

**SOCIAL NEUROSCIENCE | PSYCH-GA.3381.001**  
FALL 2014 | Monday 2-4pm | Meyer 771

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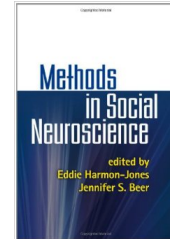
**Instructor:** Dr. Jay J. Van Bavel  
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**Office:** Room 752, 6 Washington Place  
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**Course Website:** available on NYU Classes (via your NYU Home account)

**Readings:** You are responsible for the assigned readings each week (not the additional readings). Most of them will be available on the course website. All journal articles will be posted on the course web site. However, you should buy a copy of the Harmon-Jones and Beer text (\$44 on Amazon.com).

**Additional Reading:**

Harmon-Jones, E., & Beer, J. S. (2009). *Methods in social neuroscience*. Guilford Publications: New York.



**Course Description**

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This course provides an overview of topics in the field of Social Neuroscience. The goal of this course is to give you a broad background in social neuroscience so that you may (a) be a critical consumer of this literature, (b) broaden the way you think about connections between the mind, brain, and behavior in the context of the social world, and (c) most importantly, apply these ideas to inform your own program of research. Each week will include an in-depth discussion of a different topic within the field, in addition to readings on key methods and current controversies.

**Course format and grades**

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Class assignments are designed to develop your ability to think critically and creatively, moderate discussion, present ideas and write—fundamental skills for your research career. Your assigned work should be theory-driven, clear, and concise. **Late assignments will be deducted 5% for every day they are late.** Please contact us at least a week before the due date if you require an extension due to an anticipated conflict or delay.

**Participation (10%):** Each student is expected to read the assigned articles each week and participate in discussion of those readings during the class meeting. Students are graded on their ability to understand and integrate the material. We are especially interested in your ability to add to the dialogue, such as by building on a discussion, thinking critically about the materials, or challenging an expressed view. In addition to critical perspectives on the

course material, we are looking for evidence that you understand the historical and contemporary value of the discussed work in the broader literature. You will also be graded on your contribution to your classmates (e.g., during their presentations).

**Hot Topic! presentation and blog post (10%).** Each week, one student will present a recent empirical article on the week's topic (verbally, without slides). It should be a very recent paper, published within the past year (ideally within the past few months). This is an opportunity to share some of the very latest advances in the field on that topic. You will also write a one-page description of the (<300 words—please provide word count), turned in by **midnight** prior to the day of class. You will then have the opportunity to post a copy of your description as a blog post on the NYU Social Neuroscience web site (posting papers is not required and students invited to post their paper will have the option decline this opportunity or post their paper anonymously).

**Leading discussion (10%):** Each student will serve as a discussion leader for one class meeting (there will occasionally be two leaders on a given week). Discussion leaders will be responsible for facilitating discussion of the assigned readings. Discussion leaders will prepare and distribute a list of 3-4 discussion questions to the class at least 24 hours before the class meeting. The questions can focus on articles or themes that connect the articles. Also, for each article, the discussion leader will list two positive features and two negative features, to be shared during the class discussion and designed to generate further discussion of a paper's contributions. Discussion topic assignments will be determined during the first class. Note: Discussion leaders cannot also be the *Hot Topic!* discussant on a particular day.

**Hypothesis generation (20%):** Each student will complete McGuire's creative hypothesis generation steps and develop three potential research hypotheses, which will be used as potential ideas for the final assignment. Each hypothesis must address a social neuroscience question. For example, it could address a social psychological issue with neuroscientific theory and/or methods. Or, it could address a question about neural function that relies on a social psychological theory and/or methods. This is your chance to get creative!

Each idea should be described succinctly (<300 words—please provide word count). As a first step, you will submit your ideas for blind peer review from two evaluators in the course on **Oct 27**. Based on peer feedback, you will submit your final list of hypotheses to the instructors on **Nov 10**. We will provide feedback and choose one idea for you to develop further for the research proposal assignment. ***All ideas for presentation/term paper must be approved.*** If your topic is not approved, 20% will be deducted from your proposal and presentation grade.

McGuire, W. J. (1997). Creative hypothesis generating in psychology. *Annual Review of Psychology*, 48, 1-30.

