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)

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<th>Word-final consonant repairs</th>
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<tr>
<td>a. Vowel epenthesis • big &gt; bigi</td>
<td>✓</td>
<td>rare?</td>
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<tr>
<td>b. Consonant lenition • big &gt; bik &gt; bi? &gt; bi</td>
<td>✓</td>
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2. Data

(4) Examples of paragoge (refs. in Ng 2015: 115ff; Plag 2009: 131; Hammarberg 1994)
   a. Pidgins and creoles
      English walk > Jamaican Maroon Spirit Language waka copy vowel
      English school > Solomon Islands Pidgin sukulu copy vowel
      Portuguese doutor > São Tome dotoló ‘doctor’ copy vowel
      Dutch pompoen > Berbice Dutch Creole pampuna ‘pumpkin’
   b. Loanword adaptation
      English ice > Japanese [aisu] ‘ice cream’ reduced vowel
      French avec ‘with’ > Korean [apek’i] ‘dating couple’ reduced vowel
      Arabic nur > Swahili [nuru] ‘light’ copy vowel
      Malay burung > Malagasy [vorona] ‘bird’
   c. L2 acquisition
      L1 Mandarin L2 English red [reda] placeless vowel
      L1 Cantonese L2 English blanket [blæŋkətʃ] placeless vowel
      L1 German L2 Swedish familj [familja] ‘family’ placeless vowel
      L1 Brazilian Portuguese L2 English dog [dogi]
(5) Language contact: Paragoge is everywhere (refs. in Ng 2015: 117ff)
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 epenthising 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

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 → [apek’i]
   ‣ 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
      ‣ 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 [biğ] or [big̊]
      ‣ Perception: You might interpret [big̊] 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

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(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 [biğ] or [big̊]
      ‣ 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.
Paragoge is natural only in L2 speech
a. Paragoge has two crucial stages, both effortful
   † Production (big > big\textsuperscript{\textbullet}): consonant release burst despite aerodynamic difficulty
   † Perception (big\textsuperscript{\textbullet} > big\textsuperscript{\textcircled{a}}): overcompensation for apparent vowel reduction
b. Effortful language use is rare among fluent speakers, but common in early L2 acquisition.

Production stage (big > big\textsuperscript{\textbullet}) is well attested in L2 acquisition (refs. in Ng 2015: 128ff)
b. Exceptions
   † Brazilian Portuguese: [i]-paragoge (L1-like), then schwa-paragoge (advanced learners)
   † Japanese: /u/-paragoge (this vowel is often reduced and devoiced in Japanese)

Perception stage (big\textsuperscript{\textbullet} > big\textsuperscript{\textcircled{a}}) is also attested
a. Korean loanword paragoge is correlated with stop release in source language.
b. Paragoge judged more perceptually similar than devoicing (Kawahara & Garvey 2010)

Why isn’t paragoge more common in L1 transmission?
a. Both stages seem to be possible for L1 speakers:
   † big > big\textsuperscript{\textbullet}: L1 French phonetics require consonant release burst (but chronology);
   † big\textsuperscript{\textbullet} > big\textsuperscript{\textcircled{a}}: L1 English perceive as highly similar (but refs. in Ng 2015: 85).
b. Proposal: Faced with multiple variants of /big/, e.g. [big\textsuperscript{\textcircled{8}}], [big\textsuperscript{\textcircled{18}}], [big\textsuperscript{\textbullet}],
   † L1 speakers will seldom introduce a more effortful one in their own speech,
   † but some L2 speakers will.

5. Factors

What encourages paragoge in L2 acquisition?
   † conversation tasks < read sentences < minimal pairs
b. Age ∝ paragoge (Young-Scholten et al. 1999)
   † 10–12 (5.6%) < 15–18 (16.3%) < 20–25 (20.4%) < 35–55 (32.4%)

What discourages paragoge in language contact?
Paragoge seems to disappear as speakers grow in fluency.

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More paragoge | Less paragoge

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<th>World Englishes</th>
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<td>Interior Liberian basilect</td>
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(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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References