(1) Typological gaps in vowel processes

<table>
<thead>
<tr>
<th></th>
<th>L1 transmission</th>
<th>Creolization</th>
<th>Other contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Loss of front rounded vowels</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Unrounding</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>• y &gt; i</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Backing</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>• y &gt; u</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>B. Stress-sensitive harmony</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Strong-to-weak</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>• bóki &gt; bóke</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Weak-to-strong</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>• bóki &gt; búki</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>C. Word-final repairs</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Paragoge</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>• tæg &gt; tægə</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>• tæg &gt; tæk</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

(2) Typologies and OT (Gordon 2007)
- Pathological gaps (i.e. wrong constraints)? — No
- Accidental gaps? — No
  - Small sample for creolization (case studies A, B) but large sample for L1 transmission (case study C)
- Diachronic biases — Plausible
  - Coda devoicing (Steriade 2001), NC̃ sequences (Myers 2002)

(3) My proposal
- Different circumstances → Different diachronic biases → Different typologies
  - Language contact is different because of L1 influence
  - Creolization is different because of group learning situation over extended time
- Different types of transmission → Different phonetic effects → Typological asymmetries
  - L1 transmission vs. creolization vs. other contact

(4) Contribution to language contact studies
- Similarities between L1 transmission and SLA (Eckman 2004), SLA and creolization (Plag 2009)
- Differences: creoles said to be simpler (McWhorter 2001), but not so in phonology (Klein 2011)
- This dissertation demonstrates clear differences between these transmission types.
A. Loss of front rounded vowels: Creolization vs. other contact

<table>
<thead>
<tr>
<th>Loss of front rounded vowels</th>
<th>Creolization</th>
<th>Other contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unrounding</td>
<td>y &gt; i</td>
<td>(6)</td>
</tr>
<tr>
<td>Backing</td>
<td>y &gt; u</td>
<td></td>
</tr>
</tbody>
</table>


- French mur [myʁ] > Haitian [mi] ‘wall’
- French juge [ʒyʒ] > Mauritian [ziʒ]

(7) a. Other contact: Unrounding /y/ > /i/ is common

- Br. Portuguese: French perception (Rochet 1995)
- Indonesian: Dutch loans (Sneddon 2003: 164)
- Taiwanese: nativised Mandarin (Kubler 1981)
- Serbian: L2 German (Jelena Krivokapić, p.c.)

b. Other contact: Backing /y/ > /u/ is less common


⇒ Backing occurs only when influenced by L1 with phonetically fronted or less rounded /u/.

(8) a. Different outcomes: Due to different input in creoles vs. other contact? — No

- No unusual features reported for /y/ in 17th century French dialects (Ayres-Bennett 1990)
- Lack of orthographic input does not change American English speakers’ perception (Rochet 1995)

⇒ Creole exceptionalism cannot be explained by different input

b. Different outcomes: Due to different L1s? — Not the whole story

- Perception of front rounded vowels is influenced by L1 (Rochet 1995).
- Similar L1 influence in francophone Africa, but different from creoles: /y/ > /i/, /u/
  - Asante Twi, Ghana (Haggis 1975: 65)
  - Ewe, South Togo (Lafage 1985: 165)
  - Bassa, coastal Cameroon (Wamba & Noumssi 2004: 46)

⇒ L1 influence cannot be wholly responsible for the split between creoles and other contact.

(9) What do we know about creolization and SLA that’s relevant?

a. Creolization: Two stages (Chaudenson 2001: 95ff)

- Homestead stage: Fewer slaves, more social interaction ⇒ Access to native-speaker French
- Plantation stage: Adult males, short life expectancy ⇒ Target shift: L2 French of previous arrivals

b. SLA: Early but reduced acquisition of unfamiliar contrasts

- Contrasts acquired early, e.g. beat/bead (one year in America: Flege 1980; Flege 1993; Flege et al. 2003)
- Contrasts reduced even by experienced learners: attracted to L1 category (Flege & Hillenbrand 1984)

(10) Proposal: SLA of /y/ in creolization

a. /y/ is acoustically intermediate between /i/ and /u/, hence it can be attracted by both (Bunta 2005)
  - /i/-like: [y] with reduced lip rounding.
  - /u/-like: [u̟]. Continuum attested in the francophonie.

b. Group norming favours one winner, the /i/-like pronunciation because

- Early acquisition of unfamiliar L2 contrasts in immersion (9b), possible in the homestead stage (9a).
- /u/-like pronunciations are only favoured when L1 has non-canonical /u/ (7b)

c. Lip rounding would be gradually lost due to reduced acquisition of L2 contrasts (9b)

⇒ Typological gap due to perception and production effects associated with group SLA of creolization.
B. Stress-sensitive harmony: Creolization vs. L1 transmission

<table>
<thead>
<tr>
<th>Harmony</th>
<th>Creolization</th>
<th>L1 transmission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong-to-weak</td>
<td>bóki &gt; bókε</td>
<td>(12)</td>
</tr>
<tr>
<td>Weak-to-strong</td>
<td>bóki &gt; bükì</td>
<td>(13b)</td>
</tr>
</tbody>
</table>

(12) Creolization: Strong-to-weak (sporadic) harmony (Holm 1988: 125)
- French *grosséur* > Haitian [gwɔsɛ] 'size' (expected gwɔsɛ)
- Spanish *respónde* > Papiamentu [ʁɔspɔnde] 'answer'

(13) a. L1 transmission: Strong-to-weak harmony in Pasiego Montañes Spanish (Majors 1998: 1)
  - Strong-to-weak harmony: Stressed triggers, unstressed targets
    i. beb-gré ‘I will drink’  
    ii. bib-ïría ‘I would drink’
  b. L1 transmission: Weak-to-strong harmony in Grado Italian (Walker 2005: ex. 2e)
  - Unstressed triggers, stressed targets: Weak-to-strong harmony
    i. prefûnn-a ‘profound (f. sg.)’  
    ii. prefûnn-u ‘profound (m. sg.)’

