LOOKING FOR EVIDENCE OF AN ANTI-DOPPEL BIAS IN THE PILBARA

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work in progress

The anti-doppel bias

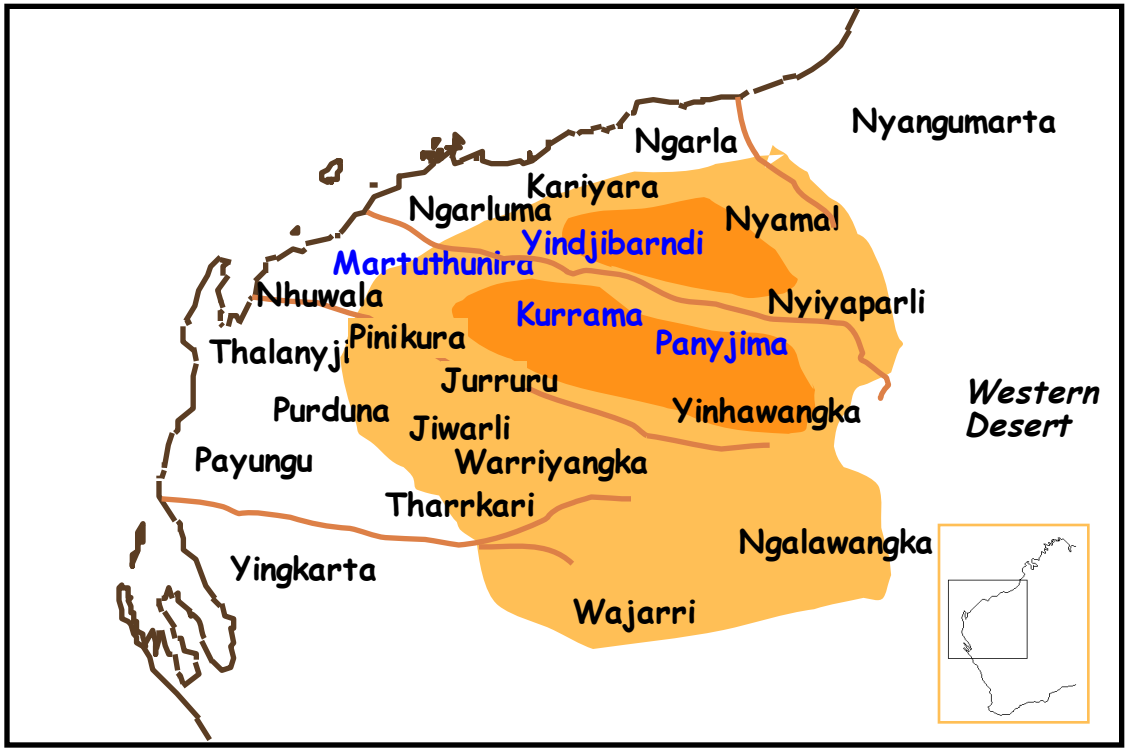
- As outlined by Mark Ellison, the anti-doppel bias we have identified in individual bilinguals can have dramatic diachronic consequences on the word forms of languages in contact
- Our simulations predict that doppels will be lost at a higher frequency than non-doppels in languages that share speakers over time – leading to an outcome of highly differentiated vocabularies
- But how can we determine the likelihood that two or more languages have undergone differentiation as a result of an anti-doppel bias?

Developing a methodology …

- We need to develop a methodology that will allow us to assess the retention rates in languages suspected to have this type of history
- It would not be an alternative to the comparative method
- It would reveal relationships of bilingualism/contact between languages

