



EXPLORATION U: COMMUNITY SCIENCE NIGHT AT BALD EAGLE HIGH SCHOOL

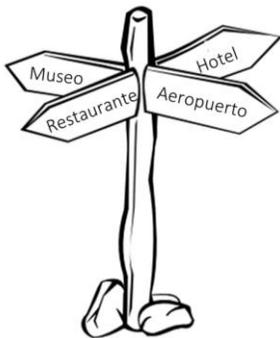
BILINGUALISM MATTERS at PENN STATE

CENTER FOR LANGUAGE SCIENCE

Newsletter
Spring/Summer
2017

FEATURED RESEARCH

A message from our Steering Committee



Have you ever traveled to a foreign country of a different mother tongue, and tried to understand important signs by trying to guess what the words mean? If so, you've probably noticed that while some words can look or sound different across languages, some words are fairly easy to guess! The theme of this Bilingualism Matters newsletter is cognates. Cognates are words that have similar form and meaning across languages (e.g., *car* in English and *carro* in Spanish). Just like a tourist may use cognates at a crossroads while abroad, language scientists use cognates to better understand how languages change over time and how languages are stored and represented in the brains and minds of bilingual speakers. In this

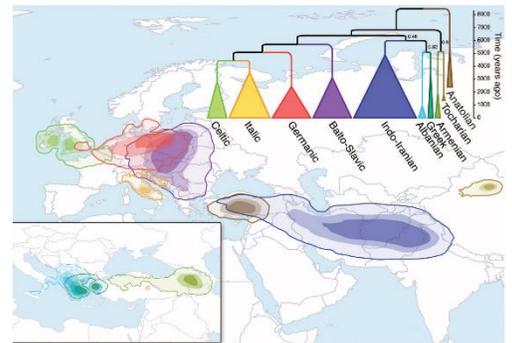
issue of our newsletter, you'll be able to learn more about research on cognates, and some of the interesting things they reveal about language and bilingualism.

It's been a busy and productive academic year, and in this issue you'll also hear a bit about some of the outreach events we've been a part of. This spring, we were delighted to collaborate with Penn State's Center for Global Studies and Global Connections on *World Stories Alive*, a weekly bilingual reading event for children held each Saturday at The Schlow Library. Look for the series again next spring, and please get in touch if you'd like to volunteer to share your native language at one of the events. We'll also be out and about in the community this summer, with events at local schools as well as Children's Day at the Central PA Arts Fest. We hope to see and talk with you at these events, and we look forward to many more interesting discussions about bilingualism and language learning!



You say "potato", I say "patata": What cognates reveal about the minds of bilinguals

Carla Fernandez and Kinsey Bice, p. 3



Cognates: The key to a common linguistic ancestor

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The Cognate Corner



He must be Spanish...



English: Gift
German: Geschenk

German: Gift
English: Poison



SOAP

Soap:

¡No significa sopa! Su real significado es JABÓN.

I wash my hands with soap.



Sopa en inglés es:

Soup:

PAN

Pan:

Su significado en español no es pan. Pan significa SARTÉN.

This pan is perfect for cooking meat.



Pan en inglés es:

Bread:

www.froggin.com.mx



www.froggin.com.mx



Bilingualism Matters Featured Partner: Janet Van Hell



Dr. Janet Van Hell, Professor of Psychology and Linguistics and Co-Director of the Center for Language Science at Penn State University

This newsletter's featured member is Dr. Janet Van Hell, a Professor of Psychology and Linguistics and Co-Director of the Center for Language Science. Janet and her Bilingualism and Language Development (BiLD) Lab are a constant presence at Bilingualism Matters outreach events, and she also happens to be an expert on cognates. Here's what Janet had to say about how she uses cognates in her research:

Since learning foreign languages at secondary school, cognates (such as cat, kat, Katze, chat) have been my life-long friends. Their overlap in spelling, pronunciation, and meaning across different languages made learning foreign language words much easier. As a language scientist, my love for cognates grew even stronger, as they form an ideal testing ground for studying fascinating questions about bilingual language processing.

