Psychology 440
Language and reasoning, Winter 2024

Office: see onQ
Office hours: see onQ
What are office hours?: https://vimeo.com/270014784

Lecture times and locations: see onQ[1]

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 Course Reserves (which is accessible via the onQ site). 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? 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 a seminar course and is structured as if it were a reading, research, and discussion group. The priorities are to acclimate students to classic and modern research on the link between language and reasoning, to build students' abilities to develop their own empirical research skills, and to strengthen student's abilities to discuss scientific research with their peers. There are no tests and no lectures. Instead, the majority of coursework is comprised of weekly readings, weekly reaction papers, and weekly discussion with classmates. 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 (Classroom contribution)
2. Facilitate active and productive classroom discussion of course-related concepts (Discussion leader)
3. Develop and present an original research project proposal related to language and reasoning (Proposal presentation)
4. Write an APA-style proposal of the original research project (Final proposal)

Assessments and Grading Scheme

- Classroom contribution – 10% of course grade
- Discussion leader – 15% of course grade

[1] If you are wondering why so many course details say "see onQ", it is because Queen's has implemented a policy that sensitive course details should not be publicly released in order to reduce the risk of politically-motivated targeted attacks. However, for students enrolled in this course, all of this information can be found in the course onQ page.

- Proposal presentation – 20% of course grade
- Final proposal paper – 55% 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:
Classroom contribution – 10% of course grade

This is a seminar course and is therefore founded upon classroom discussion between students. Thus, a major component of the course involves student discussion, and the success of this class rests on the active participation of all students in classroom discussion. Therefore, students will be assessed on two criteria that are integral ensuring active discussion among students: **reaction posts** and **classroom participation**.

1. Reaction posts

For each seminar week, each student (except for those leading discussion that week) is expected to contribute one reaction post in the course onQ discussion forum. Reaction posts should be between 200-400 words and should be posted by 11:59 PM EST on Wednesday night prior to that week's seminar class. So, as an example, reaction posts for the seminar on Friday, Jan 19 should be completed by the end of day on Wednesday, Jan 17.

Reaction posts should contain the student's reaction to the week's assigned readings. They should NOT contain summaries of the readings themselves. Instead, students should discuss their thoughts about the readings; their reactions to them; and the connections they see between that week's readings and other material covered in this course, in other courses (Psych and non-Psych), and lived experiences. Broad questions about the readings are strongly encouraged (e.g., I wonder how this applies to X? If X is true as this week's readings suggest, does that also imply that Y is true? Etc etc). Ultimately, the purpose of reaction posts is to give discussion leaders a pulse on the big questions of all students so that they can steer classroom discussion in an appropriate direction. As such, the more information you provide them in your reaction post that would help them gain a sense of your thoughts and questions about the assigned readings, the better for them and for you (because discussion leaders are grading your posts, more detail is below). Some additional examples of things to discuss in reaction posts are below:

- Ask a question about the readings
- Critically evaluate the readings (I agree/disagree because X, citing evidence)
- Point out a related literature (This paper reminds me of research on X…)
- Think about the implications of the readings for society (If this paper is true, does it imply that we should change public policy because of X?)
- Think about the implications of the readings for other research (If this paper is true, does it imply that research on X is false?)
- 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?)

1a. Grading of reaction posts

Reaction posts will be graded by the week's discussion leaders on a 3 point scale. Discussion leaders will evaluate reaction posts on the extent to which they provided information that was conducive to facilitating classroom discussion (e.g., asked thoughtful questions, linked to other literatures, generated novel insights, etc). Reaction posts will receive a 2 if they provided helpful information, a 1 if they did not provide information that was particularly helpful, and a 0 if they weren't completed.

1b. Late policy for reaction posts

There may be a time when you are unable to complete a reaction post by the due date for personal reasons. This course has been designed with accommodations and considerations for extenuating circumstances in mind. This means that "Short term Requests for Academic Consideration" (submitted through the Faculty of Arts and Science portal without documentation) are not needed.

