is being reinterpreted to align with the [i]/[ɪ], [u]/[ʊ], and [ʌ]/[a] vowel pairs in Australian English.

The four changes discussed above are just a small sample of some of the ways in which NSW languages are being re-created. Let's briefly touch on why these kinds of changes can happen, before considering how we might deal with them.

Why sound changes happen

The kinds of differences discussed in the section above arise for a variety of reasons, which range from unconscious influences to (semi-)conscious decisions.

All languages change all the time

All languages change naturally, so no healthy language is pronounced the same way across any significant span of time. If there were first language speakers of Dhurga alive today who'd miraculously remained unaffected by contact with English, their Dhurga would sound distinctly different to how Dhurga was in 1788.

Internal and external forces

Sometimes languages change because of the external influence of other languages; sometimes they change because of internal forces. We can illustrate both these processes with examples from contemporary Māori. In Māori the front vowels [ɛ] and [ē] are raising, and the back vowels [u] and [ū] are fronting (King, Harlow, Watson, Keegan & Maclagan 2009). While it is possible that these changes are internally

driven, the same sound changes have been taking place in New Zealand English over the same time period. As all Māori speakers also speak New Zealand English, it is likely that these changes have been either triggered, or at least strengthened, by one language affecting the other.

Conversely in contemporary Māori we find the sound [t] becoming palatalised before the vowel [i], so the names *Matiu* and *Hineiti* have shifted from [mætiu] to [mætʃiu], and from [hɪneɪti] to [hɪneɪtʃi]. These changes are naturally occurring ones. They are *not* also occurring in New Zealand English but they are phonetically plausible. There is a straightforward articulatory explanation for this change and unrelated examples of it have taken place in many languages around the world.

Substratum influence

Anyone learning a second language struggles with the influence of their first language. Our first language puts such a strong stamp on our mental conceptualisation of sounds that we are naturally poor at hearing sounds ‘as they are’. To learn a second language we have to learn to hear differences among some sounds that our first language made us deaf to, and unhear contrasts to which our first language attuned us. Acquiring a second language phonology is difficult. Surprisingly few people acquire a second language without some accent, and that difficulty is compounded for learners in any revitalising scenario by limited source materials, and having no community of first language speakers to listen to. It is inevitable under such conditions that the learners’ first language will have a major impact on the sound system of the revitalised language (Flege, Schirru & Mackay 2003).

Choosing a substratum-friendly system

Second language learners might choose to, or be content to, acquire a form of a language that is different from the first language speaker model. Such choices might be dictated by the learners’ desire, in the face of practical constraints like time, to set as their goal something do-able. I recently met Australian expats in Vietnam who learned Vietnamese, balked at the complexity of phonemic tone, and resolved the all-or-nothing nature of the tone system in favour of nothing. They carried on and learned to speak the language, but without engaging with tone at all. They’ll never be great speakers, but their Vietnamese interlocutors accommodate to this, and they are functionally communicative in Vietnamese.

Similar examples abound in language maintenance contexts. Goodfellow (2003) describes how the youngest generation of Kwak’wala speakers have rephonologised their ancestral language in ways that mostly maintain contrasts found in English, but abandon contrasts not found in English. So their modern Kwak’wala phonology has lost glottalised consonants altogether, neutralised the distinction between velar and uvular consonants, and is further losing the velar fricative.

Language revitalisers can also make these kinds of deliberate choices. Consider the following hypothetical scenario:

- One Wiradjuri learning group aim to learn a form of Wiradjuri as close as possible to its traditional form, making careful effort to maintain a distinction between *r* and *rr*, have just three vowels without neutralised forms, and maintain the noun case system.
- A second Wiradjuri learning group aim instead to learn a form of Wiradjuri which employs largely English word order, abandons the case system but keeps the locative case suffix as a general preposition meaning *in* and *on*, and conflates *r* and *rr* to just *r*. They decide to write the language with an orthography best intended to help English speakers pronounce words.

This Wiradjuri scenario is hypothetical, but not far-fetched. The explosion in language revitalisation work around the world over the last decade is throwing up increasing numbers of cases where language revitalisers deliberately choose to acquire heavily substratum-influenced varieties. Let's briefly consider two North American examples.

