

The Triggering Effect of Cognates on Bilingual Speech

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Outline

Theoretical background

Previous research

Bilingual communities

Experimental tasks

Corpus-based analysis

Future directions

Background

Triggering: cognates facilitate CS (Clyne 1967, 2003)

In the mental lexicon, words are organized in language subsets; activation of one word activates subset (Paradis, 1987, 2004)

Trigger words are connected to / part of the subsets of both languages

Selection of trigger word:

- causes activation of the other language subset
- increases chance of selection of a word in the other language
- Occurs in bilingual mode; not consciously planned

Previous Studies

1. Moroccan Arabic-Dutch corpus
 - 3 Moroccan Arabic-Dutch speakers
 - Raised in The Netherlands
 - Self-recorded conversations (2224 words)
 - All cognates were nouns, mostly proper nouns
- Significantly more words switched after a trigger word

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Significantly more words switched after a trigger word

A small corpus with three participants, analyzed manually

Previous Studies

2. Dutch-English corpus
 - 1 Dutch-English bilingual
 - 73 years old
 - Age of arrival in New Zealand: 39 (1961)
 - Interview (2849 words)

Significantly more words switched after a trigger word

All types of words function as trigger words: proper nouns, content words, and function words

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73 years old

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Only one participant, late bilingual

Previous Studies

3. Colour-cued picture naming experiment
32 Dutch learners of English in the Netherlands

To investigate the ease of switching (RT):

- Are RTs of switched items after cognates shorter than after non-cognates?
- Is this effect larger for L2-L1 than L1-L2?

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Current Project

1. Experimental task with Welsh-English balanced bilinguals
2. Large-scale corpus-based analysis of the triggering effect of cognates on three language pairs

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Work in progress!

