Selected Topic in Language and Communication:
Language and Thought
PSY 414/514 – Fall 2020

Time:	13:40-15:30 on Tuesday + offline lecture
Zoom link:	https://sabanciuniv.zoom.us/j/96718680405?pwd=ZHlrNW9sYlBpVmMwL3ZWVWJVZFVzZz09 (Meeting ID: 967 1868 0405; Password: 414514)

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Overview

Welcome to PSY 414/514 Selected Topic in Language and Communication! Every semester, we choose one specific topic related to language and communication, and this semester's focus is *language and thought*. This course aims to be one of your first, if not the very first, experiences to learn how to understand literature in depth, write scientific articles and give oral presentations, and design own experimental research studies. To achieve these aims, we will study the relation between the language we speak, like English and Turkish, and thoughts in our head.

The world's languages share considerable similarities, and speakers of any language is able to discuss a variety of topics ranging from tonight's dinner to quantum physics. Despite universal commonalities, however, languages are not "neutral coding systems of an objective reality" (Slobin, 1996, p. 91). Each language uniquely segments a spatially and temporally continuous flow of thoughts and events into discrete units in order to label them. *Do these differences found across languages lead their speakers to think in different ways*? *Or is human thought largely independent of language?*

Put it more frankly*, do you and your friend from another part of the world think differently just because you two speak different languages? Do babies think in different ways before and after they learn first language? Are you a different person from 5 years ago because you are taking university courses in English?*

In this course, we review theoretical and empirical literature to discuss these questions in depth. Please also note that this course is double coded as PSY 414 and PSY 514, which means we will have a mix of undergraduate and graduate students. Graduate students have a few extra assignments as indicated in the Course Schedule section below.

Objectives

This course assists students in improving their abilities to:

- understand theoretical, methodological, and practical issues concerning the scientific study of language and thought
- compare and synthesize different perspectives in the research field and express their opinions based on evidence in presentation and discussion
- critically analyze and evaluate research articles
- produce original research ideas and write formal proposals

Readings

There is no textbook in this course. 2-3 articles or book chapters will be assigned each week. Students are expected to read the assigned articles before each class, to submit comment on each of them, and to participate in-class discussions.

Grading

Your course grade will be made up of the following components:

Class participation	10%
Discussion questions	15%
Reaction papers	20%
Discussion-leading	25%
Final paper	30%
Research points	Extra credit

At the end of the semester, the letter grades will be assigned by using the following table:

A	A-	B+	B	B-	C+	C	C-	D+	D	F
90.00+	85.00+	80.00+	75.00+	70.00+	65.00+	60.00+	55.00+	50.00+	45.00+	below 45

1. Class Participation (10%)

You are expected to attend class and comment on assigned readings in class. You will be evaluated on how actively you contribute to the class discussion. Active participation includes but limited to (1) asking a question, (2) disagreeing with the instructor or another student, (3) identifying unspoken assumptions, reoccurring themes, or omitted themes in the discussion, (4) making a comment to clarify your understanding of another person's opinion. You may have up to 2 unexcused absences and have them not affect your final grade.

Class Participation will be graded as:

- 0 = no participation or absent
- 1 = minor contributions
- 2 = major contributions

2. Discussion Questions (15%)

You are expected to read the material of each week before class to ensure a lively discussion in class. All students are required to submit at least one question/comment for at least two of the assigned readings on SUCourse by 23:59 on Sunday. Writing weekly questions/comments will count 15% of your grade. These questions will be used to facilitate class discussion by discussion leaders. Therefore, the content must be directly related to the readings, and also should be something that can lead to interesting discussion. I encourage questions about methods.

To receive full credit, you must provide a brief background or context for your question and demonstrate you have read and understand the reading. Students are expected to go beyond factual questions (e.g., "What do the word X mean?") and submit questions that would facilitate discussion. Your questions can address theoretical ideas, methodology, and or implication of the research.

