

Paradigm shift? Variation and change in Pitjantjatjara verbal morphology

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This talk is based on my PhD thesis:

<http://hdl.handle.net/11343/325722>

and Wilmoth & Mansfield 2021:

<https://doi.org/10.1007/s11525-021-09380-y>

Today:

Background on the language and study

Structure of verb and inflection classes
prosody, interpredictability

Three areas of variation in inflection

The Dynamics of Contemporary Pitjantjatjara:
An Intergenerational Study

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**Inflectional predictability and prosodic morphology in
Pitjantjatjara and Yankunytjatjara**

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Pitjantjatjara

Pama-Nyungan (Western Desert)

3,000+ speakers

Acquired as first language

Main language of everyday life

Fieldwork in Pukatja/Ernabella

Dependent-marking

Retroflex consonants are underlined

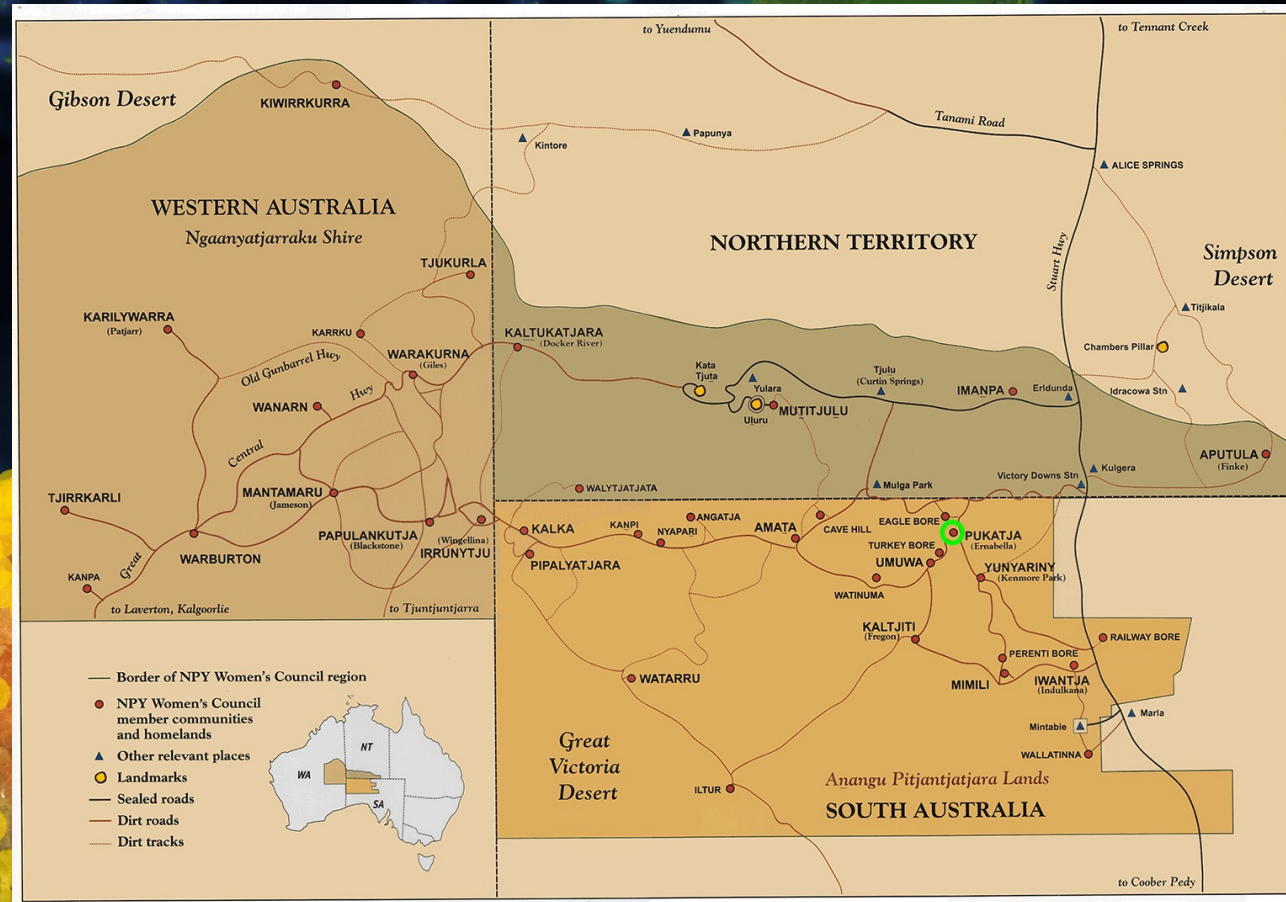
n, l, t, r

Digraphs for palatals/velar nasal

ny, ly, tj, ng

Long vowels

aa, ii, uu



Pitjantjatjara

Well documented

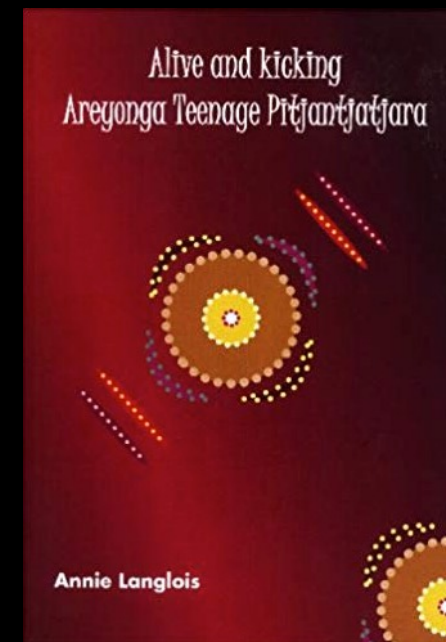
Trudinger (1943), Goddard (1985), Eckert & Hudson (1988),
Bowe (1990), Tabain et al (phonetics, since 2000s)

Langlois (2004)

Teenage girls' Pitjantjatjara in Utju/Areyonga in 1990s

Restructured variety of traditional language:
'all of the forms remain Australian, but some of the
underlying structure has become English-based'
(Meakins 2014: 399)

