PSY 323: Human Visual Perception, Spring 2023
Fridays 9:30 a.m. – 11:50 a.m.
Reem Kayden Center (RKC) 101

Instructor
Tom Hutcheon, Ph.D.
thutcheo@bard.edu
Office: RKC 130
Office hours: Mondays 9:00 a.m. – 10:00 a.m. and Wednesdays 11:30 a.m. – 12:30 p.m.

COURSE DESCRIPTION

In 2015, the world was divided into two groups: those who saw The Dress as black and blue, and those who saw it as white and gold. This division highlights a fundamental question in the study of visual perception, how can the same visual stimulus lead to such different perceptual experiences? This seminar will begin to address this and related questions by studying the anatomy and physiology of the visual system along with the cognitive processes that turn raw sensory information into our perception of the world. We will explore what happens when things go right, what happens when things go wrong, and the factors that influence what different people actually "see".

REQUIRED READING MATERIALS

All assigned readings are available through the course Google Drive.

COMPONENTS OF THE COURSE GRADE

Weekly Responses (25% of final course grade)

Each week you will submit one response for **each** of the assigned readings. Responses can take the form of questions or comments and are intended to help you think deeply about the articles and to help me organize our class discussion. Responses should be posted to the relevant shared google doc by Fridays at 8:00 a.m. Responses submitted after 8:00 am will be considered late and will be subject to a 50% penalty. Note: make sure you indicate your name so that you receive credit for your work.

Figure/Table Presentations (10% of final course grade)

On the second week of class, you will be assigned approximately 3-5 figures and/or tables from our readings. For those figures/tables, you will be the class expert and will be expected to explain all aspects of the figure/table as well as the importance of that figure/table to the paper.

Article Presentation (15% of final course grades)
Along with a partner you will select an empirical paper that either cites or is cited by the Kawakami et al (2018) article that we will read for class on March 17th. Along with your partner you will give a 10 to 15-minute PowerPoint presentation of the article followed by questions from the class. Presentations will take place during class on **March 31st**.

Class Participation and Attendance (15% of final course grade)
As a seminar, this class is founded on discussion among students and you will be graded on your class participation. Earning a high grade on class participation does not require you to answer every question in class. My hope is that you will come to class prepared to engage with the material and the other students in this class. Missing more than 3 classes will result in a loss of 50% of Class Participation and Attendance points.

Research Report (35% of final course grade)
In this assignment, you will propose and implement a novel experiment that is relevant to the topics covered in this course. This project will be broken down into the following five parts:

1) An initial 1-paragraph proposal in which you describe your general research idea. This proposal should include a summary of at least one relevant article that has not been read as part of class. Proposals must be emailed to Tom (thutcheo@bard.edu) prior to the start of class on **April 14th**.

2) You will build your experiment and collect data to answer your research question. Proposals must be emailed to Tom prior to the start of class on **May 5th**.

3) A draft of your final paper for which you will receive feedback. This is an ungraded assignment. The length is up to you. You will receive feedback on your draft by the next class period. Final Paper drafts should be emailed to Tom by the start of class on **May 12th**. Drafts submitted after this time will not be read.

4) Final paper written in APA style (8 to 12 pages). This should be written as if you had collected the data and include your data analysis. Final Papers should be emailed to Tom by the start of class on **May 19th**.

5) During class on May 19th, we will informally discuss the results of your experiment.

SUMMARY OF DUE DATES
Weekly Responses: Prior to the start of each class
Figure/Table Presentations: Will be assigned during first class meeting
Article Presentation: March 31st
Research Proposal: April 14th
Dataset Submission: May 5th
Paper Draft: May 12th
Final Research Report: May 19th

ADDITIONAL INFORMATION

Academic Accommodations
Your experience in this class is important to me. I am committed to meeting the needs of all students in this course and will work with you to ensure your accommodations are adequately met. If you have already established accommodations, I will receive a letter from the Learning Commons Disability Support Services with additional information. If you have not yet established services through the Learning Commons, but have a temporary health condition or permanent disability that requires accommodations (conditions include but are not limited to: mental health, attention-related, learning, vision, hearing, physical or health impacts), please review the Student Accessibility Resources website:
https://www.bard.edu/accessibility/students/

Academic Integrity
All students are assumed to have read the Bard College Handbook and are familiar with the school's policies regarding Plagiarism and Academic Dishonesty. Violations of these policies are taken extremely seriously and one violation will result in a failing grade for the course and a referral to the Dean of Students for further action.

