

# **Words and the World: How Words Capture Human Experience**

Seminar in Cognitive Processes (PSYC 471S)  
Special Topics in Linguistics (LING 385S)  
Emory University  
Spring 2007

## **Time and Place:**

Tuesdays & Thursdays, 2:30 – 3:45pm  
Psychology 302

## **Instructor information:**

Instructor: Phillip Wolff, PhD  
Office: Psychology 321  
Office hours: By appointment  
Phone: (404) 727-7140  
Email: pwolff@emory.edu

## **Course Description:**

Language has frequently been viewed as a window into the human mind. But now that we know more about the semantics of different languages, we are faced with an interesting problem. Different languages seem to be telling us different stories about the nature of the mind. Important distinctions made in one language are not necessarily made in another. The question, then, is what are we to make of these cross-linguistic differences? How do they arise? Are they created by purely linguistic processes operating over the course of language evolution? Do they represent differences in thought? In this sea of differences, are there any semantic universals? If so, are these universals based on innate categories, or are they acquired? What might the cross-linguistic similarities and differences contribute to our understanding of conceptual and linguistic development? Which categories might be given to us by our genetic inheritance, which by culture, and which by our language?

These questions have long been of interest to psychologists, linguists, and anthropologists. But only recently has the integration of knowledge and methodologies necessary for real progress on these questions taken place. In particular, experimental approaches have only recently been applied to the cross-linguistic study of word meaning. The course will review the literature covering these exciting new findings.

This course fulfills the GER advanced seminary requirement. There are no prerequisites.

## **Format:**

The course will be conducted as a seminar / workshop. Students will be expected to present papers, write weekly reaction papers, complete homework, and write an end-of-semester paper. Details are provided below.

## Course Materials:

Articles will be put on electronic reserve. Electronic reserve can be reached at <http://www.library.emory.edu>. Press the "Reserves Direct" button at the top of the page. You will be prompted for your university login and password. After entering these, you will be shown the option "Add a class." After pressing this, you will be able to "Search by Instructor." Search for "Wolff, Phillip". I currently have three classes. Choose the one entitled, "Words and the World".

## Course Requirements:

Student presentations. The instructor will present the class readings for two of the classes. In the remaining classes, the class readings will be presented by students. A presentation should accomplish three objectives. First, it should summarize the paper (~20 minutes). In summarizing a paper, you should be sure to specify 1) the problem being investigated, 2) hypotheses, 3) predictions, 4) the experimental methods used to test these predictions, including details about the stimuli and procedure, 5) the key findings, and 6) conclusions. Second, class presentations should provide a critical reaction to the paper (~10 minutes). In this part of your presentation, you should go beyond what was said in the paper. There are many ways in which you might react to a paper. For example, you might challenge the hypotheses, methodology, or conclusions. Alternatively, you might elaborate on the significance (or insignificance) of the paper. Finally, your presentation should include 2-3 deep questions for the class. Deep questions often spur class discussion. However, perhaps the most effective way of spurring class discussion is to describe the papers clearly and with sufficient detail. Each presentation should include a 1-2 page handout. It is expected that everybody will bring a printout of the assigned reading(s) to class.

Presentations will be graded on the quality of the summary, critical reaction, and overall coherence.

Tickets. For each class, students must turn in a "ticket." The tickets should have two parts: a comment and a question. Ask good questions, that is, questions whose answers (if known) would be consequential. In formulating your ticket, you might begin with an observation (the comment part), then raise a question. Alternatively, you might begin with a question, and then propose an answer. Your tickets should be 120-150 words, printed out (not hand written or emailed), and turned in at the end of class. In most classes, I will ask you to read your comments and questions. Your tickets will be graded as either good (√), very good (√+), or excellent (√++) (= 85%, 95% & 100%). You will be allowed to drop the three tickets with the lowest grade. (The current paragraph is 148 words, and hence is would be an appropriate length for a ticket.

Homework. There will be two homework assignments. The focus of the assignments will be on how causal relationships are expressed in English and other languages. The homework will involve 1) identifying the different ways in which we can describe causal relationships, 2) interviewing speakers of different languages on how they express causation in those languages, and 3) analyzing the results. As with the tickets, the assignments will be graded as either good (√), very good (√+), or excellent (√++).