Because reaction posts provide discussion leaders with material that is necessary for preparing classroom discussion, reaction posts that are submitted late do not provide discussion leaders with enough time to prepare. Thus, reaction posts fall under the classification of "scaffolded assignments". Because discussion leaders' performance is dependent upon and is scaffolded upon reaction posts, requests for a reaction post deadline extension (through either QSAS or ASC) may not be able to be accommodated.

Come see me if you have QSAS accommodations for extensions for assessment deadlines and you feel that the alternatives outlined in this syllabus are not suitable. Any reaction post that is submitted after the due date will receive a 0. However, as noted in the grading scheme for classroom contribution, students can drop several of their lowest reaction post scores, which serves as an accommodation for low-scoring reaction posts.

2. Classroom participation

The success of this class rests on the active participation of all students in classroom discussions. Indeed, the first learning outcome of the course stresses that succeeding in the course is contingent upon

discussing course content with classmates. Classroom participation is required, not optional. Quite simply, the more that everyone speaks up in class and engages in classroom discussion, the more interesting and successful this class will be. Therefore, to incentivize participation in classroom discussions, you will be graded on the degree to which you participate in classroom discussions.

2a. Grading of classroom participation

Similar to the grading of reaction posts, each student's classroom participation each week will be graded by the instructor on a 3 point scale. The student will receive a 2 for the week if they made valuable contributions to classroom discussion, a 1 if they were present but did not make valuable contributions to classroom discussion, and a 0 if they were absent.

2b. QSAS accommodations for classroom participation

The first learning outcome of the course stresses that succeeding in the course is contingent upon *discussing course content with classmates.* Classroom participation with classmates is required, not optional. Participating in classroom discussion is an essential requirement for the course in addition to being a Provincial Degree Level Expectation for building communication skills. This is a seminar course that aims to increase student's knowledge of the content through classroom discussion. Therefore, QSAS requests for alternative evaluation in lieu of participation or alternative methods of participation may not be able to be accommodated. Come see me if you have QSAS accommodations for classroom participation and you feel that the alternatives outlined in this syllabus are not suitable. However, note that accommodations for missed classes are built into the classroom contribution grading scheme, outlined below. Thus, students who are active participants in classroom discussion but who may miss a few classes for various reasons can ultimately succeed in this course. However, students who frequently miss class (regardless of the reason) and/or rarely participate in classroom discussion (regardless of the reason) will ultimately lose marks on the classroom participation grade.

2c. Classroom participation 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.

Classroom contribution grading scheme

Classroom contribution grades will be a composite of reaction post grades and classroom participation grades. There are 7 classroom seminar sessions covering assigned readings in the course. Students will write a reaction post for 6 seminar sessions (students do not have to write a reaction post for the week in

which they are leading discussion), meaning that they will have 6 reaction post grades, ranging from 0 to 2. Students will also be graded on classroom participation for 6 seminar sessions (students do not receive a classroom participation grade for the week in which they are leading discussion), meaning that they will have 6 classroom participation grades, ranging from 0 to 2.

Each student's classroom participation grades will be pooled with their reaction post grades, resulting in 12 classroom contribution grades. Each student's classroom contribution grade (worth 10% of their course grade) will be computed from their highest 10 scores. The lowest 2 scores will be dropped. This means that students can be absent from 2 classes or can miss 2 reaction posts (or a combination of those totalling 2) and not have it affect their classroom contribution grade. This serves as an accommodation for late/incomplete reaction posts and for classroom absences and is available to all students.

Assessment Details:
Discussion leader – 15% of course grade

For 6 of the 7 content weeks, 3 to 4 students will serve as discussion leaders and will lead classroom discussion about the readings. Discussion leaders are expected to have read the week's assigned readings, read other students' reaction posts, come up with discussion questions and topics in order to encourage classroom discussion on the readings, and grade other students' reaction posts (after the week's discussion seminar is completed).

Signups for weeks operate on a first-come, first-served basis. Email Dave to reserve your week. It is expected that all students will sign up for a week by January 22, 2023. Any student not signed up for a week by January 22 will have their week assigned to them. In rare circumstances, some discussion leaders may be asked to switch weeks to accommodate student absences. Weeks can have no more than 4 discussion leaders except for in unique circumstances (e.g., one week will have to have 5 leaders if we have an enrollment of 25, or if a student is ill on their Discussion Leader week and needs to fill the role on a later week).

