
Psychology 440
Language and reasoning, Winter 2021
REMOTE ASYNCRONOUS VERSION

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Virtual office hours: Tuesday, 3 pm – 5 pm

Link info (be aware that clicking this will basically drop you straight into the meeting):

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Required Texts

There is no textbook for this class. All readings for the course will consist of journal articles, review articles, or book chapters, available on eReserves (which is accessible via onQ). Please see the **Reading list** for a complete list of references for the readings, and please see the **Class Schedule** for the weeks corresponding to those readings.

Course Overview

This course will explore the science behind how seemingly-innocuous changes in language can impact how people think about social concepts. For instance, do metaphorical frames impact how we think about diseases (such as cancer and COVID-19)? Do subtle variations in wording (such as talking about causing vs producing) influence how we view other people? This course sheds light on how language shapes the mental models that we use to understand and reason about complex social phenomena.

This course is structured as if it were a guided reading and research group. The priorities are to acclimate students to classic and modern research on the link between language and reasoning and to build students' abilities to develop their own empirical research skills related to this area. There are no tests, no lectures, and because of remote delivery, there are no in person discussions. Additionally, in an effort to keep the course asynchronous, there are no scheduled "zoom" discussion sections. Instead, the majority of the coursework is comprised of weekly readings and weekly discussion with classmates about the readings via the onQ discussions forum. Toward the end of the term, each student will develop and present an original research idea related to language and reasoning, provide feedback upon one another's presentations, and adapt the presentation into a project proposal (which will serve as the final project of the course).

Intended Student Learning Outcomes

Upon completion of this course, a successful student should be able to:

1. Understand, evaluate, and discuss with classmates major constructs in language and reasoning, such as the Sapir-Whorf hypothesis, conceptual metaphors, and distributed semantics
2. Develop and present an original research project proposal related to language and reasoning
3. Provide constructive feedback on others' research project proposals
4. Write an APA-style proposal of the original research project

Assessments and Grading Scheme

- Forum discussion of readings – 40% of course grade
- Proposal presentation – 20% of course grade
- Final proposal – 40% of course grade

In this course, some components will be graded using numerical percentage marks. Other components will receive letter grades, which for purposes of calculating your course average will be translated into numerical equivalents using the Faculty of Arts and Science approved scale. Your course average will then be converted to a final letter grade according to the Queen's Official Grade Conversion Scale.

Arts & Science Letter Grade Input Scheme

Assignment mark	Numerical value for calculation of final mark
A+	93
A	87
A-	82
B+	78
B	75
B-	72
C+	68
C	65
C-	62
D+	58
D	55
D-	52
F48 (F+)	48
F24 (F)	24
F0 (0)	0

Queen's Official Grade Conversion Scale

Grade	Numerical Course Average (Range)
A+	90-100
A	85-89
A-	80-84
B+	77-79
B	73-76
B-	70-72
C+	67-69
C	63-66
C-	60-62
D+	57-59
D	53-56
D-	50-52
F	49 and below

Please note that there will be no “rounding up” of final grades (as in, a final percentage of 79.6 will receive a B+ and not an A-). The logic is as follows: to treat all students equally, whatever points I add to one student's grade I must also add to all students' grades. So, if I bump up a 79.6 to an A-, I effectively add .4 to that student's grade, which I must then add to all students' grades. After that, someone else will be on the cusp, and bumping them will put someone else on the cusp, etc, etc. Rinse and repeat and everyone has A+s. For these reasons, final grades receive no rounding up.

Assessment Details:

Forum discussion of readings – 40% of course grade

Content weeks (Weeks 1 – 10) – 80% of forum discussion grade

This course is intended to be a discussion-based course (but delivered asynchronously because of remote delivery). Thus, a major component of the course involves student discussion, and the success of this class rests on the active participation of all students. Each student is expected to make two contributions to the discussion forum each week. See below for examples of contributions. I will provide discussion questions and prompts at the beginning of each week, but students can also ask questions and pose prompts as long as they are made early in the week (prior to Wednesday). Students must make a minimum of 2 substantive (longer than 40 words) posts each week by Friday at 2 pm (EST). I will monitor these discussions as posts are made and by logging in throughout the week to offer commentary.