Community concerns (Minutjukur et al 2019)



Changes to verbs elsewhere in Australia

Shift to Kriol verb system

Borrowing English modal verbs

Simplification in inflection class systems

Regularisation of irregular forms

Loss of some inflectional categories

Reduced range of auxiliaries

Avoidance of subordinate clauses based on non-finite verb forms

Increased reliance on light verb/coverb constructions

+ other changes in polysynthetic languages

(e.g. Pitjantjatjara: Langlois 2004, Tiwi: Lee 1987, Dhuwaya: Amery 1985, Murrinhpatha: Mansfield 2014, Bininj Kunwok: Marley 2020, Dyirbal: Schmidt 1985, Lardil: Richards 1997, Light Warlpiri: O'Shannessy 2013, Gurindji Kriol: Meakins 2011)



29 women, late teens – 80s

Conversation

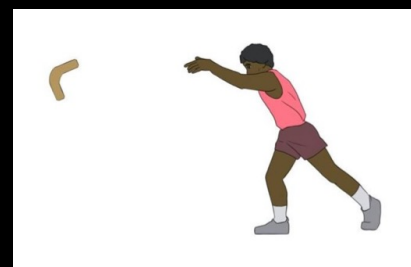
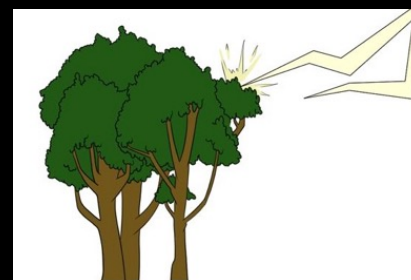
Narrative

Elicited narrative

...and experimental data

49 speakers

~41,000 words



O'Shannessy (2004)
King (2010)
Dudley (2013)
Varon (2006)
Wilmoth et al (forthc.)

I looked at:

Perspectives on language vitality

Phonetic variation

Verbal morphology

Case marking

Possession

Nominalisation + subordination

Negation

What does a Pitjantjatjara verb look like?

Minimally, a root and TAM suffix:

wangka-nyi
speak-PRS

Optional extras include reduplication, directional prefixes, derivational suffixes, augments:

para~para-riitja-ri-nga-ngi
RDP~around-race-INCH-AUG-PST.IPFV
'(they) were running around'

Lots of nominal and category changing morphology too:

pika-tjara-ri-ngku-nytja-ku-tawara
illness-PROP-INCH-AUG-NMLZ-DAT-AVERS
'to avoid getting sick'



How does inflection work?

Seven TAM categories and two deverbal nominalisations.

	‘speak’
IMP	<i>wangka-Ø</i>
PST	<i>wangka-ngu</i>
PRS	<i>wangka-nyi</i>
IMP.IPFV	<i>wangka-ma</i>
PST.IPFV	<i>wangka-ngi</i>
FUT	<i>wangka-ku</i>
AG.NMZ	<i>wangka-pai</i>
AC.NMZ	<i>wangka-nytja</i>
MV	<i>wangka-ra</i>

How does inflection work?

Four conjugation classes.

	Ø-class 'speak'	l-class 'bite'	n-class 'put'	ng-class 'hit'
IMP	<i>wangka-Ø</i>	<i>patja-la</i>	<i>tju-ra</i>	<i>pu-wa</i>
PST	<i>wangka-ngu</i>	<i>patja-<u>n</u>u</i>	<i>tju-nu</i>	<i>pu-ngu</i>
PRS	<i>wangka-nyi</i>	<i>patja-<u>n</u>i</i>	<i>tju-na-nyi</i>	<i>pu-nga-nyi</i>
IMP.IPFV	<i>wangka-ma</i>	<i>patja-nma</i>	<i>tju-na-ma</i>	<i>pu-nga-ma</i>
PST.IPFV	<i>wangka-ngi</i>	<i>patja-<u>n</u>ingi</i>	<i>tja-na-ngi</i>	<i>pu-nga-ngi</i>
FUT	<i>wangka-ku</i>	<i>patja-lku</i>	<i>tju-nku-ku</i>	<i>pu-ngku-ku</i>
AG.NMZ	<i>wangka-pai</i>	<i>patja-lpai</i>	<i>tju-nku-pai</i>	<i>pu-ngku-pai</i>
AC.NMZ	<i>wangka-nytja</i>	<i>patja-ntja</i>	<i>tju-nku-nytja</i>	<i>pu-ngku-nytja</i>
MV	<i>wangka-ra</i>	<i>patja-<u>r</u>a</i>	<i>tju-nku-la</i>	<i>pu-ngku-la</i>

How does inflection work?

Imperative suffixes are distinct across classes.

	Ø-class 'speak'	l-class 'bite'	n-class 'put'	ng-class 'hit'
IMP	<i>wangka-Ø</i>	<i>patja-la</i>	<i>tju-ra</i>	<i>pu-wa</i>
PST	<i>wangka-ngu</i>	<i>patja-<u>n</u>u</i>	<i>tju-nu</i>	<i>pu-ngu</i>
PRS	<i>wangka-nyi</i>	<i>patja-<u>n</u>i</i>	<i>tju-na-nyi</i>	<i>pu-nga-nyi</i>
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PST.IPFV	<i>wangka-ngi</i>	<i>patja-<u>n</u>ingi</i>	<i>tja-na-ngi</i>	<i>pu-nga-ngi</i>
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AG.NMZ	<i>wangka-pai</i>	<i>patja-lpai</i>	<i>tju-nku-pai</i>	<i>pu-ngku-pai</i>
AC.NMZ	<i>wangka-nytja</i>	<i>patja-ntja</i>	<i>tju-nku-nytja</i>	<i>pu-ngku-nytja</i>
MV	<i>wangka-ra</i>	<i>patja-<u>r</u>a</i>	<i>tju-nku-la</i>	<i>pu-ngku-la</i>

How does inflection work?

Past tense suffixes are mostly distinct.

