Word Learning in Different Linguistic Contexts by 18-month-old Basque-Spanish Bilinguals

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Basque Center on Cognition, Brain and Language

7th Summer Neurolinguistics School
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Language acquisition

doggy
home
daddy
park
ball
mommy
Language acquisition

- Discrimination between native languages when these are rhythmically similar (Bosch and Sebastián-Gallés, 2001)

- From universal listeners to language-specific listeners (Bosch and Sebastián-Gallés, 2003)

- Early lexical representations (Ramón-Casas & Bosch, 2010; Hudon, 2013)
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→ WORD LEARNING
Switch task procedure

(a)  

"lif"  

"neem"

(b)  

Same trial  

Switch trial  

"lif"  

"neem"

Look at the bin!

Where is the bin?

(Fennel & Waxman, 2010)

14-months-old ✔

17 and 20-months-old ✔

From Werker’s et al. (1998)
Switch task procedure

(a) ‘lif’
   ‘bin’
   ‘neem’
   ‘din’

(b) Same trial
    ‘lif’
    ‘bin’
    ‘neem’
    ‘din’

Switch trial
    ‘lif’
    ‘bin’
    ‘neem’
    ‘din’

Look at the bin!
Where is the bin?

(Fennel & Waxman, 2010)

“bin” and “din” From Werker’s et al. (1998)

14-months-old ✔
17 and 20-months-old ✔
Present study

Language discrimination
Phonetic detail knowledge
Word recognition

Word learning

Can phonetic detail guide word learning?
Method

/oʊə/ /oθə/ /oʊtʃə/
Method

\[ /\text{o}\text{\textae}/ \rightarrow /\text{o}\text{\textepsilon}/ \rightarrow /\text{o}\text{\textepsilon}\text{\textae}/ \]

Spanish

\[ /\text{o}\text{\textae}/ \rightarrow /\text{o}\text{\textepsilon}/ \text{ PHONEMIC} \]

\[ /\text{o}\text{\textae}/ \rightarrow /\text{o}\text{\textepsilon}\text{\textae}/ \text{ NON-PHONEMIC} \]
Method

/oʊə/ /oθe/ /ɔtʃe/

Spanish

/oʊə/ → /oθe/ PHONEMIC

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Basque

/oʊə/ → /oθe/ NON-PHONEMIC

/oʊə/ → /ɔtʃe/ PHONEMIC
Method

- Fourteen 18-month-old Basque-Spanish bilinguals (mean age 547 days)
  - 11 infants excluded

- Vocabulary size (Werker & Tees, 2005; Werker et al., 2007; Curtin et al., 2005)
  - MacArthur-Bates CDI

- Language Exposure Questionnaire
  - Criterion: 85%-15%
  - Mean exposure: 70.79%
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Method
<table>
<thead>
<tr>
<th>Spanish condition</th>
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| Pretest/Post-test | Habitation  
| ![Image](image1.png) | ![Image](image2.png)  
| /pok/             | ¡Mira al /oše/ bonito!  
<p>|</p>
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### Spanish condition

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- Vocabulary and language exposure
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- Vocabulary and language exposure
1. Use of phonetic detail
2. Vocabulary size

SPANISH CONDITION
2. Vocabulary size

BASQUE CONDITION

looking time

0.000 0.025 0.050 0.075 0.100
Basque Vocab

Label
oce  ose  otse

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3. Language exposure and language dominance

- $F(2, 12) = 74.196, p = 0.007^*$
Discussion

- **Novelty vs. familiarity preference** (Houston-Price & Nakai, 2004)
  - Older infants (Fennell & Werker, 2007)

- **Language mixing** (Byers-Heinlein, 2013)

- **Sample size (<24)**
Discussion

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- Basque-Spanish bilingual infants have not used phonetic detail to guide their learning.
- Vocabulary size in each of their languages correlates to infants’ looking time in each condition.
- Infants rely on their dominant language to learn words.
- Linguistic context and language dominance (Mattock et al., 2010)
Thank You!
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