Class participation. Even if you are shy, you need to contribute to the class discussion. Class participation will be graded as either good (√), very good (√+), or excellent (√++).

Course paper. At the end of the class you need to write a paper addressing one or all of the following questions: 1) How do cross-linguistic differences in meaning arise? 2) Do cross-linguistic differences in meaning indicate differences in thought? 3) In this sea of differences, are there any semantic universals? 4) If so, are these universals based on

innate categories, or are they acquired? 5) What might the cross-linguistic similarities and differences contribute to our understanding of conceptual and linguistic development? 6) Which categories might be given to us by our genetic inheritance, which by culture, and which by our language? 7) What implications might cross-linguistic differences have for the learning of a first and/or second language?

Your paper should be “thesis-driven.” Start the paper by identifying a problem or question (~ 2 paragraphs). Then state your thesis. A thesis is signaled by a statement like “In this paper I will argue that...” Once you state your thesis, you should then briefly outline how you plan to defend your thesis. The rest of the paper should constitute your defense and final conclusions. Your defense should cite studies and theories from the literature. You are encouraged, but not required, to go beyond the readings covered in the course.

All papers must be 7.5-8 pages long, have 1.5 spacing with 1 inch margins, and be in 12 point Times-Roman font (or 11 point Arial). Citations and references should be in APA style. Papers not meeting these style requirements will be returned ungraded.

A draft of the paper is due Tuesday, April 17. I will provide feedback and grades by April 24. Final papers are due by the 5 PM on Monday, May 7. Papers will be graded on the following dimensions: 1) thesis quality, 2) literature covered, 3) logical coherence, and 4) written presentation.

### **Grades:**

Your class grade will be based on your class presentations (20%), tickets (40%), class project homework (10%), class participation (5%) and first (10%) and final (15%) drafts of your class paper. Extra credit assignments will not be offered. Class grades will be assigned according to the following averages: A (93-100%), A- (90-92%), B+ (87-89%), B (83-86%), B- (80-82%), C+ (77-79%), C (73-76%), C- (70-72%), D+ (67-69%), D (63-66%), D- (60-62%), F (below 60%).

Students taking the course Pass/Fail must attend course meetings regularly, read the assigned articles, turn in the class questions regularly, and turn in class project homework. The class paper and presentations are not required.

### **Miscellaneous policies:**

Academic honesty. Every student who applies to and is accepted by Emory College, as a condition of acceptance, agrees to abide by the provisions of the Honor Code so long as he or she remains a student at Emory College. By his or her continued attendance at Emory College, a student reaffirms his or her pledge to adhere to the provisions of the Honor Code. Plagiarism and/or cheating won't be tolerated.

Students with disabilities. It is the policy of Emory University to make reasonable accommodations for qualified students with disabilities. All students with special requests or need for accommodations should make this request in person as soon as possible.

