

Syllabus for PSYC 450

Seminar in Language & Thought

Professor Paul Thibodeau
Fall 2020

In this class we will explore the relationship between language and thought. Can subtle differences in the languages we speak affect how we make important decisions and remember events? Do people who speak different languages think about and even perceive the world differently? Are some thoughts unthinkable without language? And through what mechanisms might language influence other cognitive processes?

1 Course Learning Goals

Specifically, in this course you learn...

1. ...about empirical and theoretical research on a fundamental question in cognitive science.
2. ...critical thinking skills to help you reason scientifically about psychological phenomena.
3. ...skills to enhance communication and collaboration in classroom discussion and through writing.

2 Structural Stuff

Time	Mondays 6:30-8:30
Place	Zoom and TBD
Instructor	Paul Thibodeau (Seve 205; paul.thibodeau@oberlin.edu)
Texts	McWhorter, J.H. (2016), <i>The Language Hoax: Why the World Looks the Same in Any Language</i> . Oxford Press. Journal articles will be posted on Blackboard (Bb).
Office Hours	Tuesdays 1-2 on Zoom (or whenever we can find a convenient time. Just send me an email. It can be as simple as, “Hi Paul, Can we meet sometime to talk about stuff in Language & Thought?”). The link will be available on Bb.

3 The Sapir-Whorf Hypothesis

The weekly readings for the course focus on a specific question in cognitive science:

Are our own concepts of time, space, and matter given in substantially the same form by experience to all men, or are they in part conditioned by the structure of particular languages? —Whorf

A starting point is the idea is that language is the primary tool that humans use for thinking, as has been argued by some of the most famous scholars in history.

The soul when thinking appears to me to be just talking. —Plato

If language is a primary medium for thinking, then differences in the structure and content of the world's languages implies differences how the world's people think. Today, however, we know that it is possible to think in mediums other than language—like in images, for example—and so the question is more nuanced. For example, does early linguistic experience subtly influence our perceptual processes? Do different languages lead people to create different mental categories (that shape even non-linguistic thinking)? Do certain patterns of language use reinforce certain patterns of thinking?

We dissect nature along lines laid down by our native language. The categories and types that we isolate from the world of phenomena we do not find there because they stare every observer in the face; on the contrary, the world is presented in a kaleidoscope flux of impressions which has to be organized by our minds—and this means largely by the linguistic systems of our minds. —Whorf

Many contemporary cognitive scientists remain skeptical of the claim and the evidence that has been produced to support it.

There is no scientific evidence that languages dramatically shape their speakers' ways of thinking. —Pinker

We will discuss what the Whorfian question means, and how it has been interpreted and investigated by scholars in psychology, linguistics, anthropology, and sociology. As we move through the course, we will think about various levels of linguistic analysis (phonemes, morphemes, semantic, syntax, etc) and how specific differences between languages could create differences in fundamental cognitive processes like categorization, learning, generalization, perception, and attention. Our discussion will also be grounded in basic and universal domains of experience like GENDER, NUMBER, TIME, SPACE, and EMOTION.

4 Assignments

1. **Response Papers.** You will be expected to write a response to the readings (max 600 word) almost every week (10 total). I will provide prompts.
2. **Discussion Questions.** You will be expected to post weekly discussion questions on the Discussion Board in Bb. Much of our classroom discussion will be guided by the questions posted on the Discussion Board.
3. **Presentations.** You will be expected to present two empirical articles to the class.
4. **Final Paper.** You will be expected to write a final paper (10-ish pages, double-spaced and APA-formatted). There is some flexibility with this assignment. One option is to formalize your thoughts on the Sapir-Whorf Hypothesis in a focused literature review of the readings that we do for the course (and maybe a few additions). Another option is to explore research on a different topic related to language and thought or to apply the ideas we consider to a new issue or domain. There will be class time for workshopping final paper ideas. Everyone will be expected to participate in a round of peer-editing. I will also have individual meetings with students to give feedback on the final paper during the final week of the course.

5 Grading

This course is a small seminar. It is important that you actively participate by completing the response papers, submitting discussion questions, attending class, and engaging in the conversation. Your final grade will be based on your active engagement in the weekly course readings and meetings (70%) and your final paper (30%). A more specific breakdown of the grade is shown below.

Response Papers	25%	10 reflections on readings/prompts.
Presentations	10%	2 short presentations on empirical articles.
Participation	35%	Discussion questions, attendance, engagement.
Final paper	30%	First draft, peer review, final draft.

Late work

Response papers, discussion questions, and presentations are designed to help you prepare for class and/or constitute what we are actually doing in class, so it is important to complete them in a timely manner. Materials to complete assignments will be available on Bb at least a week before they are due. In the event that you are unable to complete one of these assignments by the time they are due, please be in touch with me. Rescheduling the due date for the final paper requires permission from Academic Advising Resource Center (AARC).

