PSYC423:
Selected Topics in Real-World Scene Perception
Fall Session, 2018
Syllabus

Monday, 1:00pm-2:30pm; Wednesday, 11:30am-1:00pm
MACINTOSH-CORRY RM C508

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Office Hours: Tuesdays 11:00am-12:00pm (or by appointment)

Learning Objectives

To complete this course students will demonstrate their ability to:

- Summarize current theories visual cognition with a special emphasis on scene processing, object recognition, visual attention, eye movements, visual memory and related applied fields
- Critically evaluate current, experimental literature in the field of visual cognition
- Develop writings skills
- Summarize and communicate research findings in one area of visual cognition
- Generate new research question in the field of visual cognition

Course Format

Each week will focus on a particular topic. Generally, Monday class will introduce you to a new topic with two-three readings per week and a Reaction paper. You will have the opportunity to share your thoughts written in reaction papers during the Monday class. Readings and reaction papers must be completed prior to the Monday class.
During the Wednesday class, students will lead discussion on an article of their choosing related to that week's topic.

Readings

There is no textbook. Articles will be assigned to be read for each class. You will be able to download the articles from the web/library – use your research skills! Any articles not available through the school library system or available on line (through Google Scholar, the author's own website or other repositories such as Research Gate, bioRxiv or PsyArXiv) will be provided via onQ one week in advance.

Workload

Participation

Participation is always good in a seminar class! Participating and presenting go hand in hand, and speaking up in class will help you as well as your classmates (when they're presenting or you are). All criticisms/comments/questions are encouraged.

Reaction Paper

Each week you will be required to submit (via *onQ*) a Reaction Paper. It is not to be **no more than 1 page long** (more than that and you are doing too much). The reaction paper is meant to show me that you have done the readings and that you have **thought about them**. I am interested in *your* ideas – not the authors'. **A summary of the experiment is not enough and not required. Demonstrate your ability to synthesize information, critically examine or come up with your own ideas for experiments (creativity).** I suggest that you begin by coming up with something you thought of while reading, a critique of the experiment, theoretical question about the experiment, or a possible next step for future studies. Basically, by the end of the semester you will be able to demonstrate that you can go beyond the material as it is presented!

Reaction papers are submitted via onQ Dropbox – under each week's banner. Reaction papers are **due by 7pm each Sunday** prior to Monday class; however, the first reaction paper is due Tuesday, September 11, 2018 at 7pm.

NB: **No Exceptions** will be made for late reaction papers. The best 10 grades are kept from a possible 12, so the bottom 2 grades are dropped.

Grading of Participation and Reaction Papers is based on Young's I-C-E (Ideas, Concepts, and Extensions):

- **3/3** Comments and responses reveal a capacity to analyze, synthesize, and evaluate material and give evidence of original thinking and an extensive knowledge base. They demonstrate a careful, concise, critical analysis with a clear and well-argued hypothesis based on the material. They exhibit evidence of learning that is willing to explore beyond the initial learning situation.
- **2/3** Comments and responses reveal a good analysis and some critical reasoning. They demonstrate a reasonable understanding of relevant issues and familiarity with the material. They demonstrate a solid understanding of the relationship or connections among the basic concepts. They show a need to be more concise or precise in details and more careful in articulating arguments.
- **1/3** Comments and responses show an acceptable treatment of the subject matter. They demonstrate an understanding of the basic facts, vocabulary, details, and elemental concepts and show an ability to deal with simple issues arising out of the material. The student needs to engage the subject matter more fully and formulate ideas more clearly.

Presentations

You will lead two discussions in the class in which you will present a new article related to that week's topic and provide a 15 minute presentation/discussion of that article during

Wednesday's class. **This will not be a PowerPoint presentation**. Instead, provide a **one page handout** with the key figures and at least 5 questions that can be presented to the class to stimulate discussion (submit your handout under Assignments on onQ).

Research Proposal

On **Monday December 3rd at 5pm,** you will be required to submit a research paper (15 pages max) on a topic of current interest within the field of scene perception/scene processing. The final paper will include a review of past research relevant to your topic, and a proposal for future research (i.e., a new experiment). Late papers will be penalized 10% per day. More information will follow (submit under Assignments on onQ).