	Ø-class 'speak'	l-class 'bite'	n-class 'put'	ng-class 'hit'
IMP	<i>wangka-Ø</i>	<i>patja-la</i>	<i>tju-ra</i>	<i>pu-wa</i>
PST	<i>wangka-ngu</i>	<i>patja-nu</i>	<i>tju-nu</i>	<i>pu-ngu</i>
PRS	<i>wangka-nyi</i>	<i>patja-<u>ni</u></i>	<i>tju-na-nyi</i>	<i>pu-nga-nyi</i>
IMP.IPFV	<i>wangka-ma</i>	<i>patja-nma</i>	<i>tju-na-ma</i>	<i>pu-nga-ma</i>
PST.IPFV	<i>wangka-ngi</i>	<i>patja-<u>ningi</u></i>	<i>tja-na-ngi</i>	<i>pu-nga-ngi</i>
FUT	<i>wangka-ku</i>	<i>patja-lku</i>	<i>tju-nku-ku</i>	<i>pu-ngku-ku</i>
AG.NMZ	<i>wangka-pai</i>	<i>patja-lpai</i>	<i>tju-nku-pai</i>	<i>pu-ngku-pai</i>
AC.NMZ	<i>wangka-nytja</i>	<i>patja-ntja</i>	<i>tju-nku-nytja</i>	<i>pu-ngku-nytja</i>
MV	<i>wangka-ra</i>	<i>patja-<u>ra</u></i>	<i>tju-nku-la</i>	<i>pu-ngku-la</i>

How does inflection work?

Ø- and l-class suffixes are distinct across all categories.

	Ø-class 'speak'	l-class 'bite'	n-class 'put'	ng-class 'hit'
IMP	<i>wangka-Ø</i>	<i>patja-la</i>	<i>tju-ra</i>	<i>pu-wa</i>
PST	<i>wangka-ngu</i>	<i>patja-<u>nu</u></i>	<i>tju-nu</i>	<i>pu-ngu</i>
PRS	<i>wangka-nyi</i>	<i>patja-<u>ni</u></i>	<i>tju-na-nyi</i>	<i>pu-nga-nyi</i>
IMP.IPFV	<i>wangka-ma</i>	<i>patja-nma</i>	<i>tju-na-ma</i>	<i>pu-nga-ma</i>
PST.IPFV	<i>wangka-ngi</i>	<i>patja-<u>ningi</u></i>	<i>tja-na-ngi</i>	<i>pu-nga-ngi</i>
FUT	<i>wangka-ku</i>	<i>patja-lku</i>	<i>tju-nku-ku</i>	<i>pu-ngku-ku</i>
AG.NMZ	<i>wangka-pai</i>	<i>patja-lpai</i>	<i>tju-nku-pai</i>	<i>pu-ngku-pai</i>
AC.NMZ	<i>wangka-nytja</i>	<i>patja-ntja</i>	<i>tju-nku-nytja</i>	<i>pu-ngku-nytja</i>
MV	<i>wangka-ra</i>	<i>patja-<u>ra</u></i>	<i>tju-nku-la</i>	<i>pu-ngku-la</i>

How does inflection work?

TAM suffixes are mostly shared between Ø-, n-, and ng-classes.

	Ø-class 'speak'	l-class 'bite'	n-class 'put'	ng-class 'hit'
IMP	<i>wangka-Ø</i>	<i>patja-la</i>	<i>tju-ra</i>	<i>pu-wa</i>
PST	<i>wangka-ngu</i>	<i>patja-<u>n</u>u</i>	<i>tju-nu</i>	<i>pu-ngu</i>
PRS	<i>wangka-ny<i>ī</i></i>	<i>patja-<u>n</u>i</i>	<i>tju-na-ny<i>ī</i></i>	<i>pu-nga-ny<i>ī</i></i>
IMP.IPFV	<i>wangka-<i>ma</i></i>	<i>patja-n<i>ma</i></i>	<i>tju-na-<i>ma</i></i>	<i>pu-nga-<i>ma</i></i>
PST.IPFV	<i>wangka-<i>ngi</i></i>	<i>patja-<u>n</u>ing<i>i</i></i>	<i>tja-na-<i>ngi</i></i>	<i>pu-nga-<i>ngi</i></i>
FUT	<i>wangka-<i>ku</i></i>	<i>patja-l<i>ku</i></i>	<i>tju-nku-<i>ku</i></i>	<i>pu-ngku-<i>ku</i></i>
AG.NMZ	<i>wangka-<i>pai</i></i>	<i>patja-l<i>pai</i></i>	<i>tju-nku-<i>pai</i></i>	<i>pu-ngku-<i>pai</i></i>
AC.NMZ	<i>wangka-<i>nytja</i></i>	<i>patja-<i>ntja</i></i>	<i>tju-nku-<i>nytja</i></i>	<i>pu-ngku-<i>nytja</i></i>
MV	<i>wangka-<i>ra</i></i>	<i>patja-<u>r</u><i>a</i></i>	<i>tju-nku-<i>la</i></i>	<i>pu-ngku-<i>la</i></i>

How does inflection work?

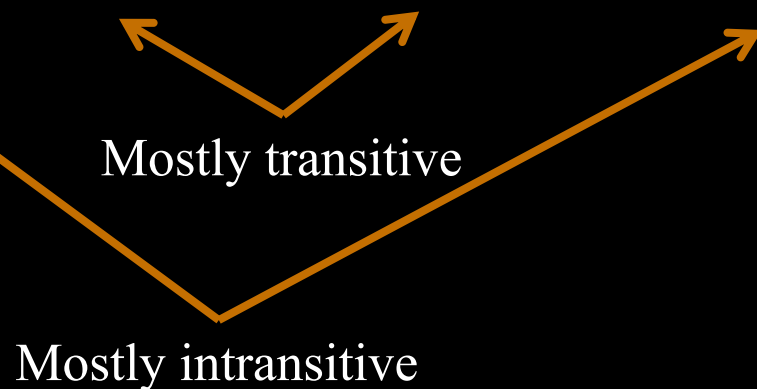
These classes are distinguished by ‘augment’ syllables, whose form depends on class + following suffix.

