



PENNSCİLS

PENN STATE CENTER FOR LANGUAGE SCIENCE

May–September, 2011

Imaging Bilingual Brains

PENNSCİLS Penn State Center For Language Science



• Michele T. Diaz



• Arturo E. Hernandez



• Sharlene D. Newman

The Center for Language Science (CLS) organized a three-day series of seminars devoted to fMRI training. These were held May 2 - 4, 2011. The purpose of the seminars was to give current Center for Language Science (CLS) graduate students, post-docs, and faculty the opportunity to dive head in to fMRI data collection and analysis. In order to do so, the CLS invited a set of neuroimaging experts to lead discussion on theoretical and practical considerations in experimental design and implementation of fMRI studies that specifically focus on language processing. Thanks to their joined efforts and patience (!) in teaching us the secrets of fMRI, three novel studies have been designed and data are currently being collected. The broader scope of these studies is to investigate the neural correlates of bilingual language processing, and each project addresses a specific question.

Invited guests included:

- ◇ Michele T. Diaz, Duke University (Assistant Professor of Psychiatry and Behavioral Sciences and Associate Director for Scientific Administration at the BIAC)
- ◇ Arturo E. Hernandez, University of Houston (Associate Professor of Psychology and Director of the Developmental Psychology Program at Univ. of Houston)
- ◇ Sharlene D. Newman, Indiana University (Assistant Professor of Psychological and Brain Sciences)

After the initial set of seminars, teams of CLS members and the neuroimaging experts were able to collaborate on fMRI bilingualism projects over several weeks. Researchers here at Penn State proposed fMRI projects to our three invited guests and worked to initiate them over the summer. The current collaborative projects focus on bilingualism. One of the studies expands upon existing ERPs data on morpho-syntactic processing in native speakers of English who are second language learners of Spanish. The second study investigates whether bilingual speakers who are speaking in their second language (L2) have to actively inhibit their first language (L1). The third study examines the neural correlates of sentence-level codeswitching at different syntactic sites in Spanish-English bilinguals.

Going through the process of learning a new experimental technique was quite an endeavor, but it was well worth it and opens up new avenues for research! Our hope is that by expanding our experimental horizons we will be able to have a deeper insight into the underlying processes that regulate bilingual language processing.

Exciting results are on the way....Stay tuned !!

Our ongoing fMRI projects formed through this collaborative effort include:

- ◇ **The Neural Bases of Semantic Inhibition in English-Spanish Bilinguals**, Project team: Judith Kroll, Eleonora Rossi, Peiyao Chen, and Bobby Marker
- ◇ **The Neural Bases of Code-Switching in Spanish-English Bilinguals**, Project team: Janet van Hell, Giuli Dussias, Alvaro Villegas, Michele Diaz, Sharlene Newman and Caitlin Ting

-Written by Eleonora Rossi, Janet van Hell, & Rhonda McClain

Visiting Lecturers



The CLS is proud to host several visiting faculty this fall. Listed below is a brief outline of our visitor's talks in the immediate weeks.

- ◇ **Dr. Paula Fikkert (Radboud University, the Netherlands)** From August 31st to September 2nd Dr. Fikkert visited our center and presented at the weekly CLS meeting.
- ◇ **Dr. Noriko Hoshino (Kobe City University of Foreign Studies)** Dr. Hoshino will visit the CLS from September 8th to September 20th and will present at Friday September 9th's special lab meeting.
- ◇ **Dr. Natasha Tokowicz (University of Pittsburgh)** Dr. Tokowicz is visiting for the fall during her sabbatical. She will present a talk at Friday September 9th's CLS meeting.
- ◇ **Josef Fruehwald (University of Pennsylvania)** Josef will visit the CLS September 16th and present at the weekly CLS meeting. He is also scheduled to give an ELAN tutorial and a plyr tutorial.
- ◇ **Dr. Ellen Bialystok (York University)** Dr. Bialystok will visit the CLS for a few days and is giving a special talk on November 17th.
- ◇ **Dr. Mark Seidenberg (University of Wisconsin, Madison)** Dr. Seidenberg will visit the CLS for a few days and give a talk scheduled during the regular CLS meeting time.

*CLS Weekly Meetings:
Fridays 9:00 to
10:30am 102 Thomas
Building
(Please note the change
in location)
Refer to the meeting
schedule for more details
Everyone is welcome to
participate!*

Special CLS Lectures

Two very exciting talks will be held towards the end of our fall semester. Be sure to keep these dates in mind!

Thursday November 17th, 4:00 pm

Ellen Bialystok
(York University)

Reshaping the Mind: The Benefits of Bilingualism

Friday, December 2nd 9:00 am

Mark Seidenberg
(University of Wisconsin)

Learning, Plasticity, and the "Achievement Gap"

Spotlight on Visiting Scholars : Fall, 2011



Noriko received her Ph.D. in psychology from Penn State in 2006. After leaving Penn State, she did her post-doc at Tufts and at the ESRC Centre for Research on Bilingualism at Bangor University in the UK. She recently moved back to Japan and is now on the faculty at Kobe City University of Foreign Studies. Her research focuses on the questions of how and when bilinguals select the language of production when they speak in each of their languages and of what cognitive and linguistic factors constrain the process of speech planning. She looks forward to talking with people in the CLS community during her visit!



Jing came to CLS as a visiting scholar under the supervision of Judith Kroll. She has been teaching English major students in the College of Foreign Languages and Literature of Northwest Normal University in China. Her interests are bilingualism, writing processes, and SLA. Her office is 4X, Thomas.



