

# AFFECTIVE SCIENCE

Psychology M1308.000500 – Section 001

Instructor: Dr. Sowon Hahn

Spring 2022, Wednesdays 14:00-16:50

Building #16, M315 (14-302 may be used)

\* Classes will be held on Zoom Through April 12. After that, we will meet in the classroom.

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## Course Description:

This seminar will review recent research that combines affective and cognitive approaches to understand the human mind and behavior. Over the past few decades, researchers have begun to characterize the neural systems that extend from primitive affective responses such as fight or flight to humans' complex emotions, including guilt, envy, empathy, and social pain. We will discuss articles in various fields in affective science. In addition to the weekly discussion, students will write a research proposal on the topic of their choice selected from the class discussion.

## Course Requirements:

**Class discussion** Contribution to class will be worth 50% of your final grade. Students will be required to generate 3-5 main issues and discussion points from each article. Students will also take responsibility for leading the discussion. Discussion leaders will 1) summarize the key points from the article using a PowerPoint presentation, and 2) facilitate in-depth discussion using the discussion questions posted by other students. Leading the discussion (or we can call it presentation) will be worth 20% of your grade.

**Final Paper** Constituting 30% of the final grade, students will write a paper on their chosen topic within the field of affective science. The paper should have a proposal format, evaluating the current body of research, and proposing a new study. Papers should be double-spaced with 1-inch margins and 12-pt standard font and recommended to be about 8-10 pages long. We will use the final two weeks of the class to present/discuss the individual proposal.

## Schedule of Topics (subject to revision)

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### Week 1: March 2

#### Introduction

- “What Emotions Are (and Aren’t)” by Lisa Feldman Barrett. New York Times. July 31, 2015

### Week 2: March 9

#### Emotion and Reason

- Sacks, O. (1995). “The Case of the Colorblind Painter” in *An Anthropologist on Mars: Seven Paradoxical Tales*.
- Sacks, O. (1995). “An Anthropologist on Mars” in *An Anthropologist on Mars: Seven Paradoxical Tales*.
- Damasio, A. (1985). *Descartes’ Error: Emotion, Reason, and the Human Brain*. Chapters 1 & 2
- Naqvi, N., Shiv, B., & Bechara, A. (2006). The role of emotion in decision making: A cognitive neuroscience perspective. *Current directions in psychological science*, 15(5), 260-264.

### **Week 3: March 16**

#### **Theories of Emotion**

- Barrett, L. F. (2006). Are emotions natural kinds?. *Perspectives on psychological science*, 1(1), 28-58.
- Russell, J. A. (2003). Core affect and the psychological construction of emotion. *Psychological review*, 110(1), 145.
- Ortony, A., & Turner, T. J. (1990). What's basic about basic emotions?. *Psychological review*, 97(3), 315.
- Schwarz, N., & Clore, G. L. (2003). Mood as information: 20 years later. *Psychological inquiry*, 14(3-4), 296-303.

### **Week 4: March 23**

#### **Emotion and Brain**

- LeDoux, J. E. (2000). Emotion circuits in the brain. *Annual review of neuroscience*, 23(1), 155-184.
- Pessoa, L. (2017). A network model of the emotional brain. *Trends in cognitive sciences*, 21(5), 357-371.
- Dalgleish, T. (2004). The emotional brain. *Nature Reviews Neuroscience*, 5(7), 583-589.
- Lindquist, K. A., & Barrett, L. F. (2012). A functional architecture of the human brain: emerging insights from the science of emotion. *Trends in cognitive sciences*, 16(11), 533-540.

### **Week 5: March 30**

#### **Emotion and Cognition**

- Bechara, A., Damasio, H., Tranel, D., & Damasio, A. R. (1997). Deciding advantageously before knowing the advantageous strategy. *Science*, 275(5304), 1293-1295.
- Woolley et al. (2010). Evidence for a collective intelligence factor in the performance of human groups. *Science*, 330, 686-688.
- Baumeister, R. F., Bratslavsky, E., Muraven, M., & Tice, D. M. (1998). Ego depletion: Is the active self a limited resource?. *Journal of personality and social psychology*, 74(5), 1252.
- Öhman, A., Flykt, A., & Esteves, F. (2001). Emotion drives attention: detecting the snake in the grass. *Journal of experimental psychology: general*, 130(3), 466.

### **Week 6: April 6**

#### **Emotion and Social Interaction**

- Coan, J. A., Schaefer, H. S., & Davidson, R. J. (2006). Lending a hand: Social regulation of the neural response to threat. *Psychological Science*, 17, 1032-1039.
- Chartrand, T. L., & Bargh, J. A. (1999). The chameleon effect: the perception-behavior link and social interaction. *Journal of personality and social psychology*, 76(6), 893.
- Carstensen, L. L., Fung, H. H., & Charles, S. T. (2003). Socioemotional selectivity theory and the regulation of emotion in the second half of life. *Motivation and emotion*, 27(2), 103-123.
- Hawkey, L. C., & Cacioppo, J. T. (2010). Loneliness matters: A theoretical and empirical review of consequences and mechanisms. *Annals of behavioral medicine*, 40(2), 218-227.