Your questions will be graded as:

- 0 = no question
- 1 = factual question or question without context
- 2 = thoughtful question demonstrating that the student read and understood the reading

3. Reaction Papers (20%)

There will be three reaction papers at designated times. One of them will be assigned in the first week to understand your views on this topic. The other two will be short reaction papers (maximum of 4 double-spaced pages), concerning your reactions and thoughts about the provided article or lecture. The material will be provided at least one week before the assignment due date. In total, these assignments will count 20% of your grade (the first paper is worth 5 points, and the other two worth 7.5 pts each). Each paper is due at the beginning of the class on the assigned date (October 13, November 17, and December 8). Late papers will not be accepted.

4. Discussion Leading (25%)

Every student is required to lead a discussion during the semester. Depending on the class size, you will present alone or in a small group. Similarly, depending on class size, all students will serve as discussion leaders 1-3 times. The schedule for discussion leaders will be discussed in class and may be determined based on student interest, random assignment, or a combination of both.

We will decide on the schedule in the second class (October 13). Therefore, students who are considering to take the course are asked to be presented in the class. The schedule will be distributed a few days after the first class meeting.

Discussion leaders will be responsible summarizing at least two of the assigned papers for that week (excluding the optional articles) for class discussion and lead the discussion based on the questions and comments each student will submit for that week. Discussion leaders are also required to review and organize the questions/reactions provided by their peers, use these as facilitators for discussion during class, in addition to their own thoughts/comments.

Discussion leaders may schedule an appointment with the instructor to preview the issues for discussion ahead of time. Discussion leaders should prepare by reading assigned articles and possibly other background readings for facilitating good discussion with other students.

5. Final paper (30%)

The final assignment is a research proposal for a new empirical study concerning one of the course topics or another topic related to the language and thought debate.

Your proposal must be written in APA style. For formatting details, refer to the APA Manual (6th edition). The body of the proposal should be 7-10 pages (double-spaced) in length, excluding the title page, abstract, or references. We will also ask you to verbally present your study (5-15 minutes depending on the size of class).

The topics covered in the syllabus may provide a starting point for these papers, but you are encouraged to find sources beyond the course readings. The paper will be roughly in the format of a journal article, but with no data. The paper will have (1) an introduction, (2) methods, (3) planned analyses, (4) a discussion of expected results and their implications.

On December 22, you will present your proposal idea to the class and receive feedback from other students and the instructor. Your proposal idea must be approved by the instructor me, and you may be asked to revise your prospectus based on the feedback you receive. The duration of the presentation will be determined based on the class size.

Further detailed information about this assignment will be provided as this date approaches.