Natasha is Associate Professor of Psychology and Linguistics at the University of Pittsburgh and will be spending part of my sabbatical visiting CLS. Her research focuses on adult second language learning and bilingualism. She is especially interested in challenges posted to successful adult second language learning, including mismatches between languages-at the level of individual words, and at the level of morpho-syntax. Her research program uses behavioral, eye-tracking, and event-related brain potential methods as sources of converging evidence to explore these issues. She can be reached at natasha@psu.edu or in room 4F Thomas Bldg.

2011 PIRE Undergraduate Interview

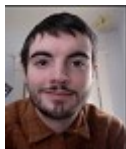
An interview with Kylee Jo Cook (KJC), Rebecca Leimkuhler (RL), Lauren Perrotti (LP), and Nicole Wasilus (NW)



Patrick
Clark



Kylee-Jo
Cook



James
Graham



Nathan
Hollister



Rebecca
Leimkuhler



Rachel
Negron



Lauren
Perrotti



Nicole
Wasilus

This summer the PIRE funded eight undergraduate students to participate in a unique experience. Patrick Clark, Kylee Jo Cook, James Graham, Nathan Hollister, Rebecca Leimkuhler, Rachel Negron, Lauren Perrotti, and Nicole Wasilus were the first cohort of undergraduates to travel abroad and work with our PIRE partners. As a young research scientist the opportunity to network and learn from more senior scientists is an invaluable opportunity. We interviewed some of the PIRE students to talk about how they benefitted from their trips abroad.

Based on your own impression, what factors make the PIRE a positive cultural experience and set it apart from other study abroad experiences?

RL: I have never studied abroad before and I feel as though this was more beneficial than studying abroad because I was in a daily situation at work where I was fully immersed in the culture and could see aspects of it from a different perspective than a student.

LP: I had studied abroad in Todi, Italy in the summer of 2010. There I lived with a host family and took three classes. In Granada, Spain this summer, I was able to do research independently

in a very productive way and fully immerse myself in the Spanish culture in an intellectual way.

NW: I have never studied abroad but I have traveled to other countries. This experience was unlike any other because I was completely immersed in a culture that was foreign to me. I knew only basic Chinese and was in a location where almost nobody outside of the lab spoke English.

Describe working with your PIRE mentor? What kinds of experiences did you have as a visiting lab member?

KJC: I honestly believe that my mentor Rosa Sánchez-Casas is one of the best people I have ever had the privilege of meeting. I think of her as family. She was so welcoming to the lab and Taragona in general. Rachel and I were accepted in to her lab family right away. Everyone was interested in what we were doing and eager to help in any way. Apart from the foreign language, I did not feel like a visitor in any way.

RL: My PIRE mentor (*Sonja Kotz*) gave me a wealth of experience in the field of linguistics. Being at the Institute full time, I got to attend lectures and participate in other research going on. I could focus all of my attention on my own project and my mentor was there to help and advise me every step of the way, giving insight that I could not have received at Penn State or even in the United States.

LP: My PIRE mentor abroad was Teresa Bajo and she was wonderful to work with. It is a very unique experience to be a visiting lab member, but Teresa included us in lab meetings, helped us secure lab space and resources, and generally supported us along the way.

NW: I had a great experience working with my PIRE mentor, Dr. Taomei Guo. She was so warm and welcoming. We met weekly over lunch to discuss how I was adjusting to life in China and how my research was progressing.

If you had any challenges in your research project, how did you overcome those?

KJC: After arriving to Tarragona, Rosa and I realized that there were major flaws in my main task, translation recognition. It took many hours and many deep sighs to rewrite the experiment. However, I now have a new appreciation for the time and work that goes into creating a task similar to mine. I was also fortunate enough to have the help of Rosa's lab.

RL: Most challenges were easily overcome by talking to either my mentor or other people that I worked with. I was very lucky in that my Penn State faculty mentor also made herself very available to me.

LP: There are always challenges in research, but never problems. Doing research is an intellectual exercise that constantly makes us think creatively. There were technological changes and temporary malfunctions, but with perseverance and help we figured out everything.

NW: I had a few challenges with my research while abroad. In one particular instance, the participant was very shy and was actually scared of me because I looked like nobody she had ever seen. We ended up having to conduct the experiment on the floor of our play room and I had to sit as far away as possible while still grading the tasks and handling the equipment and toys. I overcame this experience by just going with the flow and trying my best to smile and look **nonthreatening!**

Do you think this experience has inspired you to consider research as a profession? If so, how?

KJC: I enjoy the field of research I am partaking in.. however, a career in research is not for me.

RL: Yes, this experience has had me considering research in a very realistic situation. I got to experience for 8 weeks what it would be like to be conducting full time research and that is an extremely unique and helpful situation to have been in.

LP: While I have considered pursuing research and academia, this experience has shown me a previously unknown side to research that is interactive and international.

NW: This experience has inspired me to search for opportunities where I can continue conducting research either by becoming a

research assistant or during graduate school. I hope to be able to continue contributing to the professional field of communication science and disorders through research.

How are you continuing to work on your project now that you are back at Penn State?

KJC: I am working on analyzing the data and hope to continue on with ERP data relating to my specific project.

RL: Now that I'm back at Penn State, I'm going to continue to run my experiment on first language English, second language German, which is the exact opposite of my participant pool in Leipzig. I'm also going to continue to analyze my data with more minute manipulations.

