The influence of native-language phonology on lexical access: exemplar-based vs. abstract lexical entries

For Japanese speakers [r] and [l] belong to the same phoneme. This L1 difference influences how they perceive these phones in other languages. For L1 Japanese speakers rock and lock are homophones.

Abstract storage (phonemic storage): irrelevant details not stored, only constrastive information. Exemplar (acoustic trace, episodic): actual words stored with all phonetic detail. Word recognition involves matching input to stored words and finding closest match.

1. Suppose there is an L1 Japanese speaker who has English as and L2. How would this speaker process rock and lock? If the exemplar model is correct would rock and lock be homophones in this speaker's head? Why or why not?

2. If the abstract model is correct, will rock and lock be homophones in this speaker's head? Why or why not?

3. What is the phonemic status of [s] and [z] in Catalan and Spanish?

4. What is the phonemic status of [e] and [ε] in Catalan and Spanish?

5. What is the phonemic status of [o] and [ɔ] in Catalan and Spanish?

6. What two groups of people were contrasted.

The repetition priming task involves showing people real words and phony words on the computer screen (or hear words on a headset), their job is to press one button if it is real and another if it is phony. The time it takes them to recognize a word is measured, their reaction time. If a person sees (or hears) the word WORK and then a little later sees the word WORK again, they respond faster the second time. Seeing WORK the first time is said to prime (or have a repetition effect on) the second appearance of WORK.

In this study, people heard many different words and non words. The crucial cases were those in which there was a contrast in Catalan, but not in Spanish.

7. If a monolingual Catalan speaker heard [nɛtə] and later on heard [nɛtə] again, would there be a priming effect? What would this show?

8. If a monolingual Spanish speaker heard [nɛtə] and later on heard [nɛtə] again, would there be a priming effect? What would this show?

9. If a monolingual Catalan speaker heard [nɛtə] and later on heard [nɛtə], would there be a priming effect? What would this show?

10. If a monolingual Spanish speaker heard [nɛtə] and later on heard [nɛtə], would there be a priming effect? What would this show?

Look at the black diamonds in Figure 1 b. For both the Spanish and Catalan dominant speakers the
diamond is at about 60 which shows that when they saw the same word repeated they responded about 60 milliseconds faster. The white boxes show how much the reaction time was affected when they saw a minimal pair. If this were done in English a minimal pair could be rock and lock or Burt and burp. In other words, seeing one word doesn't speed up the reaction time to seeing a word that is similar, but not the same.

11 Now look at Figure 1a. Was there a repetition effect for Spanish and Catalan dominant speakers when they saw the exact same word the second time? What does that tell you about how they perceived the words?

12 Now look at the white boxes that represent word pairs such as [nɛtə] and [netə]. Was there a repetition effect for Catalan dominant speakers? What does that tell you about how they perceived [nɛtə] and [netə]?

13 Look at the white boxes that represent word pairs such as [nɛtə] and [netə]. Was there a repetition effect for Spanish dominant speakers? What does that tell you about how they perceived [nɛtə] and [netə]?

14 What do these results say about the influence of L1 on L2?

15 Do these results support abstract or exemplar storage? Why?