**Research Proposal (30%):** Your research proposal represents a fleshed-out version of hypothesis idea approved by the instructors. This proposal will include a presentation of

the hypothesis, which includes background to frame the hypothesis and clear theoretical statements of your hypothesis. It will also include a new section on your methodological approach. This should include an overview section describing why you felt that your chosen approach is optimal, along with a brief description of the procedure and measures to be used. Written proposals must be between 750 and 1000 words (plus an additional reference pages). Please submit your proposal via the class website on **Dec. 19<sup>th</sup>**.

**Presentation (20%):** Each student will briefly present her or his research proposal (10-15 minutes) during the last class meeting (**Dec. 8<sup>th</sup>**). These presentations should be clear and concise, with a focus on your theoretical hypothesis and proposed methodological approach. Standard presentation format involves Keynote/PowerPoint, but you are free to use any format necessary to communicate your proposal. You will be graded on your ability to clearly and elegantly communicate the main points of the theory or research proposal.

**Social media bonus points (up to 2%):** This is your one-and-only opportunity to bolster your grade. We will not let you complete an “extra assignment” or let you turn in a “revision” of your term paper if you did a bad job. If you are worried about your grade, please complete any or all of these activities.

**Wikipedia (1%):** Compose (or *substantively* edit) a wiki entry directly related to the course. Email us a screen capture of the entry before and after your edits.

**Twitter (1%):** Compose and post one tweet about a published article related to the content we have covered in class. Your tweet must communicate the core point of the paper, provide a link to the paper, and include reference to @social\_neuro. If your twitter identity is not the same as your name, you should also email a copy of your tweet to ensure you receive credit (**Due Dec. 21<sup>st</sup>**).

### GRADING SCHEME

Participation	10 points
Leading Discussion	10 points
<i>Hot Topic!</i> paper response	10 Points
Hypothesis Generation	20 points
Proposal paper	30 points
Presentation	20 points
Total	100 points

A	93-100	C	73-76
A-	90-92	C-	70-72
B+	87-89	D+	67-69
B	83-86	D	60-66
B-	80-82	F	<59
C+	77-79		

If you have questions or concerns about your grades you should meet with either instructor after class to discuss them.

## Topic and Assignment Schedule

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### Calendar At a Glance

Date	Topic
Sept. 8	Course overview, history, and methods of Social Neuroscience
Sept. 15	Perceiving People
Sept. 22	Thinking about the Self and Others; fMRI methods
Sept. 29	Attitudes and decision making; EMG and ANS methods
Oct. 6	Emotion; EEG methods
Oct. 13	No class – Fall Recess
Oct. 20	Self-regulation
Oct. 27	Goals and motivation
Nov. 3	Social attachment and exclusion
Nov. 10	Group dynamics and intergroup relations
Nov. 17	Prejudice and Stereotyping
Nov. 24	Morality and ideology
Dec. 1	Social Neuroendocrinology and Immunology; Hormone methods
Dec. 8	Presentations

### September 8: Course overview, history, and methods of Social Neuroscience

Cacioppo, J. T., & Petty, R. E. (1983). Foundations of social psychophysiology. In J. T. Cacioppo & R. E. Petty (Eds.), *Social Psychophysiology: A sourcebook* (pp. 3-36). New York: Guilford Press.

Ochsner, K.N., Lieberman, D. (2001). The emergence of social cognitive neuroscience. *American Psychologist*, 56, 717-734.

Cacioppo, J. T., & Decety, J. (2009). What are the brain mechanisms on which psychological processes are based? *Perspectives on Psychological Science*, 4, 10-18.

Amodio, D. M. (2010). Can neuroscience advance social psychological theory? Social neuroscience for the behavioral social psychologist. *Social Cognition*, 28, 695-716.

\*\*See brain images on posted Blackboard for some neuroanatomy references

For more on the use of fMRI in social neuroscience, read pp. 8-16 of:

Cacioppo, J. T., & Berntson, G. G. (2005). Analyses of the social brain through the lens of human brain imaging. In J. T. Cacioppo & G. G. Berntson (Eds.), *Social neuroscience* (pp. 1-17). New York: Psychology Press.

## Additional reading:

Cacioppo, J. T., & Berntson, G. G. (1992). Social psychological contributions to the decade of the brain: Doctrine of multilevel analysis. *American Psychologist, 47*, 1019-1028.