(14) a. Weak-to-strong harmony: Articulatory unnaturalness? — No
  ⇒ Weak-to-strong harmony is not articulatorily natural.

b. Weak-to-strong harmony: Perceptual enhancement (Walker 2005)? — No
  - Cue enhancement is a zero-sum game. Why enhance trigger cues at the cost of target cues?
  - Other listener-oriented effects are attested in production (Yao 2010); this one isn’t.

c. Weak-to-strong harmony: Morphological contrast (Lloret 2007)? — No
  - Skipping intervening syllables in Lena Spanish (Hualde 1998: 104)
    i. kàndan–os ‘dry branches’  
    ii. kàndan–u ‘dry branch’
  ⇒ Weak-to-strong harmony does not maximise morphological contrast.

(15) a. Articulatory unnaturalness in Finnish palatal harmony (Ohala 1994)
  i. Back /a o u/  
    [pou̯tə] ‘fine weather’  
    [pou̯tə]-lla ‘in good weather’
  ii. Front /æ ø y/  
    [pøyte] ‘table’  
    [pøyte]-lla ‘on the table’
  iii. Neutral /i e/  
    [men-ı] ‘going’  
    [men-kojn] ‘let him go’
  ⇒ The most ‘acoustically palatal’ vowels are the ones that don’t trigger palatal harmony.

b. Differential compensation: Compensate more when you expect more coarticulation
  - Compensate for expected effect (strong-to-weak), undercompensate for less expected (weak-to-strong)
    ⇒ Neutral /i e/ in palatal harmony, weak-to-strong harmony
  - Undercompensate across the board (note: strong-to-weak coarticulation is greater)
    ⇒ Strong-to-weak harmony

(16) Proposal: L2 learners are too inexperienced to carry out differential compensation
- L1 listeners are able to undercompensate for weak triggers
- L2 learners tend to undercompensate across the board (cf. Levy & Strange 2008: 151)
C. Paragoge: Contact vs. L1 transmission

(17) Word-final repairs

<table>
<thead>
<tr>
<th>Paragoge</th>
<th>Contact</th>
<th>L1 transmission</th>
</tr>
</thead>
<tbody>
<tr>
<td>tæg &gt; tæg</td>
<td>(18)</td>
<td>rare</td>
</tr>
<tr>
<td>Others</td>
<td>tæg &gt; tæk</td>
<td>✓</td>
</tr>
</tbody>
</table>

(18) Contact: Paragoge (Holm 1988; Tsuchida 1995; Tarone 1980)

a. Creoles
   - English laugh > Saramaccan läfu
b. SLA
   - English blanket > L1 Cantonese [blaŋkatə]
c. Loanwords
   - English fizz > Japanese [φizu]

(19) Previous proposals on lack of paragoge in L1 transmission — Problematic

- Unattested repairs are harmonically bounded (laryngeal underspecification: Lombardi 1995/2001)
- Unattested repairs are those which cannot result from misperception (p-map: Steriade 2001)

(20) a. Paragoge is possible in contact: Perception of release bursts as full vowels
   - L1 phonotactics may favour perception of release bursts as full vowels (Boersma & Silke 2009)
   - L2 paragogic vowels are frequently marked short and voiceless, e.g. [blaŋkatə] (Tarone 1980)
b. Paragoge is favoured in contact: Adults self-monitor more effectively (Jaeger 2005: 82)
   - Adults self-monitor more effectively than children; may militate against deletion in adult SLA
   - Rates of L2 paragoge increase in more formal speech tasks (Eckman 2004: 539)
c. Paragoge is disfavoured in L1 transmission: Child articulatory constraints
   - Children may have greater difficulty articulating onsets faithfully than codas (McAllister 2009)
   - Paragoge would not be an articulatory improvement since it introduces more onsets

Conclusion

(21) Summary

- Different types of transmission → Different phonetic effects → Typological asymmetries
- Synchronic systems constrained by diachronic biases as well as UG (Steriade 2001; Blevins 2004)

(22) Implications

- A new way of using language contact data to test general theories of typology
- Diachronic biases must be a consideration when matching theory to data

(23) Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring 2010</td>
<td>Unrounding (case study) term paper</td>
</tr>
<tr>
<td>Fall 2010</td>
<td>Harmony (case study) term paper</td>
</tr>
<tr>
<td>Spring 2011</td>
<td>Unrounding presentation at SPCL (Pittsburgh, 8 Jan)</td>
</tr>
<tr>
<td>Date</td>
<td>Task</td>
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<tr>
<td>Summer 2011</td>
<td>Unrounding chapter</td>
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<tr>
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<td>Harmony presentation at SPCL (Accra, 2 Aug)</td>
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<td>Fall 2011</td>
<td>Harmony chapter</td>
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<td>Literature review detailed outline</td>
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<td>Confirm external readers</td>
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<td>Spring 2012</td>
<td>Epenthesis chapter draft</td>
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<td>Literature review draft</td>
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<tr>
<td>Fall 2012</td>
<td>Finalise epenthesis chapter</td>
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<tr>
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<td>Finalise literature review</td>
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<tr>
<td>Spring 2013</td>
<td>Submit dissertation</td>
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I would like to thank Claire Bowern, Steve Anderson, Darya Kavitskaya, Erich Round, John Singler, Leandro Bolaños, Emily Gasser and Jason Zentz for their help with this project. Of course I am to blame for any errors, not they.

References


