

# Shared spans in bilingual grammars: Evidence from Pennsylvania Dutch participles

Deborah Adeyeye & Emmeline Wilson

The Pennsylvania State University



## Introduction

### Bilingual Mental Lexicon

- Psycholinguistic studies posit non-selective access in the bilingual mental lexicon i.e. the **parallel activation** of the bilingual's two languages. [15, 2]
- There exists a combined **integrated cognitive space** in which competition between grammatical elements from each language is inevitable. [9, 16, 3]

### Borrowing

- Borrowing involves the **transfer or incorporation** of lexical items originating from a donor language ( $L_D$ ) into the discourse of a target language ( $L_R$ ). [7, 4, 10]
- There is a strong dispreference for the borrowing of inflectional morphology from one language into another.

#### (1) German-English [9, p.521]

Die werden **gedraftet** von einer High School  
They are drafted from a high school

'They are drafted from a High School'

#### (2) Igbo-English [10, p.102]

Ha **chang-iziri** ihe niile  
They chang-PAST thing all

'They changed everything'

## Pennsylvania Dutch

PD is a North American language that has been in close contact with American English over the past 240 years. It is most similar to the dialects of the southeastern Palatinate Germany. There has been an attested increase of lexical borrowing into PD from 17-30% between the 1880s and 1990s. [8]

### Pennsylvania Dutch Participles

- Weak verbs:** have no vowel change (umlaut), take  $g(e)-t$  as the participle inflection.
- Strong verbs:** unpredictable vowel changes except in their nonfinite and present tense forms, take  $g(e)-e$  as the participle inflection.

Infinitive	Participle
schiwwere	gschiwwert
schmoke	gschmokt
<i>dreiwe</i>	<i>gedriwwe</i>
<i>weare</i>	<i>gwore</i>

## Methods

- Manually skimmed and pulled out verbs with an ENG designation from volumes of *The Comprehensive Pennsylvania German Dictionary* [1].
- Omitted** 1) verbs for which no participle was listed, 2) semantic loans (extensions), and 3) loan translations (calques)
- Coded** for ...
  - Initial segment (C/V) of ENG root
  - Prefixed or bare verb in PD
  - Participle exponency in PD (weak/strong)
  - Corresponding participle exponency in ENG (regular/irregular)

## Research Question

What factors determine when the English participle stem is integrated into the Pennsylvania Dutch participle instead of the English nonfinite stem?

## (Preliminary) Results

### Initial Segment of the English Stem

Whether the initial segment of the English stem is a consonant or vowel **does not** influence the exponency of the English stem when inflected as a participle in PD.

### Prefixed or Bare Status of the PD Verb

Whether the PD verb has a prefix or not **does not** influence the exponency of the English stem when inflected as a participle in PD.

### Regularity (weak/strong) of PD and ENG participles

Whether the English participle is regular or irregular **seems to influence** the exponency of the English stem when inflected as a participle in PD.

*Additionally, the regularity of the English participle seems to align with the weak/strong exponency of the PD participle.*

	PD weak	PD strong
ENG regular	schiwwere/gschiwwert 'to shiver/shivered'	
ENG irregular	tietsche/getietscht 'to teach/taught'	weare/gwore 'to wear/worn'

## Theoretical Assumptions

We assume a realizational, late-insertion framework of morphosyntax. [5, 6]

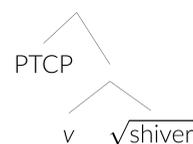
We assume a distinction between roots and stems.

- root:** smallest abstract primitive unit
- stem:** a root and its syntactic categorizer

We assume the existence of bipartite morphemes that allow for a circumfix vocabulary item. [11]

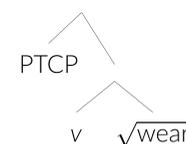
## Distributed Morphology Analysis

### Regular ENG - Weak PD (*gschiwwert*)



- $\sqrt{\text{shiver}} \leftrightarrow /ʃɪv.ɪ/$
- $v \leftrightarrow \emptyset$
- $\text{PTCP} \leftrightarrow /gə/.../t/ /$  (elsewhere)