Pilbara languages as a test case

- Just looking at 4 languages: Martuthunira, Yindjibarndi, Kurrama, Panyjima



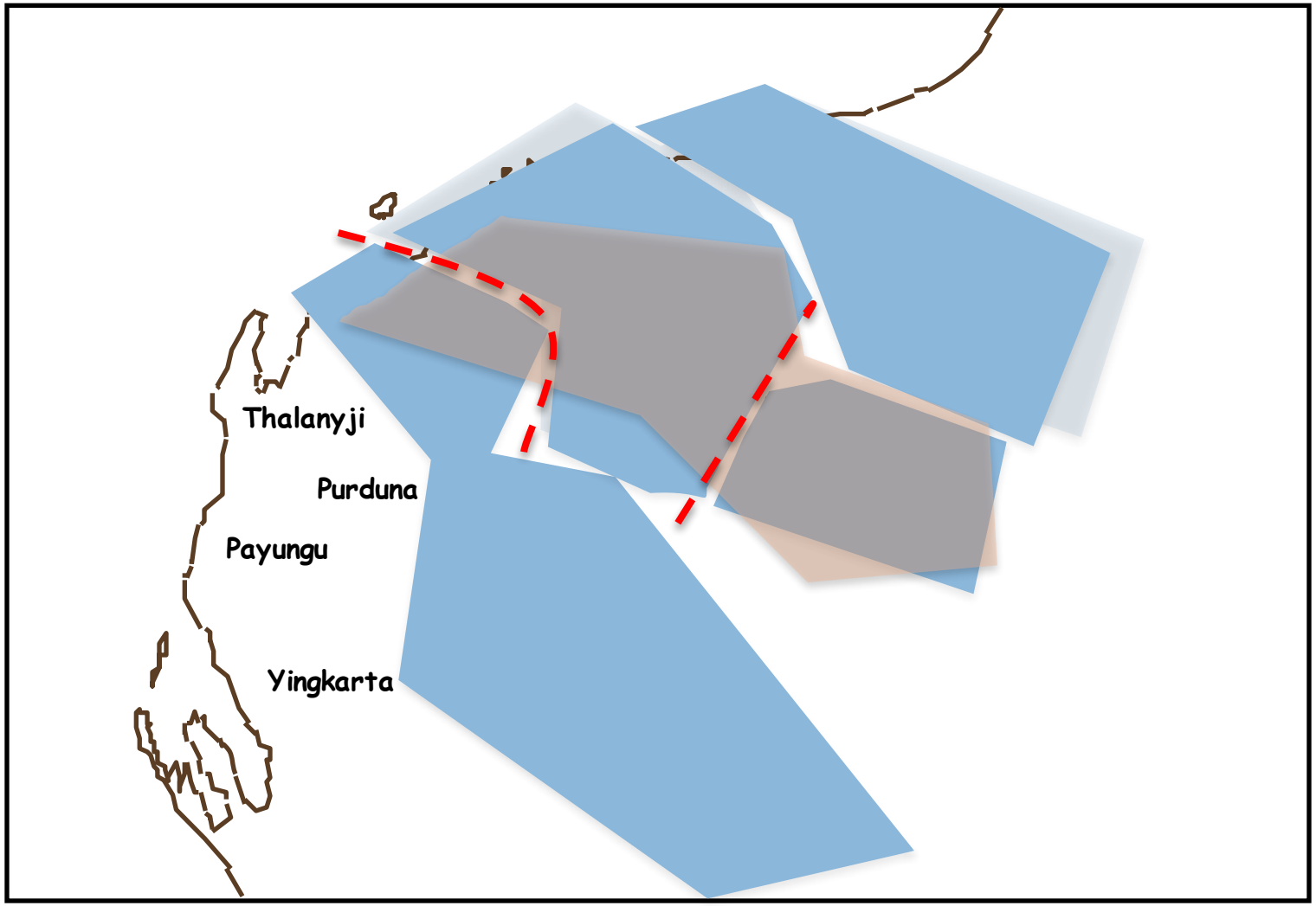
Pilbara languages as a test case

- I picked these 4 languages because:
  - I wanted to focus on related languages in contact, and these languages are obviously, closely related
  - They have all been traditionally assigned to the Ngayarda subgroup of Pama-Nyungan
  - Dench has questioned whether Martuthunira may have undergone some of the changes it shares with neighbouring languages as a result of pattern diffusion/calquing of constructions – e.g. the alignment shift
  - Yindjibarndi/Kurrama are the languages likely to be the source of the new pattern under this hypothesis

From Dench (2009)

- Can we work out if the alignment shift happened:
  - once, in a common ancestor of the accusative languages?
  - more than once, independently, in related languages with similar configurations?
  - or the pattern was borrowed from the innovator(s) into neighbouring languages?