Participation will be graded on the basis of effort to integrate course material (e.g., you make reference to course readings, outside readings, or readings from past or present Psychology or related disciplines), engagement (evidence that you are responding to other people), and critical thinking. Each post will be graded on a 5-point scale and added so that your total score per week will be X/10. For Content weeks (Weeks 1 – 10), I am only counting your highest 8 weeks' scores. Your lowest 2 week scores will be dropped (i.e., you can take two weeks off). These dropped week scores will not be reflected in your course grade.

Here are some examples of the discussion contributions you might make:

- Ask a question, prior to Wednesday only
- Answer someone else's question (Based on the readings this week, or some outside reading I did – link here – I think the answer to your question is X)
- Add to a question (Yes, X, but I also wonder about Y)
- Critically evaluate an answer (I agree/disagree because X, citing evidence)
- Discuss the quality of evidence to support/refute a point made by someone else (I agree/disagree with that point because there is the following issue with the evidence)
- Point out a related literature (This paper reminds me of research on X...)
- Blow it all up (Why does this matter? What connection does this have to real life? Does this ever even happen in real life? Why should people care?)

Discussion Guidelines. University and discussion-based courses are places to share, question, and challenge ideas. Each student brings a different lived experience from which to draw upon. To help one another learn the most we can from this experience, please consider the following guidelines:

1. Make a personal commitment to learn about, understand, and support your peers.
2. Assume the best of others and expect the best of them.
3. Acknowledge the impact of oppression on the lives of other people and make sure your writing is respectful and inclusive.
4. Recognize and value the experiences, abilities, and knowledge each person brings.
5. Pay close attention to what your peers write before you respond. Think through and re-read your writings before you post or send them to others.
6. It's OK to disagree with ideas, but do not make personal attacks.
7. Be open to being challenged or confronted on your ideas and to challenging others with the intent of facilitating growth. Do not demean or embarrass others.
8. Encourage others to develop and share their ideas.
9. Do not draw from personal experience or provide anecdotal evidence when discussing topics. Students in the class have not consented to hear about your personal life. The discussion should focus upon course materials and be critical while also supportive and inclusive.

Weekly Schedule. There may be a time when you are unable to complete a discussion board post for personal reasons. This course has been designed with accommodations and considerations for extenuating circumstances in mind.

- Each week's readings will be made available onQ on Sunday morning at 9 am (EST).
- All forum posts will be due by Friday at 2 pm (EST).
- There is a 72 hour grace period for forum posts, such that late forum posts will be accepted up until Monday at 2 pm (EST), but let me know in advance if you are taking it.
- As mentioned before, the lowest 2 week scores will be dropped (i.e., you can take two weeks off from making any discussion posts).

Presentation weeks (Weeks 11 – 12) – 20% of forum discussion grade

Many of the learning outcomes for this course involve developing an original research project proposal, communicating it to others, and helping others develop their own research project proposals as well. In the last two weeks of the course, students will be “presenting” their research project proposals and providing feedback on one another’s proposals.

During the two presentation weeks, weekly content will be other students’ project proposal presentations. Presentations will be made available on presentation weeks in onQ by Sunday morning at 9 am. Students are expected to view and provide feedback on each students’ presentation by Friday at 2 pm (with a 72 hour grace period, which must be requested in advance). Feedback should be emailed directly to the presenters, and presenters will provide me with an account of whether all students provided them with feedback. This will be graded on a pass/fail basis: students receive 10/10 for that week if they provided feedback to all presenters, and receive 0/10 for that week if they do not provide feedback to all presenters.

Here are some examples of the feedback you might give:

- Ask a question but also give a potential answer (Do you think variable X will be an issue in your study? If so, here might be a way to account for it...)
- Suggest a followup study and why its worth doing (Another study you could do down the road might be X because of Y)
- Point out a related literature (Your idea reminds me of research on X...)
- Note areas of confusion, but be specific about what part was confusing (I liked your design but I was a little confused about the hypotheses. Specifically...)

Notably, there are no “off” weeks or dropped weeks for presentation weeks. This is because it would not be fair to your fellow classmates for you get their feedback on your proposal without you giving them your feedback on their proposal.

Assessment Details:

Proposal presentation – 20% of course grade

As discussed previously, many of the learning outcomes for this course involve developing an original research project proposal. The remaining assessments relate to that proposal.

Students will develop their own original research project and present a proposal of that project to the class. This is your chance to dive into the topic that you are most interested in learning more about and take a shot at designing your own research project. Project proposals must be unique, meaning two or more students cannot propose the same idea. Project proposals must also incorporate class content in some way, meaning they have to examine some aspect of the link between language and thought.