	Ø-class ‘speak’	l-class ‘bite’	n-class ‘put’	ng-class ‘hit’
IMP	<i>wangka-Ø</i>	<i>patja-la</i>	<i>tju-ra</i>	<i>pu-wa</i>
PST	<i>wangka-ngu</i>	<i>patja-<u>n</u>u</i>	<i>tju-nu</i>	<i>pu-ngu</i>
PRS	<i>wangka-ny<i>l</i></i>	<i>patja-<u>n</u>i</i>	<i>tju-na-ny<i>l</i></i>	<i>pu-nga-ny<i>l</i></i>
IMP.IPFV	<i>wangka-<i>ma</i></i>	<i>patja-n<i>ma</i></i>	<i>tju-na-<i>ma</i></i>	<i>pu-nga-<i>ma</i></i>
PST.IPFV	<i>wangka-<i>ngi</i></i>	<i>patja-<u>n</u>ing<i>i</i></i>	<i>tja-na-<i>ngi</i></i>	<i>pu-nga-<i>ngi</i></i>
FUT	<i>wangka-<i>ku</i></i>	<i>patja-l<i>ku</i></i>	<i>tju-nku-<i>ku</i></i>	<i>pu-ngku-<i>ku</i></i>
AG.NMZ	<i>wangka-<i>pai</i></i>	<i>patja-l<i>pai</i></i>	<i>tju-nku-<i>pai</i></i>	<i>pu-ngku-<i>pai</i></i>
AC.NMZ	<i>wangka-<i>nytja</i></i>	<i>patja-<i>ntja</i></i>	<i>tju-nku-<i>nytja</i></i>	<i>pu-ngku-<i>nytja</i></i>
MV	<i>wangka-<i>ra</i></i>	<i>patja-<u>r</u><i>a</i></i>	<i>tju-nku-<i>la</i></i>	<i>pu-ngku-<i>la</i></i>

Let's look at class membership...

There is a correlation with transitivity, as in many Pama-Nyungan languages (Dixon 2002, p. 215-237). Data drawn from Goddard & Defina (2020).

	Ø-class	1-class	n-class	ng-class	Total
Intransitive	200	56	45	140	441
Transitive	45	336	213	85	679
Ambitransitive	4	2	1	1	8
Ditransitive	0	1	0	2	3
Total	249	395	259	228	1131



But we found a categorical association with prosodic structure.

	∅-class	l-class	n-class	ng-class	Total
Root ends with complete foot	249	395	0	0	644
Root ends with unfooted syllable	0	0	259	228	487
Total	249	395	259	228	1131

Metrical structure

Primary stress on first syllable of prosodic word

No phonetic evidence for secondary stress (Tabain et al., 2014)

Bimoraic feet from left edge of word

Vowels are moraic, long vowels are bimoraic

L-class

(wiru)(lyara)-**la**

slip-IMP

(paar)(paka)-**la**

fly-IMP

N-class

(kili)(na-**ra**)

clean-IMP

(uu)(li-**ra**)


tease-IMP

Ø-class	l-class	n-class	ng-class
(wangka)- speak	(patja)- bite	(tju)- put	(nya)- see
(uri)- move	(puu)- blow	(a)- go	(pu)- hit
(ngara)- stand	(kantu)- stamp	(uu)(li)- tease	(uka)(li)- descend
(ngaa)(kampa)- gasp	(pii)(lyuru)- peel papery stuff	(kili)(na)- clean	(tii)(ra)- shine
(nyina)(kati)- sit down	(nginyi)(wara)- feel food envy	(wiyan)(ma)- refuse	(ili)(li)- glow

The present tense suffix (for example) attaches directly to Ø/1-class roots.

Ø-class	1-class	n-class	ng-class
(wangka)-nyi speak	(patja)- <u>ni</u> bite	(tju- put	(nya- see
(uri)-nyi move	(puu)- <u>ni</u> blow	(a- go	(pu- hit
(ngara)-nyi stand	(kantu)- <u>ni</u> stamp	(uu)(<u>li</u> - tease	(uka)(li- descend
(ngaa)(kampa)-nyi gasp	(pii)(lyuru)- <u>ni</u> peel papery stuff	(kili)(na- clean	(tii)(<u>ra</u> - shine
(nyina)(kati)-nyi sit down	(nginyi)(wara)- <u>ni</u> feel food envy	(wiyan)(ma- refuse	(ili)(li- glow

But augments are required in n/ng-class present tense forms.

Ø-class	l-class	n-class	ng-class
(wangka)-nyi speak	(patja)- <u>ni</u> bite	(tju- na)-nyi put	(nya- nga)-nyi see
(uri)-nyi move	(puu)- <u>ni</u> blow	(a- na)-nyi go	(pu- nga)-nyi hit
(ngara)-nyi stand	(kantu)- <u>ni</u> stamp	(uu)(<u>li</u> - na)-nyi tease	(uka)(<u>li</u> - nga)-nyi descend
(ngaa)(kampa)-nyi gasp	(pii)(lyuru)- <u>ni</u> peel papery stuff	(kili)(<u>na</u> - na)-nyi clean	(tii)(<u>ra</u> - nga)-nyi shine
(nyina)(kati)-nyi sit down	(nginyi)(wara)- <u>ni</u> feel food envy 	(wiyan)(<u>ma</u> - na)-nyi refuse	(ili)(<u>li</u> - nga)-nyi glow

These satisfy a constraint, for most TAM suffixes, that they align with the right edge of a metrical foot.

Conjugation markers are usually single segments in Australian languages, with no prosodic function (see e.g. Dixon 1980).

Prosodically-sensitive class assignment is productive

Zero-derived factitive verbs (make X become Y) go in the n- or l-class.