Cacioppo, J. T., Berntson, G. G., Lorig, T. S., Norris, C. J., Rickett, E., & Nusbaum, H. (2003). Just because you're imaging the brain doesn't mean you can stop using your head: A primer and set of first principles. *Journal of Personality and Social Psychology, 85*, 650-661.

Poldrack, R. A. (2006). Can cognitive processes be inferred from neuroimaging data? *Trends in Cognitive Sciences, 10*, 59-63.

Amodio, D. M. & Harmon-Jones, E. (2012). Neuroscience approaches in social and personality psychology. In M. Snyder & K. Deaux (Eds.), *Handbook of social and personality psychology* (pp. 11-150). New York: Oxford University Press.

Lieberman, M. D. (2010). Social cognitive neuroscience. S. T. Fiske, D. T. Gilbert, & G. Lindzey (Eds.). *Handbook of Social Psychology* (5th ed.) (pp. 143-193). New York, NY: McGraw-Hill.

**September 15: Perceiving People**

Kanwisher, N., McDermott, J., & Chun, M. (1997) The Fusiform Face Area: A Module in Human Extrastriate Cortex Specialized for the Perception of Faces. *Journal of Neuroscience, 17*, 4302-4311.

Sagiv, N. & Bentin, S. (2001). Structural encoding of human and schematic faces: Holistic and part-based processes. *Journal of Cognitive Neuroscience, 13*, 937-951.

Gobbini, M. I., Leibenluft, E., Santiago, N., & Haxby, J. V. (2004). Social and emotional attachment in the neural representation of faces. *Neuroimage, 16*, 1628-1635.

Engell, A. D., Haxby, J. V., & Todorov, A. (2007). Implicit trustworthiness decisions: Automatic coding of face properties in human amygdala. *Journal of Cognitive Neuroscience, 19*, 1508-1519.

## Additional reading:

Van Bavel, J. J., Packer, D. J., & Cunningham, W. A. (2011). Modulation of the Fusiform Face Area following minimal exposure to motivationally relevant faces: Evidence of in-group enhancement (not out-group disregard). *Journal of Cognitive Neuroscience, 23*, 3343-3354.

**September 22: Thinking about the Self and Others (fMRI methods)**

Chapter 14 in Harmon-Jones & Beer: fMRI Methods

Kelley, W. M., Macrae, C. N., Wyland, C. L., Caglar, S., Inati, S., & Heatherton, T. F. (2002). Finding the self?: An event-related fMRI study. *Journal of Cognitive Neuroscience*, *14*, 785-794.

Mitchell, J. P., Macrae, C. N., & Banaji, M. R. (2006). Dissociable medial prefrontal contributions to judgments of similar and dissimilar others. *Neuron*, *50*, 655-663.

Grezes, J., Frith, C. & Passingham, R. E. (2004). Brain mechanisms for inferring deceit in the actions of others. *Journal of Neuroscience*, *24*, 5500-5505.

Saxe, R., & Powell, L. (2006). It's the thought that counts: Specific brain regions for one component of theory of mind. *Psychological Science*, *17*, 692-699.

Amodio, D. M., & Frith, C. D. (2006). Meeting of minds: the medial frontal cortex and social cognition. *Nature Reviews Neuroscience*, *7*, 268-277.

Additional Reading:

Gilbert, S. J., Williamson, I. D. M., Dumontheil, I., Simons, J. S., Frith, C. D., & Burgess, P. W. (2007). Distinct regions of medial rostral prefrontal cortex supporting social and nonsocial functions. *Social Cognitive and Affective Neuroscience*, *2*, 217-226 .

Gillihan, S. J., & Farah, M. J. (2005). Is Self Special? A Critical Review of Evidence From Experimental Psychology and Cognitive Neuroscience. *Psychological Bulletin*, *131*, 76-97.

Klein, S. B. (2012). The Self and Science: Is It Time for a New Approach to the Study of Human Experience? *Current Directions in Psychological Science*, *21*, 253-257.

**September 29: Attitudes and decision making; EMG and ANS methods**

Chapter 5 in Harmon-Jones & Beer: EMG Methods

Cacioppo, J. T., Petty, R. E., Losch, M. E., & Kim, H. S. (1986). Electromyographic activity over facial muscle regions can differentiate the valence and intensity of affective reactions. *Journal of Personality and Social Psychology*, *50*, 260-268.

