Code-switching in linguistics: the state of the art

Margaret Deuchar

Examples of code-switching (CS)

Intraclausal (Welsh-English)

mae o on standby

be.V.3S.PRES he.PRON

‘He’s on standby’

Interclausal (Spanish-English)

el siempre me da cumplidos asi,

he.PRON always me.DAT.1SG give.PRES.3SG compliment.PL like_this

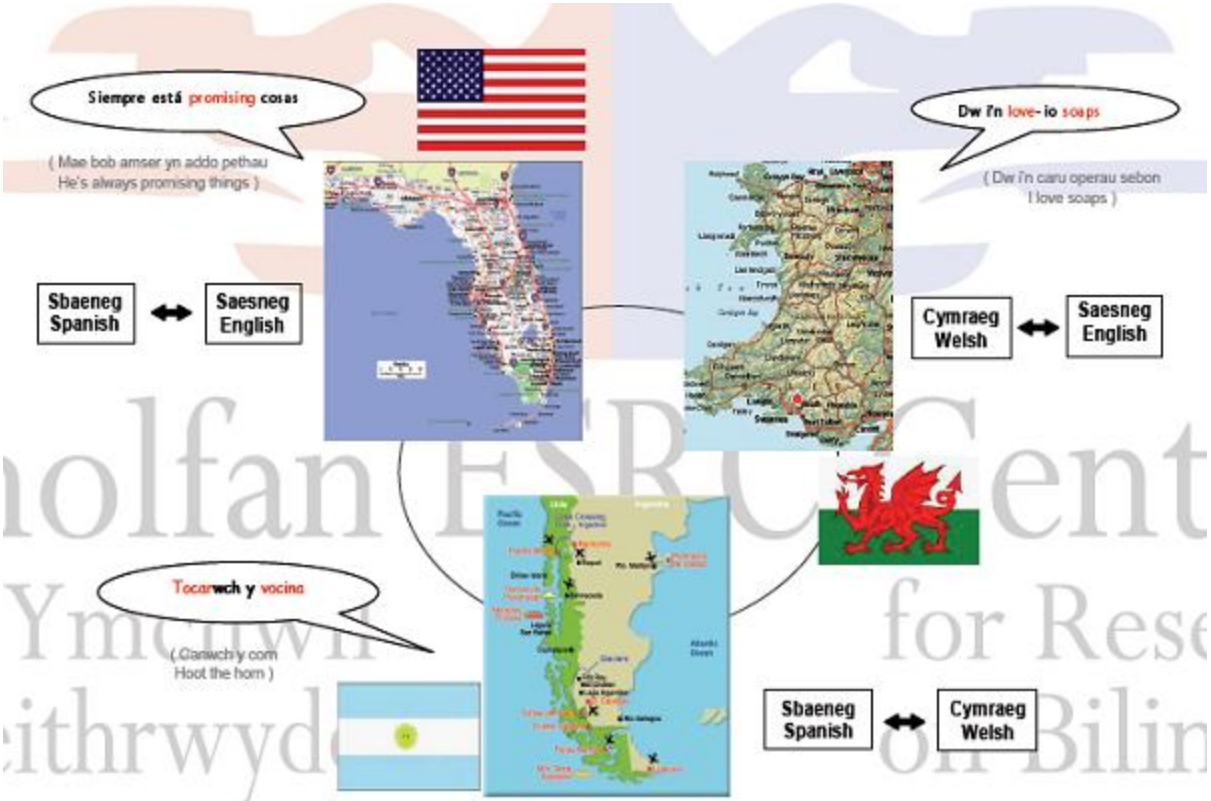
so I said to him ‘Talk to me in two more years’

‘He always gives me compliments like that….’

Bilingual Corpora

Spanish-English

Welsh-English



Spanish-Welsh

www.bangortalk.org.uk

Canolfan ESRC Centre dros Ymchwil i Ddwyieithrwydd
ESRC Centre for Research on Bilingualism

Welcome to BangorTalk

The ESRC Centre

This site holds the conversational corpora assembled by the ESRC Centre for Research on Bilingualism in Theory & Practice at University of Wales Bangor.

