Phonological constraints on the processing of cognates and loanwords in L2

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In linguistic research, synchronic, diachronic and experimental evidence are not usually combined to address issues about phonological representations. Although present-day speakers do not have knowledge of the history of their own native language, grammars are pertinacious and past developments leave their mark on the synchronic system in systematic ways, which must be processed by the present-day speaker. Other than cognates (inherited words), loans are systematically adapted to the phonology of the native language. Our focus is on the constraints that phonological representations can have on the processing of cognates and loans particularly in a second language (L2). How does the individual native phonology of the German or Dutch native speaker constrain the processing of English as L2? Two issues need to be addressed. First, all three languages share inherited words, i.e. cognates: D *bed*, E *bed,* G *Bett.* But all three have also borrowed from Romance languages particularly Latin and Old French. These have been adapted according to the native phonology of the different languages: D *paniek,* E *pánic,* G *Pánik.* To what extent is the current native speaker of Dutch and German influenced by their native phonology of cognates and loans? What implications do the historical origins of words (i.e. whether they were borrowed or inherited) and the ways in which they have developed or been adapted have for native speakers of the modern languages?

We will present results from neurolinguistic experiments where we investigated how highly proficient L2 speakers of English process phonological word structures that diverge to different degrees and on different levels from their native counterparts. e.g., for loans different stress placement: English *réptile* vs. German *Reptíl*; for cognates segmental differences: English *thunder* [ˈθʌndə], German *Donner* [ˈdɔnɐ]? In our experiments, we employed a priming paradigm with a lexical decision task, where participants heard part of a word (fragment prime), followed by a target word appearing on the screen. The participant then had to decide via a button press whether or not the word on the screen is an actual word in English. We recorded accuracies, reaction times and brain responses via EEG (electroencephalography).

Ultimately, our studies show that the history of a language impacts the native system and diachrony cannot be ignored when conducting research into the synchronic system. This is particularly true when looking at bilingual processing, where phonological correspondences may facilitate or inhibit word recognition and processing.