The Esselen language from the mid-Californian coast is currently being revitalised by two sisters who each approach the task in very different ways. Deborah Miranda is motivated to revive Esselen in a manner most faithful to its earlier recorded form. Louise Miranda-Ramirez is less interested in the 'purity' of the form she acquires, and is happy to learn an English-influenced variety on the grounds that it provides her with a realistically achievable goal that satisfies her desire for a language of identity. Louise's Esselen reinterprets case suffixes as prepositions, and employs largely Subject-Verb-Object word order. In writing she detaches prefixes and writes them as separate words, where that parallels the English structure. So, for example, she writes *nish welel* (my language), where Deborah writes *nishwelel*. (L. Hinton, pers. comm., 28 March 2009). Louise's thoughts about this deliberately chosen stance are worth quoting here:

The structure of our language is subject, object, and verb, but in my own Esselen writing, I also use our words in the typical English structure of subject, verb, and object ... After much intensive study of my language, I believe that it might be easier to create new prayers, stories, and other pieces using Esselen words in an English sentence structure ... I believe that using the words differently from our ancestors doesn't change the language. Do we choose not to change our own language for the satisfaction of a linguist to return an 'extinct' language? Hasn't the English language changed from all the 'thee-s and thou-s'? All languages change throughout the years: new words are created, and definition and usage change. (Miranda-Ramirez 2008–09, pp. 11–12).

Powell (1973, in Thieberger 2002) describes a language program in Quileute from west Washington state, which has highly complex word morphology with lots of inflections, making it hard to learn in the absence of a fluent first language speech community. The Quileute revivers' highest priority was to acquire a link with their heritage, and a salient badge of their Quileuteness. Faced with the complexity of the language they chose to learn a substrate-influenced form of Quileute. They employed the learning strategy of taking an English sentence and, by doing a word-for-word

substitution, created a sentence using Quileute words but English word order, as in the following example:

Give me half that candy,
 Give me half that lape',
 Hes me half sa' lape',
 Hes me tala'a sa' lape'. (Powell 1973, p. 6)

Linguistics as a discipline does not have a generally agreed-upon label for the kinds of deliberate choice exemplified here by Esselen and Quileute learners. Powell used the term *pidgin*, but this is an unfortunate choice for a second language learning strategy. Nor is *mixed language* a good option as it describes an outcome of bilingualism. Sandefur (1983) describes the use of Ngandi words with Kriol word order as *relexification*, but this label explicitly focuses on vocabulary. A better term might be *stratum influence* although it is mostly used in the literature to refer to the result of language shift, not second language learning. Thieberger (2002) recommends *re-creation* as an alternative. In the remainder of this paper to avoid further coinage I'll adopt re-creation.

Coming back to NSW it is clear that revitalisers have a choice – to aim for outcomes most like the traditional language, or to choose a re-created language as their goal. Re-created languages may be the only viable outcome for some revitalisation projects because of lack of sources. In other cases they may simply be chosen for more pragmatic reasons. In all cases they are at risk of being viewed as cases of 'insufficient learning', so let's turn our attention to attitudes about re-created language, the need for open discussion of the choices available, and the importance of identified goals in choosing how to write a language.

Re-created languages and conflicting views about authenticity

The unavoidable modernisation and induced change that are inherent in language revitalisation efforts can give rise to contestation within any revitalising community about issues of authenticity. Some will take a more conservative position and allow only revitalised language closest to the oldest remembered form to be viewed as authentic. Others will take a more change-friendly position and view a newly emergent variety of a language as being equally legitimate. Such contestations over authenticity have been discussed in the language revitalisation literature with respect to Hawai'ian (Wong 1999), Californian languages (Hinton & Ahlers 1999), and Māori (Crombie & Houia-Roberts 2001), but have received little discussion in Australia to date. With respect to pronunciation, claims about authenticity typically draw on the active ability of older speakers, as was possible for Māori in recent decades, so the pronunciation and vocabulary of revitalised Māori could still be anchored to the older remembered forms. In NSW however, for most languages there have now been several generations of no first language speakers, and thus there simply are no models that can provide definitive answers to the questions that modern revivalists need to ask.

This lack of anchoring to the past forms of the language licenses the *creat-* in language re-creation, and facilitates new hooks on which claims about authenticity might be hung.

Some of the potential tensions inherent in revitalisation work in NSW include the following.

Aboriginal language revitalisers have to negotiate potential mismatches between the rhetoric of getting the old language back, and the reality of the acquisition of a variety that is quite different to the old language, and in some obvious ways English-influenced. This difficulty can be heightened by comparison with, or criticism from, those who either speak ‘more traditional’ languages or are in a stronger position to revive a ‘more traditional-sounding’ variety. When the different outcomes of revitalisation projects with very different aims are not subject to open discourse, then issues of authenticity become harder to negotiate.

