

To (code)Switch  
or  
Not To (code)Switch

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# Types of code-switching

- Дай гитару поюзать
  - J'ai trouvé. I gefunden diese
    - Sometimes I start a sentence in Spanish y termino en Español

## Bilinguals:

### Russian-Armenian bilingual child:

- babushka and dedushka vs. tatyk and papyk

### Spanish-German bilinguals:

- Juan amenazó a alguien, *aber ich Weiss nicht \*wen / wem er gdroht hat*  
*who-Acc / who-Dat*

Juan threatened someone      *but I don't know*      *to whom he threatened*

- Juan amenazó a alguien, *aber ich Weiss nicht wen / \*wem*  
*who-Acc / who-Dat*

Juan threatened someone      *but I don't know*      *whom*

(González-Vilbazo & Ramos, 2012)

# Bilingual Competence

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- a cognitive state the result of which is code-switching

(based on López, 2018)

*Generative approach: Competence and Performance*

*I-language and E-language*

Code-switching is a surface manifestation of I-language

(López, 2018)

# What is the ultimate goal of L2 acquisition?

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The bilingual is not two monolinguals in one person

(Grosjean, 1989)

Code-switching is a manifestation of bilingual competence

(López, 2018)

## **Do L2ers develop bilingual competence?**

- integrate the new linguistic norms into the existing mental grammar
  - code-switch like balanced bilinguals

Дай гитару по-use-ать

\*In the *'El Corte Inglés'* two stops from where we live  
In the /el *Corte Inglés* two stops from where we live

# Let's take some examples

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I saw this woman yesterday in the park

Кто was in the park?  
Where was женщина?  
Who saw the woman?  
Когда я видела женщину?

Я видел эту женщину yesterday in the park

Кто was in the park?  
Where was женщина?  
Who saw the woman?  
Когда я видела женщину?

I saw this woman вчера в парке

Кто was in the park?  
Where was женщина?  
Who saw the woman?  
Когда я видела женщину?

Я видел эту женщину вчера в парке

Кто was in the park?  
Where was женщина?  
Who saw the woman?  
Когда я видела женщину?

# Structural ambiguity: You cannot get a man with a gun!

(from the musical "Annie Get Your Gun" [https://en.wikipedia.org/wiki/Annie\\_Get\\_Your\\_Gun\\_\(musical\)](https://en.wikipedia.org/wiki/Annie_Get_Your_Gun_(musical)))

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You cannot **get** a man **with** a gun

You cannot get a **man with** a gun



# Linguistic Target: Ambiguous Relative Clause

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*Bill called the mother of the woman [RC that was talking about cosmetics]*

*Иван позвал маму женщины, [RC которая говорила о косметике]*

*Who was talking about cosmetics?*

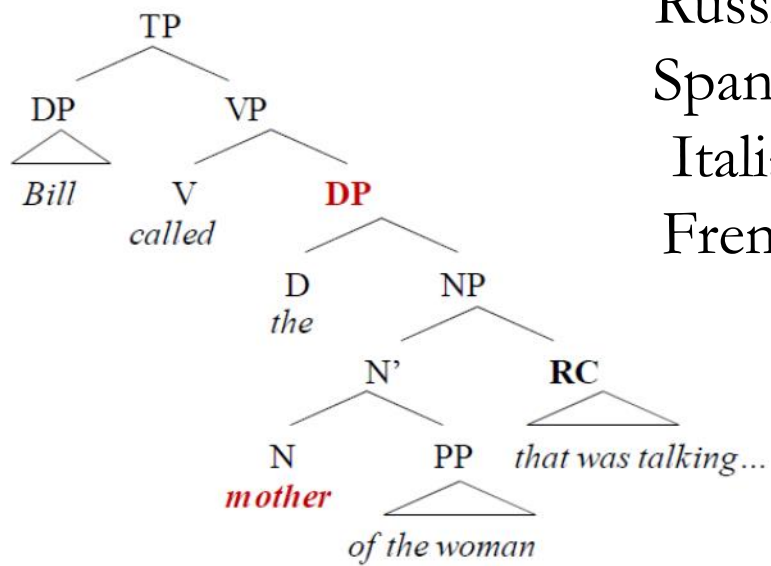
*a) the mother   b) the woman*

...*the mother* of *the woman that was talking*...

