Compositionality

Evidence from Code-Switching

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Outline

I. Introduction: Phrasemes in language mixing
II. Study: Verb-based phrasemes
III. Discussion: Verb semantics
IV. Conclusion & Outlook

Research question

How are phrasemes processed during language production?

Holistically, i.e. they are retrieved in one piece?

Compositionally, i.e. they are assembled from individual morphemes each time they are produced?

Approaches to processing

- Traditionally: deviations/errors observed in monolingual acquisition, language loss, or slips of the tongue. (Häcki-Buhofer 2007a, Paradis 2004, Kuiper et al. (2007)
- Recently: processing speed measured during psycholinguistic experiments. (see Wray 2012)
- Here: production strategies observed in everyday discourse of balanced bilinguals.

Initial assumptions

- Bilingual and monolingual language processing are not fundamentally different. (Paradis 2004; Bialystok & Craik 2010)

- Bilingual data reveal strategies and stages of language processing not accessible through monolingual data.

Initial assumptions

- Linguistic phenomena such as language switching or mixing, which are observable alongside or within phrasemes in bilingual discourse, can be employed as indicators for chunking or parsing during language production.

→ Implications also for monolingual processing.

The 4-M-Model

(Myers-Scotton & Jake 2000)

1. **Content** morphemes
2. **Early system** morphemes
3. Late system morphemes (**bridges**)
4. Late system morphemes (**outsiders**)

Jim like-s Sally's eyes.

The Matrix Language Frame Model
(Myers-Scotton 1993 and following)

Asymmetrical distribution of languages:

- **Matrix Language** (ML) → syntactic frame
- **Embedded Language** (EL) → "content words"

In mixed constituents:

1. Word order from ML
2. Outsider morphemes (ageement and case markers) from ML

Embedded language islands

- Myers-Scotton (2002:162):

"[M]any Embedded Language islands are either formulaic or routine collocations, perhaps making them similar to the activation required to access singly occurring forms"

→ Phrasemes tend to resist language mixing; they are processed as chunks.

Conceptual Unit Hypothesis

- Backus (2003)

Complete conceptual units can be switched. Realization of semantically weak elements from L_x through morphemes from L_y is possible.

... het is nu, ja, kültürle, kültürle dini karıştırıyorlar, **VIND IK** ...
'now it's like, well, they are mixing up culture and religion, **I THINK**' (Backus 2003:115)

→ Not many examples, mostly pragmatically motivated units

Formulaic Frames

- Namba (2008/2012): ML frames, slots filled with EL elements.

then it's (.)	me o	hiraiteru
	eye ACC	open

{**then** the eyes are open}

→ Very few examples from two bilingual children; idiomatic competence developing

Phraseme-internal mixing?

- According to Myers-Scotton, phrasemes generally seem to be inserted as (switched) chunks.

- According to Backus and Namba you can have language mixing inside a phraseme.

→ What determines the degree of resistance to internal language mixing?

Data & Methodology

- Qualitative corpus-based study
- 50 hours of informal interviews

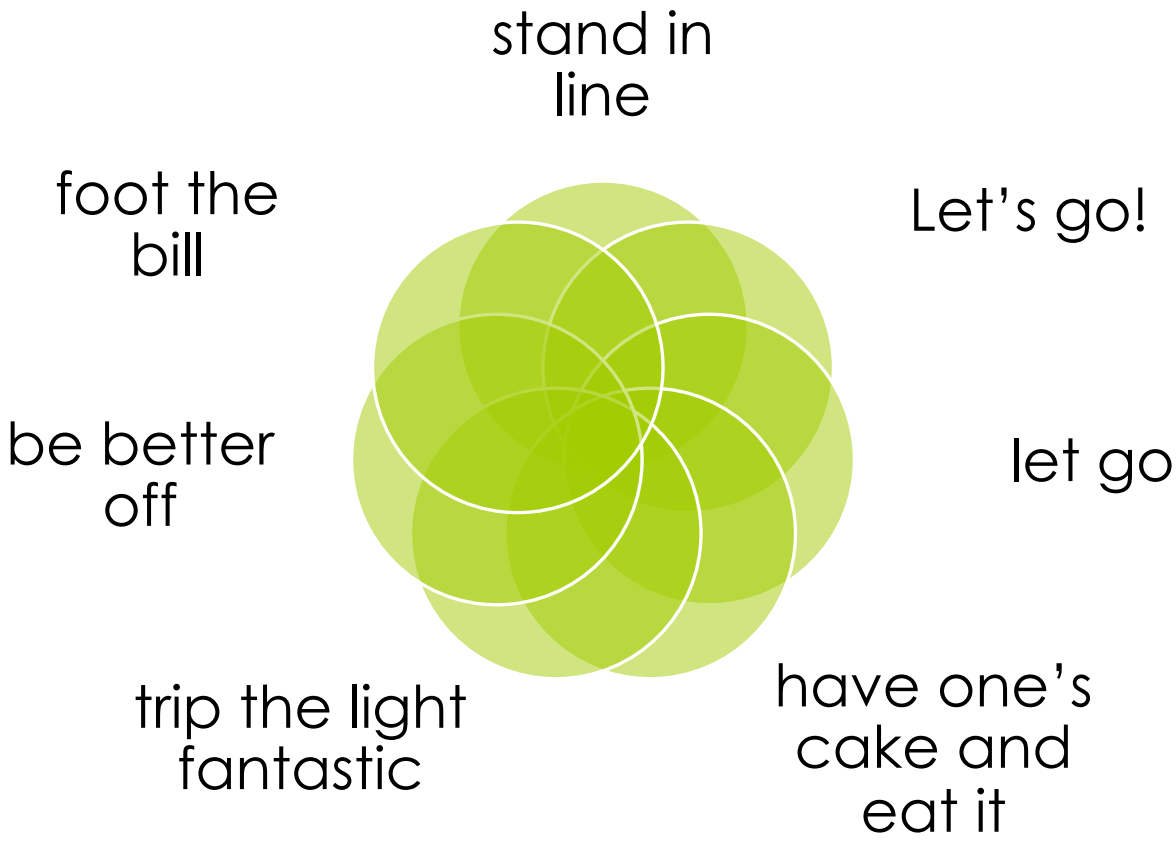
  8 German Americans, recorded 1999-2005 as part of DFG project "*Sprachkontakt Deutsch-Englisch: Code-switching, Crossover & Co.*"