Extra credit opportunity* – *Discussion Leaders for Jan 26 & Feb 2
In recognition that being one of the first Discussion Leaders in the course is more difficult, I am rewarding students who volunteer to be some of the first Discussion Leaders. Discussion Leaders for the Jan 26 seminar class will each receive 2 extra credit percentage points to be added to their course grade (e.g., a 88% becomes a 90%), and Discussion Leaders for the February 2 seminar class will each receive 1 extra credit percentage point to be added to their course grade.

Grading of Discussion Leaders
The instructor will grade each group as a whole on the degree to which they led a thoughtful, engaging, and productive discussion of the assigned readings. In leading classroom discussion, Discussion Leaders may summarize the assigned readings if they wish, but it is not required. More importantly, in leading classroom discussion, Discussion Leaders should read students' reaction posts, consolidate key themes and questions, and present these key themes and questions to the class in a way that encourages active participation. Classroom discussions should have a duration of at least 1.5 hours, and Discussion Leaders should try to engage all students in the class.

Each group will receive a Faculty of Arts and Science Letter grade (A through F, +/-) reflecting the degree to which they accomplish the above objectives.

Discussion Leader absences

The second learning outcome of the course stresses that success in the course is contingent upon *facilitating active and productive classroom discussion of course-related concepts*. Therefore, acting as a Discussion Leader for one of the content weeks is an essential requirement for the course. Failure to act as a Discussion Leader will result in a zero being assigned for the Discussion Leader grade.

There may be a time when you are signed up to be a Discussion Leader for the week but you are unable to be one due to personal reasons. This course has been designed with accommodations and considerations for extenuating circumstances in mind. This means that Short Term Requests for Academic Consideration up to 3 days (submitted through the Faculty of Arts and Science portal without documentation) are not needed.

If it becomes apparent to you that you will be unable to be a Discussion Leader for a date that you had originally signed up for, the first thing to do is to **email the instructor immediately**. If it is early enough in the process, we will try to negotiate you switching weeks with another individual. If we are unable to find a switch, we will add you to a later week.

However, note that this system has one caveat, which is that after the last week, there are no other weeks. Therefore, students who are scheduled to present in the last seminar class of the term (March 15) must be aware that presenting in that last week comes with a risk: **they must present that week due to there being no other seminar weeks available after that week.** If a student is scheduled to present that week and fails to do so for whatever reason, they will be assigned a zero for the Discussion Leader grade.

QSAS accommodations for alternative to delivering public, in class presentations

As mentioned previously, the second learning outcome of the course stresses that success in the course is contingent upon *facilitating active and productive classroom discussion of course-related concepts*. Therefore, acting as a Discussion Leader for one of the content weeks is an essential requirement for the course. It is required, not optional, because it is a valuable skill to be able to promote effective communication amongst team members to address important questions in addition to being a Provincial Degree Level Expectation for building communication skills. As a result, QSAS requests for alternative to delivering public, in class presentations may not be able to be accommodated. Come see me if you have QSAS accommodations for alternatives to delivering public, in class presentations and you feel that the alternatives outlined in this syllabus are not suitable. Additionally, note that SASS (https://sass.queensu.ca/) is always available to support students who struggle with presentations.

Assessment Details:

Proposal Presentation – 20% of course grade

Proposal Overview

The final two 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.

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. However, they can spin that in any direction they wish, such as examining the reasoning styles of

bilingual individuals or examining linguistic abilities of children with Autism Spectrum Disorder (ASD). The directions you can go in are only limited by your imagination.

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 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 to implement. As examples, a project that asks people to read information and make judgments in an online survey would be feasible. A project that recruits depressive patients, records their conversations using an EAR, and looks at depressive symptoms would also be feasible, although special attention would need to be paid to how exactly you would accomplish all of that. A project that records the conversations that take place in homes across Canada and measures whether household members purchase products based on their language use would be infeasible (because, like, how would you even do that unless you have access to everyone's Amazon Echo data? As a general rule of thumb, presume that you have the resources of a Psychology faculty member here at Queens and not the resources of Jeff Bezos).

