

Word-final vowel epenthesis: An L2 sound change?

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1. Overview

- (1) **The controversy: simplicity**
 - a. A creole is a (i) massively restructured (ii) L2 that has become an L1.
 - b. Are creoles simple languages?
 - i. Bioprogram: child L1 acquisition → simple grammars (Bickerton 1984)
 - Discredited: bilingual creolisation in Hawaii (Roberts 2000; Siegel 2006; cf. Mufwene 1990)
 - ii. Creole prototype: adult L2 acquisition → simple grammars (McWhorter 1998)
 - Discredited: average inventories, syllable templates (Klein 2011; cf. Mufwene *et al.* 2017)
- (2) **My hypothesis: transmission bias**
 - a. Creoles are ~~simple~~ different.
 - b. The differences are ~~synchronic~~ diachronic.
 - c. Missing sound changes can be traced to ~~child L1 learners' cognitive biases~~ adult L2 learners' phonetic biases.
- (3) **Today's missing sound change: paragoge (word-final epenthesis)**

| Word-final consonant repairs | Language contact | L1 transmission |
|--|------------------|-----------------|
| a. Vowel epenthesis • big > big _i | ✓ | rare? |
| b. Consonant lenition • big > bi <u>k</u> > bi <u>ʔ</u> > bi | ✓ | ✓ |

2. Data

- (4) **Examples of paragoge (refs. in Ng 2015: 115ff; Plag 2009: 131; Hammarberg 1994)**
 - a. **Pidgins and creoles**

| | |
|---|------------|
| English <i>walk</i> > Jamaican Maroon Spirit Language <i>wak<u>a</u></i> | copy vowel |
| English <i>school</i> > Solomon Islands Pidgin <i>sukul<u>u</u></i> | copy vowel |
| Portuguese <i>doutor</i> > São Tome <i>dotol<u>o</u></i> 'doctor' | copy vowel |
| Dutch <i>pompoen</i> > Berbice Dutch Creole <i>pampun<u>a</u></i> 'pumpkin' | |
 - b. **Loanword adaptation**

| | |
|--|---------------|
| English <i>ice</i> > Japanese [ais <u>u</u>] 'ice cream' | reduced vowel |
| French <i>avec</i> 'with' > Korean [apɛk' <u>i</u>] 'dating couple' | reduced vowel |
| Arabic <i>nūr</i> > Swahili [nur <u>u</u>] 'light' | copy vowel |
| Malay <i>burung</i> > Malagasy [voron <u>a</u>] 'bird' | |
 - c. **L2 acquisition**

| | |
|--|-----------------|
| L1 Mandarin L2 English <i>red</i> [red <u>ə</u>] | placeless vowel |
| L1 Cantonese L2 English <i>blanket</i> [blæŋkət <u>ə</u>] | placeless vowel |
| L1 German L2 Swedish <i>familj</i> [fəmilj <u>ə</u>] 'family' | placeless vowel |
| L1 Brazilian Portuguese L2 English <i>dog</i> [dog <u>i</u>] | |