LP: Now back at Penn State, I will continue to collect data (particularly from English-Spanish bilinguals). I will then analyze this data in order to formulate and write an Honors Thesis.

NW: I'm continuing my project at Penn State by continuing to score the data I have collected while abroad. Dr. Miller and I have enlisted the help of a native Chinese speaker at Penn State to ensure accuracy of my scoring. I will analyze my data to discover if Chinese preschoolers develop theory of mind similarly to English preschoolers.

Many thanks to the PIRE students for their generous responses. -R.M.

Visit the PIRE student blogs for more information about are students' summer research experiences!

http://cls.psu.edu/pire/pire_blogs.html/

New Students

New Students in fall 2011: Spanish Linguistics: Stephanie Bowers, Matthew Brown, Xanthanese Dean, and Miguel Ramos
Psychology: Angela Chounaird, Kaitlyn Litcofsky, and Caitlin Ting

Matthew Brown

Matt is a first year graduate student in the Department of Spanish, Italian and Portuguese. He is pursuing a dual-title, M.A./Ph.D. in Hispanic Linguistics and Language Science. Matt attended the Florida State University for his undergraduate education in English Literature and Spanish and also attained an M.A. in Spanish during his time there. He is interested in language processing and acquisition.

Angela Chounaird

Angela is beginning her first year of graduate study in the Psychology Department. She is working with Dr. Ping Li, and her current goal is to obtain a dual-title doctorate in Cognitive Psychology and Language Science. Angela recently graduated from Bucknell University with a B.A. in Psychology and minors in Spanish, Italian, and Linguistics. She is interested in lexical development and selection processes in second language learners, as well as cross-language influence and bilingualism more generally.

Xanthanese Dean

Xanthanese is a first year graduate student in the Department of Spanish, Italian, and Portuguese and hopes to earn a dual-title doctorate in Hispanic Linguistics and Language Science. Xanthanese graduated from Miami University with a major in Spanish and a minor in Linguistics. Xanthanese is interested in sentence processing and bilingualism.

Kaitlin Litcofsky

Kaitlyn just started as a first-year graduate student in the Cognitive area of the Department of Psychology in Fall 2011. She graduated from Tufts University in 2009, and before coming here she worked as a research assistant at Georgetown University. Kaitlyn is interested in codeswitching and the interaction of a bilingual's two languages. Her primary advisor is Janet van Hell. Kaitlyn's office is: 2L Thomas.

Caitlin Y. Ting

Caitlin is a first year graduate student in the Department of Psychology. She is pursuing a dual-title doctorate in Cognitive Psychology and Language Science, as well as the Specialization in Cognitive and Affective Neuroscience. Her primary advisor is Dr. Janet van Hell. Caitlin attended the Pennsylvania State University, University Park for her undergraduate career, where she studied Spanish, Psychology, and Linguistics. Her interests lie in language development and acquisition, sentence processing, lexical access, and bilingualism.

Awards/Accomplishments

Students/Alumi who have accepted job offers:

Matthew Carlson (Northwestern University) has accepted a position at University of Texas, El Paso starting January 2012.

Aaron Mitchell (Penn State) has accepted a position at Bucknell University as a visiting assistant professor for the 2011-2012 year.

Research Training Opportunities:

Amelia Dietrich and Tim Poepsel attended the Linguistics Society of America Summer Institute at the University of Colorado-Boulder in July.

Awards/Accomplishments:

- NSF Dissertation Improvement Awards

-Cari Bogulski (Psychology) NSF BCS-1124051. Bogulski, C. A., Kroll, J. F., van Hell, J. G. (2011). Are bilinguals better learners? A neurocognitive investigation of the bilingual advantage.

-Roxana Botezatu (Communication Sciences) NSFBCS-1052926. Botezatu, M. R., Miller, C. A., Misra, M., van Hell, J. G. (2011). The role of orthography to phonology mapping in bilingual word reading.

-Rosa Guzzardo (Spanish) NSF BCS-BCS-1123874. Dussias, P. E., Guzzardo Tamargo R. E., Gerfen, C. (2011). Doctoral Dissertation Research: Linking comprehension costs to production patterns during the processing of mixed language.

-Jorge Valdes Kroff (Spanish) NSF BCS-1124218. Dussias, P. E., Valdés Kroff, J. R., Gerfen, C. (2011). Doctoral Dissertation Research: Using eye-tracking to study auditory comprehension in codeswitching: Evidence for the link between production and comprehension.

- Faculty Grants

-Ping Li (Psychology) NSF BCS-1057855. Multi-site Research Grant. Li, Ping. (2011). Collaborative Research: Cross-Language Lexical Interaction.

- Student Awards

-Colleen Balukas (Spanish) Colleen has received a Linguistic Institute Fellow (Alternate), Linguistic Society of America this summer, a Milton B. Dolinger Graduate Fellowship in the Liberal Arts (Penn State), a Susan Welch-Arthur Nagle Family Graduate Fellowship (Penn State), and a Jesús Díaz Award (Department of Spanish, Penn State University).

-Amelia Dietrich (Spanish) Amelia received a fellowship from the Linguistic Society of America to attend their summer courses.