## Tentative Schedule

Dates	Discussion topic	Presenter	Reading
Jan. 23 Jan. 25	Introduction	Instructor	Crystal (1997) pp. 1-7 & 14-15 Whorf (1950) pp. 57-64; Whorf (1941) pp. 233-245
Jan. 30	Basic issues	Instructor	Pinker (1994) pp. 55-67
Feb. 1	Number (part 1)	Andrea C. Nora K.	Pullum (1991) pp. 159-171 Gordon (2004) (M)
Feb. 6 Feb. 8	Spatial Orientation	Amanda S. Laura B.	Li & Gleitman (2002) (L) Levinson, Kita, Haun, & Rasch (2002) (L)
Feb. 13 Feb. 15	Spatial relations	Richard Molly D.	Hermer-Vasquez, Spelke, & Katsnelson (1999) (L) Bowerman (1996) (L)
Feb. 20 Feb. 22	Time	Amanda S. Emily T.	Boroditsky (2001) (L) Boroditsky & Ramscar (2002) (S)
Feb. 27	Causation	Marcus B. Megan C.	Wolff, Klettke, Ventura & Song (2005) (M) Varley & Siegal (2000) (S)
March 1		Nora K. Miki	Wolff & Ventura (2003) (S) Klettke & Wolff (2003) (S)
March 6 March 8	Motion	Tai, W. Richard Molly, D.	Slobin (1996) (L) Parish, Ma, Golinkoff, Hirsh-Pasek (2007) (L) Gennari, Sloman, Malt, & Fitch (2002) (L)
March 13-15	SPRING BREAK		
March 20	Space & Time (HW 1 due)	Jennifer C. Tai W.	Casasanto & Boroditsky (2003) (S) Casasanto et al. (2004) (S)
March 22	Color	Miki Faleisha	Regier, Kay, Golbert, & Ivry (2007) (L) Roberson, Davies, & Davidoff, (2000)
March 27 March 29	Events (HW 2 due)	Erica D. Emily T.	Zacks, Tversky, & Iyer (2001) (L) Wolff (2003) (L)
April 3 April 5	Language & Brain	Emily L. Alphonso M. Megan C.	Kemmerer (2007) (L) Dehaene, Spelke, Pinel, Stanescu & Tsivkin (1999) (S) Kaminski, Call, & Fischer (2004)
April 10 April 12	Number (part 2)	Jennifer C. Faleisha B. Marcus B.	Beller, S., & Bender, A. (2005) (S) Wynn & Chiang (1998) (M) McCrink & Wynn (2004) (M)
April 17	Grammatical Gender (Draft of paper due)	Alphonso M. Erica D.	Boroditsky, Schmidt, & Phillips (2003) (M) Vigliocco et al. (2005)
April 19	Objects/Masses	Emily L.	Imai & Gentner (1997) (L)
April 24 April 26	Artifacts	Andria C. Laura B.	Malt, Sloman, Gennari, Shi, & Wang (1999) (L) Ji, Zhang, & Nisbett (2004) (L)
May 7	Final paper due		

## References

- Beller, S., & Bender, A. (2005). The cognitive advantages of counting specifically: An analysis of Polynesian number systems. In B. G. Bara, L. Barsalou, & M. Bucciarelli (Eds.), *Proceedings of the Twenty-Seventh Annual Conference of the Cognitive Science Society* (pp. 214-219). Mahwah, NJ: Lawrence Erlbaum.
- Boroditsky, L. (2001). Does language shape thought? English and Mandarin speakers' conceptions of time. *Cognitive Psychology*, *43*, 1-22.
- Boroditsky, L., Schmidt, L., & Phillips, W. (2003). Sex, Syntax, and Semantics. In D. Gentner & S. Goldin-Meadow (eds.), *Language in Mind* (pp. 61-80). MIT Press.
- Boroditsky, L., Ham, W. & Ramscar, M. (2002). What is universal about event perception? Comparing English and Indonesian speakers. *Proceedings of the 24th Annual Meeting of the Cognitive Science Society*. Fairfax, VA
- Boroditsky, L. & Ramscar, M. (2002). The Roles of Body and Mind in Abstract Thought. *Psychological Science*, *13*, 185-188.
- Bowerman, M., (1996). Learning how to structure space for language: A cross-linguistic perspective. In P. Bloom, M. Peterson, L. Nadel & M. Garrett (eds.), *Language and Space* (pp. 358-436). Cambridge, MA: MIT Press.
- Bowerman, M. (1996). The Origins of Children's Spatial Semantic categories: Cognitive Versus Linguistic Determinants, In J.J. Gumperz & S.C. Levinson (eds.) *Rethinking Linguistic Relativity* (pp. 145-175)., Cambridge University Press, Cambridge, UK.
- Bowerman, M. & Choi S. (2001). Shaping Meanings for Language: Universal and Language Specific in the Acquisition of Spatial Semantic Categories. In M. Bowerman & S.C. Levinson (eds.), *Language Acquisition and Conceptual Development* (pp. 475-511), Cambridge University Press, Cambridge, UK.
- Casasanto, D. & Boroditsky, L. (2003) Do we think about time in terms of space? *Proceedings of the 25th Annual Meeting of the Cognitive Science Society*. Boston, MA.
- Casasanto, D., Boroditsky, L., Phillips, W., Greene, J., Goswami, S., Brocanegra-Thiel, S., Santiago-Diaz, I, Fotokopoulou, O, Pita, R., & Gil, D. (2004). How deep are effects of language on thought? Time estimation in speakers of English, Indonesian, Greek, and Spanish. *Proceedings of the 26th Annual Meeting of the Cognitive Science Society*.
- Crystal, D. (1997). *The Cambridge Encyclopedia of Language*. Cambridge University Press.
- Dehaene, S., Spelke, E., Pinel, P., Stanescu, R., & Tsivkin, S. (1999). Sources of mathematical thinking: Behavioral and brain-imaging evidence. *Science*, *284*, 970-974.
- Frawley, W. (1992). *Linguistic semantics*. Lawrence Erlbaum Associates, Hillsdale, NJ.
- Gennari, S. P., Sloman, S. A., Malt, B. C., & Fitch, W. T. (2002). Motion events in language and cognition. *Cognition*, *83*, 49-79.