Bechara, A., Damasio, H., Tranel, D., & Damasio, A. R. (1997). Deciding advantageously before knowing the advantageous strategy. *Science*, *275*, 1293-1295.

McClure, S. M., Li, J., Tomlin, D., Cypert, S., Montague, L. M., & Montague, P. R. (2004). Neural correlates of behavioral preference for culturally familiar drinks. *Neuron, 44*, 379-387.

Behrens, T. E. J., Hunt, L. T., Wollrich, M. W., & Rushworth, M. F. S. (2008). Associative learning of social value. *Nature, 456*, 245-249.

#### Additional reading:

Cunningham, W. A., Zelazo, P. D., Packer, D. J., & Van Bavel, J. J. (2007). The Iterative Reprocessing Model: A multilevel framework for attitudes and evaluation. *Social Cognition, 25*, 736-760.

Cacioppo, J.T. and Berntson, G.G. (1994) Relationship between attitudes and evaluative space: A critical review, with emphasis on the separability of positive and negative substrates. *Psychological Bulletin, 115*, 401-423.

Lieberman, M. D, Ochsner, K. N., Gilbert, D. T., & Schacter, D. L. (2001). Do amnesics exhibit cognitive dissonance reduction? The role of explicit memory and attention in attitude change. *Psychological Science, 12*, 135-140.

Delgado, M.R., Schotter, A., Ozbay, E.Y., Phelps, E.A. (2008). Understanding Overbidding: Using the Neural Circuitry of Reward to Design Economic Auctions. *Science, 321*, 1849-1852.

Crites, S. L., Jr., & Cacioppo, J. T. (1996). Electrocortical differentiation of evaluative and nonevaluative categorizations. *Psychological Science, 7*, 318-321.

Cunningham, W. A., Raye, C. L., & Johnson, M. K. (2004). Implicit and explicit evaluation: fMRI correlates of valence, emotional intensity, and control in the processing of attitudes. *Journal of Cognitive Neuroscience, 16*, 1717-1729.

### October 6: Emotion

Adolphs. R., Gosselin, F., Buchanan TW, Tranel D, Schyns P, Damasio AR. (2005). A mechanism for impaired fear recognition after amygdala damage. *Nature, 433*, 68-72

Gross, J.J., & Levenson, R.W. (1997). Hiding feelings: The acute effects of inhibiting negative and positive emotion. *Journal of Abnormal Psychology, 106*, 95-103.

Ochsner, K. N., Bunge, S. A., Gross, J. J., & Gabrieli, J. D. E. (2002). Rethinking feelings: An fMRI study of the cognitive regulation of emotion. *Journal of Cognitive Neuroscience, 14*, 1215-1229.

Amodio, D. M., Devine, P. G., & Harmon-Jones, E. (2007). A dynamic model of guilt: Implications for motivation and self-regulation in the context of prejudice. *Psychological Science, 18*, 524-530.

#### Additional Reading

Weng, H. Y., Fox, A. S., Shackman, A. J., Stodola, D. E., Caldwell, J. Z. K., Olson, M. C., Rogers, G. M. & Davidson, R. J. (2013). Compassion training alters altruism and the neural responses to suffering. *Psychological Science, 24*, 1171-1180.

Davidson, R. J. & Lutz, A. (2008). Buddha's Brain: Neuroplasticity and Meditation. *IEEE Signal Processing, 25*, 171-174.

Lindquist, K. A., Wager, T. D., Kober, H., Bliss-Moreau, E., & Barrett, L. F. (2012). The brain basis of emotion: A meta-analytic review. *Behavioral and Brain Sciences, 35*, 121-143.

### **October 13: NO CLASS (FALL BREAK)**

### **October 20: Self-regulation and cognitive control; EEG methods**

Chapter 10 in Harmon-Jones & Beer: EEG Methods

Lengfelder, A., & Gollwitzer, P. M. (2001). Reflective and reflexive action control in patients with frontal lobe lesions. *Neuropsychology, 15*, 80-100.

T.A. Hare, C.F. Camerer, A. Rangel. (2009). Self-control in decision-making involves modulation of the vmPFC valuation system. *Science, 324*, 646-648.

