

PSYC3830: Psychology and the Internet  
Fall 2024

For an interactive, web-based version of this syllabus, check out <https://psychandtheinternet.netlify.app/>.

### Course Information

Psychology and the Internet  
Thursdays, 10:10am-12pm

### Instructor Information

Ben Silver  
He/him/his  
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Office hours: XX or by appointment

### Learning Objectives

1. Students will be able to **critique** new/innovative psychology research methods and subdisciplines in the context of more traditional methods.
2. Students will be able to **conduct** data scraping procedures for real internet data that can help answer psychological research questions.
3. Students will be able to **develop** real-world recommendations for internet regulations, internet use, and technology design based on psychological principles.

### Course Description

If the purpose of psychology is to understand human behavior, then we need to ensure that the questions we ask and the methods we use accurately reflect the world in which human behavior takes place. Increasingly, human behavior takes place online. In this course, we will approach the intersection of psychology and the internet from two perspectives: the tools we use and the questions we ask. Traditionally, psychology experiments have been carried out in a lab with controlled experiments. But the internet gives us a trove of new tools and datasets to understand psychological processes that have been studied for decades. For example, to study emotions, we can look at personal disclosures on Reddit. To study curiosity, we can look at how people use search engines. In addition, we can also ask new psychological questions that reflect our changing world. How do people present themselves and interact with others online? Why do people share misinformation on social media when they know it's false? It is important to understand not just how people behave generally, but how they behave online specifically, and how that differs from behavior in offline settings. Each week of the course will focus on a different subset of psychology research about the internet. The first half of the course will focus on new tools to probe classic psychological phenomena, and the second half of the course will focus on new research questions native to online environments.

This is a discussion seminar for advanced undergraduates. Instructional methods include readings, in-person discussions, personal reflections, and two projects. The emphasis will be on psychology literature and psychological principles, but students from related disciplines, including neuroscience, computer science, data science, and information science, among others, are welcome in the course. Prerequisite: At least one previous psychology/cog sci course OR a data science course in any department. This is a 4-credit course.

### **Role in the Psychology Curriculum**

This course is designed to give advanced undergraduate students in the Psychology Department a deeper understanding of the questions asked and the techniques used when studying online behavior. It can fulfill the Seminar requirement or the Special Elective of the Psychology Major and the post-baccalaureate Psychology Certificate; for the Neuroscience & Behavior Major, it can be used to fulfill the P5 Advanced Seminar requirement.

### **Assignments**

#### *Data tutorial (25 points)*

The first half of this course will focus on new tools to probe classic psychological phenomena. In order to apply what you've learned about the internet as a rich source of psychology data, your midterm assignment will be to construct a simple, step-by-step tutorial to present to our class on how to download data from one data source, and some of the things you can do with that data once you have it in hand. What makes this a tutorial is that your document will include both code and explanations of what the code does. These tutorials will also live on the syllabus website and can be accessed after the class ends so you can conduct psychology research online on your own. As part of the assignment, you will first submit a rough draft, which you will revise based on my feedback, and you will present your tutorial to the class. Please see the assignment sheet for more details.

#### *Op-ed (25 points)*

The second half of this course will focus on new research questions native to online environments. Many of the psychological theories and research questions that we will discuss in class have real implications for internet use in everyday life. Legislative proposals to regulate online environments have been gaining steam, but rarely are those proposals rooted in rigorous understandings of psychology and human behavior. Furthermore, the motivation for these policies is not often effectively communicated to the public. Your final assignment is to write an op-ed for a specific publication (your choice!) highlighting one aspect of the internet that encourages harmful or self-destructive behavior, and ideas for how to change/improve it. I encourage you to think of this assignment as an opportunity to write something that you can actually try to get published in a general audience publication. Please see the assignment sheet for more details.

#### *Reading log (16.5 points) and discussion leader (3.5 points)*

Reading log: You will be required to keep a reading log to record your thoughts while completing your readings. The reading log will exist in a Google document that can be

viewed by the rest of the class, as well as by me. You should structure the reading log according to the provided template. For each week's readings, I will provide you with guiding questions that you will use to structure your thoughts. I will check the reading log each week for completion.

Discussion leader: In addition, you will each serve as a discussion leader for one week of the class. As discussion leader, it is your responsibility to help me facilitate/carry the in-class discussion. You will be expected to have read everyone else's reading logs for that week. You should also come to class prepared with discussion questions and discussion points (in addition to that week's guiding questions).

