

PSYC423 / PSYC833
Selected Topics in Real-World Scene Perception
Fall Session, 2014
Syllabus

Instructor: Dr. Monica Castelhana
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Office Hours: Tuesday 1:00pm to 2:00pm (or email for appointment)

Class Time: Tuesday, 10:00-11:30am; Thursday, 8:30-10:00am
Class Location: Jeffery Hall, room 116

Course Objectives

- To develop an understanding of the classic and current issues within the field of scene perception.
- A research paper is assigned to give you an opportunity to research in more depth a question you have regarding one of the issues regarding scene perception and related fields.

Course Format

Each week will focus on a particular topic. Generally, Tuesday 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 Tuesday class. Readings and reaction papers must be done prior to the Tuesday class.

During the Thursday class, students will present presentations of articles will be done by student

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. Don't do it.

Here is the official version: 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>

Workload

Participation/Group Activities

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.

In addition, there will be some days in which you will be expected to participate in group activities (towards the end of the semester). For these activities, you will join 3-4 of your classmates to discuss the research topic and solve an application or theoretical problem related to that topic. More information about these group activities will be given in class.

Reaction Paper

Each week you will be required to submit (via Moodle) a *reaction paper*. Typically, the reaction paper will be **less 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**. You are encouraged to come up with something you thought of while reading, a critique of the experiment, theoretical question about the experiment, or a possible next step for the experiments.

Reaction papers are **due by 9pm each Monday** prior to Tuesday class. **No Exceptions** will be made for late reaction papers. You are **required** to submit **10** (so you can skip one if you're too busy that week or hand in an extra one and have your lowest mark dropped).

Grading of Participation and Assignments 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 do two presentations in which you will present a new article related to that week's topic and provide a 5-10 minute presentation of that article during Thursday's class. This will **not** be a powerpoint presentation. Instead, provide a one page handout with the key figures and verbally summarize the rationale for the study, the method, and the key findings.

Research Proposal

On **Friday November 21st**, 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. You need to choose your topic by **October 28th** and hand-in a **one paragraph summary** (1/2 page long max) describing your idea for the final paper. 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.

You will also be required to briefly present (2-5min) your proposal to the class on **November 25th/November 26th**. This proposal presentation as well as the half-page summary will be included in your research proposal grade.

Evaluation

Class Participation	25%
Reaction Papers	15%
Presentations	30%
Research Proposal	30%

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 will be provided on Moodle.

Copyright Statement

This material is copyrighted and is for the sole use of students registered in PSYC 423. This material shall not be distributed or disseminated to anyone other than students registered in PSYC 423. Failure to abide by these conditions is a breach of copyright, and may also constitute a breach of academic integrity under the University Senate's Academic Integrity Policy Statement.

Course Schedule

Tuesday	9-Sep	Organizational meeting; Introduction to Scene Processing	
Thursday	11-Sep	Introduction to Scene Processing	<p>*Standing, L. et al (1970). Perception and memory for pictures: single-trial learning of 2500 visual stimuli. <i>Psychological Science</i>, 19, 73-74.</p> <p>*Standing, L. (1973). Learning 10,000 pictures. <i>Quarterly Journal of Experimental Psychology</i>, 25, 207-222.</p> <p>(Optional) Henderson, J. M., & Hollingworth, A. (1999). High-level scene perception. <i>Annual review of psychology</i>, 50(1), 243-271.</p> <p><i>*These readings are available on Moodle</i></p> <p>Reaction Paper#1 Due</p>
Tuesday	16-Sep	Scene Gist How fast do you know what it is that you're looking at?	<p>Oliva, A. (2005). Gist of the scene. <i>Neurobiology of Attention</i>, 696(64), 251-258.</p> <p>Intraub, H. & Richardson, M. (1989). Wide-angle memories of close-up scenes. <i>Journal of Experimental Psychology: Learning, Memory, and Cognition</i>, 15, 179-187.</p> <p>Reaction Paper #2 Due</p>
Thursday	18-Sep	Presentations (Group 1)	

Tuesday	23-Sep	<p>Objects and Scenes: Does knowing what scene you're looking at make you faster at understanding an object?</p>	<p>Davenport, J. L., & Potter, M. C. (2004). Scene consistency in object and background perception. <i>Psychological Science</i>, 15(8), 559-564.</p> <p>Mullin, C.R. & Steeves, J.K.E. (2011). TMS to the lateral occipital cortex disrupts object processing but facilitates scene processing. <i>Journal of Cognitive Neuroscience</i> 23:12, 4174–4184.</p> <p>Reaction Paper #3 Due</p>
Thursday	25-Sep		<p>Presentations (Group 2)</p>
Tuesday	30-Sep	<p>Scene representations in Memory and updating those representations How much do you really see as you look around?</p>	<p>Simons, D. J., & Levin, D. T. (1997). Change blindness. <i>Trends in cognitive sciences</i>, 1(7), 261-267.</p> <p>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. <i>Psychological science</i>, 8(5), 368-373.</p> <p>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. <i>Psychological Science</i>, 21(11), 1551-1556.</p> <p>Reaction Paper #4 Due</p>
Thursday	2-Oct		<p>Presentations (Group 3)</p>