Psycholinguists like myself exploit cognates' overlap in spelling, pronunciation and meaning to study how these codes interact across languages in the bilingual mind and brain. We know, for example, that highly proficient bilinguals are faster to recognize and produce cognates than non-cognates, even when they are using only one language. These effects are taken to indicate that a bilingual's two languages are always active and that the bilingual memory system is fundamentally permeable across language boundaries.

Psycholinguistic research also has implications for the classroom. Language instructors often use cognates to help vocabulary learning in their students. One way you can try this at home is through cool applications like the Cognate Highlighter Browser, a free plugin to Google Chrome that automatically highlights all English words understandable to Spanish speakers. Cognates are fun friends!

You say “potato”, I say “patata”: What cognates reveal about the minds of bilinguals

By Carla Fernandez & Kinsey Bice

One of the most striking characteristics of languages throughout the world is that they often contain words that look similar, but may or may not mean the same thing. For example, if you’ve heard or read the word *telephone* in Spanish (*teléfono*), then you know it looks and sounds a lot like it does in English. *Telephone* and words like it are called cognates: They share similar form and meaning across languages. But not all words that look and sound the same also share a meaning. For example, the word *pan* means bread in Spanish and a cooking utensil in English. Words that share similar form but have different meanings across languages are called false friends. Researchers have made crucial use of cognates like *telephone* and false friends like *pan* in order to understand how bilinguals produce and understand language.

Research has shown that bilinguals reliably recognize cognates faster than non-cognate words (Van Hell & Tanner, 2012). This suggests that both of a bilingual’s languages are always “on” or activated, even when they are only using one. Researchers hypothesize that this dual activation allows the bilingual mind to recognize and process the word more quickly. Interestingly, a different pattern is found with false friends. When a Spanish-English bilingual sees a word like *pan*, conflicting information about its meaning is activated. Is it bread, or a tool for cooking? In the face of such conflicting information, the processing of these words seems to slow down. What’s remarkable about this is that, in conjunction with the cognate effect, it demonstrates quite clearly that when bilinguals are processing words, both of their languages are activated simultaneously.

Advantages of dual language activation in bilinguals have also been found in domains beyond word recognition, including memory retrieval. One memory retrieval task provides a category such as ‘animals’, and asks bilinguals to name items belonging to that category. Research has demonstrated that in performing this task, bilinguals reliably name more cognates than non-cognate words. It seems that when a word is accessible in both of a bilingual’s languages, it becomes easier to retrieve the word from memory (Blumenfeld, Bobb, & Marian, 2016; Baus, Costa, & Carreiras, 2013).

Another interesting research finding is that bilinguals of all ages can benefit from cognates. Studies comparing child and adult bilinguals have found that both groups are faster to understand and produce cognates as compared with non-cognates (Poarch & van Hell, 2012). What this shows is that the extent to which we benefit from cognates depends on the extent of our knowledge of the language, and not necessarily how old we are.

For older and younger bilinguals alike, cognates and false friends provide an important window into our understanding of language processing in bilinguals. They serve as a central research tool in examining how bilinguals manage their two languages simultaneously. Whether you say “potato” or “patata”, we hope you’ll agree that research on cognates provides us all with some tasty food for thought!

Baus, C., Costa, A., & Carreiras, M. (2013). On the effects of second language immersion on first language production. *Acta Psychologica*, 142(3), 402-409.

Blumenfeld, H. K., Bobb, S. C., & Marian, V. (2016). The role of language proficiency, cognate status and word frequency in the assessment of Spanish-English bilinguals’ verbal fluency. *International Journal of Speech-Language Pathology*, 18(2), 190-201.

Poarch, G. J., & Van Hell, J. G. (2012). Cross-language activation in children’s speech production: Evidence from second language learners, bilinguals, and trilinguals. *Journal of Experimental Child Psychology*, 111(3), 419-438.

Van Hell, J. G., & Tanner, D. (2012). Second language proficiency and cross-language lexical activation. *Language Learning*, 62(2), 148-171.