Project proposals DO NOT need to be projects that you have the capability to run at the moment (as in, I am not expecting you to actually conduct these projects for the class). However, try to make them pre-COVID feasible for a research lab here at Queen’s. Use methods that have either been used before or methods that are easily developed, and avoid projects that you have no idea how it would be implemented. As examples, a project that asks people to read information and make judgments would be feasible. A project that recruits depressive patients, records their conversations using an [EAR](#), and looks at depressive symptoms would also be feasible. A project that records the conversations that take place in a home and measures whether household members purchase products based on their language use would be infeasible (how would you even do that unless you are Jeff Bezos?).

If you have any questions about your project topic and whether it fits, feel free to email me and ask. For tips on developing proposals for research projects (and writing about them), see <https://writingcenter.unc.edu/tips-and-tools/grant-proposals-or-give-me-the-money/>.

The proposal presentation has two components: an outline and a presentation.

Outline – 20% of proposal presentation grade

Students will submit an outline of their proposal presentation idea to me. Outlines should include the following elements:

- Theoretical rationale – What is the topic and why is it important? What is the research question and why does it need to be answered? What are you planning on studying and what will it tell us that we didn't know before? (3-5 sentences)
- Hypotheses – What do you expect to happen? (3-5 sentences)
- Method – What will the design look like? What will be the independent variable(s) and what will be the dependent variable(s)? (5+ sentences)
- Expected results – How do you expect the data will pan out? What kinds of statistical tests will be run? (3-5 sentences)

The outline is due by March 19th at 2 pm (with an allowable 72 hour grace period, which must be requested in advance). The purpose of the outline is primarily to nudge students into thinking about their presentations early, so the outline is graded purely pass/fail. If you submit it by the due date, you get full points regardless of the quality of the outline. Outlines submitted outside of the grace period will not be accepted.

Presentation video – 80% of the proposal presentation grade

Students will record a 5 minute video presentation of their project proposal, which will be posted on the onQ site for feedback from other students. The presentation should have the same elements of the outline: theoretical rationale, hypotheses, method, and expected results.

Here are a few general tips:

- Because the presentation is only 5 minutes (max), try not to have any more than 5 slides. More than that and you'll either go over time, or you'll be whizzing through slides so fast that viewers will have a hard time even seeing what's on them.
- Try to not simply narrate what is on your slides (e.g., the presentation is just you reading your slides to us). Instead, use your slides to illustrate themes that you elaborate on in your narration.
- Hypothetical excel graphs are a great way to illustrate your hypotheses and expected results!
- You can keep you method brief. Viewers do not need to know details regarding where you will get your sample from, how many participants you will get, how they will be compensated, etc. We mostly want to know info about what participants will be doing in your study. Viewers will crucially want to know what your independent variable(s) will be, what your dependent variable(s) will be, and how they will be manipulated and/or measured in the context of the study procedure.

Tips, resources, and specific instructions for uploading and sharing the video with the class will be given in a separate document. The presentation video is due by March 26th at 2 pm (with an allowable 72 hour grace period, which must be requested in advance). The grading rubric for presentation videos will be made available in advance in onQ.

Note, videos submitted after the grace period will not be accepted. Presentation videos comprise the content for the last two weeks of the course, so videos that are submitted late cannot be used as content for that week and compromise the purpose of the assignment.

Assessment Details:**Final proposal – 40%**

Finally, to cap off the course, students will submit a written APA style research proposal of their project (10 pages minimum, double-spaced, times new roman font, 1 inch margins). This paper should contain many of the same elements as the proposal outline and proposal video presentation but written in APA format (title page, abstract, introduction, method, expected results, discussion, and references). However, because those assessments are focused on the methods and results, the paper should include a more extensive literature review of past research relevant to your topic and theoretical rationale. More details on the paper and the rubric for grading it will be made available in advance in onQ.

This paper will be due during the final exam period (on the date set for the final exam for the course) and worth 40% of the final course grade. For more details on writing in APA style, see the follow link (https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/apa_sample_paper.html)

Location and timing of final examination

The final exam will be the final research project proposal paper and will be due on the final exam date scheduled by the Faculty of Arts and Science. The exam dates for each Term are listed in the Faculty of Arts and Science webpage under “Important Dates.” Student exam schedules for the Winter Term are posted via SOLUS. Students should delay finalizing any travel plans until AFTER the examination schedule has been posted. The final research project proposal paper due date will NOT be moved or deferred to accommodate employment, travel/holiday plans, or flight reservations.