If you have any questions about your project topic and whether it fits the criteria described above, feel free to email me and ask or see me at office hours. 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**.

1. Proposal Outline (optional)
Students have the option to 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 purpose of the outline is primarily to give students an opportunity to get feedback on their proposal project at an early stage when potential confounds and issues can be spotted and easily fixed in time for the presentation. Given that proposal presentations begin on March 22, students who wish to submit an outline should do **so by the end of the day on March 15, 2023**. This due date is necessary to ensure that I have adequate time to review your proposal and send you my feedback with plenty of time for you to make necessary changes in time for the presentation. Proposals sent to me after that date may not be able to be reviewed.

Note, the proposal outline is optional. It is not graded and does not contribute to your proposal presentation grade or your final project proposal grade at all. But, in my experience, it is a really, really, really good idea for students to write one. Not only does it provide you with an opportunity to get really helpful feedback from the person who will be grading your presentation and final paper, but also the content of the proposal matches up well with the content of the proposal presentation, so completing one will give you a head start on the following assessment.

2. Proposal Presentation
Students will deliver a 10 minute presentation of their project proposal to the class for feedback. Four minutes of Q&A/feedback with the class will follow each presentation. The proposal should cover the same elements of the outline: theoretical rationale, hypotheses, method, and expected results.

Here are a few general tips for creating your presentation:

- Because the presentation is only 10 minutes (max), try not to have any more than 10 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., don't just read the text of 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
- When developing your method's section, viewers 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 creating the presentation will be given in a separate document.
- The grading rubric for presentation videos will be made available in advance of the presentation weeks in onQ and announced in class.

2a. Proposal presentation deadlines (extra credit opportunity)
Proposal presentations will occur in class on March 22 and April 5. Thus, students must have their proposals prepared for presentation by the April 5 class at the latest. In recognition that it is harder to present earlier than later, all students who present in the March 22 class will receive an extra 5 percentage points added to their proposal presentation grades.

2b. Extenuating circumstances and QSAS accommodations for alternative to delivering public, in class presentations and QSAS accommodations for extensions on assignments
Note that the third learning outcome of the course stresses that success in the course is contingent upon *developing and presenting an original research project proposal related to language and reasoning*. Therefore, presenting a proposal to others (to either the class or me) is an essential requirement for the course. Failure to complete it will result in a 0 being assigned for the Proposal Presentation grade.

There may be an instance where you cannot attend class on the day that you intended to deliver your proposal presentation. This course has been designed with accommodations and considerations for extenuating circumstances in mind. This means that Short Term Requests for Academic Consideration up to 3 days (submitted through the Faculty of Arts and Science portal without documentation) are not needed. Additionally, some students may have QSAS accommodations for alternatives to delivering public, in class presentations and/or QSAS accommodations extensions on assignments.

If any of these situations applies to you, **contact me as soon as possible** and we can arrange for you to record a 10 minute narrated video as an alternative to your in class proposal presentation, which may be able to be submitted at a later date which we agree upon. Requests for accommodation that occur after April 5 may not be able to be accommodated due to them occurring after the assignment has been completed by all in the class. Students who request accommodation to record a narrated video may not receive substantive feedback on their presentation due to the assessment being completed in an alternate format.

Additionally, note that SASS (https://sass.queensu.ca/) is always available to support students who struggle with presentations.

Assessment Details:
Final proposal paper – 55% of course grade

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 presentation but should written in APA format (title page, abstract, introduction, method, expected results, discussion, and references). However, because the previous 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 will be due on the latest possible date it can be in the Final Examination Period in order to provide students with as much time as possible to write it (but also allow me enough time to grade them to meet course grade assignment deadlines). It will be worth 55% 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).

Extenuating circumstances and QSAS accommodations for extensions

There may be an instance where you cannot complete the final proposal paper on time. This course has been designed with accommodations and considerations for extenuating circumstances in mind. This means that Short Term Requests for Academic Consideration up to 3 days (submitted through the Faculty of Arts and Science portal without documentation) are not needed. Additionally, some students may have QSAS accommodations for extensions for classroom assignments.