Respect for Diversity
It is my intent that students from diverse backgrounds and perspectives be well-served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. It is my intent to present materials and activities that are respectful of diversity: gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture. Your suggestions on ways that I can improve the course and incorporate more diversity are encouraged and appreciated.

BARD LAND ACKNOWLEDGMENT

In the spirit of truth and equity, it is with gratitude and humility that we acknowledge that we are gathered on the sacred homelands of the Munsee and Muhheaconneok people, who are the original stewards of this land. Today, due to forced removal, the community resides in Northeast Wisconsin and is known as the Stockbridge-Munsee Community. We honor and pay respect to their ancestors past and present, as well as to Future generations and we recognize their continuing presence in their homelands. We understand that our acknowledgment requires those of us who are settlers to recognize our own place in and responsibilities toward addressing inequity, and that this ongoing and challenging work requires that we commit to real engagement with the Munsee and Mohican communities to build an inclusive and equitable space for all.

Human Visual Perception Schedule – Spring 2023

Friday, February 3rd – Welcome to human visual perception

Friday, February 10th – How experience and expectations shape what we see

Readings:

1. Hastorf, A. H., & Cantril, H. (1954). They saw a game: A case study. *Journal of Abnormal and Social Psychology, 49*, 129 – 134.
2. Chase, W. G., & Simon, H. A. (1973). Perception in chess. *Cognitive Psychology, 4*, 55 – 81.
3. Eberhardt, J. L., Goff, P. A., Purdie, V. J., Davies, P. G. (2004). Seeing black: Race, crime, and visual processing. *Journal of Personality and Social Psychology, 87*, 876 – 893.

Due: Weekly Response #1

Friday, February 17th – From action potentials to perception

Readings:

1. Hubel, D. H., & Wiesel, T. N. (1959). Receptive fields of single neurones in the cat's striate cortex. *Journal of Physiology, 148*, 574-591.
2. Kanwisher, N., McDermott, J., & Chun, M. M. (1997). The fusiform face area: A module in human extrastraiate cortex specialized for face perception. *The Journal of Neuroscience, 17*, 4302-4311.
3. Quiroga, R., Reddy, L., Kreiman, G., Koch, C., & Fried, I. (2005). Invariant visual representation by single neurons in the human brain. *Nature*, 435, 1102–1107.

Due: Weekly Response #2

Friday, February 24th – How attention gates what we see

Readings:

1. Treisman, A., & Gelade, G. (1980). A feature-integration theory of attention. *Cognitive Psychology, 12*, 97 – 136.
2. Memmert, D. (2006). The effects of eye movements, age, and expertise on inattentional blindness. *Consciousness & Cognition, 15*, 620 – 627.
3. Lavie, N., Ro., & Russell, C. (2003). The role of perceptual load in processing distractor faces. *Psychological Science, 14*, 510 – 515.

Due: Weekly Response #3

Friday, March 3rd – No Class, Tom at Eastern Psychological Association Meeting

Friday, March 10th – The special case of face perception

Readings:

1. Tanaka, J. W., & Farah, M. J. (1993). Parts and wholes in face recognition. *The Quarterly Journal of Experimental Psychology, 46*, 225-245.
2. Pitcher, D., Walsh, V., Yovel, G., Duchaine, B. (2007). TMS evidence for the involvement of the right occipital face area in early face processing. *Current Biology, 17*, 1568 – 1573.
3. Jenkins, R., White, D., Van Montfort, D., Burton, A. M. (2011). Variability in photos of the same face. *Cognition, 121*, 313-323.

Due: Weekly Response #4

Friday, March 17th – The impact of social categories on the perception of faces

Readings:

1. Bar-Haim, Y., Ziv, T., Lamy, D., & Hodes, R. M. (2006). Nature and nurture in own-race face processing. *Psychological Science, 17*, 159 – 163.
2. Kawakami, K., Friesen, J., & Vingilis-Jaremko, L. (2018). Visual attention to members of own and other groups: Preferences, determinants, and consequences. *Social and Personality Psychology Compass*, *12*(4), e12380.
3. Fincher, K. M. (2019). Social antecedents and perceptual consequences of how we look at others. *Journal of Experimental Psychology: General, 148*, 143 – 157.