- (5) **Language contact: Paragoge is everywhere (refs. in Ng 2015: 117ff)**
- a. **Atlantic creoles:** Sranan, Saramaccan, Jamaican, Maroon Spirit Language, Krio, Negerhollands, Berbice Dutch Creole, Fa d'Ambu, Papiamentu, Palenquero, Bozal Spanish
 - b. **Atlantic pidgins and early creoles:** early Sranan, early Saramaccan, early Kittitian, early Jamaican, early Krio, early Bajan, Liberian Interior English, Nigerian Pidgin English, Ghanaian Pidgin English
 - c. **Pacific pidgins and creoles:** Solomon Islands Pidgin, Chinese Pidgin English
 - d. **Loanword adaptation:** Japanese (from English, French, Chinese), Korean (from English, French), Cantonese (from English), Hawaiian (from English), Warlpiri (from English); Shona (from English), Fon (from French), Swahili (from Arabic), Kanuri (from Arabic, Hausa), Selayarese (from Indonesian)
 - e. **L2 acquisition of English:** Mandarin, Taiwanese, Cantonese, Korean, Vietnamese, Japanese, Spanish, Brazilian Portuguese
- (6) **L1 transmission: Paragoge is often reported to be missing or rare**
- a. Synchronically (missing: Sanders 1979; cf. Steriade 2001)
 - b. Diachronically (rare: Campbell 1999: 35; Singh & Muysken 1995)
 - c. Child speech (rare: Demuth *et al.* 2006)
- (7) **Historical cases: Paragoge is not missing, but it's not common (refs. in Ng 2015: 123ff)**
- a. Language contact?
 - Brazilian Portuguese, Old Spanish, Vulgar Latin, South Dravidian, Quranic Arabic
 - b. Lacking historical records:
 - Indonesia: Many languages in Sulawesi and Maluku
 - Australia: Anguthimri, Arandic languages, Lardil

3. Previous proposals

3.1 Previous proposals: Paragoge is impossible

- (8) **Claim: Devoicing [bik] is always favoured over epenthesis [bigi]**
- a. Two proposals from early Optimality Theory
 - Deleting a feature is more parsimonious than epenthesising a segment (Lombardi 1995/2001)
 - p-map: Devoiced [bik] is more perceptually similar to /big/ (Steriade 2001/2008)
 - b. So why is paragoge so common in language contact?

3.2 Previous proposals: Paragoge is only possible in language contact

- (9) **Claim: L1/L2 mismatch (Eckman 1981: 214; cf. Singh & Muysken 1995)**
- a. You are learning a language with CVC syllables, e.g. /big/
 - You are only able to pronounce CV syllables, e.g. [bi], [bigi]
 - Mismatch (underlying vs. surface) is not possible in L1 acquisition

- b. Then how do we explain these cases?
 - Mismatch within L1: German *Tag* [tak] ‘day’ (cf. Russian, Turkish, SgEng, etc.)
 - Loanword paragoge without mismatch: Korean [kæk] ‘guest’ but *avec* → [apɛkʰi]
 - Language change creates mismatch: Cantonese [lok] vs. Mandarin [lju]

(10) **Claim: Written input is responsible for L2 paragoge (Young-Scholten *et al.* 1999)**

- a. We learn L2 from written input, discouraging deletion and hence favouring epenthesis
- b. Then how do we explain creole paragoge?

3.3 Previous proposals: Paragoge is perfectly natural

(11) **Claim: Faithfulness always favours epenthesis**

- a. Two proposals from loanword studies
 - Preservation Principle: Segmental contrasts are maximally preserved (Paradis & LaCharité 1997; cf. Eckman 1981: 213)
 - Featural faithfulness: V epenthesis is better than C deletion (Uffman 2007: 206).
- b. So why is it only common in language contact?

(12) **Claim: Paragoge is a natural phonetic development**

- a. C release burst interpreted as reduced V (Kang 2003; Blevins 2004: 146; Davidson 2007)
 - Production: You can pronounce *big* /big/ as [big^ɾ] or [big^ə]
 - Perception: You might interpret [big^ə] as /big/ or /bigə/
- b. So why is it only common in language contact?

4. My proposal

(13) **The missing sound change in more detail**

| Word-final consonant repairs | Language contact | L1 transmission |
|---|------------------|-----------------|
| a. Paragoge • big > big ^ə > bigə > bigi | ✓ | not common |
| b. Lenition • big > bik > bi? > bi | ✓ | ✓ |

(14) **Lenition is a natural phonetic development**

- a. L1 speech is characteristically fluent, fast and casual
- b. Word-final consonants are weakly produced, poorly perceived
 - Production: You are likely to pronounce *big* /big/ as [big^ɾ] or [big^k]
 - Perception: You are likely to interpret those as [bik] > [bi?] > [bi]
- c. These sound changes can also occur in L2 speech when fluent or casual.

