Background
Failure to encode a phonemic difference lexically results in spurious homophony.

But is it really because of the absence of the relevant phonemic category? Indeed, Escudero et al. (2008) and Weber & Cutler (2004) present evidence that interlanguage lexical contrasts arise in the absence of robust perceptual discrimination by Dutch-English L2ers.

Question
Is the formation of a phonemic category a pre-requisite for establishing a contrast in lexical representations?

Lexical Decision
SAME
...word A...
[8 to 20 items]
...[female voice]
yes/no

MINIMAL PAIR
...word A...
[8 to 20 items]
...[female voice]
yes/no

„real French word?“
Measure: Reaction time on correct responses only.
Results: Difference between first and second presentation (facilitation?) on conditions „same“ vs. „minimal pair“

Phonological ABX
1. i-y control
2. u-y test
3. o-œ test

Summary and Discussion
Beginner learners are relatively good at categorizing French [u]-y (Exp 1), but still have “spurious homophony” for [u-y] minimal pairs in the lexicon (Exp 2). Conversely, their categorization of [o]-œ [a] remains far from target-like, but they nevertheless have established a lexical contrast for /œ/-/œ/. Advanced learners behave like native speakers on lexical decision tasks, but are not different from the beginners on phonological ABX. Both are different from native speakers.

These results suggest that the mechanisms underlying phonemic categorization and lexical encoding may be dissociated in L2 acquisition. This apparently counterintuitive finding can be accounted for by an alternative model of lexical priming, on which not only perceived representations, but also their close phonological neighbors are activated: While native speakers quickly deactivate neighboring representations, and thus avoid priming effects on minimal pairs, we propose that L2ers require more time to deactivate neighboring representations, leading to response patterns that mimic spurious homophony.

Stimuli
[i-y] [u-y] [o-œ] (+ [e-œ])
5 French minimal pairs each
5 non-word minimal pairs each
60 French word fillers
60 non-word fillers
4x260 item lists counterbalanced

Participants
11 French native listeners
65 Am. English learners of French:
8 sem. + Length of Residence > 1 yrs = advanced (N=20)
4 sem. + Length of Residence = 0 yrs = beginners (N=45/20)

Experimental Design
ABX
Conditions:
labial: myb mub / mob mœb
coronal: tyd tød / tode tœd
control: sun vub / tid ted / bib beb

Selected References

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