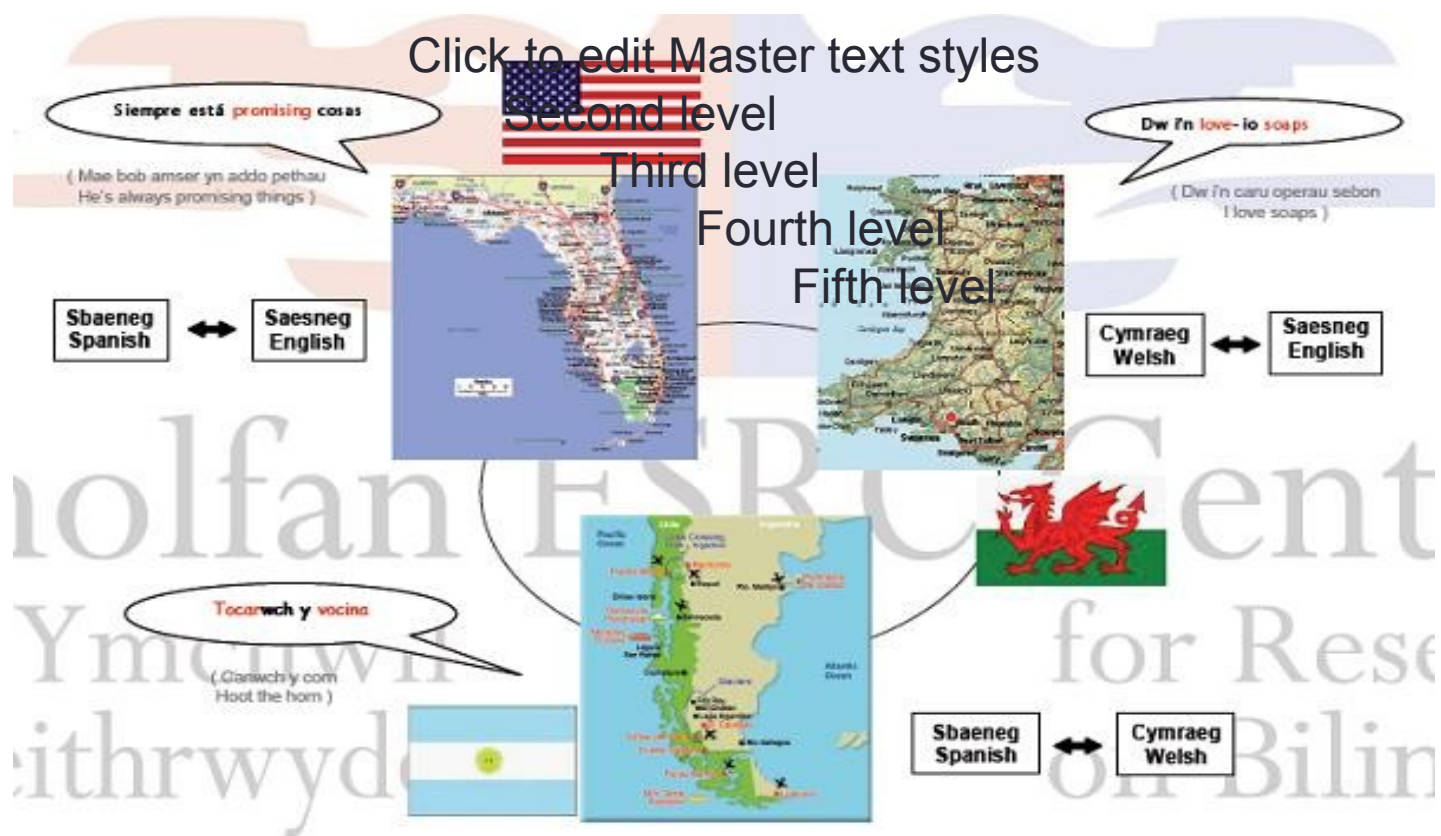
Research Questions

1. What characteristics of cognates affect the extent to which they can facilitate codeswitching?
2. What characteristics of non-cognate words affect their likelihood to undergo cognate-induced codeswitching?
3. How does codeswitching density affect cognate-induced codeswitching?
4. Is there a different effect for balanced bilinguals?

Bilingual Communities

Spanish-English

Welsh-English



Spanish-Welsh

Experimental Method

Self-paced picture-naming task

48 participants from Wales

Early Welsh-English bilinguals

Learned both languages before the age of 7

Task: 195 items with 27 cognates

Colour cue indicated response language

Experiment set: preceder, cognate/control, follower

Measured Reaction Times

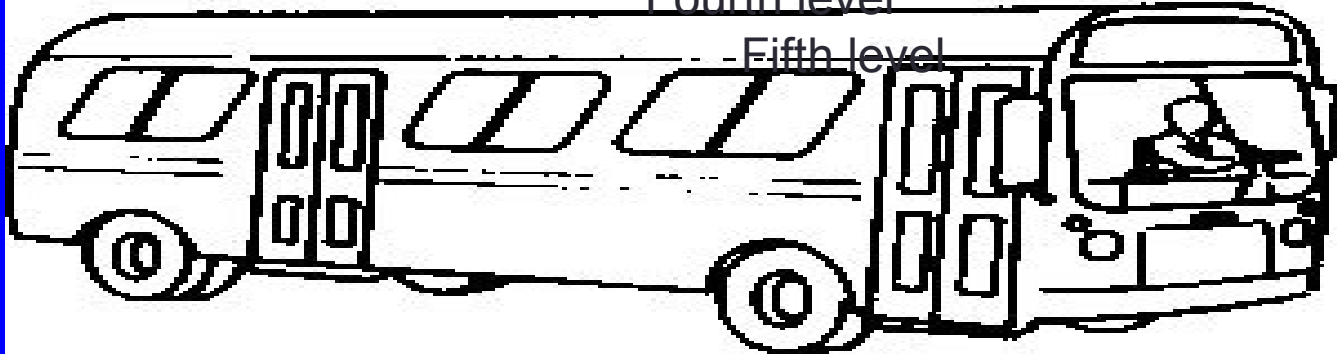
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Second level

Third level

Fourth level

Fifth level



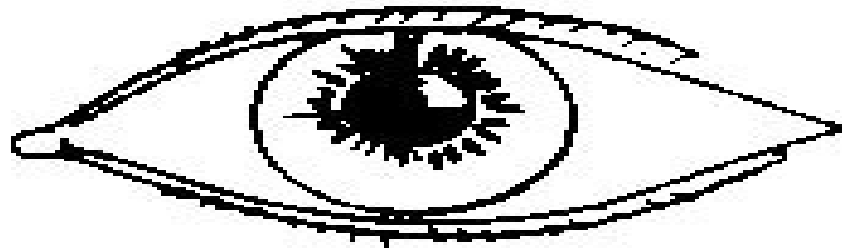
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Second level

