

PSYC 2821 Cognition in Context:

Mental Health & Well-Being

3 points

Spring 2022

TR 11:40a-12:55p

Location: TBD

Instructor: Dr. Caroline Marvin

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Bulletin description:

Attention, perception, memory, executive function, decision-making – we often learn about these processes and more in isolation. But these cognitive processes occur in context, influencing and being influenced by our thoughts, behaviors, and emotions, and by the social and societal structures in which we live.

Course description:

This section of Cognition in Context will focus on the cognitive processes supporting and affected by mental health and well-being, offering a perspective on cognitive psychology that emphasizes its connections to psychopathology, positive psychology and to other disciplines that aim to maximize people's well-being on an individual and societal level.

Class time and readings are generally structured such that we will explore key concepts and research related to each cognitive process and connect this foundational knowledge to the diagnosis and treatment of psychopathology and to questions related to individual and societal well-being. As illustration, in one week, we will learn core principles of habit learning and conditioning and examine the ways in which we can use what we know about how habits are formed and broken to engage in healthier habits and we will explore the relevance of classical conditioning to anxiety disorders and their treatment. In a week devoted to decision-making, we

will examine how we typically make judgments under uncertainty and the role of neurodiversity in understanding cognitive biases and other aspects of judgment and decision-making. We will also investigate the potential role of governments in influencing individual and societal well-being through nudges and the importance of research integrity and replication, particularly when using research to potentially influence policy.

Learning objectives:

- Core concepts and theories in cognition & well-being:
 - Identify major concepts, theories, and research findings in:
 - Cognition
 - Psychopathology
 - Individual subjective well-being
 - Psychology's relationship with societal well-being
 - Explain how cognitive processes such as attention, perception, memory, language, problem-solving, etc. influence and are influenced by well-being

- Collecting, assessing, and synthesizing empirical research: Identify the kinds of questions psychologists ask about cognition and well-being at different levels of analysis and find, identify, and appropriately cite relevant empirical research in the field. Evaluate the methods, results, limitations, and broader implications of research findings and communicate these findings in oral, written, and graphical form. Evaluate the accuracy of popular news reports about empirical research and the appropriateness of graphs and other visualizations of data.

- Applications of research in cognition & well-being: Apply knowledge and scientific reasoning to understand and promote well-being in our own lives and in the lives of others. Evaluate the applicability of research findings to real-world scenarios and leverage those findings to inform our understanding and decision-making regarding the health and well-being of individuals and societies.

Prerequisites:

PSYC UN1001, PSYC UN1021, or equivalent introductory psychology course.

Role in the Psychology Curriculum:

This course can be used to fulfill the following requirements:

- For the Neuroscience & Behavior major, this course can fulfill the P4 Additional 2000-level lecture course requirement

- For the Psychology major or concentration, this course can be used to fulfill the Special Elective or additional elective course requirement. With permission of the Director of Undergraduate Studies, this course can also be used to fulfill the Group 1 Perception & Cognition requirement.
- For the Postbaccalaureate certificate program in Psychology, this course can be used to fulfill the elective requirement. With permission from the program director, this course could also be used to fulfill the Group 1 Perception & Cognition requirement.

Course format:

This course will incorporate more traditional, interactive lectures, as well as team-based, in-class projects involving case studies and other challenges.

Communication with Instructor & TAs:

We are very much looking forward to the opportunity to get to know you this semester. We each hold weekly office hours, so please make an effort to attend. You don't need to have a specific question! We're happy to talk about course-related material, but we can also talk about lab research, course planning, careers, etc. If you have the option of either emailing or signing up for office hours, please do everything you can to visit office hours. You'll get an immediate answer to your question, and we'll have the chance to get to know each other. If you do need to email, please help us not to miss your email by writing the subject line as "UN2821: [topic of email]." We can't always respond to emails right away, so if you haven't heard back from us after a few days, please feel free to ping us again – or, better yet, come to office hours!