Diversity and Inclusiveness

In an ideal world, science would be objective. However, much of science is subjective and is historically built on a small subset of privileged voices. In this class, we will make an effort to read papers from a diverse group of scientists, but limits still exist on this diversity. I acknowledge that it is possible that there may be both overt and covert biases in the material due to the lens with which it was written, even though the material is primarily of a scientific nature. Integrating a diverse set of experiences is important for a more comprehensive understanding of science. I would like to discuss issues of diversity in psychology as part of the course from time to time. Please contact me (in person or electronically) or submit anonymous feedback if you have any suggestions to improve the quality of the course materials.

Furthermore, I would like to create a learning environment for my students that supports a diversity of thoughts, perspectives and experiences, and honors your identities (including race, gender, class, sexuality, religion, ability, etc.) To help accomplish this:

- If you have a name and/or set of pronouns that you prefer, please let me know!
- If you feel like your performance in the class is being impacted by your experiences outside of class, please do not hesitate to come and talk with me. I want to be a resource for you. Remember that you can also submit anonymous feedback (which will lead to me making a general announcement to the class, if necessary, to address your concerns).

I (like many people) am still in the process of learning about diverse perspectives and identities. If something was said in class (by anyone) that made you feel uncomfortable, please talk to me about it. (Again, anonymous feedback is always an option.)

As a participant in course discussions, you should also strive to honour the diversity of your classmates.

Accommodations for Disabilities

Queen's University is committed to achieving full accessibility for persons with disabilities. Part of this commitment includes arranging academic accommodations for students with disabilities to ensure they have an equitable opportunity to participate in all of their academic activities. If you are a student with a disability and think you may need accommodations, you are strongly encouraged to contact Student Wellness Services (SWS) and register as early as possible. For more information, including important deadlines, please visit the Student Wellness website at: <http://www.queensu.ca/studentwellness/accessibility-services/>

Academic Consideration for Students in Extenuating Circumstances

Queen's University is committed to providing academic consideration to students experiencing extenuating circumstances that are beyond their control and are interfering with their ability to complete academic requirements related to a course for a short period of time. The Senate Policy on Academic Consideration for Students in Extenuating Circumstances is available at <http://www.queensu.ca/secretariat/sites/webpublish.queensu.ca.uslclwww/files/files/policies/senateandtrustees/Academic%20Considerations%20for%20Extenuating%20Circumstances%20Policy%20Final.pdf>

Each Faculty has developed a protocol to provide a consistent and equitable approach in dealing with requests for academic consideration for students facing extenuating circumstances. Arts and Science undergraduate students can find the Faculty of Arts and Science protocol and the portal where a request can be submitted at: <http://www.queensu.ca/artsci/accommodations>. Students in other Faculties and Schools who are enrolled in this course should refer to the protocol for their home Faculty.

If you need to request academic consideration for this course, you will be required to provide the name and email address of the instructor/coordinator. Please use the following:

Instructor/Coordinator Name: David Hauser

Instructor/Coordinator email address: david.hauser@queensu.ca

Academic Integrity

Queen's students, faculty, administrators and staff all have responsibilities for upholding the fundamental values of academic integrity; honesty, trust, fairness, respect, responsibility and courage (see www.academicintegrity.org). These values are central to the building, nurturing and sustaining of an academic community in which all members of the community will thrive. Adherence to the values expressed through academic integrity forms a foundation for the "freedom of inquiry and exchange of ideas" essential to the intellectual life of the University (see the Senate Report on Principles and Priorities <http://www.queensu.ca/secretariat/policies/senate/report-principles-and-priorities>).

Students are responsible for familiarizing themselves with the regulations concerning academic integrity and for ensuring that their assignments and their behaviour conform to the principles of academic integrity. Information on academic integrity is available in the Arts and Science Calendar (see Academic Regulation 1 <http://www.queensu.ca/artsci/academic-calendars/regulations/academic-regulations/regulation-1>), on the Arts and Science website (see <https://www.queensu.ca/artsci/students-at-queens/academic-integrity>), and from the instructor of this course. Departures from academic integrity

include plagiarism, use of unauthorized materials, facilitation, forgery and falsification, and are antithetical to the development of an academic community at Queen's. Given the seriousness of these matters, actions which contravene the regulation on academic integrity carry sanctions that can range from a warning or the loss of grades on an assignment to the failure of a course to a requirement to withdraw from the university.