Amodio, D. M., Harmon-Jones, E., Devine, P. G., Curtin, J. J., Hartley, S. L., & Covert, A. E. (2004). Neural signals for the detection of unintentional race bias. *Psychological Science, 15*, 88-93.

Amodio, D. M. (2010). Coordinated roles of motivation and perception in the regulation of intergroup responses: Frontal cortical asymmetry effects on the P2 event-related potential and behavior. *Journal of Cognitive Neuroscience, 22*, 2609-2617.

Lopez, R.B., Hofmann, W., Wagner, D.D., Kelley, W.M., & Heatherton, T.F. (2014). Neural predictors of giving in to temptation in daily life. *Psychological Science, 25*, 1337-44.

#### Additional Reading:

Gilbert, S., Gollwitzer, P. M., Cohen, A.-L., Oettingen, G., & Burgess, P. W. (2009). Separable brain systems supporting cued versus self-initiated realization of delayed



intentions. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 35, 905-15.

Ochsner, K., Gross, J.J. (2005). The cognitive control of emotion. *Trends in Cognitive Sciences*, 9, 242-249.

Amodio, D. M., Kubota, J. T., Harmon-Jones, E., & Devine, P. G. (2006). Alternative mechanisms for regulating racial responses according to internal vs. external cues. *Social Cognitive and Affective Neuroscience*, 1, 26-36.

### **October 27: Goals and motivation**

Chapters 7 & 9 in Harmon-Jones & Beer: ANS and EEG Methods

Harmon-Jones, E., & Sigelman, J. (2001). State anger and prefrontal brain activity: Evidence that insult-related relative left prefrontal activation is associated with experienced anger and aggression. *Journal of Personality and Social Psychology*, 80, 797-803.

Cunningham, W. A., Van Bavel, J. J., & Johnsen, I. R. (2008). Affective Flexibility: Evaluative Processing Goals Shape Amygdala Activity. *Psychological Science*, 19, 152-160.

Berkman, E.T. & Falk, E.B. (2013). Beyond brain mapping: Using the brain to predict real-world outcomes. *Current Directions in Psychological Science*, 22, 45-50.

Additional Reading:

Lench, H. C., Flores, S. A., & Bench, S. W. (2011). Discrete emotions predict changes in cognition, judgment, experience, behavior, and physiology: A meta-analysis of experimental emotion elicitation. *Psychological Bulletin*, 137, 834-855.

Wheeler, M. E., & Fiske, S. T. (2005). Controlling racial prejudice and stereotyping: Social cognitive goals affect amygdala and stereotype activation. *Psychological Science*, 16, 56-63.

### **November 3: Social attachment and exclusion**

Young, L.J., Wang, Z., & Insel, T. R. (1998). Neuroendocrine bases of monogamy. *Trends in Neurosciences*, 21, 71-75.

Eisenberger, N. I., Lieberman, M. D., & Williams, K. D. (2003). Does rejection hurt? An fMRI study of social exclusion. *Science*, 302, 290-292.

Somerville, L.H., Heatherton, T.F., and Kelley, W.M. (2006). Anterior cingulate cortex responds differentially to expectancy violation and social rejection. *Nature Neuroscience*, *9*, 1007-1008.

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.

Shackman, A. J., Salomons, T. V., Slagter, H. A., Fox, A. S., Winter, J. J. & Davidson, R. J. (2011). The integration of negative affect, pain and cognitive control in the cingulate cortex. *Nature Reviews Neuroscience*, *12*, 154-167.

Additional reading:

Xu X, Zuo X, Wang X, Han S. (2009). Do you feel my pain? Racial group membership modulates empathic neural responses. *Journal of Neuroscience*, *29*, 8525-8529.

Rotge., J. Y., et al (2014). A meta-analysis of the anterior cingulate contribution to social pain.

### **November 10: Group processes and intergroup relations**

Van Bavel, J. J., Packer, D. J., & Cunningham, W. A. (2008). The neural substrates of in-group bias: A functional magnetic resonance imaging investigation. *Psychological Science*, *19*, 1131-1139.

Cikara, M., Botvinick, M. M., & Fiske, S. T. (2011). Us versus them: Social identity shapes neural responses to intergroup competition and harm. *Psychological Science*, *22*, 306-313.