We are seeking to gain a greater understanding of how bilingual individuals in a variety of communities manage both their languages within the same conversation.

The questions we consider include:

1. Do bilinguals in different types of communities handle their two languages in different ways in conversation?
2. How do social variables such as class, age and gender affect the way people handle their two languages in informal conversations?

The corpora

To date, we have assembled three corpora:

- The Siarad Welsh-English corpus
- The Patagonia Welsh-Spanish corpus
- The Miami Spanish-English corpus

Change language

English (Saesneg)

Contact us

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The corpora

The Siarad corpus
The Patagonia corpus
The Miami corpus

Research Team

Collaborators

Salient questions in code-switching research by linguists

Q1 How does code-switching differ from borrowing?

Q2 What is grammaticality in code-switching?

Q3 What factors influence variation in code-switching patterns?

Question 1

How does code-switching differ from borrowing?

Q1 How does CS differ from borrowing?

pan dach chi ’n defnyddio wide-angle
when be.2PL.PRES PRON.2PL PRT use.NONFIN wide-angle

lenses dach chi ’n emphasize-io ’r
lenses be.2PL.PRES PRON.2PL PRT emphasize.NONFIN DET

foreground
foreground

‘When you use wide-angle lenses, you emphasize the foreground.’

How does CS differ from borrowing?

- Practical as well as theoretical question
- Highly disputed
- Contrasting views:

e.g. Myers-Scotton (2002) vs. Poplack (2012)

Definitions of CS vs. borrowing

	Switches	**Borrowings**
Myers-Scotton	Infrequent	Frequent
Poplack	Unintegrated	Integrated

Myers-Scotton (2002) Poplack (2012)

What is relative role of frequency and integration in distinguishing code-switching and borrowing?

Stammers& Deuchar 2012: frequency and integration of English-origin verbs used in Welsh

3 categories of verbs

1) Welsh-origin, e.g. *cofio* 'remember'
2) English-origin listed in Welsh dictionary, e.g. *costio* 'cost' (borrowing)
3) English-origin not listed in Welsh dictionary, e.g. *concentrate-io* 'concentrate' (switch)

Measure of integration: soft mutation

Soft mutation: morphophonological process involving changes in word-initial consonants

- voiceless stops become voiced, e.g. /k/ -> /g/
- voiced stops become fricatives, e.g. /d/ -> /ð/

In specific environments, e.g.

- following certain prepositions
- verbs in construction with auxiliary verb *gwneud* 'do'

Example (1) of verb-initial soft mutation

costio ‘to cost’

after preposition *i* ‘to’