PIRE Students: Fall, 2011

Alvaro Villegas will be traveling this fall to work in the labs of Drs. Rosa Sánchez-Casas and Josep Demestre (Tarragona) and Dr. Teresa Bajo (Granada). Alvaro is a fourth year graduate student in the Department of Spanish, Italian and Portuguese advised by Dr. Giuli Dussias. His research investigates how lexical information guides bilingual sentence processing. He is also interested in how participant's variables, such as immersion experience and proficiency, modulate syntactic processing. Alvaro will be traveling from September 5th until December 16th in Spain. The title of his project is: A comparative approach to examining the real-time processing of sentence complement/relative

Rhonda McClain will be visiting Dr. Guillaume Thierry at Bangor University, Wales . Rhonda is a fourth year graduate student in the Department of Psychology and is advised by Dr. Judith Kroll. Her research investigates the organization of bilingual semantic representation. She is also interested in using event-related potentials as a technique to explore implicit language processing within bilinguals. Rhonda will be traveling from September 27th until November 29th in Wales. Her project will investigate the role of linguistic contexts in determining how bilinguals access their conceptual store.

Cari Bogulski has been awarded a PIRE fellowship for the fall. Cari is a fifth year graduate student in the Department of Psychology and is advised by Dr. Judith Kroll. Cari is interested in using both behavioral and neuroscientific methods in the study of bilinguals as a means of examining cognitive processing. Some of her recent projects have investigated bilingual advantages in foreign language vocabulary learning, working memory, and executive function.

New Post-docs Fall, 2011

Katharine Donelly-Adams



Katharine started as a postdoctoral fellow at the Department of Psychology and the Center for Language Science in July 2011. She graduated from Tufts University, and before joining us she taught at Juniata College in Huntingdon, PA. Katharine is interested in reading development and disability in first and second language learning, reading fluency, and teaching practices and reading interventions. Her primary advisor is Janet van Hell. Katharine's office is: 4B

Darren Tanner



Darren comes to the Center for Language Science from the University of Washington, where he recently completed his Ph.D. in Linguistics. His research uses both neurocognitive and behavioral measures and focuses on sentence processing in monolingual and bilingual populations. Darren is excited to be at Penn State and is looking forward to the new research opportunities that the CLS brings. You can find him in 4F Thomas.

Selected Media Coverage

The PIRE partnership was highlighted in a recent online magazine publication. Students and shared their thoughts on bilingualism.

September, 5th 2011. Hispanic Outlook Magazine, <http://www.hispanicoutlook.com/>.
<http://live.psu.edu/story/51420>

<http://www.guardian.co.uk/science/2011/feb/18/bilingual-alzheimers-brain-power-multitasking>

Several exchanges with the media aimed at discussing the advantages of bilingualism

<http://www.elmundo.es/elmundosalud/2011/02/18/neurociencia/1298046214.html>

<http://www.scientificamerican.com/podcast/episode.cfm?id=being-multilingual-helps-with-multi-11-02-18>

<http://pagingdrgupta.blogs.cnn.com/2011/02/18/foreign-language-learning-good-for-your-brain/?hpt=C2>

Judy Kroll was interviewed in numerous online media publications

http://www.science20.com/news_articles/bilingualism_mental_gymnasium_brain-77256

<http://www.mg.co.za/article/2011-03-18-on-the-tip-of-tongue/>

<http://mexico.cnn.com/salud/2011/03/03/las-personas-bilingues-reaccionan-mejor-ante-el-alzheimer-cientificos>

<http://www.abc.net.au/rn/allinthemind/stories/2011/3164263.htm>

http://mpegmedia.abc.net.au/rn/podcast/2011/03/aim_20110319.mp3

<http://www.psychologicalscience.org/index.php/publications/observer/2011/april-11/aps-fellow-kroll-receives-2-8-million-from-nsf-to-study-bilingualism-and-the-brain.html>

http://www.publicbroadcasting.net/wamc/news.newsmain?action=article&ARTICLE_ID=1807559

<http://dougal.union.ic.ac.uk/media/iscience/blog/way-with-words/>

The importance of studying sign-hearing bilingualism was highlighted in a recent news article

<http://www.usnews.com/science/articles/2011/03/24/sign-language-users-read-words-and-see-signs-simultaneously>

Janet van Hell was featured on Dutch national TV for a documentary on brain research

