Term Information

Effective Term	Autumn 2026

General Information

Course Bulletin Listing/Subject Area	Psychology
Fiscal Unit/Academic Org	Psychology - D0766
College/Academic Group	Arts and Sciences
Level/Career	Graduate
Course Number/Catalog	6875
Course Title	Social Affective Neuroscience
Transcript Abbreviation	Soc Aff Neuro
Course Description	This course takes a systems neuroscience approach to understand how the brain represents psychological constructs such as valence and arousal, emotions, social threat and affiliation, empathy, morality, and self and other representation. We will explore the development of these systems over the lifespan and how they are shaped by the social environment.
Semester Credit Hours/Units	Fixed: 3

Offering Information

Length Of Course	14 Week, 12 Week, 8 Week, 7 Week, 6 Week, 4 Week
Flexibly Scheduled Course	Never
Does any section of this course have a distance education component?	No
Grading Basis	Letter Grade
Repeatable	No
Course Components	Lecture
Grade Roster Component	Lecture
Credit Available by Exam	No
Admission Condition Course	No
Off Campus	Never
Campus of Offering	Columbus

Prerequisites and Exclusions

Prerequisites/Corequisites	
Exclusions	
Electronically Enforced	Yes

Cross-Listings

Cross-Listings	

Subject/CIP Code

Subject/CIP Code	42.0101
Subsidy Level	Doctoral Course
Intended Rank	Doctoral

Requirement/Elective Designation

The course is an elective (for this or other units) or is a service course for other units

Course Details

Course goals or learning objectives/outcomes

- Students will come away from this course with a basic understanding of the neural correlates of social behavior
- Students will come away from this course with a basic understanding of the neural correlates of affective experience
- Students will come away from this course with a basic understanding of the use of functional magnetic resonance imaging for studying social and affective constructs
- Students will come away from this course with an understanding of development of the neural correlates of social and affective behavior
- Students will be able to think critically about neuroimaging findings

Content Topic List

- Introduction to social affective neuroscience
- Functional neural networks associated with affective and social behavior
- The allostatic brain: Adaptive regulation of affect and behavior
- Pleasure, displeasure, and arousal: decomposing the neural representation of affect
- What is emotion?: The brain basis of emotions
- Development of emotion across the lifespan
- Reward: Wanting, liking, and risk
- Feeling better: Emotion regulation
- Mind perception: Perceptions of the self and others
- The tie that binds: neural correlates of social affiliation
- Social status and rejection
- Putting social-affective processing in context

Sought Concurrence

No

Attachments

- Psych 6875_syllabus_Jan 2026.doc: Syllabus

(Syllabus. Owner: Paulsen,Alisa Marie)

Comments

- Updated syllabus uploaded *(by Paulsen,Alisa Marie on 01/06/2026 02:21 PM)*
- Please see feedback email sent to department 12-19-2025 RLS *(by Steele,Rachel Lea on 12/19/2025 04:53 PM)*

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Paulsen,Alisa Marie	11/22/2025 07:17 AM	Submitted for Approval
Approved	Paulsen,Alisa Marie	11/22/2025 07:21 AM	Unit Approval
Approved	Vankeerbergen,Bernadette Chantal	11/24/2025 09:29 PM	College Approval
Revision Requested	Steele,Rachel Lea	12/19/2025 04:53 PM	ASCCAO Approval
Submitted	Paulsen,Alisa Marie	01/06/2026 02:21 PM	Submitted for Approval
Approved	Paulsen,Alisa Marie	01/06/2026 02:21 PM	Unit Approval
Approved	Vankeerbergen,Bernadette Chantal	01/06/2026 06:19 PM	College Approval
Pending Approval	Jenkins,Mary Ellen Bigler Neff,Jennifer Vankeerbergen,Bernadette Chantal Steele,Rachel Lea	01/06/2026 06:19 PM	ASCCAO Approval

Social Affective Neuroscience
PSYC 6875

In-person lecture
Fall 2026
Wed 9:00am-11:30am
[Location]

Instructor: Kristen A. Lindquist, Ph.D.
Office hours: by appointment
Office location: Lazenby 100 C-D
Email: lindquist.83@osu.edu

Course Description

This course is designed to provide you with a foundational understanding of the neural correlates of social and affective experiences across the lifespan. The course fulfills requirements for training in the Social and Cognitive Neuroscience PhD programs in the Department of Psychology at The Ohio State University.