Tentative Course Schedule

Week	Topics and Assignments
1	**October 6 – Intro to the course and the language and thought debate** • Syllabus • Presentation and discussion scheduling • What is the language and thought debate?
2	**October 13 – Theories of the language and thought debate** Assignments: • **Reaction Paper 1 due at 13:40 on October 13** Readings: • Whorf, B. L. (1940/1956). Science and linguistics. In J. B. Carroll (Ed.), *Language, thought, and reality: Selected writings of Benjamin Lee Whorf* (pp. 207-219). Cambridge, MA: MIT Press. • Pinker, S. (1994). The language instinct: How the mind creates language (excerpt: pp. 55-67). New York, NY: William Morrow. Optional readings: • Sapir, E. (1929). The status of linguistics as a science. *Language*, *5*, 207-214. • Heider, E. R. (1972). Universals in color naming and memory. *Journal of Experimental Psychology, 93*, 10-20. • Kay, P., & Kempton, W. (1984). What is the Sapir-Whorf hypothesis? *American Anthropologist*, *86*, 65-79.
3	**October 20 – Modern theories and experiments** Readings: • Slobin, D. I. (1996). From "thought and language" to "thinking for speaking." In J. J. Gumperz & S. C. Levinson (Eds.), *Rethinking linguistic relativity: Studies in the social and cultural foundations of language* (pp. 70-96). Cambridge, UK: Cambridge University Press. • Wolff, P., & Holmes, K. J. (2011). Linguistic relativity. *Wiley Interdisciplinary Reviews: Cognitive Science*, *2*(3), 253–265. https://doi.org/10.1002/wcs.104 Optional readings: • Gleitman, L.R. & Papafragou, A. (2013). Relations between language and thought. In D. Reisberg (Ed.), *Handbook of Cognitive Psychology*. New York, NY: Oxford University Press. • Levinson, S. C. (2003). Language and mind: Let's get the issues straight! In D. Gentner & S.Goldin-Meadow (Eds.), *Language in mind: Advances in the study of language and thought* (pp. 25-37). Cambridge, MA: MIT Press.
4	**October 27 – Color** Readings: • Davidoff, J., Davies, I., & Roberson, D. (1999). Colour categories in a stone-age tribe. *Nature*, *398*, 203-204. • 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 of the United States of America*, *104*(19), 7780. https://doi.org/10.1073/pnas.0701644104 Optional readings: • Ozturk, O., Shayan, S., Liszkowski, U., & Majid, A. (2013). Language is not necessary for color categories. *Developmental Science*, *16*(1), 111–115. https://doi.org/10.1111/desc.12008 • Wright, O., Davies, I. R. L., & Franklin, A. (2015). Whorfian effects on colour memory are not reliable. *Quarterly Journal of Experimental Psychology*, *4*, 745-758. https://doi.org/10.1080/17470218.2014.966123 • Cibelli, E., Xu, Y., Austerweil, J. L., Griffiths, T. L., & Regier, T. (2016). The Sapir-Whorf Hypothesis and Probabilistic Inference: Evidence from the Domain of Color. *PLOS ONE*, *11*(7), e0158725. https://doi.org/10.1371/journal.pone.0158725

5	**November 3 – Number & Objects** Readings: • Gordon, P. (2004). Numerical Cognition Without Words: Evidence from Amazonia. *Science*, *306*(5695), 496–499. https://doi.org/10.1126/science.1094492 • Frank, M. C., Everett, D. L., Fedorenko, E., & Gibson, E. (2008). Number as a cognitive technology: Evidence from Pirahã language and cognition. *Cognition*, *108*(3), 819–824. https://doi.org/10.1016/j.cognition.2008.04.007 • Malt, B. C., Sloman, S. A., & Gennari, S. P. (2003). Universality and language specificity in object naming. *Journal of Memory and Language*, *49*(1), 20–42. https://doi.org/10.1016/S0749-596X(03)00021-4 Optional readings: • Gelman, R., & Gallistel, C. R. (2004). Language and the Origin of Numerical Concepts. *Science*, *306*(5695), 441–443. https://doi.org/10.1126/science.1105144 • Imai, M., & Gentner, D. (1997). A cross-linguistic study of early word meaning: Universal ontology and linguistic influence. *Cognition*, *62*(2), 169–200. https://doi.org/10.1016/S0010-0277(96)00784-6 • Saalbach, H., & Imai, M. (2007). Scope of linguistic influence: Does a classifier system alter object concepts? *Journal of Experimental Psychology: General*, *136*, 485-501.
6	**November 10 – Spatial cognition** Readings: • Majid, A., Bowerman, M., Kita, S., Haun, D. B. M., & Levinson, S. C. (2004). Can language restructure cognition? The case for space. *Trends in Cognitive Sciences*, *8*(3), 108–114. https://doi.org/10.1016/j.tics.2004.01.003 • Landau, B., & Ferrara, K. (2013). Space and language in Williams syndrome: Insights from typical development. *Wiley Interdisciplinary Reviews: Cognitive Science*, *4*(6), 693–706. https://doi.org/10.1002/wcs.1258 • Li, P., & Abarbanell, L. (2018). Competing perspectives on frames of reference in language and thought. *Cognition*, *170*, 9–24. https://doi.org/10.1016/j.cognition.2017.09.005 Optional readings: • Gentner, D., Özyürek, A., Gürcanli, Ö., & Goldin-Meadow, S. (2013). Spatial language facilitates spatial cognition: Evidence from children who lack language input. *Cognition*, *127*(3), 318–330. https://doi.org/10.1016/j.cognition.2013.01.003 • 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*(1), 70–80. https://doi.org/10.1016/j.cognition.2010.12.009 • Marghetis, T., Núñez, R., & Bergen, B. K. (2014). Doing arithmetic by hand: Hand movements during exact arithmetic reveal systematic, dynamic spatial processing. *Quarterly Journal of Experimental Psychology (2006)*, *67*(8), 1579–1596. https://doi.org/10.1080/17470218.2014.897359
7	**November 17 – Time** Assignments: • **Reaction Paper 2 due at 13:40 on November 17** Readings: • Casasanto, D., & Boroditsky, L. (2008). Time in the mind: Using space to think about time. *Cognition*, *106*(2), 579–593. https://doi.org/10.1016/j.cognition.2007.03.004 • Núñez, R., & Cooperrider, K. (2013). The tangle of space and time in human cognition. *Trends in Cognitive Sciences*, *17*(5), 220–229. https://doi.org/10.1016/j.tics.2013.03.008 • de la Fuente, J., Santiago, J., Román, A., Dumitrache, C., & Casasanto, D. (2014). When You Think About It, Your Past Is in Front of You: How Culture Shapes Spatial Conceptions of Time. *Psychological Science*, *25*(9), 1682–1690. https://doi.org/10.1177/0956797614534695 Optional readings:

	• Miles, L. K., Tan, L., Noble, G. D., Lumsden, J., & Macrae, C. N. (2011). Can a mind have two time lines? Exploring space–time mapping in Mandarin and English speakers. *Psychonomic Bulletin & Review*, *18*(3), 598–604. https://doi.org/10.3758/s13423-011-0068-y
8	**November 24 – Odor** Readings: • Olofsson, J. K., & Gottfried, J. A. (2015). The muted sense: Neurocognitive limitations of olfactory language. *Trends in Cognitive Sciences*, *19*(6), 314–321. https://doi.org/10.1016/j.tics.2015.04.007 • Majid, A. (2015). Cultural Factors Shape Olfactory Language. *Trends in Cognitive Sciences*, *19*(11), 629–630. https://doi.org/10.1016/j.tics.2015.06.009 • Majid, A., & Burenhult, N. (2014). Odors are expressible in language, as long as you speak the right language. *Cognition*, *130*(2), 266–270. https://doi.org/10.1016/j.cognition.2013.11.004 Optional readings: • Lorig, T. S. (1999). On the similarity of odor and language perception. *Neuroscience & Biobehavioral Reviews*, *23*(3), 391–398. https://doi.org/10.1016/S0149-7634(98)00041-4 • Majid, A., & Levinson, S. C. (2011). The Senses in Language and Culture. *The Senses and Society*, *6*(1), 5–18. https://doi.org/10.2752/174589311X12893982233551
9	**December 1 – Emotion & Theory of Mind** Readings: • Lindquist, K. A. (2017). The role of language in emotion: Existing evidence and future directions. *Current Opinion in Psychology*, *17*, 135–139. https://doi.org/10.1016/j.copsyc.2017.07.006 • Wierzbicka, A. (2009). Language and Metalanguage: Key Issues in Emotion Research. *Emotion Review*, *1*(1), 3–14. https://doi.org/10.1177/1754073908097175 • Pyers, J. E., & Senghas, A. (2009). Language promotes false-belief understanding: Evidence from learners of a new sign language. *Psychological Science*, *20*, 805-812. Optional readings: • Majid, A. (2012). The Role of Language in a Science of Emotion. *Emotion Review*, *4*(4), 380–381. https://doi.org/10.1177/1754073912445819 • Lakoff, G. (2016). Language and Emotion. *Emotion Review*, *8*(3), 269–273. https://doi.org/10.1177/1754073915595097 • Pell, M. D., Monetta, L., Paulmann, S., & Kotz, S. A. (2009). Recognizing Emotions in a Foreign Language. *Journal of Nonverbal Behavior*, *33*(2), 107–120. https://doi.org/10.1007/s10919-008-0065-7 • Newton, A. M., & de Villiers, J. G. (2007). Thinking while talking: Adults fail nonverbal falsebelief reasoning. *Psychological Science*, *18*, 574-579. • Dungan, J., & Saxe, R. (2012). Matched false-belief performance during verbal and nonverbal interference. *Cognitive Science*, *36*, 1148-1156.
10	**December 8 – Language and the Brain** Assignments: • **Reaction Paper 3 due at 13:40 on December 8** Readings: • Gilbert, A. L., Regier, T., Kay, P., & Ivry, R. B. (2006). Whorf hypothesis is supported in the right visual field but not the left. *Proceedings of the National Academy of Sciences*, *103*, 489-494. • Thierry, G., Athanasopoulos, P., Wiggett, A., Dering, B., & Kuipers, J.-R. (2009). Unconscious effects of language-specific terminology on preattentive color perception. *Proceedings of the National Academy of Sciences*, *106*(11), 4567–4570. https://doi.org/10.1073/pnas.0811155106

