

# **Transmission bias, language contact and sound change**

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# ***Is language contact an exceptional form of sound change?***

- Using a database of 77 language contact situations, I identify three typological differences between:
  - ‘normal’ L1 sound change
  - creolisation
  - other language contact (e.g. loans, L2)

# ***How do we explain the differences?***

- **The null hypothesis**
  - Accidental sample bias
- **The transmission bias hypothesis**
  - The sociohistorical circumstances defining each type of language transmission, e.g. age of learner or nature of input, can produce strong biases which block or disfavour certain linguistic changes.

# *The merger bias 1*

Front rounded vowel loss	Creoles	Other contact	L1 change
Unrounding, e.g. y > i	✓	✓	✓
Backing, e.g. y > u	rare	✓	rare

- In every French creole (n=8), the rule is that French /y/ merges with /i/, e.g. plume > /plim/.
- In other forms of language contact (n=27), including francophone West Africa, there is well-attested merger between French /y/ and /u/.

# *The merger bias 2*

- Strikingly, in this case creole sound change patterns with L1 sound change (n=24), not with other language contact.
- **Analysis: Transmission bias hypothesis**
  - When acquisition is less complete, phoneme change is based on perceptual matching.
  - When acquisition is more complete, phonological (articulatory) features are transmitted more accurately.

# ***The merger bias 3***

- **Analysis, continued**
  - Tongue position is privileged over lip rounding with respect to phonological matching.
  - Acquisition is more complete in creolisation than in other forms of language contact, hence tongue position survives as in L1 change.
  - Acquisition is less complete in loanword adaptation, hence change can go in either direction, since perceptual matching depends on L1 phonetics.

# *The assimilation bias 1*

<b>Vowel harmony</b>	<b>Creoles</b>	<b>Other contact</b>	<b>L1 change</b>
Stressed trigger, e.g. búki > búku	✓	✓	✓
Unstressed trigger, e.g. búki > bíki	unknown	✓	✓

- In creoles (7 synchronic systems + many sporadic instances), stressed vowel quality often spreads to unstressed vowels, e.g. Spanish *dedo* > Papiamentu /dede/ ‘finger’.

# ***The assimilation bias 2***

- The opposite process (unstressed vowel quality spreading to stressed vowels) is also well attested in L1 change (16 language families), e.g. German umlaut and Romance metaphony.
- Both processes are found in other types of language contact, which pattern with L1 transmission rather than creolisation.



# ***The assimilation bias 3***

- **Analysis: Null hypothesis**
  - Adult L2 learners tend to overcompensate for weak acoustic salience by reversing apparent phonetic reduction (e.g. schwa).
  - In all known creolisation situations, the lexifiers are more stress-timed (or display more vowel reduction) than the substrate languages.
  - Hence creolisers were more likely to reverse unstressed vowel reduction than the opposite.

# *The epenthesis bias 1*

Word-final consonant repairs	Creoles	Other contact	L1 change
Epenthesis, e.g. <i>big</i> > <i>bigi</i>	✓	✓	rare
Other repairs, e.g. <i>big</i> > <i>bik</i>	✓	✓	✓

- Word-final consonants often trigger vowel epenthesis in language contact, e.g. English *big* > Sranan *bigi*.
  - Creoles (n=11), pidgins and early creoles (n=11), loans (n=11), L2 acquisition (n=8)

# *The epenthesis bias 2*

- Word-final vowel epenthesis is also occasionally reported in L1 change, but generally in situations associated with heavy areal contact:
  - Vulgar Latin
  - South Dravidian
  - Sulawesi and Maluku in Indonesia
  - Old Spanish, originating in 10<sup>th</sup>/11<sup>th</sup> centuries
  - Quranic Arabic
- The exceptions are Australian languages at time depths for which historical data are not available.

# ***The epenthesis bias 3***

- **Analysis: The transmission bias hypothesis**
  - Word-final vowel epenthesis is usually the result of reinterpreting consonant release bursts, not mismatched syllable constraints.
  - Change in the direction of more effortful speech is characteristic of adult L2 acquisition, but is rare in L1 transmission.
  - Hence the resulting sound change is associated with heavy language contact.

# ***Conclusions***

- The transmission hypothesis is supported.
  - In other words, specific forms of language contact can indeed constrain sound change differently from L1 transmission.
- These differences are diachronic and sometimes neutral with respect to synchronic markedness.
  - Simplicity and similarity are not enough when analysing language contact.
- Are there more micro-typologies to be found?

# ***Thank you for reading!***

- Full discussion and references are available in my dissertation:
  - **Ng, E-Ching. 2015. The phonology of contact. Ph.D. dissertation, Yale University.**
  - <http://www.eching.org>
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