How do you fill all the gaps in the dictionary? Identifying lexical development strategies for reawakening Australian languages.

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Abstract

As more and more Aboriginal communities in southern Australia seek to revive languages that have fallen from use and memory, they are invariably confronted by the dearth of sources at their disposal. While any lack of resources describing grammar, speech style and genre will be a significant problem for language reclaimers, it is the apparent ‘gaps’ in dictionaries and wordlists that are often perceived to be most critical in the language reclamation task. Any existing records of a language’s lexicon are likely to be very limited in volume, focused on outsiders’ perceptions of exotica, and consequently lacking in words to talk about everyday life, either past or present. Even in code-switching methods of reclamation, such as Amery’s (2000) formulaic approach, the absence of many ordinary lexical items soon limits progress.

For those who resolve the apparent tension between purism and pragmatism by choosing to modernise their lexicon, the main issue quickly becomes one of how to do so. Where descriptions for specific languages exist they are normally significantly incomplete and, despite linguists’ best intentions to maximise accessibility, largely remain occult to non-linguists. Broader typological knowledge is even further out of reach. Communities that can and want to engage with linguists, who ideally have the requisite knowledge and skills, have some prospect of making good and rapid advances. However, many activists currently eschew outsider expertise and seek to go it alone.

Notwithstanding that it, too, represents outsider intervention, this paper reports on an exercise in ‘remedial lexicography’ that aims to respectfully offer Australian reclamation activists a broad set of prescriptive options for lexical replacement and expansion derived from published sources, advice from others in the field and the author’s experience. In so doing it seeks to balance a presumed preference for typological consistency with the inevitability of substratum influence from the common tongue, on the assumption that without some access to the processes of related languages, English will maintain its overwhelming dominance. Thus, while accepting Zuckermann and Walsh’s (2011, p. 117) exhortation to “embrace the hybridity…”, it also hopes to afford the so-called purists every opportunity to follow in the tracks of their forebears should they wish (Eira 2011).

Keywords: Indigenous Australian, revival, lexical, development

Introduction

While still something of an academic niche market, revival linguistics is clearly an expanding field in Australia and many parts of the (largely post-colonial) world. Witness, for example, the increasing frequency of items in the local media about ‘saving’ or ‘re-awakening’ ‘sleeping’ languages, the growing number of school programs in Australian languages (Hobson 2013), the recent burst of activity in producing ‘salvage’ descriptions (Lissarague 2006, 2007, 2010; Donohue 2007; Morelli 2008; 2011; Jones 2008; Wafer & Lissarague 2008; Gargett 2011), the 2010 publication of the first local edited volume Re-awakening languages (Hobson, Lowe, Poetsch & Walsh), and the 2011 parliamentary Inquiry into language learning in Indigenous communities (Commonwealth of Australia n.d.).

Although it remains unclear how many revivers are currently aiming for revernacularisation as their ultimate goal, or simply aspire to establish some emblematic use, it is apparent that most are seeking for their language to be spoken again in some contexts. On that basis, and following the Australian Indigenous Languages Framework analysis that language awareness does not
constitute *revival* (Senior Secondary Assessment Board of South Australia 1996), the attainment of some productive use is assumed for the remainder of this paper.

In this task most Australian revival languages are poorly served by either archival sources or more contemporary descriptions. Even where substantial early accounts such as Threlkeld 1834 exist they are still relatively limited in scope and content, and reflect a way of life starkly removed from modern experience, notwithstanding that they might also first need to be recovered from nineteenth century handwriting or untrained recorders’ often idiosyncratic and inconsistent spelling systems. The most well documented of the sleeping languages can usually only hope for the field linguist’s stock trio of wordlist, sketch grammar and illustrative texts, at best. If amongst the fortunate few, revivers may have access to a collection of some thousands of words, plus some indication of how to combine them to make meaning.

The typical wordlist or dictionary in a sleeping Australian language has a strong focus on nominals for body parts, kin terms, artefacts, landscape, flora and fauna, with the latter natural categories sometimes described to a depth reflecting taxonomic interest, supplemented by easily demonstrable verbs and a smattering from other word classes. This is relatively unsurprising as it indicates collection having taken place within a social and physical environment that was significantly alien, and by often untrained collectors. Some borrowings may be included and these are usually suggestive of an earlier period in Australian history drawing on items like musket, billycan, jam pot, jumbuck and bullock. Most often, however, it can be assumed that there is much more of the once-spoken language missing from such documents than there is contained in them, and available records will not be sufficient for more than the most basic functionality, even when supplemented by whatever language may still be remembered in the community.

While a lack of knowledge of the morphology and syntax of a language and access to exemplary texts in it are obvious limiting factors in any attempt to communicate meaningfully, it is still regrettably the norm that most revival language acquisition in Australia is characterised by simple word list learning. Even in models such as Amery’s (2000) formulaic approach, that seeks to bootstrap practical language use with fixed phrases (through which lexical items can also be rotated), the emphasis is still primarily on vocabulary with a heavy focus on nominals. Much community-based salvage activity also remains strongly focussed on the collection of words. Wordlists and dictionaries thus become the default hunting grounds of revivers.

In such contexts the absence of any naturally or culturally predictable item, such as for possum, thunder or spear, is readily apparent as a ‘gap’ in the dictionary and the language. Other assumed universals not normally found in Australian languages, like hello, please and thankyou, will usually be similarly perceived, as will those obviously only connected to more contemporary life, such as butcher, chair and keyboard. Regardless of whether they are actually potential subjects for lexical replacement or lexical expansion, they are most likely to be viewed collectively as simple deficits that preclude communication in the present.