	• Fedorenko, E., & Varley, R. (2016). Language and thought are not the same thing: Evidence from neuroimaging and neurological patients. *Annals of the New York Academy of Sciences*, *1369*(1), 132–153. https://doi.org/10.1111/nyas.13046 Optional readings: • Nieder, A., & Dehaene, S. (2009). Representation of Number in the Brain. *Annual Review of Neuroscience*, *32*(1), 185–208. https://doi.org/10.1146/annurev.neuro.051508.135550 • Siok, W. T., Kay, P., Wang, W. S. Y., Chan, A. H. D., Chen, L., Luke, K.-K., & Tan, L. H. (2009). Language regions of brain are operative in color perception. *Proceedings of the National Academy of Sciences*, *106*(20), 8140–8145. https://doi.org/10.1073/pnas.0903627106 • Regier, T., & Kay, P. (2009). Language, thought, and color: Whorf was half right. *Trends in Cognitive Sciences*, *13*(10), 439–446. https://doi.org/10.1016/j.tics.2009.07.001 • Maier, M., & Abdel Rahman, R. (2018). Native Language Promotes Access to Visual Consciousness. *Psychological Science*, *29*(11), 1757–1772. https://doi.org/10.1177/0956797618782181
11	**December 15 – Language and Development** Assignments: • **Proposal presentation in class** Readings: • Bloom, P. (2004). Children think before they speak. *Nature*, *430*(6998), 410–411. https://doi.org/10.1038/430410a • Gentner, D. (2016). Language as cognitive tool kit: How language supports relational thought. *American Psychologist*, *71*(8), 650–657. https://doi.org/10.1037/amp0000082 • Yang, J., Kanazawa, S., Yamaguchi, M. K., & Kuriki, I. (2016). Cortical response to categorical color perception in infants investigated by near-infrared spectroscopy. *Proceedings of the National Academy of Sciences*, *113*(9), 2370–2375. https://doi.org/10.1073/pnas.1512044113 Optional readings: • Ferry, A. L., Hespos, S. J., & Waxman, S. R. (2010). Categorization in 3- and 4-month-old infants: an advantage of words over tones. *Child Development*, *81*(2), 472–479. https://doi.org/10.1111/j.1467-8624.2009.01408.x • Ji, Y., & Hohenstein, J. (2018). English and Chinese children's motion event similarity judgments. *Cognitive Linguistics*, *29*(1), 45–76. https://doi.org/10.1515/cog-2016-0151 • de Villiers, J. G., & Pyers, J. E. (2002). Complements to cognition: A longitudinal study of the relationship between complex syntax and false-belief-understanding. *Cognitive Development*, *17*, 1037-1060.
12	**December 22 – Multilingualism** Readings: • Caldwell-Harris, C. L. (2015). Emotionality Differences Between a Native and Foreign Language: Implications for Everyday Life. *Current Directions in Psychological Science*, *24*(3), 214–219. https://doi.org/10.1177/0963721414566268 • Kousta, S.-T., Vinson, D. P., & Vigliocco, G. (2008). Investigating linguistic relativity through bilingualism: The case of grammatical gender. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *34*(4), 843–858. https://doi.org/10.1037/0278-7393.34.4.843 • Costa, A., Vives, M., & Corey, J. D. (2017). On Language Processing Shaping Decision Making. *Current Directions in Psychological Science*, *26*(2), 146–151. https://doi.org/10.1177/0963721416680263 Optional readings: • Spelke, E. S., & Tsivkin, S. (2001). Language and number: A bilingual training study. *Cognition*, *78*(1), 45–88. https://doi.org/10.1016/S0010-0277(00)00108-6