mae o mynd i gostio wyth mil wsti

be.3S.PRES it go.NONFIN to cost.NONFIN eight thousand you_know

‘It will cost 8,000 you know’ *[Stammers1]*

Example (2) of verb-initial soft mutation

deud ‘to say’ with auxiliary

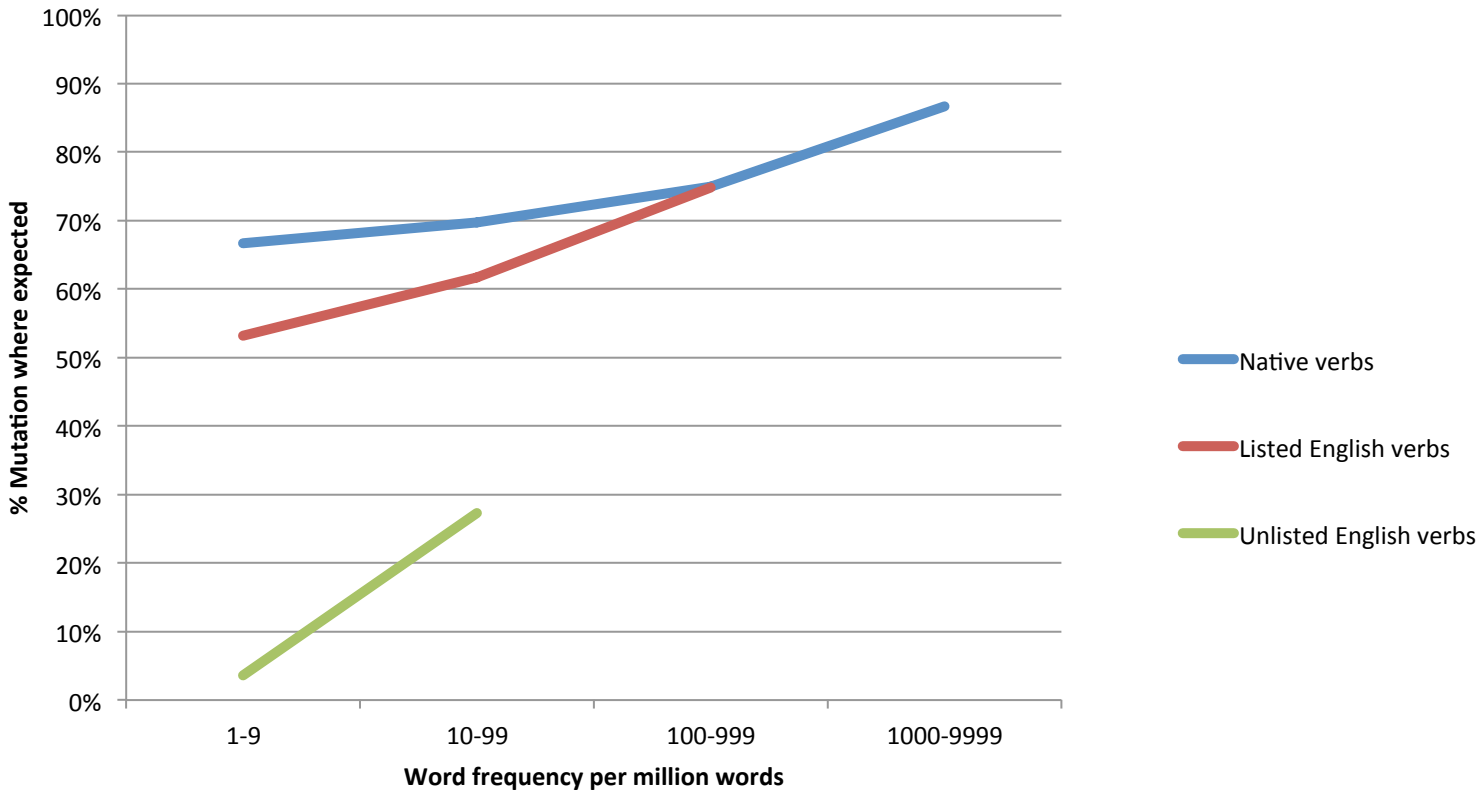
wnes i ddeud ‘Do you fancy a pint on Wednesday’

do.V.1S.PAST 1.PRON.1S

‘I said, “Do you fancy a pint on Wednesday”.

/d/ -> /ð/ in first consonant of *deud*

Application of soft mutation to three verb categories



Listed verbs (borrowings): higher rate of mutation/integration across varying frequencies
Unlisted verbs (switches): low rate of integration and low frequency

Results
Role of frequency and integration

What is relative role of frequency and integration in distinguishing code-switching and borrowing?

	Switches	**Borrowings**
Frequency	Low	Variable
Integration	Low	High

Deuchar & Stammers 2016

Question 2

What is grammaticality in code-switching?

Q2 What is grammaticality in CS?

- Fiercely debated topic
- Competing approaches
  - Matrix Language Frame (Myers-Scotton 2002)
  - Minimalism Program (MacSwan 2009)

What is grammaticality in CS?

Historical perspective:

Weinreich (1953): a bilingual may switch, but "not within a single sentence"

i.e. interclausal but not intraclausal switches recognised

What is grammaticality in CS?