### Irregular ENG - Strong PD (*gwore*)

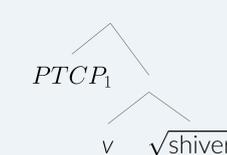


- $\sqrt{\text{wear}} \leftrightarrow /we.ɪ/$
- $v \leftrightarrow \emptyset$
- $\text{PTCP} \leftrightarrow /gə/.../ə/ / \_ \text{ROOT}_{irr} \_$
- $/we.ɪ/ \leftrightarrow /wo.ɪ/ / [\text{PTCP}]$

## Spanning Analysis

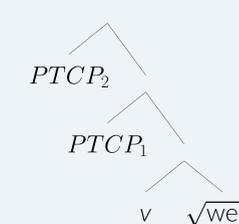
This analysis requires the use of the **Superset Principle** [12] for matching.

### Regular ENG - Weak PD (*gschiwwert*)



- $\leftrightarrow /ʃɪv.ɪ/$
- $\text{PTCP}_1 \leftrightarrow /gə/.../t/$

### Irregular ENG - Strong PD (*gwore*)



- $\leftrightarrow /wo.ɪ/$
- $\text{PTCP}_1 \leftrightarrow /gə/.../ə/$
- $\text{PTCP}_2 \leftrightarrow /gə/.../ə/$

## Conclusion & Implications

- The regularity of the English ( $L_D$ ) participle influences the exponency of the shared verb as a PD ( $L_R$ ) participle.
- Spans [13] are the optimal target for lexical sharing in the bilingual lexicon. [14]
- Evidence for the bilingual lexicon as a shared and integrated cognitive space.
- Exponency of shared spans and subsequent inflection depends on the activated language mode of the bilingual speaker.

## Selected References

- R. C. Beam. *The Comprehensive Pennsylvania German Dictionary*. 2004-2011.
- T. Dijkstra and W. J. Van Heuven. The architecture of the bilingual word recognition system: From identification to decision. *Bilingualism: Language and Cognition*, 5(3):175-197, 2002.
- R. Fisher, D. Natvig, E. Pretorius, M. T. Putnam, and K. S. Schuhmann. Why is inflectional morphology difficult to borrow?—Distributing and Lexicalizing Plural Allomorphy in Pennsylvania Dutch. *Languages*, 7(2):86, 2022.
- F. Gardani. On morphological borrowing. *Language and Linguistics Compass*, 12(10), 2018.
- M. Halle and A. Marantz. Distributed Morphology and the Pieces of Inflection. In K. Hale and S. J. Keyser, editors, *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, pages 111-176. The MIT Press, 1993.
- M. Halle and A. Marantz. Some key features of Distributed Morphology. In *Papers on phonology and morphology*, volume 21 of *MIT Working Papers in Linguistics*, pages 275-288. 1994.
- E. Haugen. The Analysis of Linguistic Borrowing. *Language*, 26(2):210-231, 1950.
- M. L. Loudon. The English 'Infusion' in Pennsylvania German. In R. Hickey, editor, *English in the German-Speaking World*, pages 384-407. Cambridge University Press, 2019.
- C. Myers-Scotton and J. L. Jake. Nonfinite verbs and negotiating bilingualism in codeswitching: Implications for a language production model. *Bilingualism: Language and Cognition*, 17(3):511-525, 2014.
- S. Poplack. *Borrowing: loanwords in the speech community and in the grammar*. Oxford University Press, 2018.
- N. Rolle. The morphological/phonological behavior of bipartite morphemes. 2022.
- M. Starke. Nanosyntax A short primer to a new approach to language. *Nordlyd*, 36(1):1-6, 2009.
- P. Svenonius. Spans and Words. In H. Harley and D. Siddiqi, editors, *Morphological Metatheory*, pages 199-220. John Benjamins, 2016.
- D. Tat. Lexical Borrowing Targets Spans. *Languages*, 7(4):289, 2022.
- W. J. Van Heuven, T. Dijkstra, and J. Grainger. Orthographic Neighborhood Effects in Bilingual Word Recognition. *Journal of Memory and Language*, 39(3):458-483, 1998.
- J. N. Williams. *The Bilingual Lexicon*. Oxford University Press, 2015.