This course will take a systems neuroscience approach to understand how the brain represents psychological constructs including but not limited to valence and arousal, emotional experiences and perceptions, social threat and affiliation, empathy, moral decision-making, and the self versus the minds of other entities. We will explore the development of these systems over the lifespan and what their development suggests about their basicness in human cognition and their ability to be shaped by the environment.

Course content will focus almost exclusively on human neuroimaging research (e.g., using functional magnetic resonance imaging; fMRI) given its applicability to examining the neural correlates of social and affective processes in healthy, awake humans of diverse ages. However, every method has its limitations and evidence from lesion-based approaches, single-cell recordings, positron emission tomography (PET) or transcranial magnetic stimulation (TMS) may be considered, as applicable. Students are expected to familiarize themselves with the benefits and caveats associated with each method.

Students should come away from this course with a basic understanding of the neural correlates of social and affective behavior. We will focus primarily on the level of broadscale functional neural networks—sets of brain regions that co-activate together across tasks and work together as functional units. An understanding of these mechanisms can inform corresponding psychological processes involved in social and affective phenomena, and as such, psychological theorizing and research. Even if students do not use this level of analysis in their own work, they should come away

from this course as more informed consumers of contemporary neuroscience research and having a better idea of the basic processes that contribute to normative social and affective behavior.

Because this course is ultimately interdisciplinary, students will be asked to familiarize themselves with **foundational readings** in neuroanatomy, neuroimaging, and the psychology of emotion and social behavior outside of class, as a basic understanding of these domains will be important for understanding the course material. Of note, we will focus exclusively on basic research and on normative variation in social-affective processes within the population.

Instructor

This course is taught by Dr. Kristen Lindquist, a faculty member in the Social and Cognitive Neuroscience programs in the Department of Psychology. Dr. Lindquist's research focuses on the neural basis of social and affective phenomena across the lifespan, such as the basis of valence and arousal, emotional experiences, emotional perceptions, and social behavior, more generally. She directs The Affective Science Lab, which is dedicated to understanding how the neurobiology of social affective processing is influenced by the socio-cultural environment in which a person develops.

Course structure

Class time will be spent primarily in discussion. Because discussion is central, you will need to read and prepare for each class period to participate actively. The course requirements serve to enhance student learning by preparing them for active discussion in class and application of material beyond the class discussion. These requirements reflect five key types of assignments:

Reading Assignments: The course readings include research articles and chapters available at the course website.

Foundational readings are intended to familiarize students from diverse backgrounds with the topics to be discussed that week. These may include background in the psychological theories being discussed or important historical context for the Discussion readings. Note that some students may have read these papers before in other courses or as part of their own research. However, *all students* should familiarize themselves with these papers prior to each class. Foundational readings need not (although can be) explicitly included in class discussions or thought papers.

Discussion readings are the intended target of class discussions each week. Class discussions and thought papers should focus explicitly on the Discussion readings.

Written Assignments: A variety of written assignments are to be completed for this course.

Thought papers: Weekly thought papers detail students' scholarly takes on the discussion readings that week. The paper is due by 11:59pm on the Monday before class, so that Dr. Lindquist can review the papers before Wednesday morning. Students can miss one thought paper without penalty and are not required to submit a thought paper during a week when they are a Topic Leader. Submit thought papers to the course website in the format of single space/12 point font/1 inch margins with your name in the header.

Research proposal: For the culmination of the course, you will submit a research proposal outlining a study of your own design. Detailed instructions will be provided, but this should take the format of an APA-format manuscript with an introduction, proposed methods, hypothesized results, and discussion section.

Oral Assignments: Two oral assignments are to be completed for this course.