This realisation rapidly brings revivers to a critical juncture, whether to honour the past and attempt to speak the language only as it is understood to have been spoken, or to modernise and develop a new functional variety. This is likely to be a highly politicised and potentially divisive issue for any Indigenous Australian community. Deliberate language change can be seen as interference with a cultural tradition that, albeit heavily damaged by colonisation, is still recognised as surviving, and all the more worthy of preservation intact for that reason. Regardless
of the long and active Australian traditions of deliberate language growth, more change can easily be construed as more loss.

There are also likely to be recognised custodians who may have strong interest in preserving their stewardship, whether for the sake of the culture or more personal reasons. And just the time and effort required to undertake such revolutionary change can seem an overwhelming deterrent, especially when there are far more pressing issues of health, housing and employment to deal with.

**Filling the gaps**

Knowing that some have already resolved the perceived tension between purism and pragmatism and begun their own process of remediation and modernisation, and others currently aim to, what follows is premised on the assumption that there are some revivers out there who would appreciate some guidance in the task. This is confirmed by the author’s direct discussions with many community language activists in the context of offering teacher training for language revival as the coordinator of the Master of Indigenous Languages Education at the University of Sydney, and is the source of the title of this paper.

While some dictionaries, especially the more contemporary ones, do include a learners guide they regretfully remain largely inaccessible to most of the presumed target audience. Personal experience suggests that even graduate teachers require approximately 100 hours of introductory linguistics before they feel confident in their abilities to understand and use these texts. To some extent this may be a function of individual linguists’ capacity to explain complex and abstract texts clearly in writing to a lay audience who may have only normal literacy skills. In any case, many readers with little experience of language-as-object face a hurdle that they commonly perceive as insurmountable, regardless of whether, for example, particular case roles are described in terms of *doer* and *doer.to* or nominative/absolutive and ergative. Such guides remain largely unread, which is most unfortunate, as the best contain a good sample of potential lexical development strategies, possibly even discussed as such, for example Ash, Giacon & Lissarague 2003 and Morelli 2008. There are also some excellent language-specific descriptions of lexical development processes in Australian languages available such as Simpson 1985, Amery 1993, Giacon 2001 and Eira 2010, although most demand an even greater familiarity with the field and can be too often dismissed as not relevant to related languages or entailing a risk of ‘pollution’. Typological overviews such as Dixon 2002 are even further out of reach.

In addition there can be a significant obstacle with community resistance to (mostly unfamiliar) linguists whose interests and activities are sometimes seen as, at best, tangential and irrelevant to those of revivers, or cultural misappropriation and exploitation, at worst (Perley 2012; Kimberley Language Resource Centre 2010). Whether this is based in actual or perceived offences; interpersonal conflict; folk myth; confusion between the actions of contemporary linguists and the past activities of missionaries, magistrates and explorers, or; a simple desire for self-determination free of outsider interference, is irrelevant. The consequence is that some groups are rejecting professional input, in person or on paper, and seeking to work it out for themselves, or even engaging non-linguists to advise them. While this is their unquestionable right, it can be argued that there is also a right that they are not accessing to their potential advantage, the right to make informed decisions.

Ghil'ad Zuckermann, Julia Miller and Jasmin Morley (eds) 2014, Endangered Words, Signs of Revival, AustraLex, p. 3
For others, more favourably disposed to receiving advice from linguists, the issue can ironically be that there is no-one available to help them. And the fact that modern linguistics has long eschewed prescriptive over descriptive approaches does not help. In typical academic fashion, most Australian linguists not actively involved in revival are more inclined to documenting, analysing and reporting on languages and their progress than suggesting strategies for prospective change. Of course, in that, they are also constrained by the pressures of professional and institutional expectations.

These circumstances have provided the stimulus to produce a basic guide to lexical development strategies for re-awakening Australian languages that will hopefully assist community activists by giving them access to options they can choose to follow, or to reject. The opportunity to act on that ambition came in the form of a NSW Office of the Board of Studies project to provide guidance to local teachers of reviving languages through a comprehensive website addressing a broad range of revival and language teaching issues for Indigenous languages educators who, given the increasing role of schools, often find themselves de facto leaders of community revival efforts. The original text for that project on this and several related topics was prepared some two years past. Given that the project now appears to have stalled, a decision was recently taken to exercise mutually agreed non-exclusive rights and publish independently. This is hopefully, then, only the first phase in the development of an online self-service centre for Australian language revivers and teachers, that will allow them to access useful information free from too many reservations about ‘meddling linguists’.

It should be noted from the outset that there is nothing singularly new about this, or especially revolutionary. It is only the collation and presentation in accessible form of existing information that Australian revivers might draw on, and thereby be enabled to engage in sufficient corpus planning to remediate and modernise their languages, if they wish. What novelty there might be stems only from it apparently not having been done to date and the guiding principles followed in its production.

It is important also to note that some of the content, much good advice, and many of the examples was derived from several individuals prominent in Australian revival. Thanks are therefore due to Christina Eira of the Victorian Aboriginal Corporation for Languages, Rob Amery of the University of Adelaide and Steve Morelli of Many Rivers Aboriginal Language Centre for the provision of much content, as well as to Mari Rhydwen of the Office of the NSW Board of Studies, and Susan Poetsch of the University of Sydney who were both key participants in the original project and helpful critics throughout.

The resulting hypertext document, resident at http://www.indigoz.com.au/language/gaps.html, attempts to meet an extensive array of conditions. A copy is appended to this paper.