<http://www.omroepmax.nl/?waxtrapp=wskvyIsHnHUVONgBbBL>

Recent Publications

- Brenders, P., Van Hell, J. G., & Dijkstra, T. (2011). Word recognition in child second language learners: Evidence from cognates and false friends. *Journal of Experimental Child Psychology*, 109, 383-396.
- Guo, T., Liu, H., Misra, M., & Kroll, J. F. (2011). Local and global inhibition in bilingual word production: fMRI evidence from Chinese-English bilinguals. *NeuroImage*, 56, 2300-2309.
- He, H.B., Li, P., & Wang, H.W. (2011). Advances in knowledge discovery and data analysis for artificial intelligence. A special issue of the *Journal of Experimental and Artificial Intelligence*, 23, 1-136.
- Hermans, D., Ormel, E., Van den Besselaar, R., & Van Hell, J. G. (in press). Lexical activation in bilinguals' speech production is dynamic: How language ambiguous words can affect cross-language activation. *Language and Cognitive Processes*. DOI:10.1080/01690965.2010.530411
- Hoogeveen, L., Van Hell, J. G., & Verhoeven, L. (in press). Accelerated gifted students in the Netherlands: Social and emotional characteristics and behavior. *British Journal of Educational Psychology*. DOI: 10.1111/j.2044-8279.2011.02047.x
- Holtheuer, C., Miller, K., Schmitt, C. (in press). Ser and Estar: The Role of Adjective-types. *Proceedings of the 4th Conference on Generative Approaches to Language Acquisition North America (GALANA)*, 2010, Cascadia Press.
- Jackson, C.N., & van Hell, J.G. (2011). The effects of L2 proficiency level on the processing of wh-questions among Dutch second language speakers of English. *International Review of Applied Linguistics and Language Teaching*, 49(3), 195-219.
- Jackson, C. N., O'Brien, M. G., & Gardner, C. E. (2011). Prosodic cues to syntactic disambiguation in L2 German. In N. Danis, K. Mesh, & H. Sung (Eds.), *Proceedings of the 35th annual Boston University Conference on Language Development*, Volume 1 (pp.308-320). Boston, MA: Cascadia Press.
- Jackson, C.N., & O'Brien, M.G. (2011). The interaction between prosody and meaning in second language speech production. *Die Unterrichtspraxis*, 44(1), 1-11.
- Jared, D., & Kroll, J.F. (in press). Cognitive processes in bilingual reading. To appear in P. McCardle, J. R. Lee, B. Miller, & O. Tzeng (Eds.), *Dyslexia Across Languages: Orthography and the Brain-Gene-Behavior Link*. Baltimore, MD: Brookes Publishing.
- Kroll, J. F., Bogulski, C. A., & McClain, R. (in press). Psycholinguistic perspectives on second language learning and bilingualism: The course and consequence of cross-language competition. *Linguistic Approaches to Bilingualism*.
- Kroll, J. F., & Dussias, P.E. (in press). The comprehension of words and sentences in two languages. In T. Bhatia & W. Ritchie (Eds.). *The Handbook of Bilingualism and Multilingualism, 2nd Edition*. Malden, MA: Wiley-Blackwell Publishers.
- Kroll, J. F., Dussias, P. E., Bogulski, C. A., & Valdes-Kroff, J. (in press). Juggling two languages in one mind: What bilinguals tell us about language processing and its consequences for cognition. In B. Ross (Ed.), *The Psychology of Learning and Motivation*, Volume 56.
- Kroll, J. F., & Rossi, E. (in press). Bilingualism and Multilingualism: Quantitative Methods. In C.A. Chapelle, *The Encyclopedia of Applied Linguistics*. Blackwell Publishers.
- Kroll, J. F., & Bogulski, C. A. (in press). Cognitive second language acquisition: Organization of the second language lexicon. In C.A. Chapelle, *The Encyclopedia of Applied Linguistics*. Blackwell Publishers.
- Kroll, J. F., Guo, T., & Misra, M. (in press). What ERPs tell us about bilingual language processing. In M. Faust (Ed.), *Advances in the neural substrates of language: Toward a synthesis of basic science and clinical research*. Cambridge, MA: Blackwell Publishers.

Recent Publications

- Kroll, J. F., & Hermans, D. (2011). Psycholinguistic perspectives on language processing in bilinguals. In M. Schmid & W. Lowie (Eds.), *Modeling Bilingualism. From Structure to Chaos: In Honor of Kees de Bot*, (pp. 15-36). Studies in Bilingualism, 43. Amsterdam: John Benjamins Publishers.
- Li, P., & Tokowicz, N. (2011). The psycholinguistics of second language acquisition. In P. Robinson (ed.), *Routledge encyclopedia of second language acquisition*. New York, NY: Taylor & Francis/Routledge.
- Li, P., & MacWhinney, B. (2011). Competition model. In C.A. Chapelle (ed.), *The encyclopedia of applied linguistics* (in press). Malden, MA: John Wiley & Sons, Inc.
- Li, P., & Zhao, X. (2011). Connectionism. In C.A. Chapelle (ed.), *The encyclopedia of applied linguistics* (in press). Malden, MA: John Wiley & Sons, Inc.
- Li, P., Shu, H., & Liu, Y. (2011). (Language and the brain: Interfaces between linguistics, cognitive science, and neuroscience). In J. Wang (ed.), *Frontiers of humanities and social sciences in the west* (in Chinese). Beijing, China: Renmin University Press, in press.
- Liu, Y., Hao, M., Li, P., & Shu, H. (2011). Timed picture naming norms for Mandarin Chinese. *PLoS One*, 6, e16505. doi:10.1371/journal.pone.0016505
- Mainela-Arnold, E., Misra, M., Miller, C., Poll, G.H., & Park, J.S. (in press). Investigating sentence processing and language segmentation in explaining children's performance on a sentence span task. *International Journal of Language and Communication Disorders*.
- Miller, C.A., & Wagstaff, D.A. (in press). Behavioral profiles associated with auditory processing disorder and specific language impairment. *Journal of Communication Disorders*. doi:10.1016/j.jcomdis.2011.04.001.
- Miller, C.A. (2011). Auditory processing theories of language disorders: Past, present, and future. *Language, Speech, and Hearing Services in Schools*, 42, 309-319.
- Miller, K. (in press) Not all children agree: Acquisition of agreement when the input is variable. *Language Learning and Development*.
- Miller, K. (2011) Acquisition of Agreement Marking on 'do': A Production- Comprehension Asymmetry. In: N. Danis, K. Mesh, and H. Sung (eds.) *Proceedings of the 35th annual Boston University Conference on Language Development*, 2010, Cascadia Press, 466-476.
- Piñar, P., Dussias, P. E., & Morford, J. (in press). Deaf readers as bilinguals: an examination of deaf readers' print comprehension in light of current advances on bilingualism and second language processing. *Language and Linguistic Compass*.
- Poarch, G. J. & Van Hell, J. G. (accepted, pending revisions). Cross-language activation in children's speech production: Evidence from second language learners, bilinguals, and trilinguals. *Journal of Experimental Child Psychology*.
- Schwartz, A. I. & Van Hell, J. G. (accepted). Bilingual visual word recognition in sentence context. In: J. Adelman (Ed.), *Visual word recognition*. Psychology Press.
- Van Beijsterveldt, L. M., & Van Hell, J. G. (in press). The development of deaf writers' tense marking in narrative and expository text: a bimodal bilingual perspective. *Bilingualism: Language and Cognition*.
- Van Hell, J. G., & Kroll, J. F. (in press). Using electrophysiological measures to track the mapping of words to concepts in the bilingual brain: A focus on translation. In J. Altarriba & L. Isurin (Eds.), *Memory, Language, and Bilingualism: Theoretical and Applied Approaches*. New York: Cambridge University Press.