Linguists are usually trained for description of stable languages, and can be unprepared for the creativity of language re-creation. Regarding the authenticity of new languages, the same linguist can boldly counter misguided assertions about ‘bastardised languages’ by pointing out that creoles are indeed full rich languages deserving of recognition in their own right, but at the same time struggle to sanction language creation in process. This at least partly reflects the evolution of the discipline which arose around backwards-looking interests in the history of languages, and which has only become interested in language contact phenomena relatively recently.

Aboriginal people engaged in language re-awakening felt caught in a ‘powerful educated academic’ versus ‘powerless Indigenous revitaliser’ paradigm and have struggled to persuade linguists that language revitalisation does not have the same goals or methods as descriptive or historical linguistics, but that nevertheless it is a serious form of contact linguistics. A clear articulation of this view can be found on the Victorian Aboriginal Corporation for Languages website:

Linguists who work with communities in this area sometimes find we have to reinvent our own discipline as we go. Linguistics has mostly developed in terms of languages that develop continuously over time, that are passed down to children in their natural home learning environments and used by a large community in lots of different contexts. The discipline doesn’t yet have established ways of understanding about languages that have been silenced and then begin to re-emerge, languages that rely heavily on written sources, languages that involve a lot of planning and decision-making by their communities, languages that change because there are words missing or knowledge lost, or because their communities want to bring the needs of the new century into their language ... thorough description of what revival languages are like will greatly assist in: getting revival languages recognised and understood in the linguistics community, reducing the battle that people have in getting the ways they use their languages taken seriously, helping communities to have a clearer view of

the pathways of language revival, and including the needs of revival languages in the training of student linguists. (n.d.)

The last decade has seen this paradigm partly eroded, and increasing evidence that revitalisers in NSW are quietly and busily doing their own thing. The formal context of revitalisation programs with input from linguists focusing very heavily on normalised historical data, phonemic orthographies, adhering to the ‘the rules’ of revitalisation, and treating as ‘right language’ those texts produced and sanctioned by the project, often succeeds in producing outcomes consistent with the rules. But outside those formal contexts, when Aboriginal people are simply enjoying using their language among themselves in insider-only settings, they tend to be much more creative and their output less closely aligned to patterns learned in the classroom (J. Troy, pers. comm., 9 March 2009).

In the Australian context we need to move beyond these tensions and generate increased discussion of these issues for two good reasons. Revitalisers are out there doing great things, some aiming for more traditional language goals, others pushing further into re-created language goals. We need ways of understanding that re-created language outcomes are legitimate in their own right. We require the vocabulary to make these different types of outcome more discussable. And we need clear identification of goal types in order to make smart choices about orthographies.

These discussions would be helped by pointing out a limitation of the Australian Indigenous Languages Framework (AILF) descriptions of language program types – what can thought of as the *re-* words (revitalisation, revival, renewal, reclamation). These labels are all redolent, by virtue of the again sense of the prefix, of some kind of return to the old form of a language. Because these classifications are concerned with resources, not outcomes, they do not distinguish those projects that deliberately aim for a variety that is not the same as the traditional language. We can illustrate this with reference to the hypothetical Wiradjuri scenario discussed earlier. In AILF descriptor terms these two very different types of project would both fall under 3.1 Language Renewal because they involve the same situational/resource characteristics such as the absence of ‘right through’ speakers, the ‘presence of active language identification’, and the ‘significant amount of linguistic heritage’ (Senior Secondary Assessment Board of South Australia 1996, p. 22). Our lack of labelling for projects with such different outcomes has probably contributed to the tensions alluded to above and made it more difficult for re-created language work to be acknowledged as a legitimate activity in its own right.

Outcome-focus and its implications for pronouncing and writing language

A focus on type of outcome holds implications for the way in which we develop curriculum resources. Here we’ll focus on the phonology of the revitalised language and show how identifying type of outcome has major implications for how we pronounce the language we are learning, and how we choose to write it.