Topic Leader: Each student will sign up to co-lead/co-teach the class for one of the weekly topics. Students may choose to lead in any format they wish for ~30-45 minutes. Since you all will have read the material prior to class, focus most of the time on discussion/application of the main ideas; this is not a time for merely summarizing articles, although a high-level summary of each is appropriate. The goal is for the class to walk away with a clear understanding of the concepts and how to apply these concepts in the development and execution of research design.

Research Proposal Presentation: You will have the opportunity to present your research proposal to the class. This opportunity is designed to provide (1) practice presenting your research; and (2) feedback from the class on your research ideas. Presentations should be in Powerpoint or similar software and should be ~10 minutes with ~5 minutes for questions.

Course readings

Journal articles will be assigned weekly and are available at: **[link]**

Foundational readings: This course requires knowledge of functional neuroanatomy, the meaning and interpretation of the fMRI BOLD signal, and psychological theories of emotion and social behavior. Relevant foundational

papers are listed first for each week. It is expected that students will familiarize themselves with foundational papers before topics are discussed in class so they have proper grounding in methods and theories.

Evaluation

Evaluation on each assignment is based on the OSU official marks A-E scale. The following course elements contribute to the final grade:

Requirement and grade percentage:

Class Contribution 30%
- Topic Leader (15%)
- Participation in discussions (15%)

Weekly Thought Papers 15%
Research Proposal Presentation 25%
Written Research Proposal 30%

Academic Misconduct

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University's Code of Student Conduct, and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University's Code of Student Conduct and this syllabus may constitute Academic Misconduct.

The Ohio State University's Code of Student Conduct (Section 3335-23-04) defines academic misconduct as: Any activity that tends to compromise the academic integrity of the University or subvert the educational process. Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the University's Code of Student Conduct is never considered an excuse for academic misconduct, so please review the Code of Student Conduct and, specifically, the sections dealing with academic misconduct.

If an instructor suspects that a student has committed academic misconduct in this course, the instructor is obligated by University Rules to report those suspicions to the Committee on Academic Misconduct. If COAM determines that a student violated the University's Code of Student Conduct (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in the course and suspension or dismissal from the University.

If students have questions about the above policy or what constitutes academic misconduct in this course, they should contact the instructor.

Artificial Intelligence and Academic Integrity

There has been a significant increase in the popularity and availability of a variety of generative artificial intelligence (AI) tools, including ChatGPT, Sudowrite, and others. These tools will help shape the future of work, research and technology, but when used in the wrong way, they can stand in conflict with academic integrity at Ohio State.

All students have important obligations under the Code of Student Conduct to complete all academic and scholarly activities with fairness and honesty. Our professional students also have the responsibility to uphold the professional and ethical standards found in their respective academic honor codes. Specifically, students are not to use unauthorized assistance in the laboratory, on field work, in scholarship, or on a course assignment unless such assistance has been authorized specifically by the course instructor. In addition, students are not to submit their work without acknowledging any word-for-word use and/or paraphrasing of writing, ideas or other work that is not your own. These requirements apply to all students undergraduate, graduate, and professional.

To maintain a culture of integrity and respect, these generative AI tools should not be used in the completion of course assignments unless an instructor for a given course specifically authorizes their use. Some instructors may approve of using generative AI tools in the academic setting for specific goals. However, these tools should be used only with the explicit and clear permission of each individual instructor, and then only in the ways allowed by the instructor.

Religious Accommodations

Ohio State has had a longstanding practice of making reasonable academic accommodations for students' religious beliefs and practices in accordance with applicable law. In 2023, Ohio State updated its practice to align with new state legislation. Under this new provision, students must be in early communication with their instructors regarding any known accommodation requests for religious beliefs and practices, providing notice of specific dates for which they request alternative accommodations within 14 days after the first instructional day of the course. Instructors in turn shall not question the sincerity of a student's religious or spiritual belief system in reviewing such requests and shall keep requests for accommodations confidential.