It aims to be comprehensively adequate rather than exhaustive, forgoing a detailed taxonomy as exemplified in Zuckermann 2012. It also strongly favours strategies extant in Australian languages and those assessed as having the greatest potential to manifest as substratum influence from English. The result is a minimal ‘dirty dozen’:

1. Derivation – a potentially rich and typologically consistent strategy, often overlooked in favour of borrowing;
2. Conversion, or zero derivation;
3. Compounding – a potentially rich and typologically consistent strategy;
4. Borrowing – both popular in historical and contemporary contexts, but refocussed herein on Australian languages, recognising the English substratum and legitimising other non-Australian languages as sources;
5. Calque – attested in revival contexts, but highlighting potential cultural impacts;
6. Semantic extension – a potentially rich and typologically consistent strategy;
7. Reduplication – a potentially rich and typologically consistent strategy;
8. Onomatopoeia – a potentially rich and typologically consistent strategy;
9. Abbreviation – attested traditionally as contraction, with clipping and other potential substratum strategies discussed;
11. Blending – poorly attested traditionally, but strong substratum potential;
12. Coinage – poorly attested, but potential cultural appeal.

In keeping with its status as hypertext the document does not necessarily sequence strategies hierarchically so much as organise them by a combination of projected association and estimated frequency. For example, onomatopoeia is dealt with in sequence with reduplication by virtue of their collocation in the well-known character of bird names in Australian languages, commonly reflecting both strategies. Derivation is given primacy to re-assert its historical significance over currently more dominant strategies like borrowing, and so on.

Key words, especially strategies, are hyperlinked internally throughout to intentionally facilitate browsing by association and idiosyncratic, interest-based readings consistent with a commitment to user control.

The document aims to be as accessible as possible. Simplicity and clarity have been given priority over complexity; practicality and pragmatism have been preferred over precision. ‘Plain English’ is utilised throughout and terms are avoided in favour of more transparent expressions – repetition rather than *reduplication*, copying sound rather than *onomatopoeia*, loan translation rather than *calque* – although terms are parenthetically included or italicised in text where considered unavoidable or their inclusion warranted, for example *synonym* and *suffix*. There are no morpheme-by-morpheme glosses that can be repellent to unfamiliar readers of linguistic texts. Examples are not referenced, nor is there any in-text referencing, only a short list of further reading and a collective acknowledgement of contributors.

Lexical replacement is normalised from the outset by linking tradition to contemporary practice through widely known avoidance strategies, “Interestingly, filling gaps is not a new thing for Australian languages. They have a long tradition of doing it.” However, as was noted above, the distinction between lexical replacement and expansion is glossed over in favour of the more likely perception that any item that replaces one presumed missing would simply be classed as new.

Typological consistency is privileged but accepting potential substratum influence is also authorised, “While many gaps can probably be filled using traditional processes from your own or neighbouring languages, it might also be possible or necessary to fill some based on processes used by English and other languages.” Thus the potential for hybridity is embraced, although, perhaps, not quite as enthusiastically as Zuckermann and Walsh 2011 suggest.

However, the risk of perpetuating Western, English-speaking culture is also identified and sourcing from other, less familiar languages legitimised, “If all the borrowing is from the same
language a lot of the culture associated with that language will also be borrowed. A lot of European, especially British, culture has already been borrowed into Australian languages through borrowing from English. This means it might be better to mix things up and borrow from a variety of languages to ensure no particular outside influence dominates your language.”

Seeking advice from linguists in this and all areas is validated and gently, but repeatedly, encouraged throughout, “A linguist can assist in this task.”

Indigenous autonomy and self-determination are constantly asserted, “It’s up to the community to decide.” But the potential for reviving languages to begin developing organically is also foregrounded, “While any of these processes can be used in a planned way by revitalisers to create new words, as languages return to health it is likely that natural processes will take over. Living languages cannot be controlled!”

Wherever possible, illustrations from Australian languages are employed, traditional before post-contact examples, but supplemented with English for those poorly attested in the former or suggested as prospective innovations. English illustrations are also sometimes utilised initially to exemplify a strategy in the context of the known, in an attempt to reduce the cognitive load of compounded unfamiliarity.

Finally, in keeping with a spirit of open access, the document explicitly invites suggestions for expansion and revision. Its clearly stated goal is to serve the interests of Australian revivers.

The document was made available for trial use by contributors and a select cohort of revivers with some linguistic expertise for the purposes of evaluation in June 2013. While it was pleasing enough that no significant errors, inadequacies or need for revision were identified, the extensive response from one graduate Indigenous languages education student and community revival activist was particularly glowing in its endorsement, and is worth substantial reference here as confirmation of the document’s apparently successful alignment with its goals:

I really like the simplicity of explanations and I really like the examples as they help visual learners like me see what you are saying. It just so happens I was in a conversation with some Elders ... [and] asked if they thought we could at some stage in the future add words in to the language so that we could one day have fluent ... speakers and kids that were bilingual.

While they all agreed that could happen, and would need to happen for language strength, they began to throw around some ideas about intermixing the two languages or borrowing from one another, and talked about using words to have a double meaning. I think when they see the website that you have put together they will be like me – here is the platform that we can start from to increase words and sentences in our language.

For some of the Elders there may need to be a go-between person to explain some of the terminology, not because the web page doesn’t do that, but because they don’t have access to the net or, if they do, reading off the screen may not work for them. I have a couple in mind who just like to engage with us young ones by getting us to read and explain things to them. For some people who have not had as much exposure this website will also allow them to understand some
language constructions. For people like my cousin ... he will just love this because he can see logically how the creation could work. Through having something like the website it would ease his fears of things just being taken and developed without rhyme or reason.

