

The Psychology of Emotion: Theories, Functions, & Regulation
Psych S3664 (3 points), Summer 2017
Columbia University

Instructor: Jocelyn Shu
Office: 324 Schermerhorn (SCAN Lab)
Office hours: Tues (3:20-5:20), or by appointment
Email: js3526@columbia.edu

Course Information
Location: 405 Schermerhorn Hall
Department of Psychology
Times: Tues, Thurs (5:30-8:40pm)

Course Overview

This course will provide an overview of theoretical perspectives and research on what emotions are and what functions they serve. As part of this course, we will discuss the role of emotions and emotion regulation in many important aspects of our lives, such as mental health, social relationships, and decision-making. The readings will introduce students to a wide array of tools that scientists have used to understand emotions at different levels of analysis, such as the use of physiological measures (including brain activity), behavioral measures, and self-reports of experience. To present different perspectives on the study of emotions, the course will cover research drawn from the subfields of social psychology, clinical psychology and developmental psychology, as well as social and affective neuroscience. Concurrently, we will hone a scientific mindset by approaching readings, presentations, and writing assignments with a structured approach to scientific inquiry that helps us identify the major components of the research process when reading and thinking about scientific research (see the section on Article Presentations under Course Requirements).

This course will meet the following requirements:

- Group III (Social, Personality, and Abnormal) distribution requirement for Psychology majors, concentrators, and post-baccalaureate students, as well as for Engineering students minoring in Psychology.
- The fifth Psychology requirement (P5) for “one advanced psychology seminar from a list approved by the Psychology Department advisor to the program” for Neuroscience and Behavior majors.
- The seminar requirement for Psychology majors and post-baccalaureate certificate students who entered Columbia in Fall 2013 or later.
- One term of the social science requirement for GS students, provided that students obtain the necessary permissions and have taken the prerequisite psychology courses. Majors will have priority over students

who are taking the course for social science credit.

- The senior seminar requirement for Barnard Psychology majors.

Prerequisites

Science of Psychology (1001), *Mind, Brain, & Behavior* (1010), or an equivalent introductory psychology course, plus instructor permission. A prior course in statistics or research methods is recommended, but not necessary. If you do not have a psychology background and are interested in this course, please contact me to request permission before enrolling.

Course Objectives

The goals of this course are to enable you to do the following:

- 1) Understand the major psychological theories that define emotions and the functions emotions serve in our lives.
- 2) Develop a structured approach to scientific inquiry and apply it to the critical evaluation of research articles, presentation of scientific findings, and writing of research reports.
- 3) Design and write a proposal for a scientific study.
- 4) Use effective methods for quantifying emotional experiences and visualizing data.

Course Requirements

Class Attendance, Readings, & Participation

This course will meet twice a week for three hours. It is highly important in a seminar course to attend all classes and actively participate in discussions so that we are able to hear a diverse range of thoughts and ideas! Thus, your participation grade will depend on your active participation in discussions and your regular attendance in class. You will be expected to have read the assigned articles prior to class so that you are prepared to discuss them. If you feel that you may have a hard time with the participation component of the course, please come talk to me about it, so we can find a strategy that works for you.

Courseworks Response Posts

To prepare you for class discussions, you will be expected to post a brief comment on the Courseworks discussion board for each assigned article *prior to the start of every class*. This comment should consist of a summary of the article, thoughts that you have about it, and topics that you may want to discuss in class (What were the weaknesses or strengths of the article? What did you find interesting about it? Did it provide any new insight to your understanding of the topic?). Postings that meet these criteria will receive full credit. Late postings will not be accepted.

Article Presentations

You will be responsible for presenting 1-2 articles in class with a Powerpoint presentation according to a format referred to as the “QuALMRI” structure. This acronym represents the major components of the research process: formulating a *Question*, devising a *hypothesis and Alternative hypotheses*, making *Logical connections*, coming up with *Methods* to test the hypotheses, understanding the *Results*, and making *Inferences* from the results. Following such a structure is conducive to understanding both the research you are reading about and research that you may design yourself. Hence, you will use this structure extensively throughout the course to develop a scientific way of thinking when reading articles, presenting research, and writing your own research proposal.