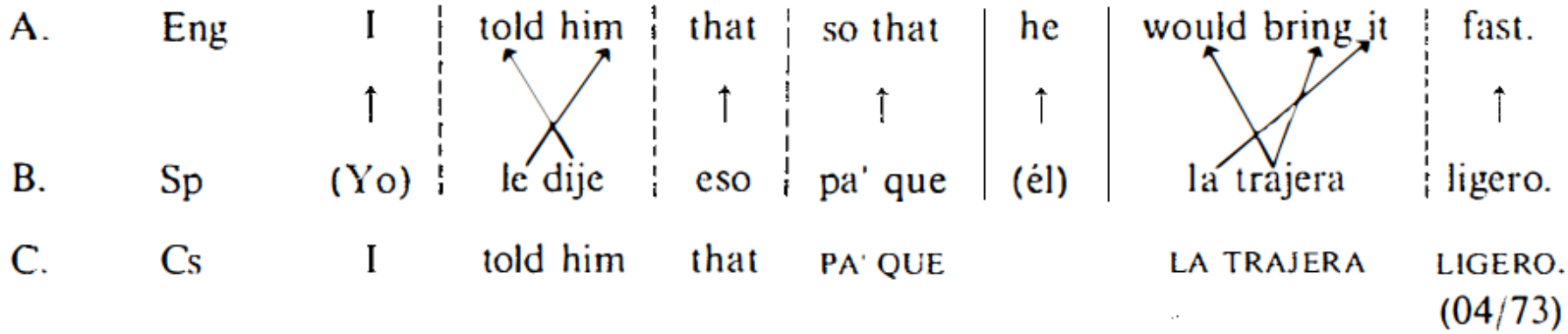
But by 1960s intraclausal CS recognised

and attempts to formulate ‘switching rules’ were made by e.g. Gumperz (1964), Lehtinen (1966), DeCamp (1969)

What is grammaticality in CS?

But best-known early work on grammaticality in CS, by Poplack (1980), which she captured in terms of constraints, one of which we'll explore:

Equivalence constraint



Poplack 1980:586

What is grammaticality in CS?

Switching at conflict sites (*pace* Poplack)

oedd ’na fath â ryw alley_bach yna

be.3S.IMP there kind with some alley little there

‘There was a kind of little alley there’ [Davies6]

English order: Adj + N

Welsh order: N + Adj

Predictions of competing frameworks (1)

1) Cantone & MacSwan (2009): language of adjective will determine word order

Possible orders according to their approach:

- *red gwin* (Adj + N) 'red wine' Adj=English
- *wine coch* (N + Adj) 'wine red' Adj=Welsh

Predicted to be ungrammatical:

**gwin red* (N + Adj) 'wine red' Adj=English

**coch wine* (Adj + N) 'red wine' Adj=Welsh

Predictions of competing frameworks (2)

Myers-Scotton (2002) argues that relative word order of adjective and noun will reflect matrix language or language of morphosyntactic frame

oedd ’na fath â ryw alley bach yna.

be.3S.IMP there kind with some alley little there

“There was a kind of little alley there.” [Davies6]

VSO order as in Welsh

Finite verb is Welsh

Welsh is matrix language

Which model is correct?

Parafita Couto, Deuchar & Fusser (2015)

- Investigated adjective/noun order in Welsh-English CS data
- Relatively few examples of mixed language adjective/noun sequences in half a million words
- 168 mixed adjective/noun sequences elicited in ‘toy task’ game

Director-matcher ‘toy task’

Photo by Arfon Rhys

Toy task: main types of data

Eng N + Welsh Adj mouse du 'black mouse'

Welsh N + Eng Adj sbectol orange 'orange glasses'

English N + Eng Adj bracelet orange 'orange bracelet'

o dan y bracelet orange mae gen ti pyramid

below the bracelet orange BE.V.3S.PRES with.PREP you.PRON.2S

'Below the orange bracelet you have a pyramid'