Your website will put this all back into perspective and allow people to make informed decisions armed with some knowledge and suggestions on how this could be achieved utilising the current orthography ... It does not sell it as ‘this is how you should do it’ thus restoring the respect of Elders to make decisions in the community on how language should be advanced.

Conclusion

Revivers of Australian languages are commonly faced with a dearth of sources in which to ground their activism, initially most apparent in the overall lack of recorded vocabulary and the disparity between what records exist and the concepts they wish to give name to in the present. Even where substantial grammatical descriptions are available they remain largely inaccessible to the reviver communities.

In this context a select range of potential strategies for lexical replacement and expansion in Australian languages has been identified and presented in a hypertext document designed to maximise usefulness to revivers and afford them the opportunity to make informed decisions about how to remediate and modernise their language, should they choose.

In this task a number of guiding principles have been followed. Typological consistency has been balanced against the potential for English substratum influence but with some encouragement to look further afield. Adequacy is preferred over exhaustiveness, intuitive organisation over taxonomic precision, flexibility of reader access over rigidly organised information, simplicity and clarity over detailed complexity, and practicality and pragmatism over precision. Analytical linguistic detail and referencing have been eschewed, lexical development normalised and authorised, and seeking linguistic advice validated and encouraged. Community control is supported but balanced against potential organic development, and prospective development emphasised over assumed completion.

Hopefully its creation will inspire others with lexicographic and broader linguistic knowledge pertinent to the revival of Australian and other languages to consider engaging in a little gentle prescriptivism to produce further practical guides to corpus planning or find other ways to make their technical expertise available to relevant communities in accessible and appealing ways that will support the continued existence of the languages they might like to continue describing.

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Appendix 1 How do you fill gaps in the language?

**How do you fill gaps in the language?**

Interestingly, filling gaps is not a new thing for Australian languages. They have a long tradition of doing it.

In many Australian cultures there is a prohibition on saying the name of those who have recently died, sometimes continuing for years in the case of highly respected people. This prohibition usually also extends to words that sound like the name of the deceased. So, if someone called Vince died, there might be a prohibition against saying his name and any words sounding like it, such as fence, bench, pencil and pinch. This still happens today in many remote parts of the country. When it does, people still need to be able to talk about fences, benches, pencils and pinching, but need to do it in a way that won’t cause distress to family, or risk causing the person’s spirit to linger, mistakenly thinking they are still being spoken to by the living.

One way is to use another word from the same language that has a similar meaning but sounds different; a synonym, like saying boundary, seat, brio and nip instead of fence, bench, pencil and pinch. Another way is to use a special word that is reserved for the purpose; a word that means something like ‘no name’. The other way is simply to borrow from your neighbours. This practice is a very strong tradition for Australian languages, and accounts for a lot of the changes that have traditionally taken place over time.

As well as ways to find new words, revitalising languages may need to find ways to make up for missing endings or for missing sentence structures. In each of these tasks the advice of a linguist can be very helpful.

**How do you create new words?**

There are many processes that different languages around the world use to create words and expressions for new ideas. Australian languages have traditionally used some of these, others have not been observed to date. While many gaps can probably be filled using traditional processes from your own or a closely related language, it might also be possible or necessary to fill some based on processes used by English and other languages. It’s up to the community to decide.

The Gumbaynggirr language from the north coast of NSW provides a good example. Traditionally Gumbaynggirr people counted up to six by using the numbers one and two and applying compounding and repetition:

1. garlugun
2. bularrı
3. bularrı-garlugun
4. bularrı-bularrı
5. bularrı-bularrı-garlugun
6. bularrı-bularrı-bularrı

However, to produce a simpler way of dealing with numbers in the modern world, Gumbaynggirr revitalisers have decided to change some of the old numbers and create new ones using a number of different strategies:

3. guga back-formation from gugaamgan (emu – three toes)
4. daan back-formation from daan gi (claws – four toes)
5. marla back-formation from maarla (hand – five fingers)
6. jugu extending meaning from jugu (group)
7. duwa back-formation from duwu (boomerang – seven shape)
8. janya back-formation from janyaanya (octopus – eight arms)
9. wagaa back-formation from wagaraa (axe – nine shape)
10. ngaal back-formation from ngaala (across – like Roman X for ten)
100. giya back-formation from giya (centipede – 100 feet)
1000. windalband adding suffixes and extending meaning from winda (star) -bang (large number – as many as stars)
1,000,000. minyalbang adding suffixes and extending meaning from minya (thing) -bang (large number)

In Kaurna, the language of Adelaide, people have recently used compounding to develop some linguistic terms to allow them to talk about the language itself as they reclaim it:

yitiwiarrra  seed word  meaning
wiltawarra  hard word  term
wapiwarra  perform word  verb

More detailed explanations and many other examples of new words developed for Gumbaynggirr, Kaurna, Gamilaraay/ Yuwaalaraay/ Yuwaalayay, and Warumungu, are available in:


These are the main processes for creating new words that are most likely to have potential for use by Australian languages undergoing revitalisation:

<table>
<thead>
<tr>
<th>Adding suffixes</th>
<th>Conversion</th>
<th>Compounding</th>
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<tbody>
<tr>
<td>Borrowing</td>
<td>Loan translation</td>
<td>Extending meanings</td>
</tr>
<tr>
<td>Repetition</td>
<td>Copying sound</td>
<td>Abbreviation</td>
</tr>
<tr>
<td>Back-formation</td>
<td>Blending</td>
<td>Coinage</td>
</tr>
</tbody>
</table>

While any of these processes can be used in a planned way by revitalisers to create new words, as languages return to health it is likely that natural processes will take over. Living languages cannot be controlled!