In the first class, I will give an introductory presentation to model the format of presentations according to the QuALMRI structure. In the second class, we will discuss the assigned readings as a group to ensure that everyone understands how to think about research according to this structure. For each of the following classes, one to three students will be assigned to present selected articles (indicated by an asterisk in the Course Schedule) and lead a discussion afterward. To prepare for your presentation, you will be required to either meet with me (during office hours or after class) to go over a draft of your presentation, or to email me a draft of your presentation at least 3 days in advance for feedback.

Emotion Regulation Project: Exercising Emotional Awareness in New York City

It is well documented that living in urban environments exposes people to greater stress and as a result, can be a risk factor for developing various physical and emotional disorders (Christenfeld et al., 1999; Kennedy & Adolphs, 2011). Fortunately, New York City has many outlets to help its residents cope with the stress of the hectic pace here! A few examples include the numerous green spaces, art museums/galleries, meditation centers, and yoga studios (the list goes on and on) that are available to help us take a break and recharge.

For this project, we will begin by brainstorming ideas in class for the various activities and options in New York City that help us maintain our mental health by regulating our emotions. You will select two of these options to partake in by the end of the semester (you are encouraged to choose activities that you have not tried before!). You will research tools that are available to quantify your emotions. This is most commonly done via questionnaires such as the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988, see references at the end of syllabus). However, you are encouraged to be creative in how you might measure your dependent variable(s). You will select a measure to record your emotions before and after partaking in your chosen activities. You will then visualize your results to compare the options you selected graphically. (This can be done through Excel or other software.)

You will briefly share your idea for this project as part of a presentation during the 6th class period and give a “flash talk” of your results during the last class. This talk should be 5-10 minutes in length (and consist of ~3-5 slides). You will also write a one-page summary of your project that considers issues involved with conducting emotion research based off of your experiences with this project. This exercise will give you hands-on experience with emotion measures used in research, and have you consider effective methods for representing data graphically as well as issues involved with designing studies that measure emotion.

Research Proposal

As a final paper, you will develop a research proposal for a study pertaining to a question that investigates an aspect of emotion. This paper will follow the QuALMRI format, should be between 8-10 pages (not including references), with at least 10 references. This paper should be written and cited in APA style and is due on the last class.

To prepare you for this paper, you will be required to submit outlines that will be graded, one that is presented as a Powerpoint during the 6th class, and a written outline (or draft) due on the 8th class. Details for these assignments will be presented in class and in a separate handout.

Grading

20% - Class Attendance and Participation

15% - Courseworks Response Posts (1.5% for every class)

15% - Article Presentation

15% - Emotion Regulation Project

(5% Powerpoint Outline, 5% “Flash Talk” Presentation, 5% 1 page summary, each out of 100 pts)

35% - Research Proposal

(10% Powerpoint Outline, 5% Written Outline, 20% Final Paper, each out of 100 pts)

Class Policies

Attendance & Participation

Class attendance and participation during discussions is of utmost importance in a seminar course. You are expected to attend all classes, to arrive on time, and to be prepared to actively contribute to the discussions by having completed the required readings. You will need to provide a note from your doctor or advising dean for unexpected absences due to illnesses or emergencies. Each unexcused absence will result in a 2% deduction to your overall grade (a tenth of your class attendance/participation grade).

Written Assignment Submissions

Courseworks responses to the assigned articles must be posted prior to each class and postings for each class are worth 1.5% of your overall grade (a tenth of the Courseworks Response Posts grade). As these posts are intended to prepare you for class discussions on the readings, there will be zero credit for late submissions posted after the start of a class period. Extensions will be granted for late or missing postings due to an excused absence.

A late outline or final paper will result in a 5-point deduction on your grade for the assignment for each day it is overdue. In case of medical illnesses or emergencies, you must notify me as soon as possible for extensions to be considered.