L-class:

(ila)- la	near-IMP	pull
(katu)- la	high-IMP	lift
(nyaa)- la	what-IMP	do whats-it-called

N-class

(kutju)(pa- ra)	other-IMP	alter
(kili)(na- ra)	clean-IMP	clean
(tjaa-ng)(ka- ra)	mouth-LOC-IMP	put in mouth

The entire system is completely interpredictable

Average conditional entropy = 0

Suffix allomorphy + augments + metrical structure

	Ø-class 'speak'	l-class 'bite'	n-class 'put'	ng-class 'hit'
IMP	<i>wangka-Ø</i>	<i>patja-la</i>	<i>tju-ra</i>	<i>pu-wa</i>
PST	<i>wangka-ngu</i>	<i>patja-<u>nu</u></i>	<i>tju-nu</i>	<i>pu-ngu</i>
PRS	<i>wangka-nyi</i>	<i>patja-<u>ni</u></i>	<i>tju-na-nyi</i>	<i>pu-nga-nyi</i>
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AC.NMZ	<i>wangka-nytja</i>	<i>patja-ntja</i>	<i>tju-nku-nytja</i>	<i>pu-ngku-nytja</i>
MV	<i>wangka-ra</i>	<i>patja-<u>ra</u></i>	<i>tju-nku-la</i>	<i>pu-ngku-la</i>

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AC.NMZ	<i>wangka-nytja</i>	<i>patja-ntja</i>	<i>tju-nku-nytja</i>	<i>pu-ngku-nytja</i>
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The entire system is completely interpredictable

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Suffix allomorphy + augments + metrical structure

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PST	<i>(wangka)-ngu</i>	<i>patja-<u>nu</u></i>	<i>tju-nu</i>	<i>(pu-ngu)</i>
PRS	<i>wangka-nyi</i>	<i>patja-<u>ni</u></i>	<i>tju-na-nyi</i>	<i>pu-nga-nyi</i>
IMP.IPFV	<i>wangka-ma</i>	<i>patja-nma</i>	<i>tju-na-ma</i>	<i>pu-nga-ma</i>
PST.IPFV	<i>wangka-ngi</i>	<i>patja-<u>ningi</u></i>	<i>tja-na-ngi</i>	<i>pu-nga-ngi</i>
FUT	<i>wangka-ku</i>	<i>patja-lku</i>	<i>tju-nku-ku</i>	<i>pu-ngku-ku</i>
AG.NMZ	<i>wangka-pai</i>	<i>patja-lpai</i>	<i>tju-nku-pai</i>	<i>pu-ngku-pai</i>
AC.NMZ	<i>wangka-nytja</i>	<i>patja-ntja</i>	<i>tju-nku-nytja</i>	<i>pu-ngku-nytja</i>
MV	<i>wangka-ra</i>	<i>patja-<u>ra</u></i>	<i>tju-nku-la</i>	<i>pu-ngku-la</i>

How is this system changing now?

English borrowings

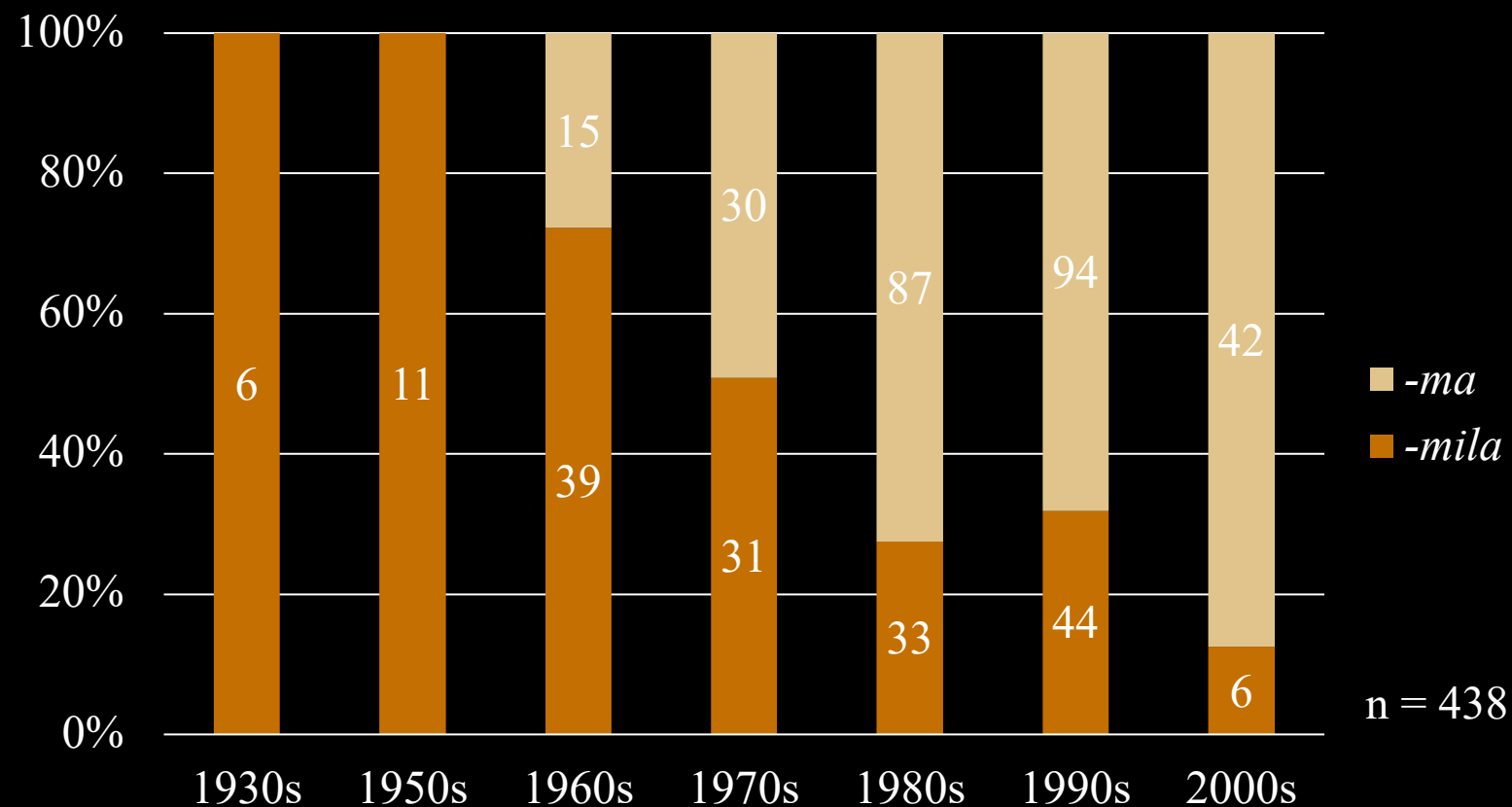
Syllable-counting allomorphy

Inchoative verbs

Borrowing transitive verbs from English

Traditionally, transitive verbs are borrowed with *-mila* (from Kriol transitive *-im* and Arrernte causative *-ilə*). There is a newer variant *-ma*.