Special thanks are due to Christina Eira of the Victorian Aboriginal Corporation for Languages, Rob Amery of the University of South Australia, and Steve Morelli of Many Rivers Aboriginal Language Centre for the provision of many of the examples in this section, as well as to Mari Rhydwen of the Office of the Board of Studies NSW, and Susan Poetsch of the University of Sydney who were both helpful critics throughout.

**Adding Suffixes (derivation)**

All Australian languages use suffixes (endings) to change both the meaning and function of words and there is a strong and active tradition of creating new words in this way. Some Top End languages may also use prefixes at the beginning of words. Other languages may even insert affixes in the middle of words, like English jokingly does with abso-bloody-lutely and fan-flaming-tastic.

In Pitjantjatjara and other Western Desert dialects the word for aware or wise, ninti, can have suffixes added to mean someone who habitually causes other people to become wise, nintirlipi, or someone who habitually becomes aware, nintirringkupayi. These words are now used for the modern ideas of teacher and student, and also function as the verbs to express teaching and learning in school. Many Australian languages also have suffixes that mean having, without, like, towards, from, at, for, and so on that allow for the creation of a great many new words.

New words created by this method may be based on describing what something does like mixer, buzzer and grabber (for policeman), an aspect of its appearance, or what it's associated with, and so on.

**Awabakal**

- wangiakay  foolish  from wangkal (fool)
- wanayakay  childish  from wanay (child)
- ngarrakay  wise  from ngarra (know)

**Nyangumarta**

- tjanytjapinti  thermometer  from tjanytja (heat)
- katjanapinti  chair  from katjana (sit)
- ngarnkapinti  razor  from ngarnka (beard)
Kaurna

- **kanthi-ana** trousers from *kanthi* (thigh)
- **mukarti-ana** hat from *mukarta* (head)
- **tiki-ana** waistcoat from *tiki* (ribs)
- **turti-ana** jacket from *turti* (arm)
- **nuki-ana** handkerchief from *nuki* (snot)

Many Australian languages have suffixes that offer the following possibilities for creating new words:

- to make something – make hot, sad, big, into stone, etc.
- to become something – become cold, happy, small, a dog, etc.
- a person or thing that habitually does something – reader, washer, runner, etc.
- two or more of something
- one of a pair of things
- more or less of something – hotter, unhappier, bigger, stonier, etc.
- associated with something – river-dweller, easterner, heavenly, etc
- with or having something – with money, having a stick, with family, etc
- without or not having something – without legs, not having sleep, without food, etc.
- being like or unlike something – like a fish, not like a man, like water, etc.
- not something – not happy, undead, unbeaten, etc.

Because adding suffixes is such a rich tradition for Australian languages it can be one of the best places to start looking for ways to create new words. If a grammatical description exists for your language it should detail some of these suffixes. If not, the features of a neighbouring language are likely to be fairly similar to the ones your language would have once used and could be borrowed. The advice of a linguist would be very helpful in this task.

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**Conversion**

This is a common way for English to form new words and can be seen in recently created verbs like task and text (I tasked him with texting Sue the meeting time.) that have been converted from the nouns task and text, as well as verbs like green (The council is planning to green the town square.) converted from the adjective green.

This process is also found in many Australian languages, although they must often also add suffixes associated with the new word class that makes the process more explicit. For example, Pitjantjaratjara can convert the adjective *ninti* (aware) to a verb (know), but must also add a suffix to produce *nintini* (knows/knowing).

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**Compounding**

Joining two words together to make a new word or a fixed expression is found in many languages. Australian languages have a long history of using this process.

English speakers are very familiar with compounded words like intake, upkeep, dragonfly, waterfall, carpark and timekeeper, although they can sometimes be unsure whether to write them as one word, hyphenate them or write them as separate words.

Often such compounds are descriptive of the behaviour, function or appearance of the thing they refer to, like the early Gumbaynggirr compound for telephone, *muya-bang-ging* (breath is flying) or the new Yuwaalaraay word *gayragumbiri* (electric brain) for computer.

**Woiwurring**

- **galkgawang** bone head skull
- **yarramirring** hair eye eyebrow
- **yarrangumduk** hair chin beard
- **budhundjinang** sore foot chillblain

**Pitjantjaratjara**

- **pina pati** ear closed deaf
- **kuru pati** eye closed blind
- **tja pati** mouth closed dumb
- **nyinakati** sit carry sit down!
- **ngarakati** stand carry stand up!
Borrowing

All languages borrow from other languages. Australian languages have always borrowed from their neighbours and are well known for the high level of sharing they display as a family. English is also a great borrower from other languages which is one reason it stays so strong. Some estimates suggest that around 70% of the words currently being used by English speakers are borrowed.

From very early on Australian languages began to borrow from foreign languages. Even before English was spoken in Australia, several languages from the Top End had borrowed around 500 words from Indonesia like **rupiya** (rupee, from India) for money and **balanda** (Hollander) for Europeans.

As soon as people began encountering whitefellas here they quickly began borrowing words for the new animals they brought with them and the goods and technology they possessed, adapting the sounds of English into their own language:

**Bundjalung**
- **bujigehn** (pussy) cat
- **bulahwar** flour
- **dindihy** (tin) dish
- **gabugahn** (cob of) corn
- **ganjabal** police (constable)
- **garenggi** cranky

**Pitjantjatjara**
- **puluki** bullock
- **tjuka** sugar
- **rayipula** rifle
- **makiti** (musket) gun
- **waya** wire
- **mutukayji** (motor) car
- **tjampita** (jam pot) cup
- **panikin** pan (pannikin)
- **pulongkita** blanket

However, some revitalisers are concerned by the high level of borrowing from English that has already taken place. They argue that other strategies like adding suffixes and extending meanings of traditional words are better options to prevent the influence of English getting any stronger. It’s up to the community to decide.