Dench (2009): Alignment shift innovation against pronoun innovations



Hypothesis

- If Martuthunira has undergone restructuring as a result of contact with Yindjibarndi/Kurrama, it is likely that there would have been a certain degree of bilingualism between them

- Is there any evidence of form differentiation between Martuthunira and Yindjibarndi/Kurrama, consistent with an anti-doppel bias?

Possible methodology

- My starting point are O'Grady's reconstructions for Proto-Ngayarta (O'Grady 1966)
- So far I have only looked at 123 of the reconstructions, so still very much work in progress
- The general idea is to look at which of the reconstructed forms for each meaning have been retained in the languages under investigation, and then do some comparison

Possible methodology

- There have been some sound changes in the Pilbara – lenition/loss of stops in certain environments (Ma, Yi, Ku), fortition of laterals (Yi, Ku)
- Initially I wanted to see whether there might be a difference in the retention rate of:

inherited word forms differentiated by sound change (less doppel-like)	vs	inherited word forms not affected by sound change at all (complete doppels)

Less doppel-like case

Proto form	Gloss	Language	Expected reflexes	Retained
*marlku.rra	good	Ma	malkurra	✗
		Yi	markurra	✓
		Ku	martkurra	✓
		Pn	marlkurra	✗

Doppel case

Proto form	Gloss	Language	Expected reflexes	Retained
*marta	blood	Ma	marta	✗
		Yi	marta	✓
		Ku	marta	✓
		Pn	marta	✓

Problem

- Despite sound changes having at times different outcomes, there are not many words that involve the particular contexts involved
- Too many identical word forms
- This approach is not suitable for these particular languages, but can be applicable elsewhere

Alternative approach

- Work out the overall retention rate for each language
- On the basis of this, work out the number of retentions expected between pairs of languages if their retentions are independent
  - product of the individual retention rates, then converted into an expected number of retained words
- Compare to the actual number of retentions for each pair of languages
  - if lower than predicted → anti-doppel bias
  - if at predicted level, no bias
  - if higher than predicted → closer relationship (or borrowing?)

Retention rates for individual languages (so far)

MARTUTHUNIRA	40%
YINDJINBARNDI	82%
KURRAMA	71%
PANYJIMA	60%

Predicted common retention rates between pairs of languages

MARTUTHUNIRA-YINDJIBARNDI	**0.4 X 0.8 = 0.33 (~ 32 WORDS)**
MARTUTHUNIRA-KURRAMA	**0.4 X 0.71 = 0.28 (~ 25 WORDS)**
MARTUTHUNIRA-PANYJIMA	**0.4 X 0.6 = 0.24 (~ 23 WORDS)**
YINDJIBARNDI-KURRAMA	**0.8 X 0.71 = 0.58 (~ 64 WORDS)**
YINDJIBARNDI-PANYJIMA	**0.8 X 0.6 = 0.49 (~ 52 WORDS)**
KURRAMA-PANYJIMA	**0.71 X 0.6 = 0.43 (~ 49 WORDS)**

Results so far …

	Predicted	Actual
MARTUTHUNIRA-YINDJIBARNDI	~ 33 WORDS	33
MARTUTHUNIRA-KURRAMA	~ 25 WORDS	29
MARTUTHUNIRA-PANYJIMA	~ 23 WORDS	23
YINDJIBARNDI-KURRAMA	~ 64 WORDS	73
YINDJIBARNDI-PANYJIMA	~ 52 WORDS	59
KURRAMA-PANYJIMA	~ 49 WORDS	52

Results so far …

- No evidence of an anti-doppel bias
- Maybe there isn't one to be found
- But, only a limited amount of data has been examined and I still need to think through a number of issues that have arisen
- There are missing data points for some meanings examined
- For Martuthunira there is no recorded form for 23 of the 123 meanings looked at so far
- This may be affecting current rates
- Also have to look more carefully at word forms that do not quite match the expected patterns of correspondence and words that are differentiated by some kind of increment

What next …

- Continue to work on this case study
- Work is also in progress testing this methodology on languages where more data is available