- (15) **Paragoge is natural *only* in L2 speech**
- Paragoge has two crucial stages, both effortful
 - Production ($\text{big} > \text{big}^\partial$): consonant release burst despite aerodynamic difficulty
 - Perception ($\text{big}^\partial > \text{big}^\partial$): overcompensation for apparent vowel reduction
 - Effortful language use is rare among fluent speakers, but common in early L2 acquisition.
- (16) **Production stage ($\text{big} > \text{big}^\partial$) is well attested in L2 acquisition (refs. in Ng 2015: 128ff)**
- L2 English: Cantonese, Korean, Portuguese, Mandarin. L2 Swedish: German.
 - Exceptions
 - Brazilian Portuguese: [i]-paragoge (L1-like), then schwa-paragoge (advanced learners)
 - Japanese: /u/-paragoge (this vowel is often reduced and devoiced in Japanese)
- (17) **Perception stage ($\text{big}^\partial > \text{big}^\partial$) is also attested**
- Korean loanword paragoge is correlated with stop release in source language.
French: always. English: correlated with release rates. (Kang 2003)
 - Paragoge judged *more* perceptually similar than devoicing (Kawahara & Garvey 2010)
- (18) **Why isn't paragoge more common in L1 transmission?**
- Both stages seem to be possible for L1 speakers:
 - $\text{big} > \text{big}^\partial$: L1 French phonetics require consonant release burst (but chronology);
 - $\text{big}^\partial > \text{big}^\partial$: L1 English perceive as highly similar (but refs. in Ng 2015: 85).
 - Proposal: Faced with multiple variants of /big/, e.g. [big⁷], [big^k], [big[∂]],
 - L1 speakers will seldom introduce a *more* effortful one in their own speech,
 - but some L2 speakers will.

5. Factors

- (19) **What encourages paragoge in L2 acquisition?**
- Formality \propto paragoge (Lin 2001; cf. Weinberger 1987; Jenkins 2000: 116ff)
 - conversation tasks < read sentences < minimal pairs
 - Age \propto paragoge (Young-Scholten *et al.* 1999)
 - 10–12 (5.6%) < 15–18 (16.3%) < 20–25 (20.4%) < 35–55 (32.4%)
- (20) **What discourages paragoge in language contact?**
Paragoge seems to disappear as speakers grow in fluency.

| More paragoge | Less paragoge |
|--|--|
| <i>Pidgins and creoles</i> | |
| Maroon Spirit Language | Jamaican |
| Surinamese creoles (radical) | Bajan, Hawaiian Creole (English-like) |
| Berbice Dutch Creole | Negerhollands |
| Older speakers' Solomon Islands Pidgin | Younger speakers' Solomon Islands Pidgin |

| More paragoge | Less paragoge |
|--|--|
| <i>Loanword adaptation</i> | |
| English names in mainland China | English names in Taiwan |
| English loanwords in standard Japanese | English loanwords in Hawaiian Japanese |
| <i>World Englishes</i> | |
| Interior Liberian basilect | Coastal Liberian English |

(references in Ng 2015: 128, 143ff)

6. Conclusion

(21) Does paragoge support the transmission bias hypothesis?

Effortful: favoured in relatively early L2 acquisition, disfavoured in L1 transmission.

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(22) Implications

- a. Creole studies: new directions for research on creolisation and exceptionalism
- b. Phonology: new micro-typologies linked to conditions of language use
- c. Historical linguistics: a new indicator suggestive of past language contact?

(23) Future directions

- a. Database: Quantify the asymmetry between contact and L1 transmission
- b. Follow up: Exceptions (on both sides of the asymmetry) and L2 acquisition literature
- c. Predictions: Are there other types of fortition or asymmetries which might be relevant?

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