With sufficient notice, instructors will provide students with reasonable alternative accommodations with regard to examinations and other academic requirements with respect to students' sincerely held religious beliefs and practices by allowing up to three

absences each semester for the student to attend or participate in religious activities. Examples of religious accommodations can include, but are not limited to, rescheduling an exam, altering the time of a student's presentation, allowing make-up assignments to substitute for missed class work, or flexibility in due dates or research responsibilities. If concerns arise about a requested accommodation, instructors are to consult their tenure initiating unit head for assistance.

A student's request for time off shall be provided if the student's sincerely held religious belief or practice severely affects the student's ability to take an exam or meet an academic requirement **and** the student has notified their instructor, in writing during the first 14 days after the course begins, of the date of each absence. Although students are required to provide notice within the first 14 days after a course begins, instructors are strongly encouraged to work with the student to provide a reasonable accommodation if a request is made outside the notice period. A student may not be penalized for an absence approved under this policy.

If students have questions or disputes related to academic accommodations, they should contact their course instructor, and then their department or college office. For questions or to report discrimination or harassment based on religion, individuals should contact the Civil Rights Compliance Office.

Policy: Religious Holidays, Holy Days and Observances

Disability Statement

(with Accommodations for Illness)

The university strives to maintain a healthy and accessible environment to support student learning in and out of the classroom. If students anticipate or experience academic barriers based on a disability (including mental health and medical conditions, whether chronic or temporary), they should let their instructor know immediately so that they can privately discuss options. Students do not need to disclose specific information about a disability to faculty. To establish reasonable accommodations, students may be asked to register with Student Life Disability Services (see below for campus-specific contact information). After registration, students should make arrangements with their instructors as soon as possible to discuss your accommodations so that accommodations may be implemented in a timely fashion.

If students are ill and need to miss class, including if they are staying home and away from others while experiencing symptoms of viral infection or fever, they should let their instructor know immediately. In cases where illness interacts with an underlying medical condition, please consult with Student Life Disability Services to request reasonable accommodations.

slds@osu.edu
https://slds.osu.edu/
098 Baker Hall, 113 W. 12th Ave
614-292-3307 phone

Intellectual Diversity

Ohio State is committed to fostering a culture of open inquiry and intellectual diversity within the classroom. This course will cover a range of information and may include discussions or debates about controversial issues, beliefs, or policies. Any such discussions and debates are intended to support understanding of the approved curriculum and relevant course objectives rather than promote any specific point of view. Students will be assessed on principles applicable to the field of study and the content covered in the course. Preparing students for citizenship includes helping them develop critical thinking skills that will allow them to reach their own conclusions regarding complex or controversial matters.

Counseling and Consultation Services

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing.

If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life's Counseling and Consultation Service (CCS) by visiting ccs.osu.edu or calling 614-292-5766. CCS is located on the 4th floor of the Younkin Success Center and 10th floor of Lincoln Tower. You can reach an on-call counselor when CCS is closed at 614-292-5766 and 24-hour emergency help is also available through the 24/7 by dialing 988 to reach the Suicide and Crisis Lifeline.

Course schedule

August 26

Welcome and Introduction to social affective neuroscience

Foundational readings: Inferring psychological constructs from physiological signals and the origins of social affective neuroscience

Cacioppo & Tassinary (1990). Inferring psychological significance from physiological signals. *American Psychologist, 45,* 16-28.

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

Cacioppo, J. T., Berntson, G. G., Sheridan, J. F., & McClintock, M. K. (2000). Multilevel integrative analyses of human behavior: Social neuroscience and the complementing nature of social and biological approaches. *Psychological Bulletin, 126*(6), 829–843. https://doi.org/10.1037/0033-2909.126.6.829

Course activities: Overview of neural systems in social and affective processing

no thought paper today

September 2

Functional neural networks associated with affective and social behavior

Foundational readings: Interpreting the BOLD signal and introduction to network neuroscience

Logothetis & Wandell (2004). Interpreting the BOLD signal. *Annual Review of Physiology, 66,* 735-769.

Mesulam (1998). From sensation to cognition. *Brain,* 121, 1013–1052.