Course materials:

In addition to textbook readings, this course will rely heavily on the empirical literature and academic reviews, as well as the occasional popular science article, podcast, and video. Pdfs and/or links to these materials will be posted under the relevant Module on Canvas. Textbook readings will be drawn primarily from the following textbook, available as a pdf or e-book web page for free through the Columbia library system:

Reisberg, D. (Ed.). (2013). *The Oxford handbook of cognitive psychology*. Oxford University Press. [CLIO link]

Course Components

Before-class preparation -- quizzes and reflection papers:

We will spend our time in class tackling big questions in cognitive psychology, working together as a class and in smaller teams to discuss empirical and review articles and their implications for mental health and individual and societal well-being. In order to be able to fully participate in these discussions, we need to make sure that we come to class prepared, having spent some time reading (/watching/listening to) the materials and generating questions for discussion. To help facilitate this preparation, we'll have short, open-book quizzes on Canvas or reflection papers on the assigned class materials before most class sessions. These quizzes or reflection papers will give you a chance to check your understanding and enable you to engage with the sometimes complex material multiple times in order to better facilitate your understanding. Quizzes and reflection papers are due the day before class, and, as the goal is to prepare you for that day's class, there are no make-up assignments.

Team-based challenges:

While class time will incorporate some more traditional lecture-focused teaching, some portion of synchronous class time will be devoted to working in teams on challenges related to the course material.

Midterm papers:

You will have two opportunities during the semester to apply your content knowledge and critical thinking skills in essays on real-world science issues. These will be in open-note, take-home test form. We will release a selection of essay prompts and supporting materials at the beginning of the exam window, and you will be able to choose your essay prompt and prepare your essay to submit by the indicated deadline. Our goal is for you to apply your knowledge and skills in critically evaluating empirical research in cognitive psychology and connecting research findings to larger questions of individual and societal well-being.

Final individual paper:

Partway through the semester, we will distribute a list of potential questions related to cognitive psychology and individual and societal well-being. You will select one of these questions and find relevant scientific research and synthesize it in a final project that can take the form of a literature review, a policy paper, an amicus brief, etc. This assignment will be scaffolded such that you will first submit your topic and an annotated bibliography. We will provide feedback on this initial proposal, potentially suggesting additional papers, keywords, areas of focus, etc. The final draft will be due at the end of the semester, in lieu of a final exam.

Grading:

- Before-class preparation (reflection papers & quizzes): 30%
- Midterm paper 1: 15%
- Midterm paper 2: 20%
- Final project: 35%
 - Topic proposal and annotated bibliography: 5%
 - Final draft: 30%

Our goal in this course is for you to achieve the rigorous learning outcomes we have set. To give you a little flexibility and to maximize your opportunities to achieve these learning outcomes, you will also be given 2 “tokens” for the course. You may use a token for any of the following:

- A free quiz credit or reflection paper credit, to be claimed anytime *before* the deadline for that quiz
- A 24-hour extension on a midterm paper or on a component of the final paper, to be claimed at least 12 hours *before* the original deadline

Course policies**Fostering an inclusive classroom:**

Our aim is to foster a learning environment that both supports a diversity of perspectives and experiences and encourages you to expand your understanding. Please reach out to us with any concerns or suggestions you may have to better address your learning needs and to improve the effectiveness of this course. We look forward to working together to create a classroom community built on mutual respect and inclusivity.

Students who may require accommodations should contact Prof. Marvin before or during the first week of class. You should also contact the Office of Disability Services (ODS) in Lerner Hall before the start of the course to register for these accommodations. The procedures for registering with ODS can be found at <https://health.columbia.edu/content/disability-services> or by calling (212) 854-2388.

Health & well-being:

Many of us have periods in which our mental health and well-being suffer, especially during such difficult and uncertain times. We urge you to take care of yourselves – and of each other. Please prioritize your mental health and wellbeing and know that there are many resources available to you both within our classroom community and throughout the university:

<https://health.columbia.edu/content/counseling-and-psychological-services>

<http://blogs.cuit.columbia.edu/nightline/>

<https://universitylife.columbia.edu/student-resources-directory#health>

We are in this together. Please reach out for help if you need it, and, if you see others who are struggling, please make sure they know how to find the support they need.