Relevant to academic integrity is plagiarism, intended or not. Regardless of how and where you retrieve information, the principles of academic integrity apply with regard to plagiarism. Please visit these helpful websites to help you make sure that you are able to write things in your own words:

- <https://www.queensu.ca/academicintegrity/students/avoiding-plagiarismcheating>
- <https://integrity.mit.edu/handbook/academic-writing/avoiding-plagiarism-paraphrasing>
- http://writing.wisc.edu/Handbook/QPA_paraphrase.html

Turnitin

This course makes use of Turnitin, a third-party application that helps maintain standards of excellence in academic integrity. Normally, students will be required to submit their course assignments to through onQ to Turnitin. In doing so, students' work will be included as source documents in the Turnitin reference database, where they will be used solely for the purpose of detecting plagiarism.

Turnitin is a suite of tools that provide instructors with information about the authenticity of submitted work and facilitates the process of grading. Turnitin compares submitted files against its extensive database of content, and produces a similarity report and a similarity score for each assignment. A similarity score is the percentage of a document that is similar to content held within the database. Turnitin does not determine if an instance of plagiarism has occurred. Instead, it gives instructors the information they need to determine the authenticity of work as a part of a larger process.

Please read [Turnitin's Privacy Pledge, Privacy Policy, and Terms of Service](#), which governs users' relationship with Turnitin. Also, please note that Turnitin uses cookies and other tracking technologies; however, in its service contract with Queen's Turnitin has agreed that neither Turnitin nor its third-party partners will use data collected through cookies or other tracking technologies for marketing or advertising purposes. For further information about how you can exercise control over cookies, see [Turnitin's Privacy Policy](#).

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Copyright of Course Materials

The material presented in class is designed for use as part this course at Queen's University and is the property of the instructor unless otherwise stated. Third party copyrighted materials (such as the book chapters and articles found on onQ) have either been licensed for use in this course or fall under an exception or limitation in Canadian Copyright law. Copying this material for distribution (e.g., uploading material to a commercial third-party website) can lead to a violation of Copyright law. Find out more about copyright here: <http://library.queensu.ca/copyright>.

Changes to the syllabus

In extreme circumstances, the syllabus and/or course schedule may be modified at my discretion. I will announce all changes via onQ.

Late policies

Because this is a discussion-based course, many assessments are designed to promote/facilitate discussion among the class (namely, the discussion posts and the proposal presentation). In these circumstances, late submissions deprive classmates of the opportunity to respond or are akin to making a contribution after everyone else has moved on to a new topic. This is the reasoning behind the following policies.

Forum discussion. Each week, forum posts will be due by Friday at 2 pm (EST). There is a 72 hour grace period for forum posts, such that late forum posts will be accepted up until Monday at 2 pm (EST) the following week, but let me know in advance if you are taking it. Additionally, in line with universal design learning principals, each student is permitted two penalty-free weeks off from forum discussions (excluding presentation weeks). So, two weeks (out of eight weeks) do not count toward your course grade, washing away those zeros.

Proposal presentation outline. The outline is due by March 19th at 2 pm. There is an allowable 72 hour grace period (which must be requested in advance of the due date). The purpose of the outline is primarily to nudge students into thinking about their presentations early, so the outline is graded purely pass/fail. If you submit it by the due date (or the grace period if it is requested), you get full points regardless of the quality of the outline. Outlines submitted outside of the due date (or grace period if it is requested) will not be accepted.

Proposal presentation videos. The presentation video is due by March 26th at 2 pm. There is an allowable 72 hour grace period (which must be requested in advance of the due date). Proposal presentation videos make up the content for the last two weeks of class. Other students will be providing feedback on them, and they cannot provide feedback on submissions that are not there. Therefore, presentation videos submitted outside of the due date (or grace period if it is requested) will not be accepted.

Final proposal papers. Final proposal papers will be due on the date assigned “final exam date” (although we won’t have a final exam, this paper is it). The due date will be announced in onQ once it is set. There is an allowable 72 hour grace period (which must be requested in advance of the due date). Proposal papers will be penalized 10 percentage points for every day that they are late.