- Van Hell, J. G. & Poarch, G. J. (in press). Lexical and conceptual representations in second language acquisition. In M. Gullberg & J. Williams (Eds.), *The Encyclopedia of Applied Linguistics*.
- Yang, J., Tan, L., & Li, P. (in press). Lexical representation of nouns and verbs in the late bilingual brain. *Journal of Neurolinguistics*.
- Zhang, L., Xi, J., Xu, G., Shu, H., Wang, X., & Li, P. (2011). Cortical dynamics of acoustic and phonological processing in speech processing. *PLoS One*, e20963. doi:10.1371/journal.pone.0020963.
- Zhao, X., Li, P., & Kohonen, T. (2011). Contextual self-organizing map: Software for constructing semantic representation. *Behavior Research Methods*, 43, 77-88.

Papers/Posters Presented

- Bogulski, C. A., & Kroll, J. F. (2011). *Does the bilingual advantage in foreign language vocabulary acquisition extend to implicit measures of learning? A comparison of behavioral and ERP evidence*. Paper presented at the Eighth International Symposium on Bilingualism, Oslo, Norway.
- Botezatu, M. R., Misra, M., & Kroll, J. F. (2011). *When L1 is shallow and L2 is deep: The role of language dominance in modulating the transfer of spelling-to-sound correspondences in bilingual reading*. Paper presented at the Eighth International Symposium on Bilingualism, Oslo, Norway.
- Bobb, S. C., Huether, L., Jackson, C. N., & Kroll, J. F. (2011). *Providing the right context for late L2 acquisition: The effect of immersion on grammatical gender processing*. Poster presented at the Eighth International Symposium on Bilingualism, Oslo, Norway.
- Bultena, S., Dijkstra, T., & Van Hell, J. G. (2011). *Within and between language co-activation in word and sentence context*. Paper presented at the 8th International Symposium for Bilingualism, Oslo, Norway, June 15-18.
- Dussias, P. E., Valdés Kroff, J. R., & Gerfen, C. (2011). *Grammatical gender processing in L2 Spanish: Eye tracking evidence from L1 speakers of Italian and English*. Paper to be presented at the Workshop on Bilingualism, Aix-en-Provence, September 12th-14th.
- Dussias, P. E. *The role of the L1 in explaining observed L1/L2 differences during syntactic processing*. Paper to be presented at the 17th meeting of the European Society for Cognitive Psychology, San Sebastian, Spain, September 29th-October 2nd.
- Feldman, L., Van Hell, J. G., Ernestus, M., Fowler, C., & Shu, H. (2011). *Does morphological processing in L2 depend on the structure of L1?* Paper presented at the 8th International Symposium for Bilingualism, Oslo, Norway, June 15-18.
- Fokke, J., Meuter, R., & Van Hell, J. G. (2011). *Individual differences and language switching in bilinguals and trilinguals*. Paper presented at the 8th International Symposium for Bilingualism, Oslo, Norway, June 15-18.
- Gerfen, C., Kroll, J. F., Tam, J., Poepsel, T., Guo, T., & Misra, M. (2011). *Blocked naming yields evidence for global inhibition in both the planning and production of speech*. Talk presented as part of a symposium, Language control and cognitive functions in bilinguals (D. W.)

Papers/Posters Presented

Green & J. Abutalebi, Organizers. Eighth International Symposium on Bilingualism, Oslo, Norway.

Gullifer, J., Kroll, J. F., & Dussias, P.E. (2011). *Can cross-language lexical activity be modulated by language-specific syntax?* Paper presented at the Eighth International Symposium on Bilingualism, Oslo, Norway.

Hoshino, N., & Kroll, J. F. (2011). *When same and different script bilinguals speak in each of their languages: Does different-script bilingualism facilitate selection?* Paper presented at the Eighth International Symposium on Bilingualism, Oslo, Norway.

Kroll, J. F. (2011). *Being bilingual*. Invited talk to be presented at the 12th International Science of Aphasia Conference, Barcelona, Spain.

Kroll, J. F. (2011). *The bilingual is a mental juggler: Behavioral and electrophysiological evidence*. Talk presented as part of a symposium, Crossing borders in language science: What bilinguals tell us about mind and brain. American Association for the Advancement of Science, Washington D.C.

Kroll, J. F., Minnick, M., Tam, J., Rossi, E., Misra, M., & Gerfen, C. (2011). *Naming all of the vegetables in a row: Does cross-language competition for selection increase under conditions of semantic blocking?* Talk presented as part of a symposium, *Dynamic Lexical Interaction of L1 and L2* (B. Malt & P. Li, Organizers).