Ensuring Academic Integrity:

As members of this academic community, we are responsible for maintaining the highest level of personal and academic integrity, which includes presenting only our own work on assignments and exams. You can find detailed definitions and examples in Columbia University's Guide to Academic Integrity (<https://www.cc-seas.columbia.edu/integrity>). The semester progresses very quickly, and there is a lot of material to learn. If you find yourself in a situation – e.g., starting an assignment too late – in which it seems like the best option may be to violate your academic integrity, please talk to us. Together, we can work out a solution. It is far better to spend a token to obtain an extension or to lose some points by handing in an assignment late than to compromise your academic integrity and potentially put your academic standing at the university in jeopardy. Plagiarism—whether intentional or inadvertent—is a serious violation of academic integrity. If you have any questions about what constitutes plagiarism and/or how to properly cite sources, please come to us. We are more than happy to help.

Schedule

The schedule below is preliminary and subject to minor adjustments as needed. The primary textbook, The Oxford Handbook of Cognitive Psychology, is referred to below as OHCP. All the readings will be posted as pdfs on Courseworks. In order to keep the reading load manageable, we will annotate the longer readings to indicate which sections to focus on.

Readings subject to changes. Please always refer to the Courseworks module and page for updated readings and links.

Week	Topic & motivating questions	Readings and Assignments
<p>Week 1 1/18 & 1/20</p>	<p>Introduction & research methods</p> <p><i>How do we measure and manipulate human cognition?</i></p> <p><i>How do we study well-being?</i></p> <p><i>How do we assess the relationship between cognition & well-being?</i></p>	<p>Mehl, M. R. (2014). Conducting Psychology Research in the Real World. <i>Noba Textbook Series: Psychology</i>. [http://nobaproject.com/modules/conducting-psychology-research-in-the-realworld].</p> <p>Margolis, S., & Lyubomirsky, S. (2018). Cognitive outlooks and well-being. In E. Diener, S. Oishi, & L. Tay (Eds.), <i>Handbook of well-being</i>. Salt Lake City, UT: DEF Publishers. DOI:nobascholar.com</p>

<p>Week 2</p> <p>1/25 & 1/27</p>	<p>Perception</p> <p><i>How much of what we see in the outside world depends on what's inside our heads?</i></p> <p><i>How does our ability to perceive our internal states affect our health and well-being?</i></p> <p><i>How do race, gender, power etc. influence face perception and biases in face perception and how does this affect societal well-being?</i></p>	<p>Dunning, D., & Balcetis, E. (2013). Wishful seeing: How preferences shape visual perception. <i>Current Directions in Psychological Science</i>, 22(1), 33-37.</p> <p>Quadt, L., Critchley, H. D., & Garfinkel, S. N. (2018). The neurobiology of interoception in health and disease. <i>Annals of the New York Academy of Sciences</i>, 1428(1), 112-128.</p> <p>Rhodes, G. (2013). Face Recognition. [OHCP]</p> <p><u>Buolamwini, J., & Gebru, T. (2018, January). Gender shades: Intersectional accuracy disparities in commercial gender classification. In Conference on fairness, accountability and transparency (pp. 77-91). PMLR.</u></p>
<p>Week 3</p> <p>2/1 & 2/3</p>	<p>Attention</p> <p><i>How do we pay attention to what's going on inside and outside our heads?</i></p> <p><i>How does mindfulness influence well-being?</i></p> <p><i>How is attention affected in attention deficit and hyperactivity disorder?</i></p> <p><i>What do we know about disparities in diagnosis and treatment of ADHD based on age, birth month,</i></p>	<p>Rensink, R.A. (2013). Perception and attention. [OHCP]</p> <p>Jazaieri, H., & Shapiro, S. (2017). Mindfulness and well-being. In <i>The happy mind: Cognitive contributions to well-being</i> (pp. 41-58). Springer, Cham.</p> <p>Wolraich, M. L., Chan, E., Froehlich, T., Lynch, R. L., Bax, A., Redwine, S. T., ... & Hagan, J. F. (2019). ADHD diagnosis and treatment guidelines: a historical perspective. <i>Pediatrics</i>, 144(4).</p> <p>Coker, T. R., Elliott, M. N., Toomey, S. L., Schwebel, D. C., Cuccaro, P., Emery, S. T., ... & Schuster, M. A. (2016). Racial and ethnic</p>

