

Transmission bias, language contact and sound change

E-Ching Ng <ng.eching@gmail.com>

National University of Singapore

Linguistic Society of America

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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

Vowel harmony	Creoles	Other contact	L1 change
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 10th/11th 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>
- Many thanks to Claire Bower, John Victor Singler, Fred C. Robinson and Stephen R. Anderson.