	• Hayakawa, S., & Keysar, B. (2018). Using a foreign language reduces mental imagery. *Cognition*, *173*, 8–15. https://doi.org/10.1016/j.cognition.2017.12.010
13	**December 29 – Language evolution** Readings: • Hauser, M. D., Chomsky, N., & Fitch, W. T. (2002). The Faculty of Language: What Is It, Who Has It, and How Did It Evolve? *Science*, *298*(5598), 1569–1579. https://doi.org/10.1126/science.298.5598.1569 • Christiansen, M. H., & Kirby, S. (2003). Language evolution: Consensus and controversies. *Trends in Cognitive Sciences*, *7*(7), 300–307. https://doi.org/10.1016/S1364-6613(03)00136-0 Optional readings: • Lupyan, G., & Dale, R. (2010). Language structure is partly determined by social structure. *PLOS ONE*, *5*(1), e8559. https://doi.org/10.1371/journal.pone.0008559 • Carstairs-McCarthy, A. (2017). Origins of Language. In *The Handbook of Linguistics* (pp. 1–19). https://doi.org/10.1002/9781119072256.ch1 • Pinker, S., & Jackendoff, R. (2005). The faculty of language: What's special about it? *Cognition*, *95*(2), 201–236. https://doi.org/10.1016/j.cognition.2004.08.004
14	**January 5 – Reconsidering the language and thought debate** Assignments: • **Final paper due at 17:00 on January 12** Readings: • Imai, M., Kanero, J., & Masuda, T. (2020). Culture, language, and thought. In *Oxford Research Encyclopedia of Psychology*. Oxford University Press. https://doi.org/10.1093/acrefore/9780190236557.013.579 • Lucy, J. A. (2016). Recent Advances in the Study of Linguistic Relativity in Historical Context: A Critical Assessment. *Language Learning*, *66*(3), 487–515. https://doi.org/10.1111/lang.12195

Research Participation (up to 3 bonus points)

Students can optionally serve as participants in research that is run by Sabancı University researchers. By participating in research, you can get extra points. For this course, you will be able to earn up to 6 research points (1 credit equals ~ 30 minutes of research participation). These 6 research points will be converted to 3 points added to your overall total at the end of the semester. More information on the available research projects will be provided during the semester.

You will be able to sign up for the experiments and get your research participation credits through the online Sona system at http://sabanciuniv.sona-systems.com. Please carefully read the Guide for Students: Sabancı University Experiment Credits System (Sona).

Academic Integrity

Students are expected to obey the Sabancı University Code of Academic Integrity.
http://www.sabanciuniv.edu/en/academic-integrity-statement
Scholastic dishonesty of any sort will not be tolerated. Cheating in any form is serious offenses and is considered to be in violation of the College's Academic Integrity Code. Cases of academic dishonesty will be reported and the student will be disciplined accordingly.