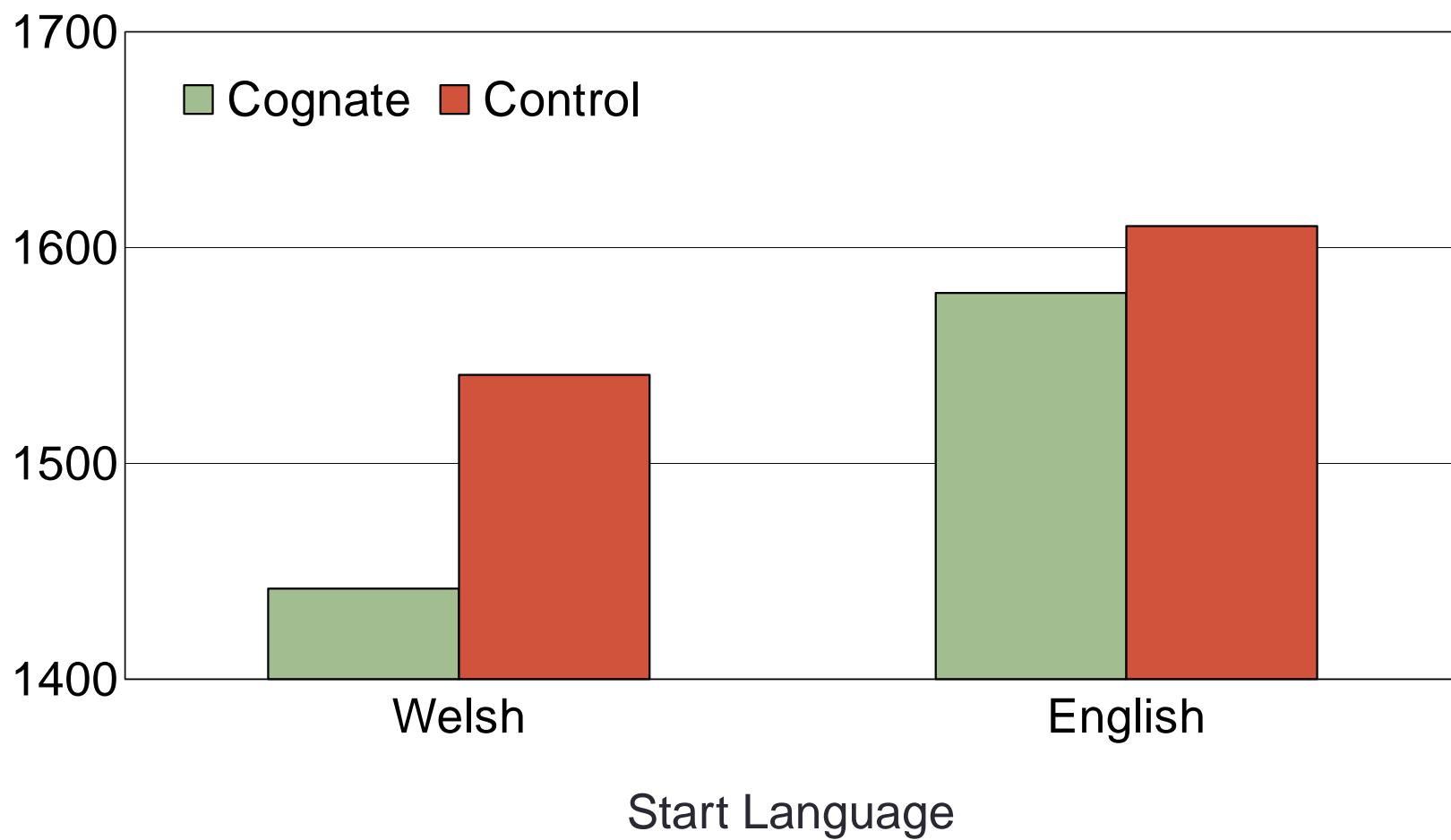
Third level

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Results



Results

- Are RTs of switched items after cognates shorter than after non-cognates?
 - **Yes.**
- Is this effect symmetrical?
 - **No, larger effect for switches from Welsh into English.**

Bilingual Corpora

Wales

40 hours collected over two years ('05-'07) in North Wales, 151 speakers, available on Talkbank.org

Miami

20 hours collected between February and April, 2008 in Miami (Florida), 85 speakers

Patagonia

20 hours collected between October and November, 2009 in Patagonia, 92 speakers

<http://siarad.org.uk/>

Corpus-Based Method

151 Welsh-English, 85 Spanish-English, and 92 Spanish-Welsh participants
Conversations recorded in pairs; interviewer was not present for conversation
Given background questionnaires
Transcribed using CHAT in CLAN
Glossed manually or automatically
Translation tier included
Stammers4: Wales
Sastre3: Miami tiers 66-105

Examples of CS

mae Americans **yn mwy** commercial
be.PRES.3S PRT more

‘Americans are more commercial.’ (Fusser 27)



Examples of CS

ya **ahorita** **estamos** almost over
already now be.PRES.2PL

'We are almost finished now already.' (Sastre 1)



Examples of CS

bydda **i** **(y)n** **wneud** **biotechnoleg,** **achos** be.FUT.1SG I
PRT do.INF biotechnology because

dw **i** **ddim** **yn** **gallu** inscribir=me **yn** **dau**
be.PRES.1SG I NEG PRT can.INF enrol.INF=ACC.1SG in two

'I'll be doing biotechnology, because I can't enrol in both.'
(Patagonia 29)



Analysis

Initial analysis with Wales corpus

Clauses split at finite verbs by computer

Sample of split clauses checked manually for error rate

Each file analyzed on clause-level

Presence of a trigger word?

If a clause has a trigger word, is there a codeswitch within the clause?

What type of word is the trigger word and the switched word?

Example with a Trigger Word

mae wneud jazz **straight**

'he does straight jazz'

Results for Stammers 4

4707 words, 841 utterances, 870 clauses

Internal switches (intra-clausal):

42% of clauses containing a trigger word also contained a CS

18% of clauses NOT containing a trigger word contained a CS

External switches (inter-clausal):

50% of clauses containing a trigger word also contained a CS

34% of clauses NOT containing a trigger word contained a CS

Next Steps ...

Run the analysis on all of the files in the Wales corpus

Run different analyses depending on the 'onion-ring' layers

Word-level analysis

Look at speaker-based versus clause-based counts

Run chi-square tests of independence on the counts

Extend the analysis to the Miami and Patagonia corpora

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