- Gleitman, L., & Papafragou, A. (2005). Language and thought. In K. Holyoak and B. Morrison (eds.), *Cambridge Handbook of Thinking and Reasoning*. Cambridge: Cambridge University Press.
- Goddard, C. (2007). Universals and variation in the lexicon of mental states. In B. Malt & P. Wolff, *Words and the world: How words capture human experience*. Oxford University Press.
- Gordon, P. (2004). Numerical cognition without words: Evidence from Amazonia. *Science Express*, 19, 1-5.
- Hauser, M., & Carey, S. (1998). Building a cognitive creature from a set of primitives. In D. Cummins & C. Allen (eds.), *The evolution of mind*. Oxford: Oxford University Press
- Hermer-Vasquez, L., Spelke, E., & Katsnelson, A. (1999). Sources of flexibility in human cognition: Dual-task studies of space and language. *Cognitive Psychology*, 39, 3-36.
- Imai, M., & Gentner, D. (1997). A crosslinguistic study of early word meaning: Universal ontology and linguistic influence. *Cognition*, 62, 169-200.
- Ji. L. J., Zhang, Z. & Nisbett, R. E. (2004). Is it culture, or is it language? Examination of language effects in cross-cultural research on categorization. *Journal of Personality and Social Psychology*, 87, 57-65.
- Kay, P., & Regier, T. (2003). Resolving the question of color naming universals. *Proceedings of the National Academy of Sciences*, 100, 9085-9089.
- Kemmerer, D. (2007). How words capture visual experience: the perspective from cognitive neuroscience. In B. Malt & P. Wolff, *Words and the world: How words capture human experience*. Oxford University Press.
- Kaminski, J., Call, J., & Fischer, J. (2004). Word learning in a domestic dog: Evidence for “fast mapping”, *Science*, 304, 1682 – 1683.
- Levinson, S. C., Kita, S., Haun, D. B. M., & Rasch, B. H. (2002). Returning the tables: language affects spatial reasoning. *Cognition*, 84, 155-188.
- Li, P. W., & Gleitman, L. R., (2002). Turning the tables: language and spatial reasoning. *Cognition*, 83, 265-294.
- Malt, B.C., Sloman, S.A., & Gennari, S. (2003). Universality and language specificity in object naming. *Journal of Memory and Language*, 49, 20-42.
- Malt, B. C., Sloman, S. A., Gennari, S., Shi, M., & Wang, Y. (1999). Knowing versus naming: similarity and the linguistic categorization of artifacts. *Journal of Memory and Language*, 40, 230-262.
- Maria, S., Berge, C., Pintado, J. (1994). Grammatical and Conceptual Forces in the Attribution of Gender by English and Spanish Speakers, *Cognitive Development*, 9, 261-292.