kala-mila- ~ *kala-ma-*
colour-LOAN- ~ colour-LOAN-



Inflecting borrowed transitive verbs

l-class

kala-mila-ni ~

colour-LOAN-PRS

l-class

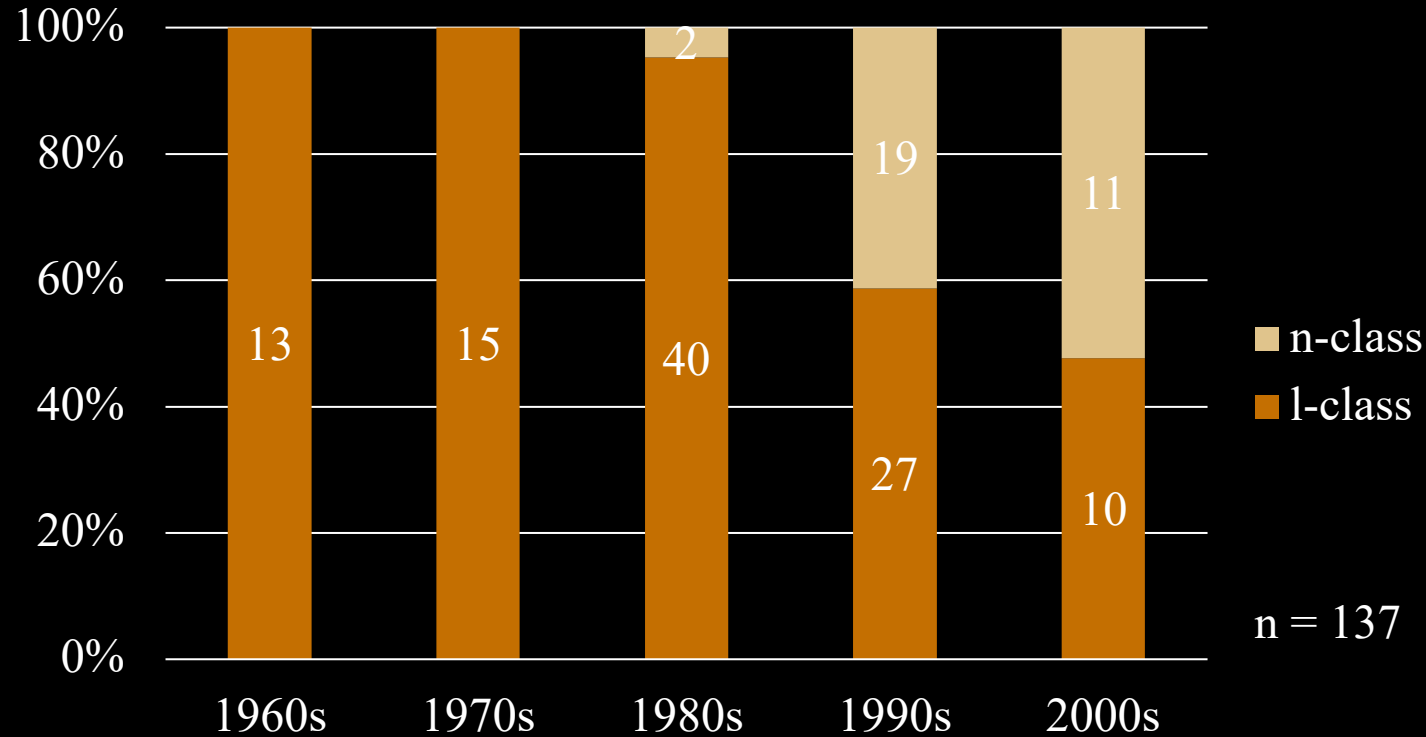
kala-ma-ni ~

colour-LOAN-PRS

n-class

*kala-ma-na-ny*ɪ**

colour-LOAN-AUG-PRS



l-class = stem is fully footed

(kala)(-ma-ni)?

(kala-ma)-ni???

n-class = stem has unfooted syllable

☞ (kala)(-ma-na)-ny*ɪ*

Syllable-counting allomorphy

Described in a number of Australian languages (see Kager 1996, Paster 2005, 2006).

Dyirbal ergative (Dixon 1972)

Disyllabic stems: *-ŋgu*

yara-ŋgu ‘man-ERG’

yugu-ŋgu ‘stick-ERG’

Longer stems: *-gu*

yamani-gu ‘rainbow-ERG’

ɟuna-ŋunu-gu ‘leaves.in.water-from-ERG’

Syllable-counting allomorphy

	Ø-class 'speak'	l-class 'bite'	n-class 'put'	ng-class 'hit'
IMP	<i>wangka-Ø</i>	<i>patja-la</i>	<i>tju-ra</i>	<i>pu-wa</i>
PST	<i>wangka-ngu</i>	<i>patja-<u>nu</u></i>	<i>tju-nu</i>	<i>pu-ngu</i>
PRS	<i>wangka-nyi</i>	<i>patja-<u>ni</u></i>	<i>tju-na-nyi</i>	<i>pu-nga-nyi</i>
IMP.IPFV	<i>wangka-ma</i>	<i>patja-nma</i>	<i>tju-na-ma</i>	<i>pu-nga-ma</i>
PST.IPFV	<i>wangka-ngi</i>	<i>patja-<u>ningi</u></i>	<i>tja-na-ngi</i>	<i>pu-nga-ngi</i>
FUT	<i>wangka-ku</i>	<i>patja-lku</i>	<i>tju-nku-ku</i>	<i>pu-ngku-ku</i>
AG.NMZ	<i>wangka-pai</i>	<i>patja-lpai</i>	<i>tju-nku-pai</i>	<i>pu-ngku-pai</i>
AC.NMZ	<i>wangka-nytja</i>	<i>patja-ntja</i>	<i>tju-nku-nytja</i>	<i>pu-ngku-nytja</i>
MV	<i>wangka-ra</i>	<i>patja-<u>ra</u></i>	<i>tju-nku-la</i>	<i>pu-ngku-la</i>

Syllable-counting allomorphy

Palu-ru ampu-ra kati-ra tju-nku-la ama u-ngku-la malaku-ngku
3SG-NOM hug-MV take-MV put-AUG-MV milk give-AUG-MV back-ERG

main verb

katu-tju-nu wiltja unngu
high-put-PST shelter inside

‘She hugged, took, put, fed, and put up high (her baby) inside the shelter.’

