Limits of ABC

Discussion

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Conference on Agreement by Correspondence
Berkeley, May 2014
Overarching theme

• Is ABC an adequate theory for capturing the full range of harmony and disharmony patterns in the world’s languages?
  – Is it too powerful?
  – Is it not powerful enough?
Bowman

• ABC is not powerful enough
  – It can’t predict the set of vowels that are transparent.

• Solution: Modifications or additional mechanisms are needed.
McMullin

• ABC seems adequate
  – Depends on whether beyond transvocalic dissimilation is attested.
What should ABC be responsible for?

• How do we know a theory is (in)adequate?
  – Attested typology
  – Experimental evidence

• How do we know that the evidence is adequate?
  – Is typological sample unbiased or representative.
  – Is the experimental evidence unbiased? Are there hidden confounds?
Typology and learning bias

- This result reflects the typology of consonant harmony
  - Two types of locality, transvocalic and unbounded

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<th>…Cv–Cv</th>
<th>…Cvcv–Cv</th>
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- Accounting for this dichotomy/learning bias in OT
  - Universal ABC constraints only allow for these two locality levels
Results: Liquid harmony (Restricted training)

Training Condition
- Control
- Short-range Harmony
- Medium-range Harmony

Proportion of harmony responses

Testing Distance

Short-range cvcvLv-Lv
Medium-range cvLvcv-Lv
Long-range Lvcvcv-Lv

(McMullin and Hansson 2013)
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**Med-Harm Group at Short-range (Unseen)**

- Proportion harmony responses over subjects 201 to 203.

**Med-Harm Group at Med-range (Saw Harm)**

- Proportion hues over subjects 201 to 203.

**Med-Harm Group at Long-range (Unseen)**

- Proportion harmony responses over subjects 201 to 203.
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**Med-Diss Group at Short-range (Unseen)**

[Graph showing proportion of disharmony responses for Subject ID ranging from 404 to 407.]

**Med-Diss Group at Med-range (Saw Diss)**

[Graph showing proportion of disharmony responses for Subject ID ranging from 404 to 407.]

**Med-Diss Group at Long-range (Unseen)**

[Graph showing proportion of disharmony responses for Subject ID ranging from 404 to 407.]
### UC Berkeley Phonology Lab Annual Report: ABC↔Conference

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#### Short-Harm Group at Short-range (Saw Harm)

![Graph showing proportion of harmony responses across different subject IDs ranging from 112 to 103.]

#### Short-Harm Group at Med-range (Unseen)

![Graph showing proportion of harmony responses across different subject IDs ranging from 112 to 103.]

#### Short-Harm Group at Long-range (Unseen)

![Graph showing proportion of harmony responses across different subject IDs ranging from 112 to 103.]

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Opaque rule learning

Ettlinger, Bradlow, & Wong 2012
Some open questions

• What type of grammatical competence are we trying to account for?
  – Population norm? Why? Simpson’s paradox?
  – Individual/idiolectal pattern? Too much variation?

• Should we stop questioning the adequacy of ABC and interrogate the nature of our evidence instead?
  – Bennett’s presentation