Bassett, D., Sporns, O. Network neuroscience. *Nat Neurosci* **20**, 353–364 (2017). https://doi.org/10.1038/nn.4502

Discussion readings:

Barrett & Satpute (2013). Large-scale brain networks in affective and social neuroscience: Towards an integrative architecture of the human brain. *Current Opinion in Neurobiology*, 23, 361-372.

Amft, M., Bzdok, D., Laird, A. R., Fox, P. T., Schilbach, L., & Eickhoff, S. B. (2015). Definition and characterization of an extended social-affective default network. *Brain Structure and Function*, *220*, 1031-1049.

Feng, et al. (2021). Common brain networks underlying human social interactions: Evidence from large-scale neuroimaging meta-analysis. *Neuroscience & Biobehavioral Reviews, 126*, 289-303.

Bickart, K.C., Dickerson, B.C., & Barrett, L.F. (2014). The amygdala as a hub in brain networks that support social life. Neuropsychologia, 63, 235-48. doi: 10.1016/j.neuropsychologia.2014.08.013. Epub 2014 Aug 23. PMID: 25152530; PMCID: PMC4981504.

September 9

The allostatic brain: Adaptive regulation of affect and behavior

<u>Foundational readings: A brief history of social-affective neuroscience</u>

Barrett, L. F., & Satpute, A. B. (2019). Historical pitfalls and new directions in the neuroscience of emotion. *Neuroscience letters*, *693*, 9-18.

Dalgleish, T., Dunn, B. D., & Mobbs, D. (2009). Affective neuroscience: Past, present, and future. *Emotion Review, 1*, 355-368.

Schulkin, J. (2011). Social allostasis: anticipatory regulation of the internal milieu. *Frontiers in evolutionary neuroscience*, *2*, 111.

<u>Discussion readings:</u>

Barrett, L. F. (2017). The theory of constructed emotion: An active inference account of interoception and categorization. *Social Cognitive and Affective Neuroscience*, doi: 10.1093/scan/nsw154.

Kleckner et al. (2017). Evidence for a large-scale brain system supporting allostasis and interoception in humans. *Nature Human Behavior*, 1, 0069.

Atzil, S., Satpute, A.,B., Zhang, J., Parrish, M.H., Shablack, H., MacCormack, J.K., Leshin, J.C., Goel, S., Brooks, J.A., Xu, Y., Kang, J. & Lindquist, K.A. (2023). The impact of sociality and affective valence on brain activation: A meta-analysis. *NeuroImage, 268,* 119879.

Atzil, S., Gao, W., Fradkin, I. *et al.* (2018). Growing a social brain. *Nat Hum Behav* **2**, 624–636 (2018). https://doi.org/10.1038/s41562-018-0384-6

September 16

Pleasure, displeasure, and arousal: decomposing the neural representation of affect

Foundational reading: On the structure of affect

Posner J, Russell JA, Peterson BS. (2005). The circumplex model of affect: an integrative approach to affective neuroscience, cognitive development, and psychopathology. Dev Psychopathol, 17(3):715-34. doi: 10.1017/S0954579405050340. PMID: 16262989; PMCID: PMC2367156.

Barrett, L. F., & Russell, J. A. (1999). The Structure of Current Affect: Controversies and Emerging Consensus. Current Directions in Psychological Science, 8(1), 10-14. https://doi.org/10.1111/1467-8721.00003

Barrett, L. F., & Bliss-Moreau, E. (2009). Affect as a psychological primitive. *Advances in Experimental Social Psychology*, 41, 167-218.

Discussion readings:

Lindquist et al. (2016). The brain basis of positive and negative affect: Evidence from a meta-analysis of the human neuroimaging literature. *Cerebral Cortex, 5,* 1910-1922.

Satpute, A. B., Kragel, P. A., Barrett, L. F., Wager, T. D., & Bianciardi, M. (2018). Deconstructing arousal into wakeful, autonomic, and affective varieties. *Neuroscience Letters*.

Guitart-Masip et al. (2014). Action versus valence in decision making. Trends in Cognitive Sciences, 18, 194-202.