#### *Participation reflection (5 points)*

Midway through the course, you will write a 250-word reflection on how you think you are doing in your participation in the course. You should use the participation rubric to help you write your reflection. I will give you feedback on your reflection about where I agree and disagree. The purpose of this assignment is for you to be honest with yourself about your relationship to the course while also getting a concrete sense from me about how are you doing. You will receive full credit on this assignment if your reflection touches on all aspects of the participation rubric.

#### *Syllabus quiz (5 points)*

Please complete a syllabus quiz on Canvas by the second week of class. The purpose of this quiz is to ensure that you have familiarized yourself with the course assignments and policies. You may reference the syllabus when taking the quiz.

#### Assignment breakdown

Data tutorial: 25%

Op-ed: 25%

Reading log: 16.5%

Discussion leader: 3.5%

Participation: 20%

Participation reflection: 5%

Syllabus quiz: 5%

### **Course Policies**

#### *Participation (20 points)*

Participation is a vague term that means something different to every instructor, and yet it is incredibly important in a seminar class such as this. For the purposes of this class, participation is evidence that you are engaging with the readings and the class material. This evidence can occur in a number of ways. First, it means being an active and considerate member of full class discussions. (Active means you step up and share your thoughts, considerate means you step back and not take up too much space.) It also means completing in-class reflections and free-writes, which you will be asked to do at the

beginning or end of some classes. It also means submitting assignments on time and communicating with me, as well as engaging with my feedback and incorporating it into your assignments.

Participation is important in this course because it is our way of constructing collective meaning of this material. Much of what we will read is part of new and rapidly-developing subdisciplines of psychology, and as a result, there is still plenty to say and to critique. Your participation will allow the entire class to grow a more informed understanding of the new/innovative research questions and methods that we will learn about. In addition, the midterm and final assessments in this class will be made easier by your participation. Asking questions about new methods will make it easier for you to complete the coding tutorial, and critically analyzing our readings will make you more adept at arguing a particular position and communicating it effectively for the op-ed.

Finally, participation is part of your grade. However you choose to engage with the material, it is my expectation that you will do so in a way that positively contributes to your classmates' experience in this course. Your participation will be assessed based on the class participation rubric. Midway through the semester, I will ask you to submit a reflection on how you think you are doing regarding participation: where you are doing well, and where you can improve. I will provide you with feedback on this reflection to indicate if your assessment aligns with mine. At the end of the semester, I will provide you with a participation grade based on the rubric.

#### *Attendance and lateness*

Above anything else, I value clear communication. I'm understanding that school is not your entire life and that life sometimes gets in the way of school. But I ask that you clearly communicate with me when this happens, or when you anticipate it happening. Extra-curricular conflicts are sometimes unavoidable, but your communication demonstrates to me that you are committed to engaging with this course. For both attendance and late assignments, my policies are similar:

Attendance is expected at every class. If you are unable to make class one week, all I ask is that you let me know at least 24 hours in advance. If you are absent from class and have not let me know in advance, your absence will impact your participation grade. In addition, if you are absent frequently, even if you do always let me know in advance, your participation grade will be impacted.

On-time assignments are always expected. If an assignment will be late, or you need an extension, please let me know as far in advance as possible. Extensions are never guaranteed. If an assignment is late and you have not let me know in advance, you will receive -10% for every 12 hours that it is late.

#### *Academic integrity*

All work should be your own. Don't plagiarize, either from your friend or from a random person online. There are NO exceptions to this rule, under any circumstances. If you are having trouble with an assignment or need more time, talk to me. I'm happy to help, and I'd

much rather spend my time helping you than reporting you to the university for plagiarizing or cheating. I promise you, it's never worth it to plagiarize – just don't do it! In addition, finding shortcuts to putting in the work required of this class – doing the readings, completing your assignments – will defeat the purpose of taking this class, which is to learn and think critically about new ideas. If you complete assignments via plagiarism rather than with your own thoughts, you're probably not going to learn very much.

For more information on Columbia's policies on academic integrity, please see here: <http://www.college.columbia.edu/academics/academicintegrity>.

Note on generative AI: You **may not** use generative AI chatbots, such as Chat-GPT or Bard, to complete your written assignments. Ever. At all. The purpose of this course is not to complete assignments; rather, the purpose is to put in the work of critically thinking about the ideas discussed. In short, you will not learn very much if you outsource all of your thinking to generative AI, and where is the fun in that?