All data in Welsh morphosyntactic frame

Parafita Couto et al. 2015
Results from toy task

Adjective/noun word order	**Matrix language of clause**	**Predicted grammatical by Minimalist approach(MP)**	**Predicted grammatical by Matrix Language Frame (MLF)**	**Number**	**Percentage**
Eng N + Welsh Adj	Welsh	Yes	Yes	132	83%

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Welsh N + English Adj	Welsh	No	Yes	15	9%
English N + Eng Adj	Welsh	No	Yes	13	8%
				168	100%

17% of data considered ungrammatical by MP but grammatical by MLF

All of data accounted for by MLF

Parafita Couto et al. 2015
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Conclusion: all data can be accounted for by assuming asymmetry between languages in which adjective/noun word order matches N + Adj of Welsh matrix language

Question 3

What factors influence variation in code-switching patterns?

What factors influence variation in CS?

Types of factor to consider (based on Gardner-Chloros 2009: 42-43)

- Community-specific
- Conversation-specific
- Speaker-specific

Dimensions of variation

- Choice of morphosyntactic frame/matrix language
- Quantity of code-switching

Factors and dimensions

Type of factor influencing CS	Dimensions of variation
Community-specific	Choice of morphosyntactic frame/matrix language
Conversation-specific	Choice of morphosyntactic frame/matrix language
Speaker-specific	Quantity of code-switching

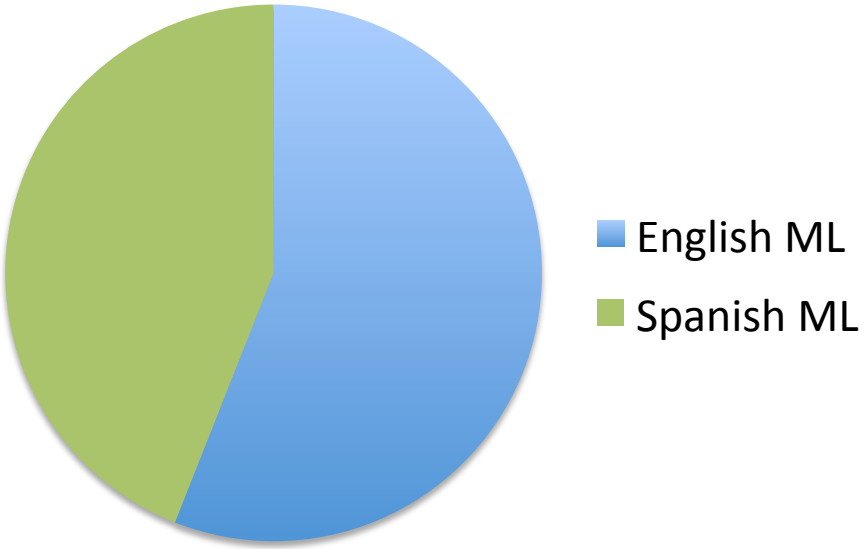
To be illustrated with reference to Welsh-English and Spanish-English corpora collected in Wales and Miami USA

Community-specific factors influencing variation in code-switching

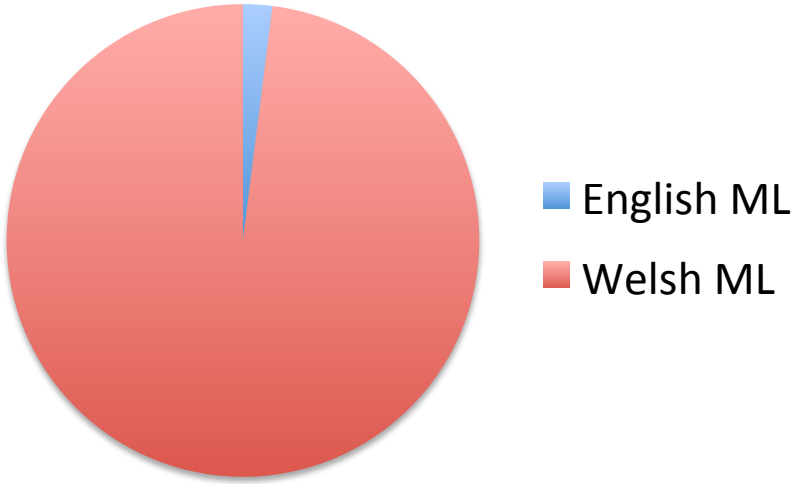
Choice of matrix language

Choice of matrix language: a comparison of two communities

Spanish vs. English matrix language[1]