Class Schedule

Week	Topic	Readings
Week 1: Jan 11	Welcome	Boroditsky (2011)
Week 2: Jan 18	Intro to the Sapir-Whorf hypothesis	Whorf (1939) Levinson (1997)
Week 3: Jan 25	Sapir-Whorf and colors	Gilbert et al (2008) Regier & Kay (2009) Winawer et al (2007) Lupyan et al (2020)
Week 4: Feb 1	Sapir-Whorf and time	Boroditsky (2001) Casasanto (2008) Boroditsky et al (2011) Fuhrman & Boroditsky (2010)
Week 5: Feb 8	Intro to conceptual metaphors	Landau et al (2010) Boroditsky & Ramscar (2002) Thibodeau & Borditsky (2011) Landau (2018)
READING WEEK: Feb 15		
Week 6: Feb 22	Metaphors and sensory states	Meier et al (2007) Ackerman et al (2010) Williams & Bargh (2008) Hauser & Schwarz (2020)
Week 7: March 1	Metaphoric frames and health	Hauser & Schwarz (2015) Hauser & Schwarz (2020) Hauser et al (2017) Hendricks et al (2018)
Week 8: March 8	Distributional semantics and collocation	Hauser & Schwarz (2016) Hauser & Schwarz (2018) Stubbs (1995) Xiao & McEnery (2006)
Week 9: March 15	Distributional semantics and word embeddings	Alammar (2018) Landauer & Dumais (1997) Lupyan & Lewis (2017) Thompson et al (2020)
Week 10: March 22	Distributional semantics and bias	Lupyan & Lewis (2020) Caliskan et al (2017) Caliskan & Lewis (2020) Garg et al (2018)
Week 11: March 29	Presentation week 1	View other student presentations
Week 12: April 5	Presentation week 2	View other student presentations

Reading list

Week 1, Jan 11: Welcome, read the syllabus plz and ask questions!

- Boroditsky, L. (2011). How language shapes thought. *Scientific American*, 304(2), 62-65.

Week 2 Jan 18: Introduction to the Sapir-Whorf Hypothesis

- Whorf, B. L. (1978). The relation of habitual thought and behaviour to language (1939). In *Language, thought, and reality: Selected writings of Benjamin Lee Whorf*. MIT press.
- Levinson, S. C. (1997). Language and cognition: The cognitive consequences of spatial description in Guugu Yimithirr. *Journal of Linguistic Anthropology*, 7(1), 98-131.

Week 3, Jan 25: Sapir-Whorf and colours

- Gilbert, A. L., Regier, T., Kay, P., & Ivry, R. B. (2008). Support for lateralization of the Whorf effect beyond the realm of color discrimination. *Brain and language*, 105(2), 91-98.
- Regier, T., & Kay, P. (2009). Language, thought, and color: Whorf was half right. *Trends in cognitive sciences*, 13(10), 439-446.
- 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(19), 7780-7785.
- Lupyan, G., Abdel Rahman, R., Boroditsky, L., & Clark, A. (2020, April 28). Effects of Language on Visual Perception. <https://doi.org/10.31234/osf.io/pzmtmc>

Week 4, Feb 1: Sapir-Whorf and time

- Boroditsky, L. (2001). Does language shape thought?: Mandarin and English speakers' conceptions of time. *Cognitive psychology*, 43(1), 1-22.
- Boroditsky, L., Fuhrman, O., & McCormick, K. (2011). Do English and Mandarin speakers think about time differently?. *Cognition*, 118(1), 123-129.
- Casasanto, D. (2008). Who's afraid of the big bad Whorf? Crosslinguistic differences in temporal language and thought. *Language learning*, 58, 63-79.
- Fuhrman, O., & Boroditsky, L. (2010). Cross-cultural differences in mental representations of time: Evidence from an implicit nonlinguistic task. *Cognitive science*, 34(8), 1430-1451.

Week 5, Feb 8: Introduction to conceptual metaphors

- Landau, M. J., Meier, B. P., & Keefer, L. A. (2010). A metaphor-enriched social cognition. *Psychological bulletin*, 136(6), 1045.
- Boroditsky, L., & Ramscar, M. (2002). The roles of body and mind in abstract thought. *Psychological science*, 13(2), 185-189.
- Thibodeau, P. H., & Boroditsky, L. (2011). Metaphors we think with: The role of metaphor in reasoning. *PloS one*, 6(2), e16782.
- Landau, M. J. (2018). Using metaphor to find meaning in life. *Review of General Psychology*, 22(1), 62-72.