(SW20190427-01-WatiTjagara)

<i>ampu-ra</i>	l-class
<i>kati-ra</i>	Ø-class
<i>tju-nku-la</i>	n-class
<i>u-ngku-la</i>	ng-class

Syllable-counting allomorphy

n-class
(monosyllabic)

tju-nku-la
'put'

Syllable-counting allomorphy

Longer stems have a different medial form.

n-class (monosyllabic)	n-class (longer)
---------------------------	---------------------

<i>tju-nku-la</i> 'put'	<i>wiita-ra</i> 'wet'
----------------------------	--------------------------

Syllable-counting allomorphy

n-class (monosyllabic)	n-class (longer)
<i>tju-nku-la</i> 'put'	<i>wiita-<u>ra</u></i> 'wet'
	<i>ilu-nta-<u>ra</u></i> die-HARM-MV 'kill'

Syllable-counting allomorphy

This is the traditional system for n-class medial verbs.

n-class (monosyllabic)	n-class (longer)
<i>tju-nku-la</i> 'put'	<i>wiita-ra</i> 'wet'
	<i>ilu-nta-ra</i> die-HARM-MV 'kill'
	<i>walka-tju-ra</i> design-put-MV 'write'

Syllable-counting allomorphy

Now there's variation – but only for morphologically complex stems.

n-class (monosyllabic)	n-class (longer)	n-class (complex stems)
<i>tju-nku-la</i> 'put'	<i>wiita-<u>ra</u></i> 'wet'	
	<i>ilu-nta-<u>ra</u></i> die-HARM-MV 'kill'	~ <i>ilu-nta-nku-la</i> die-HARM-MV 'kill'
	<i>walka-tju-<u>ra</u></i> design-put-MV 'write'	~ <i>walka-tju-nku-la</i> design-put-MV 'write'

Syllable-counting allomorphy

Variation in where you start counting syllables.

n-class (monosyllabic)	n-class (longer)	n-class (complex stems)
<i>[tju]-nku-la</i> 'put'	<i>[wiita]-ra</i> 'wet'	
	<i>[ilu-nta]-ra</i> die-HARM-MV 'kill'	<i>ilu[-nta]-nku-la</i> die-HARM-MV 'kill'
	<i>[walka-tju]-ra</i> design-put-MV 'write'	<i>walka[-tju]-nku-la</i> design-put-MV 'write'

Speaker 1: Length of stem
(phonology only)

Speaker 2: Length of preceding morph
(phonology + morphology)

Syllable-counting allomorphy

The variable forms appear at different rates.

n-class (monosyllabic)	n-class (longer)	n-class (complex stems)
<i>tju-nku-la</i> 'put'	<i>wiita-<u>ra</u></i> 'wet'	
	<i>ilu-nta-<u>ra</u></i> die-HARM-MV 'kill'	~ <i>ilu-nta-nku-la</i> die-HARM-MV 'kill'
	<i>walka-tju-<u>ra</u></i> design-put-MV 'write'	~ <i>walka-tju-nku-la</i> design-put-MV 'write'

Syllable-counting allomorphy

The variable forms appear at different rates.

n-class (monosyllabic)	n-class (longer)	n-class (complex stems)
<i>tju-nku-la</i> 'put'	<i>wiita-<u>ra</u></i> 'wet'	
	<i>ilu-nta-<u>ra</u></i> die-HARM-MV 'kill' 72%	~ <i>ilu-nta-nku-la</i> die-HARM-MV 'kill' 28%
	<i>walka-tju-<u>ra</u></i> design-put-MV 'write'	~ <i>walka-tju-nku-la</i> design-put-MV 'write'

Syllable-counting allomorphy

The variable forms appear at different rates.

Put-compounds are leading the way, due to association with standalone verb.

n-class (monosyllabic)	n-class (longer)	n-class (complex stems)
<i>tju-nku-la</i> 'put'	<i>wiita-<u>ra</u></i> 'wet'	
	<i>ilu-nta-<u>ra</u></i> die-HARM-MV 'kill' 72%	~ <i>ilu-nta-nku-la</i> die-HARM-MV 'kill' 28%
	<i>walka-tju-<u>ra</u></i> design-put-MV 'write' 45%	~ <i>walka-tju-nku-la</i> design-put-MV 'write' 55%

Syllable-counting allomorphy

The ‘innovative’ variant is bringing this cell more into line with rest of the system.

	n-class ‘write’	ng-class ‘cough’
FUT	<i>walka-tju-nku-ku</i>	<i>kuntjul-pu-ngku-ku</i>
AG.NMZ	<i>walka-tju-nku-pai</i>	<i>kuntjul-pu-ngku-pai</i>
AC.NMZ	<i>walka-tju-nku-nytja</i>	<i>kuntjul-pu-ngku-nytja</i>
MV	<i>walka-tju-<u>r</u>a ~</i> <i>walka-tju-nku-la</i>	<i>kuntjul-pu-ngku-la</i>

Paradigmatic pressure

Representation of morphological boundaries in phonology

Analogical change (‘put’ leading the way)

Inflecting inchoative verbs

Extremely productive and frequent suffix (536 tokens).

Traditionally, assigned to Ø- or ng-class depending on prosodic structure.