	<i>race/ethnicity and other factors?</i>	disparities in ADHD diagnosis and treatment. <i>Pediatrics</i> , 138(3).
Week 4 2/8 & 2/10	Learning & habits <i>How does implicit learning work and how do we learn and unlearn habits?</i> <i>How is learning related to psychological disorders and their treatment and to well-being?</i>	<p>Carden, L., & Wood, W. (2018). Habit formation and change. <i>Current Opinion in Behavioral Sciences</i>, 20, 117-122.</p> <p>Beshears, J., Lee, H. N., Milkman, K. L., Mislavsky, R., & Wisdom, J. (2021). Creating exercise habits using incentives: the trade-off between flexibility and routinization. <i>Management Science</i>, 67(7), 4139-4171.</p> <p>De Houwer, J. (2020). Revisiting classical conditioning as a model for anxiety disorders: A conceptual analysis and brief review. <i>Behaviour research and therapy</i>, 127, 103558.</p> <p>Kim, J. H. (2017). Reducing fear during childhood to prevent anxiety disorders later: insights from developmental psychobiology. <i>Policy Insights from the Behavioral and Brain Sciences</i>, 4(2), 131-138.</p>

<p>Week 5</p> <p>2/15 & 2/17</p>	<p>Memory</p> <p><i>How does episodic memory work?</i></p> <p><i>How is episodic future thinking related to well-being?</i></p> <p><i>How do our memories support our emotional well-being?</i></p> <p><i>How is memory affected in psychological disorders?</i></p> <p>**Midterm paper #1 due Monday 2/21**</p>	<p>Gallo, D.A. & Wheeler, M.E. (2013). Episodic memory. [OHCP]</p> <p>Schacter, D. L., Benoit, R. G., & Szpunar, K. K. (2017). Episodic future thinking: Mechanisms and functions. <i>Current opinion in behavioral sciences</i>, 17, 41-50.</p> <p>Barry, T. J., Chiu, C. P., Raes, F., Ricarte, J., & Lau, H. (2018). The neurobiology of reduced autobiographical memory specificity. <i>Trends in Cognitive Sciences</i>, 22(11), 1038-1049.</p> <p>Speer, M. E., & Delgado, M. R. (2017). Reminiscing about positive memories buffers acute stress responses. <i>Nature Human Behaviour</i>, 1(5), 1-9.</p>
<p>Week 6</p> <p>2/22 & 2/24</p>	<p>Memory (cont.) & Sleep</p> <p><i>What does it mean to be confident in our memories?</i></p> <p><i>How does forgetting help us remember?</i></p> <p><i>How does sleep support memory and well-being?</i></p>	<p>Dunlosky, J. & Thiede, K.W. (2013). Metamemory. [OHCP]</p> <p>Laney, C. (2013). Sources of memory errors. [OHCP]</p> <p>Poe, G. R. (2017). Sleep is for forgetting. <i>Journal of Neuroscience</i>, 37(3), 464-473.</p> <p>Paller, K. A., Creery, J. D., & Schechtman, E. (2021). Memory and sleep: how sleep cognition can change the waking mind for the better. <i>Annual review of psychology</i>, 72, 123-150.</p>