Tuesday	7-Oct	<p>Expertise and Scene perception Repeatedly seeing a place, you get to know it very well. However, you also encounter things changing. How does your visual system deal with this?</p>	<p>Chun, M. M. (2000). Contextual cueing of visual attention. <i>Trends in cognitive sciences</i>, 4(5), 170-178.</p> <p>Brockmole, J. R., & Henderson, J. M. (2006). Recognition and attention guidance during contextual cueing in real-world scenes: Evidence from eye movements. <i>The Quarterly journal of experimental psychology</i>, 59(7), 1177-1187.</p> <p>Reaction Paper #5 Due</p>
Thursday	9-Oct		<p>Presentations (Group 4)</p>
Tuesday	14-Oct	<p>Eye Movements, Attention and Scenes How do we know where to look first?</p>	<p>Henderson, J. M. (2003). Human gaze control during real-world scene perception. <i>Trends in cognitive sciences</i>, 7(11), 498-504.</p> <p>Tatler, B. W., Hayhoe, M. M., Land, M. F., & Ballard, D. H. (2011). Eye guidance in natural vision: Reinterpreting salience. <i>Journal of vision</i>, 11(5), 5.</p> <p>Reaction Paper #6 Due</p>
Thursday	16-Oct		<p>Presentations (Group 5)</p>
Tuesday	21-Oct	<p>Searching Through Scenes How do you quickly and accurately find what you're searching for?</p>	<p>Malcolm, G. L., & Henderson, J. M. (2010). Combining top-down processes to guide eye movements during real-world scene search. <i>Journal of Vision</i>, 10(2), 4.</p> <p>Wolfe, J. M., Võ, M. L. H., Evans, K. K., & Greene, M. R. (2011). Visual search in scenes involves selective and nonselective pathways. <i>Trends in cognitive sciences</i>, 15(2), 77-84.</p> <p>Reaction Paper #7 Due</p>
Thursday	23-Oct		<p>Presentations (Group 1)</p>

Tuesday	28-Oct	<p>Navigation and Spatial Perception in Scenes How does movement around a scene affect how you represent the scene?</p>	<p>Epstein, R. A. (2008). Parahippocampal and retrosplenial contributions to human spatial navigation. <i>Trends in cognitive sciences</i>, 12(10), 388-396.</p> <p>Waller, D., Friedman, A., Hodgson, E., & Greenauer, N. (2009). Learning scenes from multiple views: Novel views can be recognized more efficiently than learned views. <i>Memory & Cognition</i>, 37, 90-99.</p> <p>Reaction Paper #8 Due</p> <p>Research Proposal Description Due</p>
Thursday	30-Oct		<p>Presentations (Group 2)</p>
Tuesday	4-Nov	<p>Driving What do you pay attention to when you drive? What happens in more complex environments? What about distractions?</p>	<p>McCarley, J.S., Vais, M.J., Pringle, H., Kramer, A.F., Irwin, D.E., & Strayer, D.L. (2004) Conversation disrupts change detection in complex traffic scenes. <i>Human Factors</i>, 46, 424-436.</p> <p>Drews, F. A., Pasupathi, M., & Strayer, D. L. (2008). Passenger and cell-phone conversations in simulated driving. <i>Journal of Experimental Psychology: Applied</i>, 14, 392-400.</p> <p>Reaction Paper #9 Due</p>
Thursday	6-Nov		<p>Presentations (Group 3)</p>

Tuesday	11-Nov	<p>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?</p>	<p>Higgins E, Leinenger M and Rayner K (in press, 2014) Eye movements when viewing advertisements. <i>Front. Psychol.</i> 5:210. doi: 10.3389/fpsyg.2014.00210</p> <p>Pieters R. & Wedel, M. (2007). Goal Control of Attention to Advertising: The Yarbus Implication. <i>Journal of Consumer Research</i>, 34, 224-233.</p> <p>Reaction Paper #10 Due</p>
Thursday	13-Nov		<p>Presentations (Group 4)</p>
Tuesday	18-Nov	<p>At the Movies How well do people remember details at the scene of a movie? Does it impact how the story is interpreted?</p>	<p>Smith, T. J., Levin, D., & Cutting, J. E. (2012). A Window on Reality Perceiving Edited Moving Images. <i>Current Directions in Psychological Science</i>, 21(2), 107-113.</p> <p>Smith T J, Lamont P, Henderson J M. (2013). Change blindness in a dynamic scene due to endogenous override of exogenous attentional cues. <i>Perception</i> 42(8) 884 – 886.</p> <p><i>Extra:</i> for some fun reading on scene perception, eye movements and the Breaking Bad finale, go here: http://continuityboy.blogspot.ca/2013/10/wheres-walter-how-finale-of-breaking.html</p> <p>Reaction Paper #11 Due</p>
Thursday	20-Nov		<p>Presentations (Group 5)</p> <p>Research Proposal (Due Friday November 21)</p>
Tuesday	25-Nov	<p>Proposal Presentations</p>	
Thursday	27-Nov	<p>Proposal Presentations & Wrap-up</p>	