Feldman, M.J., Bliss-Moreau, E. & Lindquist, K.A. (in press). Linking interoception and emotion. *Trends in Cognitive Sciences.*

September 23

What is emotion?: The brain basis of emotions

Foundational reading: Theories of emotion

Lindquist, K. A. (2013). Emotions emerge from more basic psychological ingredients: A modern psychological constructionist model. *Emotion Review*, *5*, 356-368.

Lindquist et al. (2012). The brain basis of emotion: A meta-analytic review. *Behavioral and Brain Sciences, 35,* 121-143.

Mesquita, B., & Boiger, M. (2014). Emotions in context: A socio-dynamic model of emotions*. Emotion Review*, 6, 298-302.

Lindquist, K. A., Jackson, J. C., Leshin, J., Satpute, A. B., & Gendron, M. (2022). The cultural evolution of emotion. *Nature Reviews Psychology*, *1*(11), 669-681.

Discussion readings:

Guillory, S. A., & Bujarski, K. A. (2014). Exploring emotions using invasive methods: review of 60 years of human intracranial electrophysiology. *Social cognitive and affective neuroscience*, *9*(12), 1880-1889.

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,* 533-540.

Doyle, C.M. Lane, S.T., Brooks, J.A., Wilkins, R.W., Gates, K.M. & Lindquist, K.A. (2022). Unsupervised classification reveals consistency and degeneracy in neural network patterns of emotion. *Social Cognitive and Affective Neuroscience, 17,* 995-1006.

Tottenham N. (2020). Neural meaning making, prediction, and prefrontal-subcortical development following early adverse caregiving. Dev Psychopathol. Dec;32(5):1563-1578. doi: 10.1017/S0954579420001169. PMID: 33427163; PMCID: PMC8168135.

September 30

Development of emotion across the lifespan

Foundational reading: Developmental variation in affective representations across the lifespan

Nook, E.C., Somerville, L.H. (2019). Emotion Concept Development from Childhood to Adulthood. In: Neta, M., Haas, I.J. (eds) Emotion in the Mind and Body. Nebraska Symposium on Motivation, vol 66. Springer, Cham. https://doi.org/10.1007/978-3-030-27473-3_2

Carstensen, L. L. (2021). Socioemotional selectivity theory: The role of perceived endings in human motivation. *The Gerontologist*, *61*(8), 1188-1196.

Discussion readings:

Thomas, E., et al. (2019). Newborn amygdala connectivity and early emerging fear. *Developmental Cognitive Neuroscience, 37*, 1878-9293, https://doi.org/10.1016/j.dcn.2018.12.002.

Mitchell, et al. (2022). Developmental differences in affective representation between prefrontal and subcortical structures. *Social Cognitive and Affective Neuroscience*, 17, 311–322.

Camacho, M.C., Nielsen, A.N., Balser, D. *et al.* (2023). Large-scale encoding of emotion concepts becomes increasingly similar between individuals from childhood to adolescence. *Nat Neurosci* 26, 1256–1266. https://doi.org/10.1038/s41593-023-01358-9

MacCormack, J.K., Stein, A.G., Kang, J., Giovanello, K.S., Satpute, A.B., & Lindquist, K.A. (2020). Affect in the aging brain: A neuroimaging meta-analysis of older vs. younger adult affective experience and perception. *Affective Science, 1,* 128-154.

October 7

No class—Dr. Lindquist at SESP
Work on paper proposal

October 14

Reward: Wanting, liking, and risk

Foundational reading: Learning theory and reward behavior

O'Doherty, et al. (2017). Learning, reward and decision-making. *Annual Review of Psychology, 68, 73-100.*

Discussion readings:

Berridge & Robinson (2003). Parsing reward. *Trends in Neuroscience, 26,* 507-513.

Knutson & Heutell (2015). The risk matrix. *Current Opinion in Behavioral Sciences, 5,* 141-146.

Rudolph, M. D., Miranda-Domínguez, O., Cohen, A. O., Breiner, K., Steinberg, L., Bonnie, R. J., ... & Fair, D. A. (2017). At risk of being risky: The relationship between "brain age" under emotional states and risk preference. *Developmental cognitive neuroscience*, *24*, 93-106.