You need to choose your topic and hand-in a **one paragraph summary** (1/2 page long max) describing your idea for the final paper on **Friday November 9th at 5pm.** This half-page summary will be included in your research proposal grade (submit under Assignments on onQ).

Evaluation

Class Participation	20%
Reaction Papers	20%
Presentation/Discussion	20%
Research Proposal	40%

Grading Method

All components of this course will receive numerical percentage marks. The final grade you receive for the course will be derived by converting your numerical course average to a letter grade according to Queen's Official Grade Conversion Scale:

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

Academic Integrity

Don't cheat – it's really not worth it. The penalty for getting caught is getting kicked out of university. It's not worth it.

Here is the official version:
Academic Integrity is constituted by the six core fundamental values of 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 conform to the principles of academic integrity. Information on academic integrity is available in the Arts and Science Calendar, and on the Arts and Science website. You can also ask me questions regarding academic integrity. 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 regulations 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.
http://www.queensu.ca/academicintegrity/students.html

Accommodation Statement

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/

Copyright Statement

Course Schedule

Day	Date	Topics	Readings & Assignments
Monday	10-Sep	**Organizational meeting; Intro to Scenes Processing**	
Wednesday	12-Sep	**Initial Perception of Scenes**	Intraub, H. & Richardson, M. (1989). Wide-angle memories of close-up scenes. Journal of Experimental Psychology: Learning, Memory, and Cognition, 15, 179-187. Evans, Karla K., Todd S. Horowitz, and Jeremy M. Wolfe. "When categories collide: Accumulation of information about multiple categories in rapid scene perception." Psychological science 22, no. 6 (2011): 739-746. **Reaction Paper #1 Due**
Monday	17-Sep	**Memory for Scenes**	Konkle, T., Brady, T. F., Alvarez, G. A., & Oliva, A. (2010). Scene memory is more detailed than you think the role of categories in visual long-term memory. Psychological Science, 21(11), 1551-1556. Kaunitz, L. N., Rowe, E. G., & Tsuchiya, N. (2016). Large capacity of conscious access for incidental memories in natural scenes. Psychological science, 27(9), 1266-1277. **Reaction Paper#2 Due**
Wednesday	19-Sep		**Presentations (Group 1)**

Monday	24-Sep	**Photos and False Memories**	Wade, K. A., Garry, M., Read, J. D., & Lindsay, D. S. (2002). A picture is worth a thousand lies: Using false photographs to create false childhood memories. Psychonomic Bulletin & Review, 9(3), 597-603. Nash, R. A. (2018). Changing beliefs about past public events with believable and unbelievable doctored photographs. Memory, 26(4), 439-450. **Reaction Paper#3 Due**
Wednesday	26-Sep		**Presentations (Group 2)**
Monday	1-Oct	**On-line Scene representations** How much do you really see as you look around?	Rensink, R. A., O'Regan, J. K., & Clark, J. J. (1997). To see or not to see: The need for attention to perceive changes in scenes. Psychological science, 8(5), 368-373. Jones, B. T., Jones, B. C., Smith, H., & Copley, N. (2003). A flicker paradigm for inducing change blindness reveals alcohol and cannabis information processing biases in social users. Addiction, 98(2), 235-244. **Reaction Paper #4 Due**
Wednesday	3-Oct		**Presentations (Group 3)**
Monday	8-Oct	**At the Movies** How well do people remember details at the scene of a movie? Does it impact how the story is interpreted?	Smith T J, Lamont P, Henderson J M. (2013). Change blindness in a dynamic scene due to endogenous override of exogenous attentional cues. Perception 42(8) 884 – 886. Smith, T. J., & Martin-Portugues Santacreu, J. Y. (2017). Match-action: The role of motion and audio in creating global change blindness in film. Media Psychology, 20(2), 317-348. **Reaction Paper #5 Due**