If either of these situations applies to you, **contact me as soon as possible** and we can arrange for a later deadline (within reason). Requests for accommodation that occur after the due date of the final paper may not be able to be accommodated due to them occurring after the assignment has been completed by all in the class. Students who request extended deadlines may be required to receive a course mark of IN on their transcript until the final paper is completed and graded. Students who request accommodation for a later deadline may not receive substantive feedback on their paper due to the assessment being completed outside of the allotted grading window for the course.

QSAS accommodations for grammar/spelling

The final learning outcome of the course states that success in the course is contingent upon *writing an APA-style proposal of the original research project.* As stated in the APA Publication Manual, proper grammar and usage are important to all writing, including papers written in APA Style, in addition to being a Provincial Degree Level Expectation for building communication skills. Incorrect grammar and careless construction of sentences distract readers, introduce ambiguity, and impede clear communication (https://apastyle.apa.org/style-grammar-guidelines/grammar). Therefore, QSAS accommodations for grammar/spelling may not be able to be accommodated without defeating the learning objective. Come see me if you have QSAS accommodations for grammar/spelling and you feel that the alternatives outlined in this syllabus are not suitable. Note that SASS (https://sass.queensu.ca/) is always available to support students who struggle with writing, and the final proposal has enough time built-in prior to its deadline (during the final examination period) for students to connect with SASS for extra support in grammar/spelling.

Regrading policy for assessments

Sometimes, I make mistakes in grading. If I make a clerical error in grading your assessment (e.g., I added up your paper score incorrectly), please reach out to me and I'll be happy to correct it.

Aside from those circumstances, all grades assigned are final. I am happy to discuss graded assignments and provide additional feedback to students in office hours as long as those meetings take the form of discussions about how to improve on future assessments and do not take the form of debates about why more points should have been awarded on a particular assessment.

Location and timing of final examination

Once the exam schedule has been finalized, the final exam date will be posted on your SOLUS account. The exam dates for each Term are listed on the Faculty of Arts and Science webpage under Important Dates. Student exam schedules for the Fall Term are posted via SOLUS immediately prior to the Thanksgiving holiday; they are posted on the Friday before Reading Week for the Winter Term and for the summer term, they are individually noted on the Arts and Science Online syllabi. **Students must delay finalizing any travel plans until after the examination schedule has been posted. Exams will not be moved or deferred to accommodate employment, travel/holiday plans or flight reservations.** For information regarding what is considered extenuating circumstances and qualifications for Academic Consideration, please visit the Faculty of Arts and Science's Academic Consideration webpage**.**

Questions, emails, and onQ

If you have a question about the course, please take the following actions:

1. Check the syllabus (yes, this one). It's most likely answered here.
2. Check the course onQ announcements to see if it's answered there.
3. Check the course onQ Questions Discussion Forum to see if it's already been asked and answered there.
    a. If it has not been, please post your question there and I will respond as soon as I can.
    b. If your question is personal and you'd rather not post it on the discussion board, please see me after class or in office hours and I would be happy to answer it then.

Finally, you can email me your question if the above actions do not work for you. However, note that email is an asynchronous medium. My inbox is often flooded. I will try my best to respond to you as soon as possible, but please do not be offended my response is delayed or your email falls through the cracks.

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 working with students with disabilities to remove barriers to their academic goals. Queen's Student Accessibility Services (QSAS), students with disabilities, instructors, and faculty staff work together to provide and implement academic accommodations designed to allow students with disabilities equitable access to all course material (including in-class as well as exams). If you are a student currently experiencing barriers to your academics due to disability related reasons, and you would like to understand whether academic accommodations could support the removal of those barriers, please visit the QSAS website to learn more about academic accommodations or start the registration process with QSAS by clicking ***Access Ventus*** button at **Ventus | Accessibility Services | Queen's (queensu.ca)**

VENTUS is an online portal that connects students, instructors, Queen's Student Accessibility Services, the Exam's Office and other support services in the process to request, assess, and implement academic accommodations.