Due: Weekly Response #5

Friday, March 24th – No Class, Spring Break

Friday, March 31st – Article Presentations

Friday, April 7th – How perception is impacted by our bodies

Readings:

1. Bhalla, M., & Proffitt, D. R. (1999). Visual-motor recalibration in geographical slant perception. *Journal of Experimental Psychology: Human Perception and Performance, 25*, 1076 – 1096.
2. Durgin, F. H., Baird, J. A., Greenburg, M., Russell, R., Shaugnessy, K., & Wamouth, S. (2009). Who is being deceived? The experimental demands of wearing a backpack. *Psychonomic Bulletin & Review, 16*, 964 – 969.
3. Reiner, C. R., Stefanucci, J. K., Proffitt, D. R., & Clore, G. (2011). An effect of mood on the perception of geographical slant. *Cognition and Emotion, 25*, 174 – 182.

Due: Weekly Response #6

Friday, April 14th – Final Project Meetings

Readings:

1. Wood, S. M. W., & Wood, J. N. (2015). Face recognition in newly hatched chicks at the onset of vision. *Journal of Experimental Psychology: Animal Learning and Cognition, 41*, 206-215.
2. Ratan Murty, N. A., Teng, S., Beeler, D., Mynick, A., Oliva, A., & Kanwisher, N. (2020). Visual experience is not necessary for the development of face-selectivity in the lateral fusiform gyrus. *Proceedings of the National Academy of Sciences*, *117*(37), 23011-23020.

Due: Research Proposals

Friday, April 21st – Emotion and perception

Readings:

1. Phelps, E. A., Ling, S., & Carrasco, M. (2006). Emotion facilitates perception and potentiates the perceptual benefits of attention. *Psychological Science, 17*, 292 – 299.
2. Shepherd, J. L., & Rippon, D. (2022). The impact of briefly observing faces in opaque facial masks on emotion recognition and empathic concern. *Quarterly Journal of Experimental Psychology*, *76*, 404 – 418.
3. Brady, W. J., Gantman, A. P., & Van Bavel, J. J. (2020). Attentional capture helps explain why moral and emotional content go viral. *Journal of Experimental Psychology: General, 149*, 746 – 756.

Due: Weekly Response #7

Friday, April 28th – What do infants see?

Readings:

1. Gibson, E. J., & Walk, R. D. (1960). The" visual cliff". *Scientific American*, *202*(4), 64-71.

2. Franklin, A., Pilling, M., Davies, I. (2005). The nature of infant color categorization: Evidence from eye movements on a target detection task. *Journal of Experimental Child Psychology, 91*, 227 – 248.
3. Thomsen, L., Frankenhuis, W. E., Ingold-Smith, M., & Carey, S. (2011). Big and mighty: Preverbal infants mentally represent social dominance. *science*, *331*(6016), 477-480.

Due: Weekly Response #8

Friday, May 5th – Individual differences in Visual Perception

Readings:

1. Pelphrey, K. A., Sasson, N. J., Reznick, J. S., Paul, G., Goldman, B. D., & Piven, J. (2002). Visual scanning of faces in autism. *Journal of Autism and Developmental Disorders, 32*, 249 –261.
2. Palmeri, T. J., Blake, R., Marois, R., Flanery, M. A., & Whetsell, W. (2002). The perceptual reality of synesthetic colors. *Proceedings of the National Academy of Sciences, 99*, 4127 – 4131.
3. Corrow, S. L., Davies-Thompson, J., Fletcher, K., Hills, C., Corrow, J. C., & Barton, J. J. S. (2019). Training face perception in developmental prosopagnosia through perceptual learning. *Neuropsychologica, 134*, 1 -15.

Due: Weekly Response #9; Dataset submitted to Tom

Friday, May 12th – Context-driven visual attention and peer review

Readings:

1. Crump, M. J. C., & Milliken (2009) The flexibility of context-specific control: Evidence for context-driven generalization of item-specific control settings. *The Quarterly Journal of Experimental Psychology, 62*, 1523-1532.
2. Hutcheon, T. G., & Spieler, D. H. (2017). Limits on the generalizability of context-driven control. *The Quarterly Journal of Experimental Psychology, 70*, 1292-1304.
3. Weidler, B. J., Pratt, J., & Bugg, J. M. (2022). How is location defined? Implications for learning and transfer of location-specific control. *Journal of Experimental Psychology: Human Perception and Performance*.

Due: Weekly Response #10; *Draft of Final Paper*

Friday, May 19th – Informal Presentations

Due: Final Project