Main Points

1) Orthographic cross-language mapping data can be used as a diagnostic for determining the degree to which L2 identification abilities depend on L1 categories.
2) Mapping, and hence, L1 category dependence, depends on prosodic (linguistic) context.
3) Neutralization processes in the L1 makes L2 identification harder, possibly due to labeling difficulty with L1 categories.

Predicting L2 Identification Rates from L1 mapping Data: Similarity Patterns for English and Korean Obstruents in Pre- and Post-stressed Intervocalic and Post-vocalic Position

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Introduction

Speech Learning Model (SLM) - Flage, 1995
Acquisition of production skills is dependent on similarity between phonetic objects in the L1 and L2.
- "Similar" L2 phones: similar enough to L1 objects to be entwined with the L1 categories. Production & perception skills will closely resemble L1 skills.
- "New" L2 phones: dissimilar enough to L1 objects to acquire attention in acquisition. Production & perception skills will closely approximate (in quality) those of the L2.

Quantifying Similarity Mapping - Park & de Jong, 2008
Tested production confusion and L1 identification (ID) skills, if the L2 segment is "similar".
- See Methods to the right.

Park & de Jong (2008) reports the results in Fig.1. Bidirectional perceptual mapping between English & Korean obstruents in VCV (Fig.1) indicates that English anterior obstruents (/p b t d/) can be mapped onto Korean stops (Fig.1)

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Method

Stimuli
- 4 Midwestern American English speakers (2M&2F) in their late 20s
- 8 English anterior obstruents (p b t d v θ ð/) with /a/ in VCV, VCV`, & VC
- Non-native words in isolation

Listeners
- 40 Korean learners (20M&20F) in their late 20s (mean age 24-24.97 yrs.)
- Run in Kyonggi University (near Seoul)
- Native English speaking areas prior to the experiment.

Procedure - Identification & Goodness ratings
- Free-field presentation in groups of approximately 10
- Identification from 13 Korean labels (w w w m w w n w n w w o n w n w n w s w w)
- Identification from 15 Roman & IPA symbols (p b d v θ ð)
- Goodness ratings on a scale from 1 to 7 (used for weighting)

Analysis
- Prediction: accuracy of probability based on Korean labelings (Fig.1)
- Probability of where L2 category A is perceived as Category A
- Probability of category A being perceived as L1 category X probability

Results

LSM: 0.84 /d/ ÷ (0.18 /v/ + 0.78 /ð/+ 0.07 /θ/ + 0.84 /d/)
Korean /t'/

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Research Questions

1) To what extent does L2 category ID depend on L1 category mapping in VCV, VCV`, & VCV`?

2) How do these prosodic contexts modulate influence this dependence?

3) Neutralization processes in the L1 makes L2 identification harder, (linguistic) context.

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Discussion & Conclusions

1) The orthographic cross-language mapping techniques demonstrated the degree to which L2 identification abilities depend on the L1 skills. Results in VCV probability resembled results from Park & de Jong (2008), whereas results in VCV` & VCV` did not.

2) Prosodic context affects L1 category dependence. In VCV & VCV` position, Korean learners seem to use L1 skills for stops, and additional skills beyond the L1 for fricatives. In VCV` position, confusion between stops & fricatives is somewhat unclear and L1 category dependence seems to extend to its influence to more L2 categories. In VCV` position, the decrease in goodness ratings between stops & fricatives are driven by English production efficacies & inhibition effects on stops in Korean.

3) Prosodic effects in the L1 affect L2 identification. Evidence for identification is lateral or manner contrast, but notional into unreleased lax stops.

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References