*Who was talking?*

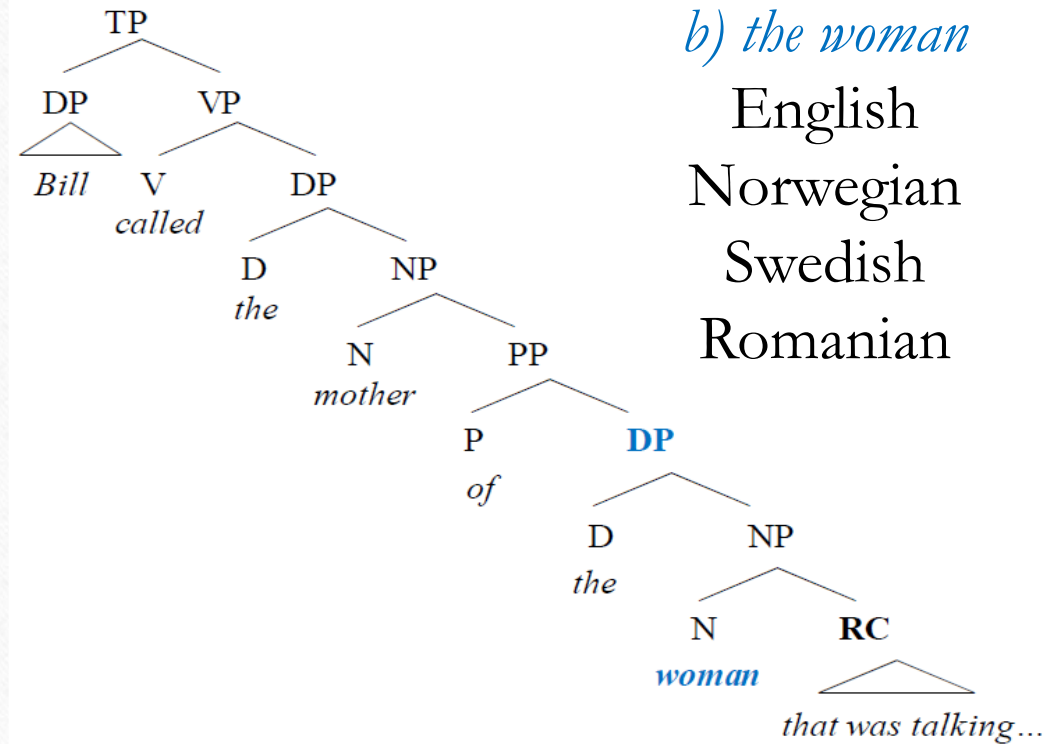
a) *the mother*

Russian  
Spanish  
Italian  
French



b) *the woman*

English  
Norwegian  
Swedish  
Romanian





Bill called **the mother** of **the woman**  
that was talking about cosmetics

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Why is that?

### The Implicit Prosody Hypothesis

(Fodor, 2002)

- (1) Bill called the mother of the woman **prosodic break** that was talking about cosmetics
- (2) Bill called the mother **prosodic break** of the woman that was talking about cosmetics

Bill called **the mother** of **the woman**  
that was talking about cosmetics

*Reference: High attachment (**the mother**) English  $\approx$  30% Russian  $\approx$  70%*

	L2-Russian	L2-English	L3-English
English-Russian	50%		
Russian-English		57%	
Russian-German-English			51%
Russian-French-English			60%
Armenian-Russian-English	71%		47%

- L2ers' results are statistically different from both their L1 and the Ln-like performance

# Possible Research Questions?

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- What will L2ers do with code-switched sentences?
  - Will they process them L1-like?
- Are there universal parsing principles that govern human language processing?
- Are there universal parsing cues that govern processing of code-switched sentences?
  - Will L2ers be sensitivity to these parsing cues?

# Sample quadruple:

## CS\_pause vs. CS\_length vs. Sent\_start

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Bill called the mother of the woman <sub>c-s</sub> *которая говорила о косметике во дворе.*  
(forces HA-pause)      **prediction: the mother**

Bill called the mother <sub>c-s</sub> *женщины которая говорила о косметике во дворе.*  
(forces the LA-pause)      **prediction: the woman**

Bill called <sub>c-s</sub> *маму женщины которая говорила о косметике во дворе.*  
(Russian length)      **prediction: the mother**

Bill called the mother of the woman that was talking about cosmetics <sub>c-s</sub> *во дворе.*  
(English length)      **prediction: the woman**

# Pilot Results: L2ers

*Baseline: High attachment (**the mother**) English  $\approx$  30% Russian  $\approx$  70%*

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## Russian-English

*Place of CS (factor2) Estimate: 1.339e-01 Std Error: 5.085e-02 df: 3.116e+01 t-value: 2.634 Pr(> |t|) 0.0130 \**

	HA_pause	LA_pause	Russian_length	English_length
HA preference	18%	5%	16%	21%

## Dutch-English (pilot)

*Place of CS (factor 2) Estimate: 0.13542 Std Error: 0.06502 df:186.00000 t-value: 2.083 Pr(> |t|) 0.0386 \**

	HA_pause	LA_pause	Dutch_length	English_length
HA preference	23%	19%	27%	37%

# Pilot Results: L2ers

*Baseline: High attachment (**the mother**) English  $\approx$  30% Russian  $\approx$  70%*

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## Russian-English

*Place of CS\*Sentence Start,  $p < .05$*

	HA_pause	LA_pause	Russian_length	English_length
Russian_start	21%	7%	14%	19%
English_start	14%	3%	18%	25%

## Dutch-English (pilot)

*Place of CS (factor 1)\*Sentence Start,  $p < .05$*

	HA_pause	LA_pause	Dutch_length	English_length
Dutch_start	37%	21%	25%	33%
English_start	28%	17%	29%	42%

# Very Preliminary Results

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- Low Attachment is a Universal parsing option in code-switched sentences
- Place of a prosodic break is a universal processing cue
  - CS before the RC favors HA
  - CS between the head nouns favors LA
- RC resolution depends on the language that supplies most of the lexical items
  - HA is preferred more often in the non-native languages
- Native (proficient / dominant) language does not play a role
  - The language of the sentence start does not matter
  - To code-switch at the beginning of the sentence or at the very end does not matter

# Study in Progress: Code-switching

Bill heard | *cs-1* the mother | *cs-2* of the woman | *cs-3* that was talking about herself | *cs-4* in the yard

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## HA vs. LA

Dutch-English (4)

Russian-English (1)

Armenian-English (2)

Spanish-English (1)

## HA vs. HA

Armenian-Russian (2)

Spanish-Russian (1)

## LA vs. LA

Norwegian-English (3)



Thank you

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за ВНИМАНИЕ

!!!