Class Presentations

Learning to create and present effective Powerpoint presentations is an essential skill that you will likely use throughout your academic career and beyond. You will be expected to have finalized presentations in Powerpoint format for all class presentations (i.e., for assigned articles, emotion regulation project, and research proposal). If there is an important reason that will cause you to be unable to present on these days, you must notify me well in advance so that we can schedule you to present on another day. Failure to present on your assigned days without notifying me in advance will result in a score of 0 for those presentations, unless you have an excused absence for that day.

Technology Use

Out of consideration for the rest of the class, please refrain from any technology use that is not class-related. Laptop use is OK, but only for the purpose of taking notes during class.

Disability Services

If you are a student with a documented disability, please talk to me about the accommodations that you will need for this course. In addition, you should contact Disability Services (DS) at 212-854-2388 or disability@columbia.edu. Please see a full description of your rights and responsibilities on the following site:

<http://www.college.columbia.edu/rightsandresponsibilities>

Please note the following statement from the above site: "it is the responsibility of students to report any learning-related disabilities, to do so in a timely fashion, and to do so through the Office of Disability Services. Students who have documented conditions and are determined by DS to need individualized services will be provided an DS-certified 'Accommodation Letter'. It is students' responsibility to provide this letter to all their instructors and in so doing request the stated accommodations."

Academic Integrity

Cheating and/or plagiarizing on assignments is a serious offense. You are expected to produce your own work on all assignments and to cite any sources that you have drawn from. Any instances of cheating or plagiarizing will be reported to the university for academic discipline and may result in a failing score on the assignment or in the course. Please refer to the full Faculty Statement on Academic Integrity at the following site:

<http://www.college.columbia.edu/faculty/resourcesforinstructors/academicintegrity/statement>

In particular, please note the following from the Faculty Statement on Academic Integrity: “as students, you must be responsible for the full citations of others’ ideas in all of your research papers and projects; you must be scrupulously honest when taking your examinations; you must always submit your own work and not that of another student, scholar, or internet agent. Any breach of this intellectual responsibility is a breach of faith with the rest of our academic community. It undermines our shared intellectual culture, and it cannot be tolerated. Students failing to meet these responsibilities should anticipate being asked to leave Columbia.”

Academic Support Services

If you need additional support with the material or assignments for this course, please come talk to me. I am happy to work with you to optimize your learning experience in this course. If you need extra support with writing assignments, you can contact the Writing Center at writingcenter@columbia.edu.

Tentative Course Schedule

For each class, articles are listed in a suggested reading order such that articles listed first may provide useful background information for subsequent articles. Under the discussion topics, I have listed questions that might guide your reading of the articles and provide ideas for discussions in class. Articles listed in the schedule are tentative and subject to change. See below for full citations.

*articles to be presented by students

Discussion Topics		Required Readings For Class
Week 1: Introduction to the Scientific Study of Emotions		
1 5/23	Developing a Scientific Mindset <ul style="list-style-type: none"> • Introductions – meet & greet • Presentation of QuALMRI format and Satpute (2013) • Outline trajectory for semester • Set schedule for class presentations 	1. Satpute (2013) 2. “Organizing Scientific Thinking Using the QuALMRI Framework (Ochsner & Kosslyn)
2 5/25	Intro to Theories on Emotion <ul style="list-style-type: none"> • Group discussion on articles • How have emotions been defined? How have different researchers approached this question? Are these debates useful? • Can animals have emotions? • Discuss ideas for emotion regulation project 	1. Ekman (1971) 2. Ekman (1992) 3. Barrett (2006) 4. Adolphs (2017) Supplemental: 5. Lieberman (2007) - <i>This is a helpful review to look through for getting oriented with many of the brain regions we will be discussing. In particular, read the Introduction and Self-Regulation sections.</i> Due: Be prepared to discuss QuALMRI items for Ekman (1971), and two ideas for the emotion regulation project.
Week 2: Defensive Responses		
3 5/30	Anxiety, Fear, and Panic as Defense Responses <ul style="list-style-type: none"> • What distinguishes anxiety from fear, and fear from panic? • What are the neural regions involved in these emotions and what are the implications of their involvement? 	1. Adolphs (2005)* 2. Mobbs (2009)* 3. Klein (1993) 4. Feinstein (2013)* 5. Öhman (2001)