Dynamic Lexical Interaction of L1 and L2 (B. Malt & P. Li, Organizers). Eighth International Symposium on Bilingualism, Oslo, Norway.

Li, P. Organizer, *Bridging L1 and L2 acquisition: Symposium in honor of Brian MacWhinney*, 12th International Congress for the Study of Child Language, Montreal, Canada, July, 2011.

Li, P. Co-Organizer, *Workshop on Computational Modeling of Bilingualism: Integrating Acquisition and Processing*, the 8th International Symposium on Bilingualism, Oslo, Norway, June, 2011.

Li, P. Co-Organizer, *Workshop on Dynamical Lexical Interaction in L1 and L2*, the 8th International Symposium on Bilingualism, Oslo, Norway, June, 2011.

Li, P. Co-Organizer, *Workshop on Smart Health and Wellbeing* (part of Penn State-Peking University Multi-Workshops, PSU-PKU joint university-level collaboration ceremony), Peking University, Beijing, China, May, 2011.

McClain, R., Kroll, J. F., Guo, T., & Chen, B. (2011). *What distracting information tells us about bilingual speech planning: Evidence for asymmetries in translation*. Paper presented at the Eighth International Symposium on Bilingualism, Oslo, Norway.

Peters, J., Kroll, J. F., & Dussias, P.E. (2011). *What language immersion reveals about the way bilinguals process words and sentences*. Poster presented at CUNY 2011: Conference on Human Sentence Processing, Stanford University, Stanford, CA.

Peters, J., Kroll, J. F., & Dussias, P. E. (2011). *Switching language dominance: What immersion tells us about the way bilinguals process words and sentences*. Poster presented at the Eighth International Symposium on Bilingualism, Oslo, Norway.

Papers/Posters Presented

- Rathmann, C., Kubus, O., Morford, J. P., Occhino-Kehoe, C., Wilkinson, E., Piñar, P. & Kroll, J. (2011). *A cross-linguistic study of non-selective lexical access in deaf bilinguals: ASL-English and DGS-German bilinguals compared*. Paper presented as part of a symposium, Bilingualism across and within modalities (K. Emmorey, Organizer). Eighth International Symposium on Bilingualism, Oslo, Norway.
- Rossi, E., Dussias, P., & Kroll, J. F. (2011). *Typological similarity and immersion have different effects on L2 language processing*. Poster presented at CUNY 2011: Conference on Human Sentence Processing, Stanford University, Stanford, CA.
- Rossi, E., Gullifer, J., Dussias, P. E., & Kroll, J. F. (2011). *On the consequence of late bilingualism for morpho-syntactic processing in the L2: Evidence from behavioral and ERP data*. Talk presented as part of a symposium, Universal and language-specific patterns in bilingual processing: The importance of a comparative approach (J. van Hell, Organizer). Eighth International Symposium on Bilingualism, Oslo, Norway.
- Rossi, E., Kroll, J. F., & Dussias, P.E. (2011). *Does typological similarity matter? The processing of grammatical gender and number in late English-Spanish bilinguals: Evidence from ERPs and eye-tracking*. Poster presented at the Eighth International Symposium on Bilingualism, Oslo, Norway.
- Van den Boer, M., Ting, C., Minnicks, J. K., Van Hell, J. G., Dussias, P. E., & Kroll, J. F. (2011). *Words are not pictures: How semantic constraint affects word and picture naming in bilinguals and multilinguals*. Paper presented at the Eighth International Symposium on Bilingualism, Oslo, Norway.
- Van Hell, J. G. Organizer. Symposium *Universal and language-specific patterns in bilingual processing: The importance of a comparative approach*. 8th International Symposium for Bilingualism, Oslo, Norway, June 15-18.
- Van Hell, J. G. (2011). *Learning and using two languages: Cognitive and neural processes*. Invited lecture at the TEACH (Together Educating America's Children) Conference of the American Federation of Teachers, Washington D.C, July 11.
- Van Hell, J. G. (2011). *Two Master Classes for Earlybird* (Dutch organization that implements English as L2 language classes in Kindergarten and elementary schools), on the Neurocognition of Second Language Learning. Rotterdam, the Netherlands, May 17.
- Van Hell, J. G. (2011). *Multilingualism and sentence-level codeswitching*. Invited lecture, Workshop Frontiers in Linguistics, Acquisition, and Multilingualism, Kerkrade, the Netherlands, May 13-14.
- Van Hell, J. G. (2011). *Neurocognitive en het leren van een tweede taal: van Lab naar Les*. [Neurocognition and second language learning: from Lab to Lesson]. Keynote Conference Early Education, Utrecht, the Netherlands, May 12.
- Van Hell, J. G., Hermans, D., Hermes, E., Van der Loop, J., & Ormel, E. (2011). *Co-activation of phonology in speech-sign and speech- speech bilinguals*. Paper presented at the 8th International Symposium for Bilingualism, Oslo, Norway, June 15-18.
- Zinszer, B. & Li, P. *Bilingual categorization behavior: internally or externally emergent?* Talk presented at 8th International Symposium of Bilingualism, Oslo, Norway, June 17, 2011.