De Dreu, C.K.W., Greer, L.L., Handgraaf, M.J.J., Shalvi, S., Van Kleef, G.A., Baas, M., Ten Velden, F.S., Van Dijk, E., Feith, S.W.W., (2010). The neuropeptide oxytocin regulates parochial altruism in intergroup conflict among humans. *Science*, *328*, 1408-1411.

Ratner, K. G., & Amodio, D. M. (2013). Seeing "us vs. them": Minimal group effects on the neural encoding of faces. *Journal of Experimental Social Psychology*, *49*, 298-301.

Additional reading:

Cikara, M., & Van Bavel, J. J. (2014) The neuroscience of intergroup relations: An integrative review. *Perspectives on Psychological Science*, *9*, 245-274.

Van Bavel, J. J., Xiao, Y. J., & Hackel, L. M. (in press). Social identity shapes social perception and evaluation: Using neuroimaging to look inside the social brain. In B. Derks, D. Scheepers & N. Ellemers (Eds.) *The Neuroscience of Prejudice*. Psychology Press.

De Dreu, C.K.W., Greer, L.L., Van Kleef, G.A., Shalvi, S., Handgraaf, M.J.J., (2011a). Oxytocin promotes human ethnocentrism. *Proc Natl A Sci USA*, *108*, 1262–1266.

Cikara, M., & Fiske, S. T. (2011). Bounded empathy: Neural responses to out-group targets' (mis)fortunes. *Journal of Cognitive Neuroscience*, *23*, 3791-3803.

## November 17: Prejudice and Stereotyping

Chapter 6 in Harmon-Jones & Beer: Startle Eyeblink Methods

Phelps, E. A., O'Connor, K. J., Cunningham, W. A., Funayama, S., Gatenby, J. C., Gore, J. C., & Banaji, M. R. (2000). Performance on indirect measures of race evaluation predicts amygdala activation. *Journal of Cognitive Neuroscience*, *12*, 729-738.

Amodio, D. M., Harmon-Jones, E., & Devine, P. G. (2003). Individual differences in the activation and control of affective race bias as assessed by startle eyeblink responses and self-report. *Journal of Personality and Social Psychology*, *84*, 738-753.

Cunningham, W. A., Johnson, M. K., Raye, C. L., Gatenby, J. C., Gore, J. C., & Banaji, M. R. (2004). Separable neural components in the processing of Black and White Faces. *Psychological Science*, *15*, 806-813.

Gilbert, S. J., Swencionis, J. K., & Amodio, D. M. (2012). Evaluative vs. trait representation in intergroup social judgments: Distinct roles of anterior temporal lobe and prefrontal cortex. *Neuropsychologia*, *50*, 3600-3611.

Additional reading:

Amodio, D. M., & Ratner, K. G. (2011). A memory systems model of implicit social cognition. *Current Directions in Psychological Science*, *20*, 143-148.

Rankin, R. E., & Campbell, D. T. (1955). Galvanic skin response to negro and white experimenters. *Journal of Abnormal and Social Psychology*, *51*, 30–33.

Richeson, J. A., Baird, A. A., Gordon, H. L., Heatherton, T. F., Wyland, C. L., Trawalter, S., & Shelton, J. N. (2004). An fMRI examination of the impact of interracial contact on executive function. *Nature Neuroscience*, *6*, 1323-1328.

Vanman, E. J., Paul, B. Y., Ito, T. A., & Miller, N. (1997). The modern face of prejudice and structural features that moderate the effect of cooperation on affect. *Journal of Personality and Social Psychology*, *73*, 941–959.

Cunningham, W. A., Van Bavel, J. J., Arbuckle, N. L., Packer, D. J., & Waggoner, A. S. (2012). Rapid social perception is flexible: Approach and avoidance motivational states shape P100 responses to other-race faces. *Frontiers in Human Neuroscience*, 6, 140.

## **November 24: Cooperation, morality, and politics**

Chapter 11 in Harmon-Jones & Beer: TMS Methods

Knoch, D., Pascual-Leone, A., Meyer, K., Treyer, V., & Fehr, E. (2006). Diminishing reciprocal fairness by disrupting the right prefrontal cortex. *Science*, 314, 829-832.

Delgado, M.R., Frank, R.H., Phelps, E.A. (2005). Perceptions of moral character modulate the neural systems of reward during the trust game. *Nature Neuroscience*, 8, 1611-1618.