- McCrink, K., & Wynn, K. (2004). Large-number addition and subtraction in infants. *Psychological Science, 15*, 776-781.
- Munnich, E. & Laundau, B. (2003). *The Effects of Spatial Language on Spatial Representation: Setting Some Boundaries*. In D. Gentner & S. Goldin-Meadow (eds.), *Language in Mind* (pp. 113-155), MIT Press.
- Papafragou, A., Massey, C., & Gleitman, L. (2002). Shake, rattle 'n' roll: the representation of motion in language and cognition. *Cognition, 84*, 189-219.
- Parish, J., Ma, W., Golinkoff, R., & Hirsh-Pasek, K. (2007). A world of relations: Relational Words. In B. Malt, & P. Wolff, *Words and the world: How words capture human experience*. Oxford University Press.
- Pinker, S. (1994). *The Language Instinct*. New York: William Morrow & Co.
- Pullum, G. (1991). *The Great Eskimo Vocabulary Hoax*. Chicago: University of Chicago Press.
- Regier, T., Kay, P., Gilbert, A. L., & Ivry, R. B. (2007). Language and thought: Which side are you on, anyway? In B. Malt, & P. Wolff, *Words and the world: How words capture human experience*. Oxford University Press.
- Roberson, D., Davies, I., & Davidoff, J. (2000). Color categories are not universal: Replications and new evidence from a Stone Age culture. *Journal of Experimental Psychology: General, 129*, 369-398.
- Sera, M., Berge, C., & Pintado, J. (1994). Grammatical and Conceptual Forces in the Attribution of Gender by English and Spanish Speakers, *Cognitive Development, 9*, 261-292.
- Slobin, D. I. (1996). Two Ways to Travel: Verbs of Motion in English and Spanish. In M. Shibatani & S. A. Thompson (eds.), *Grammatical Constructions: Their Form and Meaning* (pp. 195-219), Oxford University Press, Oxford, UK.
- Slobin, D. (1996). From 'Thought and Language' to 'Thinking for Speaking'. In J. Gumperz & S. Levinson (eds.), *Rethinking Linguistic Relativity* (pp. 70-96). Cambridge University Press.
- Slobin, D. (2003). Language and thought online: Cognitive consequences of linguistic relativity. In D. Gentner, & S. Goldin-Meadow (Eds.), *Language in mind: Advances in the study of language and thought*. Cambridge, MA: The MIT Press.
- Soja, N.N., Carey, S., & Spelke, E.S. (1992). Perception, ontology, and word meaning. *Cognition, 45*, 101-107.
- Soja, N. N., Carey, S., & Spelke, E. S. (1991). Ontological categories guide young children's inductions of word meaning: Object terms and substance terms. *Cognition, 38*, 179-211.

- Spelke, E. S., & Tsivkin, S. (2001). Language and number: A bilingual training study. *Cognition*, 78, 45-88.
- Varley, R., & Siegal, M. (2000). Evidence for cognition without grammar from causal reasoning and 'theory of mind' in an agrammatic aphasic patient. *Current Biology*, 10, 723-726.
- Whorf, B. (1991/1950/1941). An American Indian Model of the Universe, In J. Carroll (ed.), *Language, Thought and Reality: Selected Writings of Benjamin Lee Whorf*. MIT Press.
- Wolff, P. (2003). Direct causation in the linguistic coding and individuation of causal events. *Cognition*, 88, 1-48.
- Wolff, P., & Ventura, T. (2003). When Russians learn English: How the meaning of causal verbs may change. In B. Beachley, A. Brown, & F. Conlin (Eds.), *Proceedings of the Twenty-Seventh Annual Boston University Conference on Language Development* (pp. 822-833). Boston: Cascadilla Press.
- Klettke, B. & Wolff, P. (2003). Differences in how English and German speakers talk and reason about CAUSE. In R. Alterman & D. Kirsh (Eds.), *Proceedings of the Twenty-Fifth Annual Conference of the Cognitive Science Society*. Mahwah, NJ: Lawrence Erlbaum.
- Wolff, P., Klettke, B., and Ventura, T. (2005). Categories of causation across cultures. In W. Ahn, R. L. Goldstone, B. C. Love, A. B. Markman, & P. Wolff (Eds.), *Categorization inside and outside the laboratory: Essays in honor of Douglas L. Medin*. Washington, DC: American Psychological Association.
- Wynn, K. & Chiang, W. (1998). Limits to infants' knowledge of objects: The case of magical appearance. *Psychological Science*, 9, 448 - 455.
- Vigliocco, G., Vinson, D.P., Paganelli F. & Dworzynski, K. (2005). Grammatical gender effects on cognition: Implications for language learning and language use. *Journal of Experimental Psychology: General*, 134, 501-520.
- Zacks, J., Tversky, B., & Iyer, G. (2001). Perceiving, remembering, and communicating structure in events, *Journal of Experimental Psychology: General*, 130, 29-58.