6 Schedule

Week	Language	Thought
1 (8/31)	Overview	
2 (9/14)	Sounds: Phonemes	Categorization & Learning
3 (9/21)	Sounds: Morphemes	Categorization & Generalization (GENDER)
4 (10/5)	Words 1	Mental representation (NUMBER)
5 (10/12)	Words 2	Perception, attention, expertise (COLOR & SMELL)
6 (10/19)	Culture	Culture
7 (10/26)	Syntax	Attribution & Working memory
8 (11/2)	Pragmatics	Conceptual change & common ground (SPACE)
9 (11/9)	Metaphor	Abstract concepts (TIME)
10 (11/16)	Semantics	Framing & decision making (EMOTION)
11 (11/23)	Pop culture	
12 (11/30)	Proficiency	Bilingualism, values & consciousness
13 (12/7)	Peer-editing workshop	& Individual meetings

Final Paper Plans

Week	Final Paper
8 (11/2)	Brainstorming workshop
9 (11/9)	Prospectus due
10 (11/16)	Writing workshop
11 (11/23)	First draft due (for peer-editing); Peer-editing workshop
12 (11/30)	Peer-editing
13 (12/7)	Revision workshop & Individual meetings
Finals (12/16)	Final draft due by 11AM

7 Readings

A * indicates empirical research and is, thus, eligible for in class presentation.

Week 2

- *Werker, J.F. & Tees, R.C. (1984). Cross-language speech perception: Evidence for perceptual reorganization during the first year of life. *Infant Behavior and Development*, 7, 49-63.
- *Palmer, S.B., Fais, L., Golinkoff, R.M., & Werker, J.F. (2012). Perceptual narrowing of linguistic sign occurs in the 1st year of life. *Child Development*, 83, 543-553.
- Pinker, S. (1994). Mentalese. In *The Language Instinct* (pp. 55-82). HarperCollins.

- Whorf, B. L. (1956). “Language, Thought, and Reality.” In G.L. Bowie, M.W. Michaels, & R.C. Solomon (Eds.) *Twenty Questions: An Introduction to Philosophy* (pp. 289-298). Cengage.
- Pullum, G.K. (1991). The great eskimo vocabulary hoax. In *The Great Eskimo Vocabulary Hoax* (pp. 159-171). University of Chicago Press.

Week 3

- *Perez, E. & Tavits, M. (2018). Language influences public attitudes toward gender equality. *Journal of Politics*, 81, 81-93.
- *Segel, E., & Boroditsky, L. (2010). Grammar in art. *Frontiers in Psychology*, 1-3.
- *Boroditsky, L., Phillips, W., & Schmidt, L.A. (In prep). Can quirks of grammar affect the way you think? Grammatical gender categories and the mental representations of objects.
- Lupyan, G., & Dale, R. (2016). Why are there different languages? The role of adaptation in linguistic diversity. *Trends in Cognitive Sciences*, 20, 649-660.

Week 4

- *Gordon, P. (2004). Numerical cognition without words: Evidence from Amazonia. *Science*, 306, 496-499.
 - *Casasanto, D. (2005). Crying “Whorf.” *Science*, 307(5716), 1721-2. [And Gordon’s response.]
- *Frank, M., Everett, D.L., Fedorenko, E., & Gibson, E. (2008). Number as cognitive technology: Evidence from Piraha language and cognition. *Cognition*, 108, 819-824.
- *Frank, M. C., & Barner, D. (2012). Representing exact number visually using mental abacus. *Journal of Experimental Psychology: General*, 141, 134-149.
- *Spaepen, E., Coppola, M., Spelke, E.S., Carey, S.E., & Goldin-Meadow, S. (2011). Number without a language model. *PNAS*, 108, 3163-3168.
- Suplee, C. (2000). The history of zero. *The Washington Post*.

Week 5

- *Winawer, J., Witthoft, N., Frank, M.C., Wu, L., Wade, A.R., & Boroditsky, L. (2007). Russian blues reveal effects of language on color discrimination. *Proceedings of the National Academy of Sciences*, 104, 7780-7785.

- *Majid, A., & Burenhult, N. (2014). Odors are expressible in language, as long as you speak the right language. *Cognition*, 130 266-270.
- *Croijmans, I., & Majid, A. (2016). Not all flavor experience is equal: The language of wine and coffee experts. *PLoS One*, 11, e01558845.
- Lupyan, G. (2017). Changing what you see by changing what you know: The role of attention. *Frontiers in Psychology*, 8, 1-15.
- McWhorter, J. (2016). Intro & Chapter 1.

Week 6

- Everett, D. L. (2017). The role of culture in language and cognition. *Language and Linguistic Compass*, 12, 1-29.
- *Luk, K.K., Xiao, W. S., & Cheung, H. (2012). Cultural effect on perspective taking in Chinese-English bilinguals. *Cognition*, 124(3), 350-355.
- Jiang, W. (2000). The relationship between culture and language. *ELT*, 54, 328-334.
- Thompson, B., Roberts, S.G., & Lupyan, G. (2020). Cultural influences on word meanings revealed through large-scale semantic alignment. *Nature Human Behavior*.
- McWhorter, J. (2016). Chapters 2 & 3.