Opportunities for Career Development

◇ **University of Pennsylvania Post-doctoral position in Psycholinguistics**

The Department of Psychology at University of Pennsylvania has a one year position (open to renewal), post-doctoral position available beginning immediately. Qualified applicants will have a Ph.D. in Psychology, Linguistics, Cognitive Science or a related field. For more details, contact Professor John Trueswell at trueswel@psych.upenn.edu and to apply visit www.hr.upenn.edu/jobs/.

◇ **University of Maryland Post-Doctoral Position in Language Processing, Cognitive Training, and Functional Neuroimaging**

The University of Maryland, College Park, seeks a post-doctoral researcher interested in work on adult cognition, including language processing, using functional magnetic resonance imaging (fMRI). Qualified applicants will have a Ph.D. in Psychology, Linguistics, Psycholinguistics, Cognitive Science, Neuroscience, or a related field. A solid methodological background in fMRI is required and familiarity with eye tracking methods is beneficial, but not required. The position is available as early as August 15 for an initial period of two years with potential extension for an additional year. Review of materials will begin immediately and will continue until the position is filled.

◇ **Assistant Professor Position at Rutgers, Newark Campus**

The Psychology Department at Rutgers-Newark has a tenure track assistant professor position in cognitive neuroscience. Qualified applicants will have expertise in fMRI methodology for the study of cognitive processes such as memory, learning, decision making, language, problem solving etc. Department information is available at: www.psych.rutgers.edu. To apply forward materials to: cogneurosearch@psychology.rutgers.edu
DEADLINE FOR APPLICATIONS: October 15, 2011.

◇ **Assistant Professor Position Georgia Southern University**

The Psychology Department at Georgia Southern University has a 9-month, tenure track assistant professor position in psychology. Qualified applicants will have a Ph.D. in Psychology. Department information is available at: <http://class.georgiasouthern.edu/psychology/>. To apply forward materials to: Professor Amy Hackney, AHackney@GeorgiaSouthern.edu DEADLINE FOR APPLICATIONS: October 15, 2011.

◇ **Assistant Professor Position at University of Arkansas**

The Psychology Department at the University of Arkansas has a tenure track assistant professor position in psychology. Qualified applicants will have a Ph.D. in Psychology or a related field. The position will begin on August 12th 2012. Specific training in neuroscience and its intersection with cognitive, developmental or social psychology is a plus. Department information is available at http://uark.edu/rd_arsc/psyc/index.php. To apply forward materials to: Dr. Ellen Leen-Feldner, Department of Psychology, 216 Memorial Hall, University of Arkansas, Fayetteville, AR 72701 or PsychHire@uark.edu.

◇ The 2011 Hispanic Linguistics Symposium will be held at the University of Georgia, Athens. The conference will be held October 6th through the 9th. <http://www.hls2011.uga.edu/HLS2011.html>

◇ The 40th Annual New Ways of Analyzing Variation Conference will be held at Georgetown University in Washington, D. C. The conference will be held from October 27th through October 30th. <http://nwav40.georgetown.edu/index.html>

◇ The 52nd Annual Meeting of the Psychonomic Society will be held in Seattle, Washington. The conference will be held November 3rd through November 6th. <http://www.psychonomic.org/annual-meeting.html>

◇ The 36th Annual Boston University Conference on Language Development will be held at Boston University, Boston Massachusetts. The conference will be held November 4th through November 6th. <http://www.bu.edu/bucld/>

◇ The 6th Workshop on Spanish Sociolinguistics (WSS6) will be held at the University of Arizona, in Tuscon. The conference will be held from April 12 through April 14th 2012.

R-ticle

The Graduate Student R-ticle Group for Language Science is resuming weekly meetings on Fridays from 10:30 to 11:30 in 2K Thomas building. R-ticle, or the the graduate student reading/data analysis/discussion group for the Center for Language Science, is beginning its third year at Penn State, and we want you to join! R-ticle is a weekly meeting of CLS graduate students (as well as undergrads, visiting scholars, and post-docs) where we discuss research articles, provide tutorials on data analysis, and invite research scholars to give talks about professional development. In addition to discussing relevant research articles suggested by fellow students, last year, we also provide tutorials on analyzing data in *Praat*, cleaning and organizing data in *R*, working in *SPSS*, and tips and tricks on working with data in *Excel*. If you would like to become a member, or suggest articles or topics for future meetings, please email Cari (cab485@psu.edu).

Neuroscience Matters in the CLS

Light up your brain! New actiCaps for our EEGs laboratories

Our two EEG laboratories, the Purple Lab's EEG lab (PI Judy Kroll), and the newly established EEG laboratory with Janet van Hell as PI (the name for the lab is on the way!) have recently acquired a new 32/64 acquisition system (actiCAPs by Brain Products) which will allow collecting EEG data faster and at a very high quality. The most innovative characteristic of the actiCAP system are the so-called "active electrodes". Each active electrode (mounted in the designated caps) has a built-in amplifier together with a novel noise subtraction system that allows high-quality data collection. Also, the capping procedure will be faster and more efficient, given that with actiCAPS there is no need to scratch participants' skin to reach optimal levels of impedance.

Experimental quality aside, the actiCAP system comes with a free fun-factor! Not only the capping procedure will be more rapid and acquired data will be of better quality, but also a rainbow of colors will light up participants' heads! In fact, each active electrode had an in-build LED light which changes color as impedance reaches optimal levels.

If you are curious to know more about the new actiCAP system, contact us, or come along to see it at work!

Eleonora Rossi exr22@psu.edu

Janet van Hell jgv3@psu.edu

Judy Kroll jfj7@psu.edu

Peiyao Chen puc15@psu.edu