## **Week 7: April 13**

### **Embodied Emotion**

- Schachter, S., & Singer, J. (1962). Cognitive, social, and physiological determinants of emotional state. *Psychological review*, 69(5), 379.
- Friedman, B. H. (2010). Feelings and the body: The Jamesian perspective on autonomic specificity of emotion. *Biological psychology*, 84(3), 383-393.
- Robinson, M. D. (1998). Running from William James' bear: A review of preattentive mechanisms and their contributions to emotional experience. *Cognition & Emotion*, 12(5), 667-696.
- Dutton, D. G., & Aron, A. P. (1974). Some evidence for heightened sexual attraction under conditions of high anxiety. *Journal of personality and social psychology*, 30(4), 510.

## **Week 8: April 20**

### **Emotion and Environment**

- Berman, M. G., Jonides, J., & Kaplan, S. (2008). The cognitive benefits of interacting with nature. *Psychological science*, 19(12), 1207-1212.
- Bratman, G. N., Hamilton, J. P., Hahn, K. S., Daily, G. C., & Gross, J. J. (2015). Nature experience reduces rumination and subgenual prefrontal cortex activation. *Proceedings of the national academy of sciences*, 112(28), 8567-8572.
- Winkielman, P., Niedenthal, P. M., & Oberman, L. (2008). The embodied emotional mind. *Embodied grounding: Social, cognitive, affective, and neuroscientific approaches*, 263-288.
- Lumber, R., Richardson, M., & Sheffield, D. (2017). Beyond knowing nature: Contact, emotion, compassion, meaning, and beauty are pathways to nature connection. *PLoS one*, 12(5), e0177186.

## **Week 9: April 27**

### **Music and Emotion**

- "Why music makes our brain sing" by Robert J. Zatorre and Valorie N. Salimpoor. *New York Times*. 2013. June 7.
- Gaser, C., & Schlaug, G. (2003). Brain structures differ between musicians and non-musicians. *Journal of neuroscience*, 23(27), 9240-9245.
- Blood, A. J., & Zatorre, R. J. (2001). Intensely pleasurable responses to music correlate with activity in brain regions implicated in reward and emotion. *Proceedings of the national academy of sciences*, 98(20), 11818-11823.
- Chanda, M. L., & Levitin, D. J. (2013). The neurochemistry of music. *Trends in cognitive sciences*, 17(4), 179-193.

## **Week 10: May 4**

### **Emotion and Economy**

- Wald, C. (2008). Crazy money. *Science*, 322, 1624-1626.
- Mead, N. L., Baumeister, R. F., Gino, F., Schweitzer, M. E., & Ariely, D. (2009). Too tired to tell the truth: Self-control resource depletion and dishonesty. *Journal of Experimental Social Psychology*, 45(3), 594-597.
- Diener, E., & Seligman, M. E. (2004). Beyond money: Toward an economy of well-being. *Psychological science in the public interest*, 5(1), 1-31.

- Kahneman, D., & Krueger, A. B. (2006). Developments in the measurement of subjective well-being. *The journal of economic perspectives*, 20(1), 3-24.

### **Week 11: May 11**

#### **Positive Psychology**

- Grant, A. M., & Ashford, S. J. (2008). The dynamics of proactivity at work. *Research in organizational behavior*, 28, 3-34.
- Lee Duckworth, A., Steen, T. A., & Seligman, M. E. (2005). Positive psychology in clinical practice. *Annu. Rev. Clin. Psychol.*, 1, 629-651.
- Gable, S. L., & Haidt, J. (2005). What (and why) is positive psychology?. *Review of general psychology*, 9(2), 103-110.
- Fredrickson, B. L., & Branigan, C. (2005). Positive emotions broaden the scope of attention and thought-action repertoires. *Cognition and Emotion*, 19(3), 313-332.

### **Week 12: May 18**

#### **Science of Well-being**

- Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological bulletin*, 125(2), 276.
- Fredrickson, B. L., Grewen, K. M., Coffey, K. A., Algoe, S. B., Firestone, A. M., Arevalo, J. M., ... & Cole, S. W. (2013). A functional genomic perspective on human well-being. *Proceedings of the National Academy of Sciences*, 110(33), 13684-13689.
- Csikszentmihalyi, M. (1991). *Flow: The Psychology of Optimal Experience* (Vol. 41) New York: Harper Perennial.
- Robert A. Emmons, Michael E. McCullough (2003) "Counting blessing versus burdens: An experimental investigation of gratitude and subjective well-being in daily life" *Journal Personality and Social Psychology*, 84 (2), 377-389.

### **Week 13: May 25**

#### **Student Presentation**

### **Week 14: June 1**

#### **Student Presentation**

### **Week 15: Final Paper Due**