4 6/1	Threat conditioning	<ol style="list-style-type: none"> 1. Davis (1992) 2. LeDoux (2017) 3. Boeke (2017)* 4. Golkar (2013)*
Week 3: Decision Making		
5 6/6	<ul style="list-style-type: none"> • We often assume that emotions can “color” our judgments and bias them in detrimental ways. How might emotions actually serve to facilitate our judgments? • What are the differences and similarities between disgust and fear? • How might emotions help us maintain our social relationships and navigate the social environment? 	<ol style="list-style-type: none"> 1. Clore (2007) 2. Sokol-Hessner (2015)* 3. Loewenstein (2001) 4. Rozin (1987)
6 6/8	Presentations due, no readings	<p>Due: Present outline of Research Proposal in Powerpoint</p> <ul style="list-style-type: none"> • Brief summary of Emotion Regulation Project (present a few bullet points summarizing your idea for this project)
Week 4: Regulating Emotions		
7 6/13	<p>Emotion Regulation</p> <ul style="list-style-type: none"> • What are “top-down” vs. “bottom-up” processes? • What neural regions are involved in “top-down” control of emotions? And for “bottom-up” affective responses? • How might this inform our understanding of emotions in an evolutionary context? 	<ol style="list-style-type: none"> 1. Gross (1998) 2. Buhle (2014)* 3. Dore (2017)* 4. Gee (2013)*
8 6/15	<p>Mindfulness and Emotional Acceptance</p> <ul style="list-style-type: none"> • How might mindfulness and acceptance of emotions function as regulatory processes? 	<ol style="list-style-type: none"> 1. Killingsworth (2010) 2. Brown (2003)* 3. Slepian (2017)* 4. Dan-Glauser (2015)* <p>Due: Written outline/draft of Final Paper for the research proposal</p>

Week 5: Dysregulation of Emotion and Emotional Disorders		
9 6/20	Dysregulation of Emotion <ul style="list-style-type: none"> • How does suppression differ from reappraisal as an emotion regulation strategy? • How might this factor into the effectiveness of these strategies in regulating emotions? 	1. Heatherton (2011) 2. Lopez (2014)* 3. Gross (1997)* 4. Cole (1994)
10 6/22	Depression <ul style="list-style-type: none"> • Why is depression a more complex phenomenon than just feeling sad? • How might stress impact neural and cognitive processes, leading to depression? 	1. Southwick (2012) 2. Millgram (2015)* 3. Arditte (2011)* 4. Raes (2010)* 5. Mineka (1998)
Week 6: Culture and Emotion		
11 6/27	<ul style="list-style-type: none"> • How does culture impact the way we think about emotions? • How does this relationship affect approaches to emotion regulation? 	1. Tsai (2006)* 2. Ma (2017)* 3. Butler (2007)*
12 6/29	Presentations and course wrap-up	Due: “Flash Talk” Presentation of Emotion Regulation Project, 1 page summary of Emotion Regulation Project, Final Research Proposal (upload docs to CourseWorks)

Course Readings

Class 1: Developing a Scientific Mindset

1. Satpute, A. B., Shu, J., Weber, J., Roy, M., & Ochsner, K. N. (2013). The functional neural architecture of self-reports of affective experience. *Biological psychiatry*, 73(7), 631-638. (7 pgs)
2. "Organizing Scientific Thinking Using the QuALMRI Framework", written by Kevin Ochsner and modified by others (based on a scheme by Steve Kosslyn). (6 pgs)

Class 2: Intro to Theories on Emotion

1. Ekman, P., & Friesen, W. V. (1971). Constants across cultures in the face and emotion. *Journal of personality and social psychology*, 17(2), 124. (6 pgs)
2. Ekman, P. (1992). An argument for basic emotions. *Cognition & emotion*, 6(3-4), 169-200. (32 pgs)
3. Barrett, L. F. (2006). Solving the emotion paradox: Categorization and the experience of emotion. *Personality and social psychology review*, 10(1), 20-46. (23 pgs)
4. Adolphs, R. (2017). How should neuroscience study emotions? By distinguishing emotion states, concepts, and experiences. *Social cognitive and affective neuroscience*, 12(1), 24-31. (8 pgs)