To learn more go to: https://www.queensu.ca/ventus-support/students/visual-guide-ventus-students

Academic Consideration for Students in Extenuating Circumstances

Academic consideration is a process for the university community to provide a compassionate response to assist students experiencing unforeseen, short-term extenuating circumstances that may impact or impede a student's ability to complete their academics. This may include but is not limited to:

- Short term Physical or Mental Illness or Injury (stomach flu, anxiety/depression, mononucleosis, concussion, broken bones, surgery, medical treatments, etc.)
- Traumatic Event/Confidential (Bereavement, serious injury, illness or required treatment for a significant other/family member or a traumatic event such as divorce, sexual assault, social injustice, etc.)
- Requirements by Law or Public Health Authorities (court dates, jury duty, requirements to isolate, etc.)
- Significant Event (varsity athletic event, distinguished event, serving in the Reserve Forces, etc.)

Queen's University is committed to providing academic consideration to students experiencing extenuating circumstances. For more information, please see the Senate Policy on Academic Consideration for Students in Extenuating Circumstances.

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. For more information, undergraduate students in the Faculty of Arts and Sciences should consult the Faculty's webpage on Academic Consideration in Extenuating Circumstances and submit a request via the Academic Consideration Request Portal. Students in other Faculties and Schools who are enrolled in this course should refer to the protocol for their home Faculty.

Students are encouraged to submit requests as soon as the need becomes apparent and to contact their instructor and/or course coordinator as soon as possible once academic consideration has been granted. Any delay in contact may limit the options available for academic consideration.

For more information on the Academic Consideration process, what is and is not an extenuating circumstance, and to submit an Academic Consideration request, please see the Faculty of Arts and Science's Academic Consideration website. ASO courses include links to information on **Academic Consideration** on your **Course Homepage** in onQ.

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

Psychology Accommodations Coordinator Name: Tara Karasewich
Coordinator email address: psyc.accom@queensu.ca

Students are encouraged to submit requests as soon as the need becomes apparent and to contact psyc.accom@queensu.ca as soon as possible once a consideration request has been made. Any delay in contact may limit the Consideration options available.

Please follow up with psyc.accom@queensu.ca via email within 1 day of making your Consideration request.

For more information on the Academic Consideration process, what is and is not an extenuating circumstance, and to submit an Academic Consideration request, please see our website.

Queen's Policy Statement on Academic Integrity

Queen's University is dedicated to creating a scholarly community free to explore a range of ideas, to build and advance knowledge, and to share the ideas and knowledge that emerge from a range of intellectual pursuits. Queen's students, faculty, administrators and staff therefore all have responsibilities for supporting and upholding the fundamental values of academic integrity. Academic integrity is constituted by the five core fundamental values of honesty, trust, fairness, respect and responsibility and by the quality of courage. These values and qualities 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.

The following statements from "The Fundamental Values of Academic Integrity" (2nd edition), developed by the International Center for Academic Integrity (ICAI), contextualize these values and qualities:

1. **Honesty** Academic communities of integrity advance the quest for truth and knowledge through intellectual and personal honesty in learning, teaching, research, and service.
2. **Trust** Academic communities of integrity both foster and rely upon climates of mutual trust. Climates of trust encourage and support the free exchange of ideas which in turn allows scholarly inquiry to reach its fullest potential.
3. **Fairness** Academic communities of integrity establish clear and transparent expectations, standards, and practices to support fairness in the interactions of students, faculty, and administrators.
4. **Respect** Academic communities of integrity value the interactive, cooperative, participatory nature of learning. They honor, value, and consider diverse opinions and ideas.
5. **Responsibility** Academic communities of integrity rest upon foundations of personal accountability coupled with the willingness of individuals and groups to lead by example, uphold mutually agreed-upon standards, and take action when they encounter wrongdoing.
6. **Courage** To develop and sustain communities of integrity, it takes more than simply believing in the fundamental values. Translating the values from talking points into action -- standing up for them in the face of pressure and adversity — requires determination, commitment, and courage.

Students are responsible for familiarizing themselves with and adhering to the Senate regulations concerning academic integrity, along with Faculty or School specific information. Departures from academic integrity include, but are not limited to, plagiarism, use of unauthorized materials, facilitation, forgery and falsification. Actions which contravene the regulation on academic integrity carry sanctions that can range from a warning, to loss of grades on an assignment, to failure of a course, to requirement to withdraw from the university.