Week 7

- *Fausey, C. M., & Boroditsky, L. (2011). Who dunnit? Cross-linguistic differences in eye-witness memory. *Psychonomic bulletin & review*, 18(1), 150-157.
- *Amici, F., Sanchez-Amaro, A., Sebastian-Enesco, C., Cacchione, T., Allritz, M., Salazar-Bonet, J., & Rossano, F. (2019). The word order of languages predicts native speakers' working memory. *Scientific Reports*, 9, 1-12.
- *Dolscheid, S., Shayan, S., Majid, A., & Casasanto, D. (2013). The Thickness of Musical Pitch : Psychophysical Evidence for Linguistic Relativity. *Psychological Science*, 24, 613-621.
- Wolff, P., & Holmes, K.J. (2011). Linguistic relativity. *Wiley Interdisciplinary Reviews: Cognitive Science*, 2, 253-265.
- McWhorter, J. (2016). Chapter 6.

Week 8

- Majid, A., Bowerman, M., Sotaro, K., Haun, D.B.M., & Levinson, S.C. (2004). Can language restructure cognition? The case for space. *Trends in Cognitive Sciences*, 8, 108-114.
- *Haun, D.B.M., Rapold, C.J., Janzen, G., & Levinson, S.C. (2011). Plasticity of human spatial cognition: Spatial language and cognition covary across cultures. *Cognition*, 119, 70-80.
- *Boroditsky, L. & Gaby, A. (2010). Remembrances of times East: Absolute spatial representations of time in an Australian aboriginal community. *Psychological Science*, 21, 1635-1639.
- *Pyers, J.E., Shusterman, A., Senghas, A., Spelke, E.S., & Emmorey, K. (2010). Evidence from an emerging sign language reveals that language supports spatial cognition. *Proceedings of the National Academy of Sciences*, 107, 12116-12120.
- Sidnell, J., & Enfield, N.J. (2012). Language diversity and social action: A third locus of linguistic relativity. *Current Anthropology*, 53, 302-333.

Week 9

- *Fuhrman, O., McCormick, K., Chen E., Jiang, H., Shu, D., Mao, S., & Boroditsky, L. (2011). How linguistic forces and cultural forces shape conceptions of time. *Cognitive Science*, 35, 1305-1328.
- *Kocab, A., Senghas, A., & Snedeker, J. (2016). The emergence of temporal language in Nicaraguan Sign Language. *Cognition*, 156, 147-163.
- *Hendricks, R.K., & Boroditsky, L. (2017). New space-time metaphors foster new nonlinguistic representations. *Topics in Cognitive Science*, 9, 800-818.
- *Casasanto, D., Fotakopoulou, O., & Boroditsky, L. (2010). Space and time in the child's mind: Evidence for a cross-dimensional asymmetry. *Cognitive Science*, 34, 387-405.

Week 10

- *Gendron, M., Lindquist, K.A., Barsalou, L., Feldman Barrett, L. (2012). Emotion words shape emotion percepts. *Emotion*, 12, 314-325.
- *Jackson, J.C., Watts, J., ... Lindquist, K.A. (2019). Emotion semantics show both cultural variation and universal structure. *Science*, 366, 1517-1522.

- *Bransford, J.D., & Johnson, M.K. (1972). Contextual prerequisites for understanding: Some investigations of comprehension and recall. *Journal of Verbal Learning and Verbal Behavior*, 11, 717-726.
- *Thibodeau, P.H., & Boroditsky, L. (2011). Metaphors we think with: The role of metaphor in reasoning. *PLOS One*, 6 1-11.

Week 11

The assignment for this week is to watch the movie *Arrival* (2016). The reading below is optional.

- Chiang, T. (1998). Story of your life. *Stories of Your Life and Others* (pp. 117-178). Small Beer Press. (OPTIONAL)

Week 12

- Valian, V. (2015). Bilingualism and cognition. *Bilingualism: Language and Cognition*, 18, 3-24.
- *Ikizer, E.G., & Ramirez-Esparza, N. (2018). Bilinguals' social flexibility. *Bilingualism: Language and Cognition*, 21, 957-969.
- *Costa, A., Foucart, A., Hayakawa, S., Aparici, M., Apesteguia, J., Heafner, J., & Keysar, B. (2014). Your morals depend on language. *PLOS One*, 9, e94842.
- *Maier, M., & Rahman, R.A. (2018). Native language promotes access to visual consciousness. *Psychological Science*, 29, 1757-1772.

8 Miscellaneous

1. The Oberlin College Honor Code will apply to all work submitted for this course.
2. Students with special needs should provide documentation from the Office of Disabilities Services (Peters Hall 116-118; x55588; ods@oberlin.edu) regarding accommodations for lectures and examinations as soon as possible.