Samanez-Larkin GR, & Knutson B. (2015). Decision making in the ageing brain: changes in affective and motivational circuits. Nat Rev Neurosci, 16(5):278-89. doi: 10.1038/nrn3917.

October 21

Feeling better: Emotion regulation

Foundational readings:

Gross, J. J. (2015a). Emotion regulation: Current status and future prospects. *Psychological Inquiry*, *26*, 1-26.

Gross, J. J. (2015b). The extended process model of emotion regulation: Elaborations, applications, and future directions. *Psychological Inquiry*, *26*, 130-137.

Discussion readings:

Ochsner et al. (2012). Functional imaging studies of emotion regulation: A synthetic review and evolving model of the cognitive control of emotion. *Annals of the New York Academy of Sciences, 1251,* E1-24.

Morawetz, et al. (2020). Multiple large-scale neural networks underlying emotion regulation. *Neuroscience & Biobehavioral Reviews, 116*, 382-395.

Underwood et al. (2021). Networks underpinning emotion: A systematic review and synthesis of functional and effective connectivity. *NeuroImage, 243,* 118486.

Guassi Moreira JF, McLaughlin KA, Silvers JA. (2021). Characterizing the network architecture of emotion regulation neurodevelopment. *Cereb Cortex, 2*9, 4140-4150. doi: 10.1093/cercor/bhab074.

Martins, B., Ponzio, A., Velasco, R., Kaplan, J., & Mather, M. (2015). Dedifferentiation of emotion regulation strategies in the aging brain. *Social cognitive and affective neuroscience*, *10*(6), 840-847.

October 28

Mind perception: Perceptions of the self and others

<u>Foundational readings: Theories of mind perception and empathy</u>

Waytz, A., Gray, K., Epley, N., & Wegner, D. M. (2010). Causes and consequences of mind perception. *Trends in cognitive sciences*, *14*(8), 383-388.

De Waal, F. B., & Preston, S. D. (2017). Mammalian empathy: Behavioural manifestations and neural basis. *Nature Reviews Neuroscience*, *18*(8), 498-509.

Alcalá-López, et al. (2019). Building blocks of social cognition: Mirror, mentalize, share? *Cortex*, 118, 4-18.

<u>Discussion readings:</u>

Schurz, M., Radua, J., Tholen, M. G., Maliske, L., Margulies, D. S., Mars, R. B., ... & Kanske, P. (2021). Toward a hierarchical model of social cognition: A neuroimaging meta-analysis and integrative review of empathy and theory of mind. *Psychological Bulletin*, *147*, 293.

Denny, B. T et al. (2012). A meta-analysis of functional neuroimaging studies of self-and other judgments reveals a spatial gradient for mentalizing in medial prefrontal cortex. *Journal of cognitive Neuroscience*, *24*(8), 1742-1752.

Merritt, C.C., MacCormack, J., Stein, A. G., Lindquist, K. A., & Muscatell, K. (2021). The neural underpinnings of intergroup social cognition: An fMRI meta-analysis. *Social Cognitive and Affective Neuroscience, 16,* 903-916.

Van der Cruijsen, et al. (2019). Direct and reflected self-concept show increasing similarity across adolescence: A functional neuroimaging study. *Neuropsychologia,* 407-417.

Cosme, et al. (2022). Testing the adolescent social reorientation model during self and other evaluation using hierarchical growth curve modeling with parcellated fMRI data. *Developmental Cognitive Neuroscience, 101089.*

November 4

The tie that binds: neural correlates of social affiliation

Foundational readings: Social baseline theory and the primacy of social connection

Beckes, L. and Coan, J.A. (2011), Social Baseline Theory: The role of social proximity in emotion and economy of action. *Social and Personality Psychology Compass, 5,* 976-988.

Feldman, R. (2007). Parent–infant synchrony: Biological foundations and developmental outcomes. *Current directions in psychological science*, *16*(6), 340-345.

