Phonological and prosodic differences in word production and comprehension between German and English

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Introduction:

• Challenge of being a bilingual is activation of information in both languages during comprehension and production

•Schwartz et al. (2007) found that late learners produced cognates with the same orthography and phonology in both of their languages more quickly than cognates that had varied orthography or phonology

•Both segmental pronunciation and stress patterns are considered parts of phonology

•Schwartz et al. (2007) found that feed-forward and feed-backward pathways were affected by the phonology and orthography in both the L1 and L2

Present Study:

• Applying this same principle to test segmental pronunciation and stress pattern differences between German and English

• Testing reaction times in German-English bilinguals in situations with cognates

Research Questions:

1.Are cognates that have the same segmental pronunciation and stress patterns produced more quickly than those that vary in pronunciation and stress patterns between English and German?

2. Is there a difference in reaction time if we manipulate only segmental pronunciation or stress patterns while the other variable is kept constant between the two languages?

3.Do we see similar patterns for comprehension and production?

Method:

•Lexical Decision Task

Word or nonword?

•Word Naming Task

Participants:

•Late German-English bilinguals

•Living in State College or surrounding area

References:

Dijkstra, T. & Grainger, J. & van Heuven W.J.B. (1999). Recognition of Cognates and Interlingual Homographs: The Neglected Role of Phonology. *Journal of Memory and Language, 41,* 496-518.

Schwartz, A. & Kroll, J. & Diaz, M. (2007). Reading words in Spanish and English: Mapping orthography to phonology in two languages. *Languages and Cognitive Processes, 22(1),* 106-129.

Materials:

•All experimental pairs will be matched for syllable length and frequency

•Non words in lexical decision task will be possible words in German

- Pseudowords will consist of real German words in which 1-2 letters have been replaced to create a pronounceable nonword
- Pseudowords will match the experimental and control items for length
- No pseudowords will be real words in English
- No pseudowords will sound like real English words when pronounced with German spelling-to-sound correspondences (e.g., TEEP)

Example Stimuli:

	Cognate	Control
+So +St	Picnick	Piste
+So –St	Kalendar	Kartoffel
-So +St	Tiger	Tilgung

Hypotheses:

1.We propose that cognates with the same segmental pronunciation and stress patterns will be produced more quickly than those that are varied.

2.(a) If manipulating the segmental pronunciation while keeping stress patterns similar (-So +St) results in faster reaction times compared to keeping segmental pronunciation the same while manipulating stress (+So -St), then stress patterns are more central to language production.

(b) If manipulating the stress pattern while keeping segmental pronunciation similar (+So –St) results in faster reaction times compared to keeping stress patterns the same while manipulating segmental pronunciation (-So +St), then segmental pronunciation is more central to language production.

3.We predict that the manipulation of both segmental pronunciation and stress patterns will affect comprehension and production equally.