However, you *may* use these tools to help you with the coding required for the data tutorial assignment, as you see fit. We will discuss use cases in class.

#### *Class-generated policies*

Discussion norms: We will spend some time on the first day of class crafting class discussion norms to ensure that everyone feels welcome in our class space, and to ensure that we have shared expectations of what class discussions should look like. Those discussion norms will go here in an updated draft of the syllabus.

Computer policy: For most students, computers are essential for note-taking and reading. However, using computers in class can be distracting for you and for others. On the first day of class, we will create community norms around computer use. Those norms will go here in an updated draft of the syllabus.

#### *Diversity and inclusion*

It is extremely important to me that our classroom environment is welcoming and inclusive of everyone, regardless of race, gender, class, sexuality, religion, or country of origin. Please recognize that everyone comes to the table with different life experiences: What you take for granted might be something that someone else knows nothing about, and what is unfamiliar to you might be easily understood to others. Use "I" statements when speaking and don't generalize about groups of people with a particular identity. Assume good intent from your classmates during class discussions. Be respectful.

I will do my best to foster an inclusive environment over the course of the semester, where all students feel a sense of belonging. Of course, I, like anyone, have biases based on my own experiences. Please do not hesitate to reach out to me if something was said in class, either by me or by another student, that made you feel uncomfortable. My goal is to create a sense of community in our class. I hope we will all be open to difficult conversations.

Disability accommodations: If you require special accommodations through the Office of Disability Services (ODS) or the Center for Accessibility Resources and Disability Services (CARDS), please let me know as close to the beginning of the semester as possible. More information about registering with ODS can be found here:

<https://www.health.columbia.edu/services/ods>.

Student wellness: Academic life can be exceptionally challenging at times. The intention of this course is to enhance your life, not make it miserable. Please always prioritize your health. If you're ever having a tough time, and it's impacting your ability to fully participate in the course, please reach out, and we can figure something out together. The university also has many health and wellness resources available for students:

- <https://www.health.columbia.edu/content/counseling-and-psychological-services>
- <https://blogs.cuit.columbia.edu/nightline/>
- <https://universitylife.columbia.edu/student-resources-directory#!/#health>

## Course Calendar

Date	Topic	Assignments due
9/5	Introduction to course	
<i>Module 1: Psychology <u>with</u> the internet</i>		
9/12	Ethics	Syllabus quiz
9/19	Emotion	
9/26	Social networks	
10/3	Curiosity and information seeking	Data tutorial draft
10/10	Collective memory	Participation reflection
10/17	Data tutorial presentations	Data tutorial
<i>Module 2: Psychology <u>about</u> the internet</i>		
10/24	Student choice! (See note below)	
10/31	Student choice!	
11/7	Student choice!	
11/14	Student choice!	
11/21	Student choice!	Op-ed pitch
12/5	Student choice!	Due 12/12: Final op-ed + supplement

## Readings

Readings for each topic should be completed by the date listed in the above table. "Readings" doesn't necessarily just mean reading scientific literature. Sometimes it means reading newspaper articles, watching videos, listening to podcast episodes, using a

program, or exploring a corner of the internet. All links to readings are included in the reading list citations below.

Student choice note: The six topics for Module 2 will be chosen by you, from a list of ten topics. The ten topics are organized into five pairs. For each pair of topics, you as a class will vote on which topic you would prefer to be part of the syllabus. The losing topic in the pair of topics with the most even vote split will also be part of the syllabus, for a total of six topics. We will vote during the second class session. After voting, I will update the syllabus with the correct course calendar and readings. The topic pairs you will vote on are as follows:

- Impression formation and self-presentation OR Social interactions
- Nudging and decision-making OR Misinformation and disinformation
- Mental health OR Changes to cognition
- Artificial Intelligence OR Folk beliefs
- Humor and memes OR Activism