Week 6, Feb 22: Metaphors and sensory states

- Meier, B. P., Hauser, D. J., Robinson, M. D., Friesen, C. K., & Schjeldahl, K. (2007). What's "up" with God? Vertical space as a representation of the divine. *Journal of personality and social psychology*, 93(5), 699.
- Ackerman, J. M., Nocera, C. C., & Bargh, J. A. (2010). Incidental haptic sensations influence social judgments and decisions. *Science*, 328(5986), 1712-1715.

- Williams, L. E., & Bargh, J. A. (2008). Experiencing physical warmth promotes interpersonal warmth. *Science*, 322(5901), 606-607.
- Hauser, D. J., & Schwarz, N. (2020). Situated embodiment: When physical weight does and does not inform judgments of importance. *Social Psychological and Personality Science*, 1948550620971968.

Week 7, March 1: Metaphoric frames and health

- Hauser, D. J., & Schwarz, N. (2015). The war on prevention: Bellicose cancer metaphors hurt (some) prevention intentions. *Personality and Social Psychology Bulletin*, 41(1), 66-77.
- Hauser, D. J., & Schwarz, N. (2020). The war on prevention II: Battle metaphors undermine cancer treatment and prevention and do not increase vigilance. *Health communication*, 35(13), 1698-1704.
- Hauser, D. J., Nesse, R. M., & Schwarz, N. (2017). Lay theories and metaphors of health and illness. In Zedelius C., Muller, B., & Schooler J. W. (Eds.) *The science of lay theories: How beliefs shape our culture, cognition, and health*. (pp. 341-354). Springer.
- Hendricks, R. K., Demjén, Z., Semino, E., & Boroditsky, L. (2018). Emotional implications of metaphor: Consequences of metaphor framing for mindset about cancer. *Metaphor and Symbol*, 33(4), 267-279.

Week 8, March 8: Distributional semantics and collocation

- Hauser, D. J., & Schwarz, N. (2016). Semantic prosody and judgment. *Journal of Experimental Psychology: General*, 145(7), 882.
- Hauser, D. J., & Schwarz, N. (2018). How seemingly innocuous words can bias judgment: Semantic prosody and impression formation. *Journal of experimental social psychology*, 75, 11-18.
- Stubbs, M. (1995). Collocations and semantic profiles: On the cause of the trouble with quantitative studies. *Functions of language*, 2(1), 23-55.
- Xiao, R., & McEnery, T. (2006). Collocation, semantic prosody, and near synonymy: A cross-linguistic perspective. *Applied linguistics*, 27(1), 103-129.

Week 9, March 15: Distributional semantics and word embeddings

- <http://jalanmar.github.io/illustrated-word2vec/>
- Landauer, T. K., & Dumais, S. T. (1997). A solution to Plato's problem: The latent semantic analysis theory of acquisition, induction, and representation of knowledge. *Psychological review*, 104(2), 211.
- Lupyán, G., & Lewis, M. (2019). From words-as-mappings to words-as-cues: The role of language in semantic knowledge. *Language, Cognition and Neuroscience*, 34(10), 1319-1337.
- Thompson, B., Roberts, S. G., & Lupyán, G. (2020). Cultural influences on word meanings revealed through large-scale semantic alignment. *Nature Human Behaviour*, 4(10), 1029-1038.

Week 10, March 22: Distributional semantics and bias

- Lewis, M., & Lupyán, G. (2020). Gender stereotypes are reflected in the distributional structure of 25 languages. *Nature human behaviour*, 4(10), 1021-1028.
- Caliskan, A., Bryson, J. J., & Narayanan, A. (2017). Semantics derived automatically from language corpora contain human-like biases. *Science*, 356(6334), 183-186.
- Caliskan, A., & Lewis, M. (2020, July 16). Social biases in word embeddings and their relation to human cognition. <https://doi.org/10.31234/osf.io/d84kg>
- Garg, N., Schiebinger, L., Jurafsky, D., & Zou, J. (2018). Word embeddings quantify 100 years of gender and ethnic stereotypes. *Proceedings of the National Academy of Sciences*, 115(16), E3635-E3644.