Supplemental:

5. Lieberman, M. D. (2007). Social cognitive neuroscience: a review of core processes. *Annu. Rev. Psychol.*, 58, 259-289. (21 pgs)

Class 3: Anxiety, Fear, and Panic as Defense Responses

1. Adolphs, R., Gosselin, F., Buchanan, T. W., Tranel, D., Schyns, P., & Damasio, A. R. (2005). A mechanism for impaired fear recognition after amygdala damage. *Nature*, 433(7021), 68-72. (5 pgs)
2. Mobbs, D., Marchant, J. L., Hassabis, D., Seymour, B., Tan, G., Gray, M., ... & Frith, C. D. (2009). From threat to fear: the neural organization of defensive fear systems in humans. *The Journal of neuroscience*, 29(39), 12236-12243. (7 pgs)
3. Klein, D. F. (1993). False suffocation alarms, spontaneous panics, and related conditions: an integrative hypothesis. *Archives of general psychiatry*, 50(4), 306-317. (9 pgs)

4. Feinstein, J. S., Buzza, C., Hurlemann, R., Follmer, R. L., Dahdaleh, N. S., Coryell, W. H., ... & Wemmie, J. A. (2013). Fear and panic in humans with bilateral amygdala damage. *Nature neuroscience*, 16(3), 270-272. (4 pgs)
5. Öhman, A., & Mineka, S. (2001). Fears, phobias, and preparedness: toward an evolved module of fear and fear learning. *Psychological review*, 108(3), 483. (40 pgs)

Class 4: Threat Conditioning

1. Davis, M. (1992). The role of the amygdala in fear and anxiety. *Annual review of neuroscience*, 15(1), 353-375. (23 pgs)
2. LeDoux, J. E., & Brown, R. (2017). A higher-order theory of emotional consciousness. *Proceedings of the National Academy of Sciences*, 201619316. (10 pgs)
3. Boeke, E. A., Moscarello, J. M., LeDoux, J. E., Phelps, E. A., & Hartley, C. A. (2017). Active avoidance: Neural mechanisms and attenuation of Pavlovian conditioned responding. *Journal of Neuroscience*, 37(18), 4808-4818. (11 pgs)
4. Golkar, A., Selbing, I., Flygare, O., Öhman, A., & Olsson, A. (2013). Other people as means to a safe end: vicarious extinction blocks the return of learned fear. *Psychological science*, 24(11), 2182-2190. (8 pgs)

Class 5: Decision Making

1. Clore, G. L., & Huntsinger, J. R. (2007). How emotions inform judgment and regulate thought. *Trends in cognitive sciences*, 11(9), 393-399. (6 pgs)
2. Sokol-Hessner, P., Lackovic, S. F., Tobe, R. H., Camerer, C. F., Leventhal, B. L., & Phelps, E. A. (2015). Determinants of propranolol's selective effect on loss aversion. *Psychological science*, 26(7), 1123-1130. (8 pgs)
3. Loewenstein, G. F., Weber, E. U., Hsee, C. K., & Welch, N. (2001). Risk as feelings. *Psychological bulletin*, 127(2), 267. (20 pgs)
4. Rozin, P., & Fallon, A. E. (1987). A perspective on disgust. *Psychological review*, 94(1), 23. (18 pgs)

Class 6: Present outlines

No readings for this class

Class 7: Emotion Regulation

1. Gross, J. J. (1998). The emerging field of emotion regulation: an integrative review. *Review of general psychology*, 2(3), 271. (18 pgs)
2. Buhle, J. T., Silvers, J. A., Wager, T. D., Lopez, R., Onyemekwu, C., Kober, H., ... & Ochsner, K. N. (2014). Cognitive reappraisal of emotion: a meta-analysis of human neuroimaging studies. *Cerebral Cortex*, 24(11), 2981-2990. (10 pgs)
3. Doré, B. P., Morris, R. R., Burr, D. A., Picard, R. W., & Ochsner, K. N. (2017). Helping Others Regulate Emotion Predicts Increased Regulation of One's Own Emotions and Decreased Symptoms of Depression. *Personality and Social Psychology Bulletin*, 43(5), 729-739. (11 pgs)
4. Gee, D. G., Gabard-Durnam, L. J., Flannery, J., Goff, B., Humphreys, K. L., Telzer, E. H., ... & Tottenham, N. (2013). Early developmental emergence of human amygdala–prefrontal connectivity after maternal deprivation. *Proceedings of the National Academy of Sciences*, 110(39), 15638-15643. (5 pgs)