Generative Artificial Intelligence Tools (e.g., ChatGPT)

Students must submit their own work and cite the work that is not theirs. Students are permitted to utilize generative AI writing tools such as ChatGPT as long as students cite the material that they generate. Note that students are also responsible for the accuracy (or inaccuracy) of the material that ChatGPT generates. Any other use constitutes a Departure from Academic Integrity.

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 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 plagiarized text in this course. Data from submissions is also collected and analyzed by Turnitin for detecting Artificial Intelligence (AI)-generated text. These results are not reported to your instructor at this time but could be in the future.

Turnitin is a suite of tools that provide instructors with information about the authenticity of submitted work and facilitates the process of grading. The similarity report generated after an assignment file is submitted produces a similarity score for each assignment. A similarity score is the percentage of writing that is similar to content found on the internet or the Turnitin extensive database of content.

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 Policy, Acceptable Use Policy and End-User License Agreement, which govern 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

Course materials created by the course instructor, including all slides, presentations, handouts, tests, exams, and other similar course materials, are the intellectual property of the instructor. It is a departure from academic integrity to distribute, publicly post, sell or otherwise disseminate an instructor's course materials or to provide an instructor's course materials to anyone else for distribution, posting, sale or other means of dissemination, without the instructor's express consent. A student who engages in such conduct may be subject to penalty for a departure from academic integrity and may also face adverse legal consequences for infringement of intellectual property rights.

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.

Class Schedule

Week	Topic	Readings	Assessments due
Jan 12	Welcome- icebreakers, class overview	Syllabus	
SEMINAR WEEKS			
Jan 19	Intro to the Sapir-Whorf hypothesis	Boroditsky (2011) Whorf (1939) Levinson (1997)	Reaction post (Jan 17)
Jan 26	Sapir-Whorf and colors	Gilbert et al (2008) Regier & Kay (2009) Winawer et al (2007) Lupyan et al (2020)	Reaction post (Jan 24)
Feb 2	Sapir-Whorf and time	Boroditsky (2001) Casasanto (2008) Boroditsky et al (2011) Fuhrman & Boroditsky (2010)	Reaction post (Jan 31)
Feb 9	SPSP (no class)		
Feb 16	Introduction to conceptual metaphors	Landau et al (2010) Thibodeau & Boroditsky (2011) Meier et al (2007) Ackerman et al (2010) Williams & Bargh (2008)	Reaction post (Feb 14)
Feb 23	WINTER BREAK (no class)		
March 1	Metaphoric frames and health	Hauser & Schwarz (2015) Hauser & Schwarz (2020) Hauser et al (2017) Hendricks et al (2018)	Reaction post (Feb 28)
March 8	Introduction to Distributional Semantics	Hauser & Schwarz (2016) Hauser & Schwarz (2018) Alammar (2018) Lupyan & Lewis (2017) Thompson et al (2020)	Reaction post (March 6)
March 15	Distributional semantics and bias	Lupyan & Lewis (2020) Caliskan et al (2017) Caliskan & Lewis (2020) Garg et al (2018)	Reaction post (March 13) Proposal outline (March 15, optional)
PRESENTATION WEEKS			
March 22	Presentation week 1		Presentation
March 29	GOOD FRIDAY (no class)		
April 5	Presentation week 2		Presentation
			Final proposal paper (date TBA)

Reading list

Welcome, week 1

- This syllabus lol

Introduction to the Sapir-Whorf Hypothesis

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

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/pztmc

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.

Introduction to conceptual metaphors

- Landau, M. J., Meier, B. P., & Keefer, L. A. (2010). A metaphor-enriched social cognition. *Psychological bulletin*, *136*(6), 1045.
- Thibodeau, P. H., & Boroditsky, L. (2011). Metaphors we think with: The role of metaphor in reasoning. *PloS one*, *6*(2), e16782.
- 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.

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.

Introduction to Distributional Semantics

- 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.
- http://jalammar.github.io/illustrated-word2vec/
- Lupyan, 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., & Lupyan, G. (2020). Cultural influences on word meanings revealed through large-scale semantic alignment. *Nature Human Behaviour*, *4*(10), 1029-1038.

Distributional semantics and bias

- Lewis, M., & Lupyan, 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.