Amodio, D.M., Jost, J.T., Master, S.L., & Yee, C.M. (2007). Neurocognitive correlates of liberalism and conservatism. *Nature Neuroscience*, 10, 1246-1247.

Oxley, D. R., Smith, K. B., Alford, J. R., Hibbing, M. V., Miller, M. S., Hatemi, P. K., & Hibbing, J. R. (2008). Political attitudes vary with physiological traits. *Science*, 321, 1667-1670.

Additional reading:

Jost, J. T., Nam, H.H., Amodio, D.A., & Van Bavel, J. J. (2014) Political neuroscience: The beginning of a beautiful friendship. In H. Lavine (Ed.) *Advances in Political Psychology*.

Alford, J. R., Smith, K. B., & Hibbing, J. R. (2014). Differences in Negativity Bias Underlie Variations in Political Ideology. *Behavioral and Brain Sciences*.

Baumgartner, T., Heinrichs, M., Vonlanthen, A., Fischbacher, U., & Fehr, E. (2008). Oxytocin Shapes the Neural Circuitry of Trust and Trust Adaptation in Humans. *Neuron*, 58, 639-650.

## **December 1: Social Neuroendocrinology and Immunology; Hormone methods**

Chapter 3 in Harmon-Jones & Beer: Hormone Methods

McEwen, B. S. (1998). Protective and damaging effects of stress mediators. *New England Journal of Medicine*, 338, 171-179.

Dickerson, S., Kemeny, M. E., & Aziz, N. (2004). Immunological effects of induced shame and guilt. *Psychosomatic Medicine*, 66, 124-131.

Mendes, W. B., Gray, H., Mendoza-Denton, R., Major, B. & Epel, E. (2007). Why egalitarianism might be good for your health: Physiological thriving during stressful intergroup encounters. *Psychological Science, 18*, 991-998.

Amodio, D. M. (2009). Intergroup anxiety effects on the control of racial stereotypes: A psychoneuroendocrine analysis. *Journal of Experimental Social Psychology, 45*, 60-67.

Ratner, K. G., Halim, M. L., & Amodio, D. M. (2013). Perceived stigmatization, ingroup pride, and immune and endocrine activity: Evidence from a Black and Latina community sample. *Social Psychological and Personality Science, 4*, 82-91.

Mehta, P. H., & Josephs, R. A. (2006). Testosterone change after losing predicts the decision to compete again. *Hormones and Behavior, 50*, 684-692.

Additional reading:

Harmon-Jones & Beer, Chapters 4 and 13

Stanton, S. J., LaBar, K. S., Saini, E. K., Kuhn, C. M., & Beehner, J. C. (2011). Stressful politics: Voters' cortisol responses to the outcome of the 2008 United States Presidential election. *Psychoneuroendocrinology*.

Caspi, A. et al. (2003). Influence of life stress on depression: moderation by a polymorphism in the 5-HTT gene. *Science, 301*, 385-389.

Champagne, F. A., & Mashoodh, R., (2009). Genes in Context: Gene–Environment Interplay and the Origins of Individual Differences in Behavior. *Current Directions in Psychological Science, 18*, 127-131.

Ratner, K. G., & Kubota, J. T. (2012). Genetic contributions to intergroup responses: A cautionary perspective. *Frontiers in Human Neuroscience, 6*: 223.

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## **December 8: Research Presentations**

## **December 19: Final papers are due by midnight**

### **Course website**

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Log in and you should see this course. If you don't, please let me know. Readings, grades, assignments and handouts will be posted online. There is also a discussion board for questions. If you have a question you can email me, or post it online. If several people email me a similar question I will post it on the website. Please treat the website as a collective resource to ask questions of common interest and share ideas with one another. If you have a dispute or concern with another member of the class, please email me directly and do not try to deal with it on the course website.

### **Academic Conduct**

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All work must be your own. NYU uses *Turnitin*, which can automatically detect plagiarism. If you cheat, you will be caught. Cheating or plagiarism will be reported through official university channels, and the consequences will be severe. If you are unwise enough to plagiarize, the minimum punishment is usually failure in the course. If the case of plagiarism or cheating is especially blatant, you may be expelled from the university. The papers and assignments are designed for what you can do based on what we are covering in this class and the skills you have already learned.