Class 8: Mindfulness and Emotional Acceptance

1. Killingsworth, M. A., & Gilbert, D. T. (2010). A wandering mind is an unhappy mind. *Science*, 330(6006), 932-932. (1 pg)
2. Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: mindfulness and its role in psychological well-being. *Journal of personality and social psychology*, 84(4), 822. (27 pgs)
3. Slepian, M. L., Chun, J. S., & Mason, M. F. (2017). The Experience of Secrecy. (33 pgs)
4. Dan-Glauser, E. S., & Gross, J. J. (2015). The temporal dynamics of emotional acceptance: Experience, expression, and physiology. *Biological psychology*, 108, 1-12. (12 pgs)

Class 9: Dysregulation of Emotion

1. Heatherton, T. F., & Wagner, D. D. (2011). Cognitive neuroscience of self-regulation failure. *Trends in cognitive sciences*, 15(3), 132-139. (8 pgs)

2. 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*, 0956797614531492. (8 pgs)
3. Gross, J. J., & Levenson, R. W. (1997). Hiding feelings: the acute effects of inhibiting negative and positive emotion. *Journal of abnormal psychology*, 106(1), 95. (8 pgs)
4. Cole, P. M., Michel, M. K., & Teti, L. O. D. (1994). The development of emotion regulation and dysregulation: A clinical perspective. *Monographs of the society for research in child development*, 59(2-3), 73-102. (29 pgs)

Class 10: Depression

1. Southwick, S. M., & Charney, D. S. (2012). The Science of Resilience: Implications for the Prevention and Treatment of Depression. *Biol. Psychiatry*, 71, 1068. (4 pgs)
2. Millgram, Y., Joormann, J., Huppert, J. D., & Tamir, M. (2015). Sad as a matter of choice? Emotion-regulation goals in depression. *Psychological science*, 0956797615583295. (13 pgs)
3. Arditte, K. A., & Joormann, J. (2011). Emotion regulation in depression: Reflection predicts recovery from a major depressive episode. *Cognitive Therapy and Research*, 35(6), 536-543. (8 pgs)
4. Raes, F. (2010). Rumination and worry as mediators of the relationship between self-compassion and depression and anxiety. *Personality and Individual Differences*, 48(6), 757-761. (5 pgs)
5. Mineka, S., Watson, D., & Clark, L. A. (1998). Comorbidity of anxiety and unipolar mood disorders. *Annual review of psychology*, 49(1), 377-412. (37 pgs)

Class 11: Culture and Emotion

1. Tsai, J. L., Knutson, B., & Fung, H. H. (2006). Cultural variation in affect valuation. *Journal of personality and social psychology*, 90(2), 288. (20 pgs)
2. Ma, X., Tamir, M., & Miyamoto, Y. (2017). A Socio-Cultural Instrumental Approach to Emotion Regulation: Culture and the Regulation of Positive Emotions. (15 pgs)

3. Butler, E. A., Lee, T. L., & Gross, J. J. (2007). Emotion regulation and culture: are the social consequences of emotion suppression culture-specific?. *Emotion*, 7(1), 30. (19 pgs)

Class 12: Final Presentations

No readings for this class

References

(these articles are for your reference and not part of the course readings)

Christenfeld, N., Glynn, L. M., Phillips, D. P., & Shrira, I. (1999). Exposure to New York City as a risk factor for heart attack mortality. *Psychosomatic Medicine*, 61(6), 740-743.

Kennedy, D. P., & Adolphs, R. (2011). Social neuroscience: Stress and the city. *Nature*, 474(7352), 452-453.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of personality and social psychology*, 54(6), 1063.