Welsh vs. English Matrix language[2]



[1]Calculations by Jeffrey Blokzijl

[2]Nos. From Deuchar et al (in preparation)

Comparison of two communities

Community characteristics	**Miami**	**Wales**
Self-assessed identity		
Social networks		
Language structure		

Carter, Deuchar, Davies & Parafita Couto (2011)

Comparison of two communities

Community characteristics	**Miami**	**Wales**
Self-assessed identity	Diverse identities	Predominantly Welsh identity
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Self-assessed identity	Diverse identities	Predominantly Welsh identity
Social networks	Both languages used	Mostly Welsh used
Language structure		

Carter, Deuchar, Davies & Parafita Couto (2011)

Comparison of two communities

Community characteristics	**Miami**	**Wales**
Self-assessed identity	Diverse identities	Predominantly Welsh identity
Social networks	Both languages used	Mostly Welsh used
Language structure	Similar: Spanish and English both SVO	Contrasting: VSO in Welsh vs. SVO in English

Carter, Deuchar, Davies & Parafita Couto (2011)

Conversation-specific factors influencing variation in code-switching

Choice of matrix language

Conversation-specific influences on CS

Structural priming: work on Miami Spanish-English corpus by Fricke & Kootstra (2016)

"Structural priming….refers to speakers' tendency to re-use the syntactic structure of recently processed sentences"

Found strong relation between ML of two adjacent utterances

Speaker-specific factors influencing variation in code-switching

Quantity of code-switching

Speaker-specific influences on CS

How do speakers' bilingual acquisition patterns affect their code-switching as adults?

Variationist study of Welsh-English data
(Deuchar, Donnelly & Pierce, forthcoming)

Dependent variable: use of bilingual vs. monolingual clauses

Bilingual clause: contains code-switching

Monolingual clause: no code-switching

Bilingual: type of clause containing code-switching

[mae'n	nhw	yn	rhoi	e
be.3PL.PRES	PRON.3PL	PRT	put.NONFIN	PRON.3SM

yn	y	steam	room]
PRT	DET	steam	room

'They put it in the steam room'

Monolingual clause (no code-switching)

Monolingual Welsh

[a ges i fel noson mas gyda Melanie]

and get.1.S.PAST PRON.1S like night out with Melanie

‘And I had a night out with Melanie’

Monolingual English

[I don’t know]

Speaker-specific influences on CS

Independent variables:

- Pattern of bilingual acquisition (5 patterns):
    1) Welsh and English acquired simultaneously from birth (2L1)
    2) L1 from birth and L2 at age 4
    3) L1 from birth and L2 at primary school
    4) L1 from birth and L2 at secondary school
    5) L1 from birth and L2 in adulthood

Multivariate analysis using Rbrul (Johnson 2009)

Speaker-specific influences on CS: Results

Pattern of bilingual acquisition	Log-odds	Number of clauses	% of bilingual clauses	Centred factor weight
Both Welsh and English from birth	0.407	15572	14.7	0.6
L2 by age four	-0.053	19006	10.3	0.487
L2 at primary school	-0.087	26501	7.8	0.478
L2 at secondary school	-0.059	3710	6.6	0.485
L2 in adulthood	-0.209	2726	5.6	0.448

A simplified summary

Q1 How does code-switching differ from borrowing?

A1 In its low frequency and integration

Q2 What is grammaticality in code-switching?

A2 It depends on choice of matrix language

Q3 What factors influence variation in code-switching patterns?

A3 Many, but including patterns of bilingual acquisition and previous discourse