<p>Week 7</p> <p>3/1 & 3/3</p>	<p>Decision-making</p> <p><i>How do our judgments of uncertainty and risk influence our behavior and well-being?</i></p> <p><i>What is the role of government and other societal structures in promoting well-being?</i></p>	<p>Newell, B. R. (2013). Judgment under uncertainty. [OHCP]</p> <p>Rozenkrantz, L., D’Mello, A. M., & Gabrieli, J. D. (2021). Enhanced rationality in autism spectrum disorder. <i>Trends in Cognitive Sciences</i>.</p> <p>Benartzi, S., Beshears, J., Milkman, K. L., Sunstein, C. R., Thaler, R. H., Shankar, M., ... & Galing, S. (2017). Should governments invest more in nudging?. <i>Psychological Science</i>, 28(8), 1041-1055.</p> <p>Evidence of fraud in a field experiment about dishonesty (2021). DataColada.org. http://datacolada.org/98</p>
<p>Week 8:</p> <p>3/8</p>	<p>Language</p> <p><i>How does language reflect our mental health and well-being?</i></p> <p><i>Can we diagnose mental health disorders using language?</i></p>	<p>Pennebaker, J. W., Mehl, M. R., & Niederhoffer, K. G. (2003). Psychological aspects of natural language use: Our words, our selves. <i>Annual Review of Psychology</i>, 54(1), 547-577.</p> <p>Guntuku, S. C., Yaden, D. B., Kern, M. L., Ungar, L. H., & Eichstaedt, J. C. (2017). Detecting depression and mental illness on social media: an integrative review. <i>Current Opinion in Behavioral Sciences</i>, 18, 43-49.</p>

<p>Week 8: 3/10</p>	<p>Social media, technology, and well-being</p> <p><i>How is social media technology designed to capitalize on cognitive processes, such as attention, habits, and learning?</i></p> <p><i>What is the evidence for and against the effects of social media use on mental health and well-being?</i></p>	<p>Vuorre, M., Orben, A., & Przybylski, A. K. (2021). There is no evidence that associations between adolescents' digital technology engagement and mental health problems have increased. <i>Clinical Psychological Science</i>, 2167702621994549.</p> <p>Bayer, J. B., Triêu, P., & Ellison, N. B. (2020). Social media elements, ecologies, and effects. <i>Annual review of psychology</i>, 71, 471-497.</p>
<p>Week 9 3/15 & 3/17</p>	<p>Spring break</p>	<p>-----</p>
<p>Week 10 3/22 & 3/24</p>	<p>Working memory & executive function</p> <p><i>How does working memory work and can training improve working memory?</i></p> <p><i>How do anxiety and threats to sense of belonging affect working memory and executive function?</i></p> <p><i>How do mindsets affect well-being?</i></p>	<p>Baddeley, A. (2012). Working memory: theories, models, and controversies. <i>Annual review of psychology</i>, 63, 1-29.</p> <p>Diamond, A., & Ling, D. S. (2016). Conclusions about interventions, programs, and approaches for improving executive functions that appear justified and those that, despite much hype, do not. <i>Developmental cognitive neuroscience</i>, 18, 34-48.</p> <p>Moran, T. P. (2016). Anxiety and working memory capacity: A meta-analysis and narrative review. <i>Psychological bulletin</i>, 142(8), 831.</p> <p>Dweck, C. S., & Yeager, D. S. (2019). Mindsets: A view from two eras. <i>Perspectives on Psychological science</i>, 14(3), 481-496.</p>