Where the intention is to relearn a traditional variety of a language, the smart writing system will be one that is maximally phonemic. This means that learners make the effort to learn to pronounce words as they were spoken by native speakers and write words in the way native speakers would have found sensible. In effect this is like second language learning where the deliberate aim is to acquire the ability to speak like a native speaker. Of course like all second language learners, you may never be fully fluent, you may always have an accent, and your vocabulary might be limited. The important thing is not the level of attainment, but that the variety of language you are aiming for is pronounced as the last of the first language speakers pronounced it. In the case of a NSW language this would involve aiming to learn a new phonology that is different from English. In real terms this would involve such things as learning to hear and pronounce:

- stops and nasals at different places of articulation – so that *yadhu*, *yadu* and *yardu* all sound different
- the difference between *rr* and *r*
- vowel sounds as *i* and *a* and *u* without neutralising them to [ə]
- vowel length contrasts among *i* and *ii*, *u* and *uu*, and *a* and *aa*
- words with the stress patterns of the target language, and so on.

Learning a new phonology is not easy. However, where there is enough known about how the language used to be pronounced, this can and should be done – this is the normal goal of second language learning. When adopting this approach to language revitalisation you'll want a phonemic orthography, that is one that employs an unchanging symbol to uniquely represent each phoneme of the target language.

However revitalisers also face the option of aiming for a very different type of outcome, deliberately choosing to learn a re-created variety of a language that is quite different from its traditional form. There are many reasons this might be an appropriate choice: the language might have too-limited resources; the learner might know from experience that they aren't very good at learning second languages; or might be a good second language learner but know that learning without access to a native speaker community is too difficult. Like the Quileute speakers discussed above, they might decide that a re-created, English-influenced Aboriginal language still serves as a means of cultural connection, provides a link with their heritage, and constitutes a public emblem of their Aboriginal identity.

This means that you choose to speak the language in a way that is strongly influenced by your actual mother tongue, which is likely to be somewhere in the range between Standard Australian and Aboriginal English. With respect to the sounds in particular, this strategy involves a rephonologised approach whereby you would pronounce words with an English-like set of phonemes. Note that this is not like second language learning where your deliberate aim is to acquire the ability to speak like a native speaker. In real terms this would involve such choices as:

- distinguishing stops and nasals at just bilabial, alveolar, palatal and velar places of articulation, and neutralise the contrast among dental, alveolar and retroflex. So *yadhu*, *yadu* and *yardu* all would be pronounced [yadu]
- pronouncing all r sounds the same way (which could all be the continuant r, as in English red, or all be the trill/flap rr)
- pronouncing vowels in unstressed syllables as schwa [ə]
- stressing words following English stress patterns, as though they were loanwords into English.

There will be some negative consequences of these decisions. Neutralising the contrast among *yadhu*, *yadu* and *yardu* would have the effect of creating homophones; sets of words that sound the same but have different meanings. This is not necessarily a huge problem. Most languages cope with a certain amount of homophony and context generally disambiguates them. However you might have to develop other strategies where a particular pair of homophones creates a real problem.

Most importantly, if you adopt a rephonologised strategy as your approach, when it comes to spelling you will not want to try and represent this language with a traditional phonemic orthography. If you did you would be spelling words unlike the way you say them, and this will create difficulties in learning to spell. In cases like this the smart writing system might well be one that is non-phonemic. The benefits of a non-phonemic orthography can already be seen operating in the very languages for which not much modern phonemic orthographic work has yet been done.

To take Dharug as an example, the earlier wordlists from Dawes (1790–91) and King (1790/2006) right through to Ridley (1875) spelled words in non-phonemic ways, using both voiced and voiceless stop symbols. These words were recorded by people who, by virtue of being native English speakers and thus hearing voicing contrasts, faithfully recorded allophonic detail of Dharug speakers' pronunciations that those speakers themselves were deaf to. It follows then that the more 'phonetic' writing system for Dharug could now help modern relearners to pronounce these words in a manner even more consistent with old Dharug than a phonemic orthography might. Such wordlists could of course be cleaned up and made phonemic, but under a language re-creation scenario sensible arguments could be made for maintaining a non-phonemic writing system.

There has been some work undertaken already which can serve as a model for what non-phonemic writing systems for NSW languages might look like. Troy & Walsh (2009) and Reid (2002) discuss applied philology projects involving placenames, where decisions about spellings for Aboriginal words are approached specifically and deliberately from the perspective of how English speakers might pronounce them most faithfully. Where language revitalisers make deliberate choices to learn re-created languages with rephonologised pronunciations, such models might offer orthographic choices that make more sense to readers, and which, in some cases at least, might lead to pronunciations surprisingly faithful to the earlier form of the language.

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