Loan translation (calquing)

Loan translation is similar to borrowing words, except that it involves extended expressions that are translated word-by-word. English frequently uses loan translations including, from Chinese; lose face, brainwashing, long time-no see and paper tiger, and from German; stormtrooper, rainforest, beergarden, superman and concertmaster.

There are not many examples of this process being applied historically in Australian languages. However, some modern revitalisers are making use of it, such as for the names of the days of the week developed by Gumbaynggirr revitalisers:

<table>
<thead>
<tr>
<th>Day</th>
<th>English</th>
<th>Gumbaynggirr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday</td>
<td>Sun's day</td>
<td><strong>Ngayan ga</strong> sun one</td>
</tr>
<tr>
<td>Monday</td>
<td>Moon's day</td>
<td><strong>Giidanyga</strong> moon one</td>
</tr>
<tr>
<td>Tuesday</td>
<td>Tiw's (Germanic goddess) day</td>
<td><strong>Birrang ga</strong> Birrang (first man) one</td>
</tr>
<tr>
<td>Wednesday</td>
<td>Wodan's (Germanic god) day</td>
<td><strong>Bimilnga</strong> middle one</td>
</tr>
<tr>
<td>Thursday</td>
<td>Thor's (Germanic god) day</td>
<td><strong>Buruunggayga</strong> thunder one</td>
</tr>
<tr>
<td>Friday</td>
<td>Frige's (Germanic goddess) day</td>
<td><strong>Gawnggan ga</strong> Gawnggan (first woman) one</td>
</tr>
<tr>
<td>Saturday</td>
<td>Saturn's (Roman god) day</td>
<td><strong>Birraariga</strong> birraar (planet) one</td>
</tr>
</tbody>
</table>

Although Aboriginal and Torres Strait Islander people were closely in touch with the cycles of the sun and moon, as far
as we know, they didn’t count the days of the week or recognise weeks as a unit of time, so the concept of having named days in a seven-day week is itself culturally foreign.

Some revitalisers outside Australia, such as the Maori, express concern that loan translations like these, where the concepts of a foreign culture are translated into a local language on top of the idea of counting days, are a greater cause for concern that simply borrowing words. They argue that just borrowing the word Thursday and changing the sound (say, to Djaaďay), without also attempting to translate the idea of naming it after the Germanic god of thunder, carries less foreign culture with it. They suggest that other strategies like adding suffixes and extending meanings of traditional words are better options to prevent the influence of English getting any stronger, like the Gumbaynggirr have done by calling Wednesday the middle one. Other people do not see this as a problem.

This is a discussion that hasn’t really occurred widely in Australian revitalisation so far. It’s up to the community to decide.

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### Extending meanings

Semantic extension is the very common process of stretching the meaning of existing words to take in new ideas. Many Australian languages have traditionally used the same word to describe an item and either its parts or its source. So, hand and fingers are often the same word, as are breast and milk; foot, footprint and tracks; fire and firewood; sun, day and time. Similarly hearing, understanding and thinking are expressed by the same word in many languages.

#### Kaurna

- **munirra** breast, milk
- **mirnda** waist, tree trunk, spear shaft
- **kumdaji** dorsal fin, sand hill

#### Eastern Kulin

- **wilam** bark, hut
- **mining** eye, hole in the ground
- **galk** stick, bone

#### Bangerang

- **bōrinya** arm, wing, branch of a river
- **washāra** back shell of tortoise, bark plate, horny plate on emu’s breast

Many languages have also made use of the same process in more recent times, extending the meaning of traditional words to cover new concepts:

#### Kaurna

- **pard** maggot extended to rice
- **kaaru** blood extended to grape juice
- **maki** ice extended to glass
- **pirri** claw extended to hook

#### Eastern Kulin

- **wilam** hul, camp extended to tent, house, shed
- **bilim-bilim** bitter, seawater extended to alcohol

#### Mutti Mutti

- **ngundu** ceremonial song extended to hymn
- **binggadha** paint up extended to writing

#### Pitjantjatjara

- **waru** fire, firewood extended to matches, lighter
- **tilli** flame extended to lights

Extending meanings is a traditional process for Australian languages that could easily be used now to take account of new ideas.

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### Repetition

Repetition is much more common in Australian languages than it is in English. It usually creates a new word that is
either more or less intense than the original, or entails some suggestion of repetitive action or multiples, such as in the traditional Gumbaynggirr number bulari-bulari-bulari (two-two-two). Where a change of word class takes place, such as from verb to noun, adding suffixes may also be necessary.

Kaurna
- mirdumurdu: flour, bread from mirdu (dust, ashes)
- tadilathadi: frypan from tadli (spit)
- pirrkipirrki: peas from pirri (bits, pieces)
- tikathikati: chair from tika- (sit)
- pakipakiti: knife from paki- (cut)
- karkarnkati: lifting device from karka- (raise)

Gamilaraay
- gidjiirgidjiir: yellow from gidjiir (gidgee tree)
- birraybirray: boys from birray (boy)
- gaabigaabi: nauseous from gaabi (vomit)
- buyabuya: boney from buya (bone)
- balabalaa: butterfly from balaa (white)
- ngarrangarria: watch over from ngarrali (see)

Gumbaynggirr
- ngurra-ngurra: feed, supply from ngurraa (give)
- wulgam-wulgam: crooked, winding from wuliga (bent, leaning)
- wurrara-wurrara: fishing net, haul out from wurrara (pull off, take out)

Some animal names borrowed from English also make use of repetition, possibly as a result of how they were first heard, how the animals are called, or in an attempt by English speakers to make them sound simpler.