<p>Week 11: 3/29 & 3/31</p>	<p>Impulsivity & self-regulation</p> <p><i>How do we measure impulsivity across the lifespan?</i></p> <p><i>What is the evidence for and against training children in self-regulation strategies?</i></p> <p>**Midterm paper #2 due Monday 3/28**</p>	<p>Morasch, K. C., Raj, V., & Bell, M. A. (2013). The development of cognitive control from infancy through childhood. [OHCP]</p> <p>Inzlicht, M., Werner, K. M., Briskin, J. L., & Roberts, B. W. (2021). Integrating models of self-regulation. <i>Annual Review of Psychology</i>, 72, 319-345.</p> <p>Duckworth, A. L., Milkman, K. L., & Laibson, D. (2018). Beyond willpower: Strategies for reducing failures of self-control. <i>Psychological Science in the Public Interest</i>, 19(3), 102-129.</p> <p>Falk, A., Kosse, F., & Pinger, P. (2019). Revisiting the Marshmallow Test: On the Interpretation of Replication Results. <i>Psychological Science</i>, 29(7), 1159-1177.</p>
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<p>Week 12</p> <p>4/5 & 4/7</p>	<p>Emotion, stress, & emotion regulation</p> <p><i>What is the role of positive emotion in well-being?</i></p> <p><i>What is the role of emotion, emotion regulation, and empathy in intergroup and interpersonal relations?</i></p>	<p>Kiken, L. G., & Fredrickson, B. L. (2017). Cognitive aspects of positive emotions: A broader view for well-being. In <i>The happy mind: Cognitive contributions to well-being</i> (pp. 157-175). Springer, Cham.</p> <p>Pressman, S. D., Jenkins, B. N., & Moskowitz, J. T. (2019). Positive affect and health: what do we know and where next should we go?. <i>Annual Review of Psychology, 70</i>, 627-650.</p> <p>Duker, A., Green, D. J., Onyeador, I. N., & Richeson, J. A. (2021). Managing emotions in the face of discrimination: The differential effects of self-immersion, self-distanced reappraisal, and positive reappraisal. <i>Emotion</i>.</p> <p>Zaki, J. (2020). Integrating empathy and interpersonal emotion regulation. <i>Annual Review of Psychology, 71</i>, 517-540.</p>
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<p>Week 13</p> <p>4/12 & 4/14</p>	<p>Social aspects of cognition</p> <p><i>How do we understand the thoughts and behaviors of others?</i></p> <p><i>How is social interaction fundamental to cognition?</i></p> <p><i>How do implicit social cognitions affect our attitudes and interactions with each other?</i></p> <p><i>What are the practical implications of focusing on implicit vs. explicit social cognition?</i></p>	<p>Samson, D. (2013). Theory of mind. [OHCP]</p> <p><u>Dunbar, R (2016). The social brain hypothesis and human evolution. <i>Oxford research encyclopedia of psychology</i>.</u></p> <p>Greenwald, A. G., & Lai, C. K. (2020). Implicit social cognition. <i>Annual Review of Psychology</i>, 71, 419-445.</p>
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<p>Week 14 4/19 & 4/21</p>	<p>Creativity, curiosity, wisdom, and meaning in life</p> <p><i>How do curiosity and creativity work and how do they influence well-being?</i></p> <p><i>How do wisdom and meaning making influence well-being?</i></p> <p><i>What do we mean by a psychologically rich life?</i></p>	<p>Simonton, D.K. & Damian, R.I. (2013). Creativity. [OHCP]</p> <p>Weststrate, N. M., & Glück, J. (2017). Wiser but not sadder, blissful but not ignorant: Exploring the co-development of wisdom and well-being over time. In <i>The happy mind: Cognitive contributions to well-being</i> (pp. 459-480). Springer, Cham.</p> <p>King, L. A., & Hicks, J. A. (2021). The science of meaning in life. <i>Annual Review of Psychology</i>, 72, 561-584.</p> <p>Oishi, S., & Westgate, E. C. (2021). A psychologically rich life: Beyond happiness and meaning. <i>Psychological Review</i>.</p>
<p>Week 15 4/26 & 4/28</p>	<p>Well-being at the individual and societal level</p> <p><i>How can cognitive psychology inform public policy?</i></p> <p><i>How do public policy and environmental structures affect cognition and well-being?</i></p> <p><i>What are the effects of socioeconomic inequality on cognition and well-being?</i></p>	<p>Velez, M. A., & Moros, L. (2021). Have behavioral sciences delivered on their promise to influence environmental policy and conservation practice?. <i>Current Opinion in Behavioral Sciences</i>, 42, 132-138.</p> <p>Oforu, E. K., Chambers, M. K., Chen, J. M., & Hehman, E. (2019). Same-sex marriage legalization associated with reduced implicit and explicit antigay bias. <i>Proceedings of the National Academy of Sciences</i>, 116(18), 8846-8851.</p> <p>Jackson, J. C., & Payne, K. (2021). Cognitive barriers to reducing income inequality. <i>Social Psychological and Personality Science</i>, 12(5), 687-696.</p> <p>Wienk M. N. A., Buttrick, N. R., & Oishi. S. (2021). The social psychology of economic inequality.</p>

		<u>redistribution, and subjective well-being. <i>European Review of Social Psychology</i>, advance online publication</u>
DATE TBD		Final paper due