  =>

- 1040 phraseological sequences

  varying degrees of internal syntactic and semantic complexity

Subset:
451 verb-based phrasemes



Monolingual ⇔ bilingual

1. BJ: *Looking back is the worst thing you can do. You* ***turn to a pillar of salt***. (B1b:556)

2. TG: Aber ich bin froh. *They* ***keep an eye on her****, too*. Wenn irgendwie was wär'... (T28.22)

3. LK: ... da wollten mer ***sure mache***, dass mer e Haus kriegen wo ma e Eckbank neistelle kann.

Switching

- L2* phraseme as trigger for code-switch:
  know one's way around

*"...hier/ bin ich alles bequem, weil ich alles-äh you know-äh- I **know my way around**..."*

...here/ I am all convenient because I (have) everything-uhm you know-uhm- I know my way around...

(*The ML/EL distinction describes the distribution of languages within one CP only.)

Mixing

- Partial relexification (overt mixing)
  of EL phraseme: *be in denial*

  "**Sind** die Menschen **{in} denial**,
  when they do somethin' like that?"

  Are people in denial when…

Results

Out of 451 clauses containing verb-based phrasemes, 83% are monolingual in a monolingual environment.

17% reveal the speaker's bilingual identity, through switching or mixing (overt and covert)

→ Which factor promotes or inhibits phraseme-internal language mixing?

Mixing vs switching

	language mixing		language switching	
verb-based phr.	59	**75%**	18	27%
other phrasemes	20	25%	49	**73%**
total	79	100%	67	100%

→ Mixing is related primarily to verb-based phrasemes, switching occurs mostly along with other types of phrasemes.

The crucial role of verb semantics

- If the meaning of the phraseme is conveyed primarily by the nominal component, the verb can be relexified and adapted to the syntax of the matrix language of the clause.

We wanted to make sure
Wir wollten sicher gehen

Da wollte mer *sure* mache
(English collocation integrated into German clause)

The crucial role of verb semantics

- If the meaning of a phraseme is conveyed primarily by the verb, switching is the preferred strategy (often accompanied by hesitation)

> "...*hier/ bin ich alles bequem, weil ich alles-äh you know-äh- I* ***know my way around***..."

Interpretation

In German and English the verb contains a late outsider system morpheme → determines the ML of the clause.

If the verb is cognitively salient, it is conveyed in its original language → transports phraseological meaning.

Complete language switch as preferred option → makes the phraseme appear as a holistically processed "chunk".

Interpretation

If the verb is not cognitively salient (weak semantics), its surface form is not tied to ist original language → verb can be relexified.

Phraseme-internal language mixing is possible → evidence for compositional assembly during language production.

Conclusion

- The MLF Model provides convincing explanations for the mixing patterns as well as for the resistance to mixing of certain types of phrasemes.
- CS data indicate that phrasemes are generated compositionally from individual morphemes during language production.

Outlook

- Expand database: Investigation of more verb-based phrasemes with a semantically light syntactic head.
- Test hypothesis: The semantic core of a phraseme needs to be realized in its base language as a cue to a language-specific phraseological sequence. Functional elements can be relexified.

THANK YOU FOR LISTENING!

QUESTIONS

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