Ng-class:

(pulka)(-ri-nga)-nyi

big-INCH-AUG-PRS

‘grow’

(pika)(-ri-nga)-nyi

wound-INCH-AUG-PRS

‘fight’

Ø-class:

(mungar)(tji-ri)-nyi

afternoon-INCH-PRS

‘get late’

(ala)(tji-ri)-nyi

like.so-INCH-PRS

‘behave like so’

Inflecting inchoative verbs

Now, there's variation.

Ng-class:

(pulka)(-ri-nga)-nyi

big-INCH-AUG-PRS

'grow'

(pika)(-ri-nga)-nyi

wound-INCH-AUG-PRS

'fight'

Ø-class:

(mungar)(tji-ri)-nyi

afternoon-INCH-PRS

'get late'

(ala)(tji-ri)-nyi

like.so-INCH-PRS

'behave like so'

Ø-class:

pulka-ri-nyi

big-INCH-PRS

'grow'

pika-ri-nyi

wound-INCH-PRS

'fight'

ng-class:

mungartji-ri-nga-nyi

afternoon-INCH-AUG-PRS

'get late'

alatji-ri-nga-nyi

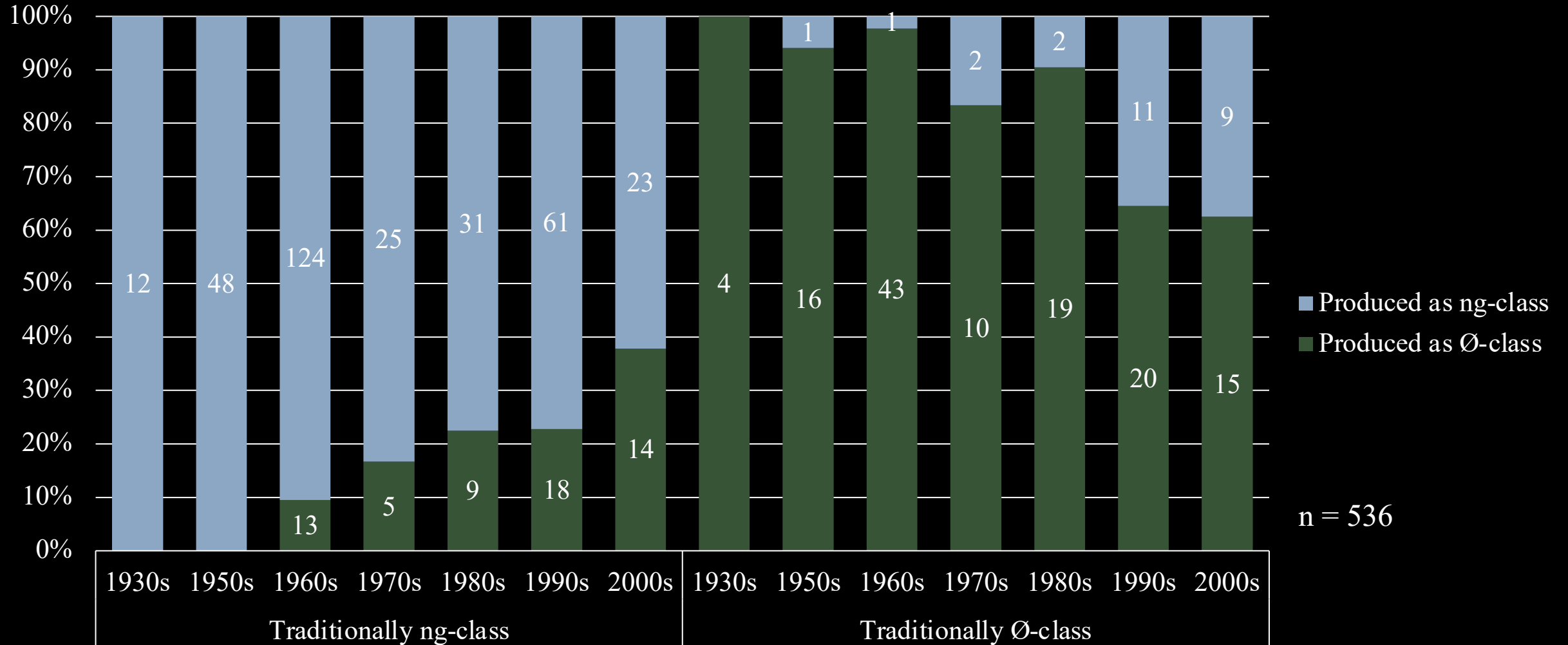
like.so-INCH-AUG-PRS

'behave like so'

Inflecting inchoative verbs

Variation in both ‘directions’, changing at equal rates.

Still a puzzle what is behind this destabilisation.



Conclusion

Intricate and non-canonical system. Information from prosodic shape + augments + suffix allomorphy has a largely complementary distribution. Together this leads to a completely interpredictable system.

Illustrates the low conditional entropy conjecture (Ackerman & Malouf 2013): reasonably high e-complexity but radically low i-complexity (average conditional entropy = 0).

Totally interpredictable inflectional systems aren't usually discussed in much detail:

illustrated by languages with simpler structures (unique suffix allomorphs in every cell, e.g. Baerman et al 2017, Corbett 2009),

presented as abstract, canonical extreme (e.g. Finkel & Stump 2009, Stump & Finkel 2013).

Pitjantjatjara shows how a language can use multiple different features to converge on an interpredictable system.

Change over time

English borrowings

Two innovations in successive generations, showing overall maintenance of prosodically-sensitive system.

Syllable counting allomorphy

Becoming more sensitive to morphology as well as phonology, perhaps a paradigmatic effect.

Inchoatives

Destabilisation, still a puzzle.

Change over time

We don't see:

- loss of inflectional categories

- simplification/conflation of inflectional classes

- use of light verb constructions

- non-morphologically-integrated borrowings

- avoidance of subordinate/nominalised forms

Not all variation is change

Not all change is simplification

Not all change is due to language contact

Not a 'restructured variety', or any evidence of language shift

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Read more in:
my thesis



Morphology paper



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