Warumungu
- jipi-jipi: sheep
- juku-juku: chook
- kapi-kapi: calf
- kiti-kiti: kid
- nani-nani: nannygoat
- piki-piki: pig
- pili-pili: billygoat
- purrak-purrak: frog

Repetition is also commonly seen in the names of birds that are derived from copying sound.

Copying sound (onomatopoeia)

Australian languages are well known for their use of sound mimicry in forming words, and bird names is one area that many people are familiar with:

Yankunytjatjara
- aralapalap: crested pigeon
- kakalaayala: Major Mitchell cockatoo
- killykillykarrn: budgerigar
- kuurruurrn: bobook owl
- mininymininy: thornbill
- nyinyi: zebra finch
- panpanpalalara: bellbird
- pilipil: miner
- pinpinpal: honeyeater
- tiltil: magpie lark
- tjintintjintir: willy wagtail
- wilyurukuru: cockatiel

Other languages have also made use of this process to create words for new items:

Yolngu Matha
- njurngjurra: pig
- bumbum: car
- gatygayn: motorbike

Ghil'ad Zuckermann, Julia Miller and Jasmin Morley (eds) 2014, Endangered Words, Signs of Revival, AustraLex, p. 15
Note that in all these cases repetition is also being used.

**Abbreviation**

Abbreviation is a common feature of rapid speech in strong Australian languages as it is in English and other languages. Some contractions are so frequent that they become normalised. So English speakers are now far more likely to say and write the contracted forms, can’t and don’t and wouldn’t, rather than saying cannot, do not and would not. Most Pitjantjatjara speakers drop one syllable and say tji’tjuta, rather than the full tji’ku (child many) for kids, but prefer not to write it like that. Similarly when people say the name of the language itself they often drop one tja syllable so that it is pronounced Pitjantjara, and many people have written it down that way. Contraction can sometimes also be seen in words formed by repetition in Australian languages.

Abbreviation by clipping words is also common in English, such as in creating ad from advertisement, uni from university, bra from brassiere and fax from facsimile. Some spoken varieties of English also combine clipping with adding a suffix such as commie or commo for communist, mozzie for mosquito, and cammo for camouflage. This is also a very common process for producing shortened ‘pet’ versions of people’s names; Bess or Betty from Elizabeth, Bill or Billy from William, etc.

As a language with a long history of writing, English has also made use of initials to produce acronyms; words like laser from Light Amplification by Stimulated Emission of Radiation, scuba from Self-Contained Underwater Breathing Apparatus, and wasp from White Anglo-Saxon Protestant.

Some of these processes for forming new English words have not been observed in Australian languages so far, but they could be used. It’s up to the community to decide.

**Back-formation**

Back-formation is a special process of abbreviation, which creates a new word that has a different meaning or is a different part of speech to the original, often by removing part of a word that is mistaken to be a suffix. The English verb babysit has been back-formed from the original noun babysitter, burgle from burglar, emote from emotion, and typewrite from typewriter. Burger is a back-formation from hamburger (a bread roll from Hamburg in Germany) now used in compounds like chickenburger, cheeseburger and fishburger. Similarly the apparent suffix –holic, back-formed from alcohol-ic, has been used to create new words like chocoholic, workaholic and shopaholic.

Back-formation can also be seen in Kaurna:

- **kapi** tobacco from **kapinthi** (vomit)
- **maana** cross-cut saw from **maanthi** (draw, pull)
- **warna** sexual disease from **warnkawanka** (fungus species)
- **ngutu** knowledge from **ngutu-apanthi** (teach)

Yuwaalaraay revitalisers have also used back-formation to create new words in recent times:

- **gayrra** electricity from **dhan.gayrra** (lightning)
- **man.gal** table from **man.ga-man.gal** (flat)

just as the old people did when they first saw a whitefella – back-forming **wanda** from **wandabaa** (ghost).

And many of the Gumbaynggirr new numbers make use of the process:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td><strong>guga</strong> from <strong>gugaamgan</strong> (emu)</td>
</tr>
<tr>
<td>4</td>
<td><strong>daan</strong> from <strong>daan.gi</strong> (claws)</td>
</tr>
<tr>
<td>5</td>
<td><strong>maa</strong> from <strong>maa</strong> (hand)</td>
</tr>
<tr>
<td>7</td>
<td><strong>duwa</strong> from <strong>duuwa</strong> (boomerang)</td>
</tr>
<tr>
<td>8</td>
<td><strong>janya</strong> from <strong>janyaany</strong> (octopus)</td>
</tr>
<tr>
<td>9</td>
<td><strong>wagga</strong> from <strong>waggar</strong> (axe)</td>
</tr>
<tr>
<td>10</td>
<td><strong>ngaal</strong> from <strong>ngaala</strong> (across)</td>
</tr>
</tbody>
</table>

**Blending (portmanteau)**

Ghil'ad Zuckermann, Julia Miller and Jasmin Morley (eds) 2014, Endangered Words, Signs of Revival, Australex, p. 16
Blending is the process of combining sound and meaning from two or more distinct words to create a new abbreviated word, and has become very common in English and other European languages:

- brunch: breakfast lunch
- motel: motor hotel
- breathalyser: breath analyser
- advertorial: advertisement editorial
- infomercial: information commercial
- intercom: internal communication
- internet: international network
- netiquette: internet etiquette

Although there is little evidence of blending in Australian languages, it can be seen in items such as Pitjantjatjara *nganatjarrka* (our side) blended from *nganara* (we) and *tarrka* (bone).