Wednesday	10-Oct		**Presentations (Group 4)**
Monday	15-Oct	**Eye Movements in Real-world Scenes** How do we know where to look first?	Henderson, J. M. (2017). Gaze control as prediction. Trends in Cognitive Sciences, 21(1), 15-23. Tatler, B. W., Hayhoe, M. M., Land, M. F., & Ballard, D. H. (2011). Eye guidance in natural vision: Reinterpreting salience. Journal of vision, 11(5), 5. **Reaction Paper #6 Due**
Wednesday	17-Oct		**Presentations (Group 5)**
Monday	22-Oct	**Marketing and Ads** Ads often involve a combination of paying attention to words and to scenes – how do you keep it all straight? -how saliency and motion may work against you, or does it?	Higgins, E., Leinenger, M., & Rayner, K. (2014). Eye movements when viewing advertisements. Frontiers in psychology, 5, 210. Pieters R. & Wedel, M. (2007). Goal Control of Attention to Advertising: The Yarbus Implication. Journal of Consumer Research, 34, 224-233. **Reaction Paper #7 Due**
Wednesday	24-Oct		**Presentations (Group 1)**
Monday	29-Oct	**Searching Through Scenes** How do you quickly and accurately find what you're searching for?	Malcolm, G. L., & Henderson, J. M. (2010). Combining top-down processes to guide eye movements during real-world scene search. Journal of Vision, 10(2), 4. Le-Hoa Võ, M., & Wolfe, J. M. (2015). The role of memory for visual search in scenes. Annals of the New York Academy of Sciences, 1339(1), 72-81. **Reaction Paper #8 Due**
Wednesday	31-Oct		**Presentations (Group 2)**

Monday	5-Nov	**Radiology and Search**	Drew, T., Cunningham, C., & Wolfe, J. M. (2012). When and why might a computer-aided detection (CAD) system interfere with visual search? An eye-tracking study. Academic radiology, 19(10), 1260-1267. Evans, K. K., Haygood, T. M., Cooper, J., Culpan, A. M., & Wolfe, J. M. (2016). A half-second glimpse often lets radiologists identify breast cancer cases even when viewing the mammogram of the opposite breast. Proceedings of the National Academy of Sciences, 113(37), 10292-10297. **Reaction Paper #9 Due**
Wednesday	7-Nov		**Presentations (Group 3)**
Monday	12-Nov	**Navigation and Spatial Perception in Scenes** How does movement around a scene affect how you represent the scene?	Epstein, R. A. (2008). Parahippocampal and retrosplenial contributions to human spatial navigation. Trends in cognitive sciences, 12(10), 388-396. Shikauchi, Y., & Ishii, S. (2016). Robust encoding of scene anticipation during human spatial navigation. Scientific reports, 6. **Reaction Paper #10 Due**
Wednesday	14-Nov	*****No Class*****	**Research Proposal Description Due (Friday November 16)**
Monday	19-Nov	**Navigation in Real and Virtual Environments** How does the type of environment affect how we represent the world?	Schöne, B., Wessels, M., & Gruber, T. (2017). Experiences in Virtual Reality: a Window to Autobiographical Memory. Current Psychology, 1-5. Chebat, D. R., Maidenbaum, S., & Amedi, A. (2015). Navigation using sensory substitution in real and virtual mazes. PloS one, 10(6), e0126307. **Reaction Paper #11 Due**

Wednesday	21-Nov		**Presentations (Group 4)**
Monday	26-Nov	**Driving** What do you pay attention to when you drive? What happens in more complex environments? What about distractions?	He, J., Chaparro, A., Nguyen, B., Burge, R. J., Crandall, J., Chaparro, B., ... & Cao, S. (2014). Texting while driving: Is speech-based text entry less risky than handheld text entry?. Accident Analysis & Prevention, 72, 287-295. Wood, G and Hartley, G and Furley, P and Wilson, MR (2016) Working Memory Capacity, Visual Attention and Hazard Perception in Driving. Journal of Applied Research in Memory and Cognition, 5(4), 454-462. **Reaction Paper #12 Due**
Wednesday	28-Nov		**Presentations (Group 5)**