Discussion readings:

Atzil, S., Touroutoglou, A., Rudy, T., Salcedo, S., Feldman, R., Hooker, J. M., ... & Barrett, L. F. (2017). Dopamine in the medial amygdala network mediates human bonding. *Proceedings of the National Academy of Sciences*, *114*, 2361-2366.

Wu, Y., Veerareddy, A., Lee, M. R., Bellucci, G., Camilleri, J. A., Eickhoff, S. B., & Krueger, F. (2021). Understanding identification-based trust in the light of affiliative bonding: Meta-analytic neuroimaging evidence. *Neuroscience & Biobehavioral Reviews*, *131*, 627-641.

Inagaki T.K., Muscatell, K.A., Irwin, M.R., Moieni, M., Dutcher, J.M., Jevtic, I., Breen, E.C., & Eisenberger, N.I. (2015). The role of the ventral striatum in inflammatory-induced approach toward support figures. *Brain Behav Immun,* 44, 247-52.

Balters, S., Miller, J. G., & Reiss, A. L. (2023). Expressing appreciation is linked to interpersonal closeness and inter-brain coherence, both in person and over Zoom. *Cerebral Cortex*, *33*(11), 7211-7220.

Xiao, Y., Alkire, D., Moraczewski, D., & Redcay, E. (2022). Developmental differences in brain functional connectivity during social interaction in middle childhood. *Developmental Cognitive Neuroscience*, *54*, 101079.

November 11

Social status and rejection

<u>Foundational readings: The sting of interpersonal rejection</u>

Slavich, G. M., O'Donovan, A., Epel, E. S., & Kemeny, M. E. (2010). Black sheep get the blues: A psychobiological model of social rejection and depression. *Neuroscience & Biobehavioral Reviews*, *35*(1), 39-45.

<u>Discussion readings:</u>

Mwilambwe-Tshilobo & Spreng (2021). Social exclusion reliably engages the default network: A meta-analysis of Cyberball. *NeuroImage, 227*, 117666.

Muscatell et al. (2016). Neural mechanisms linking social status and inflammatory responses to social stress. *Social Cognitive and Affective Neuroscience, 11,* 915-922.

Rodman, A. M., Powers, K. E., & Somerville, L. H. (2017). Development of self-protective biases in response to social evaluative feedback. *Proceedings of the National Academy of Sciences*, *114*(50), 13158-13163.

Mwilambwe-Tshilobo, L., Setton, R., Bzdok, D., Turner, G. R., & Spreng, R. N. (2023). Age differences in functional brain networks associated with loneliness and empathy. *Network Neuroscience*, *7*(2), 496-521.

November 18

Putting social-affective processing in context

<u>Foundational readings: On persons in situations</u>

Furr, R. M., & Funder, D. C. (2018). Persons, situations, and person-situation interactions. *Handbook of personality: Theory and research*, *4*.

Ellis, B. J., Boyce, W. T., Belsky, J., Bakermans-Kranenburg, M. J., & Van IJzendoorn, M. H. (2011). Differential susceptibility to the environment: An evolutionary–neurodevelopmental theory. *Development and psychopathology*, *23*(1), 7-28.

Discussion readings:

Alvarez, et al. (2022). Lower socioeconomic position is associated with greater activity in and integration within an allostatic-interoceptive brain network in response to affective stimuli. Journal of Cognitive Neuroscience, 34, 1906-1927.

Pugh et al. (2022). Emotion depends on context, culture, and their interaction: Evidence from effective connectivity. *Social Cognitive and Affective Neuroscience, 17,* 206-217.

Jorgensen, et al. (2023). Neighborhood disadvantage, race/ethnicity and neural sensitivity to social threat and reward among adolescents, *Social Cognitive and Affective Neuroscience*, 18.

Colich, N. L., Rosen, M. L., Williams, E. S., & McLaughlin, K. A. (2020). Biological aging in childhood and adolescence following experiences of threat and deprivation: A systematic review and meta-analysis. *Psychological Bulletin, 146*(9), 721–764. https://doi.org/10.1037/bul0000270

November 25

No class—Thanksgiving

December 2

Proposal Presentations

December 9

Research paper due