### Coinage

The creation of completely new word from no other source is not widely documented in Australian languages. However, the Gumbaynggirr recognise their word for horse, *gaar* as one they created themselves.

Given the way that stories and songs have traditionally been received in dreams in Indigenous Australian cultures, there might also be potential to consider dreaming new words as a strategy with some cultural appeal.

### How do you replace missing parts of words?

As well as missing records of whole words, many revitalising languages may be missing knowledge of suffixes or endings. It may be that there is a record of how to change endings to say an activity happened earlier (past tense) or is happening now (present tense), but no indication of how to say it will be happening later (future tense), or that it goes on for some time (continuous aspect). Or, when suffixes for certain classes of words are set out in a table, it might become apparent that some are missing.

Without the knowledge of what features *should* be present in an Australian language it is difficult to know what might be missing. A linguist can assist with both identifying where the gaps are and with strategies to replace them. The obvious option is to borrow from another local language. Australian languages show remarkable similarity between neighbouring languages in their grammar. So there is usually a high likelihood that a neighbouring language had the same endings or very similar ones. This has been done for the revitalisation of Gamilaraay where several essential endings have been borrowed from its close neighbour Yuwaalaraay, making any necessary sound changes to fit the different patterns of Gamilaraay.

Where there is no evidence from a neighbouring language it would be possible to borrow from a foreign language, making any necessary sound changes to fit. Alternatively a decision could be taken to extend the meaning of a known ending in the language to cover the different use. Or it could be decided to just go without and see what strategies speakers come up with by themselves. It's up to the community to decide.

### How do you replace missing sentence structures?

For most revitalising languages the best records are usually of single words or short expressions. There is sometimes very little language recorded that includes extended sentences or strings of sentences connected into longer texts, other than in non-traditional texts like Bible translations. It may be that there is no record of how to ask a question or how to talk about a series of actions and so on.

In cases like this the best option is probably to look at neighbouring languages to see what structures they used and either borrow from them or create something modelled on it. A linguist can assist in this task.

Where there is no record available from other local languages it may be necessary to consider borrowing from foreign languages including English. It's up to the community to decide.

### Can Australian languages borrow from foreign languages?

Ghil'ad Zuckermann, Julia Miller and Jasmin Morley (eds) 2014, Endangered Words, Signs of Revival, AustraLex, p. 17
Yes, most Australian languages have already borrowed from foreign languages, especially English, and strong languages are still doing it. Even before English was spoken in Australia, languages from the Top End had borrowed around 500 words from Indonesia like *rupiya* (rupee, from India) for money and *balanda* (Hollander) for Europeans.

As soon as people began encountering whitefellas here they quickly began borrowing words for the new animals they brought with them and the goods and technology they possessed. Borrowing is very strong tradition for Australian languages as the earliest records of the Sydney language show:

<table>
<thead>
<tr>
<th>wadyiman</th>
<th>white man</th>
</tr>
</thead>
<tbody>
<tr>
<td>buk</td>
<td>book</td>
</tr>
<tr>
<td>badal</td>
<td>bottle</td>
</tr>
<tr>
<td>gandal</td>
<td>candle</td>
</tr>
<tr>
<td>gan</td>
<td>gun</td>
</tr>
<tr>
<td>angadya</td>
<td>handkerchief</td>
</tr>
<tr>
<td>djagat</td>
<td>jacket</td>
</tr>
<tr>
<td>winda</td>
<td>window</td>
</tr>
<tr>
<td>bidigat</td>
<td>biscuit</td>
</tr>
<tr>
<td>badu</td>
<td>potato</td>
</tr>
<tr>
<td>djuga</td>
<td>sugar</td>
</tr>
<tr>
<td>djalba</td>
<td>sulphur</td>
</tr>
</tbody>
</table>

While Australian languages can, and still are, borrowing from English there is no reason why they cannot also borrow from other languages. However, there are some important issues to consider.

When words are borrowed from a foreign language it's like borrowing a little bit of that people's culture at the same time. The ways of looking at and talking about the world peculiar to that culture are carried in the words. Gumbaynggirr, for example, has borrowed the names of *days of the week* from English translating Sunday as the day of the sun, Monday as the day of the moon, Thursday (after Thor the Germanic god of lightning) as the day of thunder and so on. However, even though people were clearly aware of the cycles of the sun and moon, the ideas of having a seven day week and calling days after objects in the sky or European gods are traditionally foreign to Indigenous Australian cultures and much older then English itself. Many Asian languages don’t do this; they simply number the days and months.

If all the borrowing is from the same language a lot of the culture associated with that language will also be borrowed. A lot of European, especially British, culture has already been borrowed into Australian languages through borrowing from English. This means it might be better to mix things up and borrow from a variety of languages to ensure no particular outside influence dominates your language.

However, most people currently learning Australian languages are already speakers of English and usually only speak English. So they already know English words, endings and sentence structures for most things they want to say and have learned to see and think about the world as English speakers. This makes English the easiest language for them to borrow from. Even if revitalisers choose to borrow from other languages, the very strong presence of English in the community may mean that as people start to re-learn their language they will tend to follow English forms without even realising it. So not only is borrowing from other languages possible, it might be unavoidable, as might the strong influence of English.

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**Patyegarang**

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