NEWS AND EVENTS



Exploration U: Community Science Nights

This year we participated in all three of Eberly College’s Community Science Nights. The BiLD Lab did a live EEG demo, and we had games and activities, and lots of great discussions with kids and families about bilingualism and language science!



Brown Bag for Parents at The Child Care Center at Hort Woods

During the fall semester we had a great workshop and discussion with Hort Woods families about raising bilingual children. Please contact us if you’re interested in having a similar event at your school or institution!



Preschool Community Educators Meeting at The Bennett Family Center

In winter 2016, we met with community educators from numerous local preschools to share research and discuss questions about working with bilingual children in preschool classrooms. Contact us for more information, and to schedule an event for your teacher group.

Cognates: The Key to a Common Linguistic Ancestor

By Lara Schwarz & Dora LaCasse

Remember when *sick* just meant that your immune system was compromised? Now you hear it used instead of cool. Or, have you noticed that it's sometimes hard to tell the difference between the names Dawn and Don? These are examples of language change in progress! Language change can take a number of forms, from changes in meaning, to the addition of new words, to changes in our pronunciation. Changes such as these, that have been taking place for generations, have resulted in words that are shared across many languages. A language learner may recognize the relationship between German *Katze* and English *cat*, and immediately know they are related. These types of words are called cognates, and they have similar forms and meanings in multiple languages—more than one might expect. Cognates show us just how systematic language change can be, and how far reaching the relationships between many of the world's languages are.

Language changes often occur when two or more cultural groups come into contact with one another. For instance, the invention of cellphones and the global presence of English led to German borrowing the word *handy* to refer to these helpful devices. The changes might also be internally motivated.

You've probably heard in the news, "the defendant pled guilty", but did you know that the dictionary gives *pleaded* as the past tense form of *pled*? Perhaps because of influence from similar-sounding verbs like *feed-fed*, *lead-led*, or *bleed-bled*, *pled* has become widely-used. According to William Labov (1994), a linguist at the University of Pennsylvania and an expert on language variation and change, language change is a natural, systematic process.

Quite remarkably, the vast majority of languages spoken in Europe, including German, French, English, Spanish, Swedish, Italian, and even Icelandic, stem from a common ancestor language called *proto-Indo-European*, or PIE. Linguists think that PIE was spoken some 5,000 years ago near the Black Sea, eventually spreading across Europe and the Indian subcontinent (Penny 2002:2–3). Cognates emerge from hundreds of generations of language change, and linguists can use them to reconstruct the common ancestors of seemingly unrelated languages. Modern day descendants of PIE include words for livestock, family, numbers, and food (Stedje & Prell 2007:49). Some are very easily recognizable, such as *salt* (*sal* in Spanish, *sel* in French, *Salz* in German, and *salt* in Icelandic), while others are less so (English *goose* is related to German *Gans* and Spanish *ganso*).

Though we can't know for sure what PIE looked like, linguists can reconstruct it by identifying patterns in cognates. For example, the words for *fish* (German: *Fisch*, Spanish: *pez*) and *father* (Icelandic: *faðir*, Spanish and Italian: *padre*) reveal patterns that lead linguists to believe that the sounds 'p' in Romance and 'f' in Germanic languages share a common ancestor, as might the 'd' in Romance and 't/th' in Germanic languages. These patterns can be found throughout numerous languages spoken today which were once related to PIE. But linguists aren't the only ones who can use this evidence of systematic language change. Language learners who notice these patterns can also use them to help learn vocabulary in a new language.

Cognates allow us to uncover our shared linguistic history and the fascinating, natural process that is language change. They can even help us in our language learning efforts. An important job for some everyday words!

Labov, W. (1994). *Principles of linguistic change*. Oxford, UK ; Cambridge [Mass.]: Blackwell.

Penny, R. J. (2002). *A history of the Spanish language*. Cambridge: Cambridge University Press.

Stedje, A., & Prell, H.-P. (2007). *Deutsche Sprache gestern und heute: Einführung in Sprachgeschichte und Sprachkunde* (6. Aufl.). Paderborn: Fink.

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