#### MODULE 1: Psychology with the internet

##### 9/12: Ethics of using the internet for psychology research

- Anabo, I. F., Elexpuru-Albizuri, I., & Villardón-Gallego, L. (2019). Revisiting the Belmont Report's ethical principles in internet-mediated research: Perspectives from disciplinary associations in the social sciences. *Ethics and Information Technology*, 21(2), 137-149. <https://doi.org/10.1007/s10676-018-9495-z> (12 pages)
- Rosenberg, M., & Dance, G. J. X. (2018, April 8). 'You Are the Product': Targeted by Cambridge Analytica on Facebook. *The New York Times*. <https://www.nytimes.com/2018/04/08/us/facebook-users-data-harvested-cambridge-analytica.html> (7 pages)
- Calma, J. (2023, May 31). Twitter just closed the book on academic research. *The Verge*. <https://www.theverge.com/2023/5/31/23739084/twitter-elon-musk-api-policy-chilling-academic-research> (7 pages)
- Pick a social media website or web browser and look at all the settings for privacy/data use, as well as the privacy and data use terms of service

##### 9/19: Emotion expression

- Luhmann, M. (2017). Using big data to study subjective well-being. *Current opinion in behavioral sciences*, 18, 28-33. <https://doi.org/10.1016/j.cobeha.2017.07.006> (4 pages)
- Metzler, H., Rimé, B., Pellert, M., Niederkrotenthaler, T., Di Natale, A., & Garcia, D. (2023). Collective emotions during the COVID-19 outbreak. *Emotion*, 23(3), 844. <https://psycnet.apa.org/doi/10.1037/em00001111> (13 pages)
- Goldenberg, A., & Gross, J. J. (2020). Digital Emotion Contagion. *Trends in Cognitive Sciences*, 24(4), 316–328. <https://doi.org/10.1016/j.tics.2020.01.009>(10 pages)
- Play around with the [LIWC free trial](#) with social media texts from any platform of your choosing. Pay particular attention to the authentic summary variable.

### 9/26: Social networks

- Hofstra, B., Corten, R., van Tubergen, F., & Ellison, N. B. (2017). Sources of Segregation in Social Networks: A Novel Approach Using Facebook. *American Sociological Review*, 82(3), 625-656. <https://doi.org/10.1177/0003122417705656> (24 pages)
- Wolfram, S. (2013, April 24). *Data Science of the Facebook World*. Stephen Wolfram - Writings. <https://writings.stephenwolfram.com/2013/04/data-science-of-the-facebook-world/> (24 pages)

### 10/3: Curiosity and information seeking

- Lydon-Staley, D. M., Zhou, D., Blevins, A. S., Zurn, P., & Bassett, D. S. (2021). Hunters, busybodies and the knowledge network building associated with deprivation curiosity. *Nature human behaviour*, 5(3), 327-336. <https://doi.org/10.1038/s41562-020-00985-7> (9 pages)
- Kelly, C., & Sharot, T. (2024). Knowledge-Seeking Reflects and Shapes Well-Being. <https://doi.org/10.31234/osf.io/yd6j5> (15 pages)
- Play around with trends.google.com

### 10/10: Collective memory

- Ferron, M., & Massa, P. (2014). Beyond the encyclopedia: Collective memories in Wikipedia. *Memory Studies*, 7(1), 22-45. <https://doi.org/10.1177/1750698013490590> (22 pages)
- West, R., Leskovec, J., & Potts, C. (2021). Postmortem memory of public figures in news and social media. *Proceedings of the National Academy of Sciences*, 118(38), e2106152118. <https://doi.org/10.1073/pnas.2106152118> (8 pages)
- Explore the visualizations on this website: <https://seealso.org/>

## MODULE 2: Psychology about the internet

Note: This section will be updated with dates once topics are chosen. The topic pairs you will vote on are as follows:

- Impression formation and self-presentation OR Social interactions
- Nudging and decision-making OR Misinformation and disinformation
- Mental health OR Changes to cognition
- Artificial Intelligence OR Folk beliefs
- Humor and memes OR Activism

### Impression formation and self-presentation

- Krämer, N. C., & Schäwel, J. (2020). Mastering the challenge of balancing self-disclosure and privacy in social media. *Current Opinion in Psychology*, 31, 67-71. <https://doi.org/10.1016/j.copsyc.2019.08.003> (4 pages)
- Brady, W. J., McLoughlin, K. L., Torres, M. P., Luo, K. F., Gendron, M., & Crockett, M. J. (2023). Overperception of moral outrage in online social networks inflates beliefs about intergroup hostility. *Nature Human Behaviour*, 7(6), 917-927. <https://doi.org/10.1038/s41562-023-01582-0> (10 pages)
- Schlosser, A. E. (2020). Self-disclosure versus self-presentation on social media. *Current Opinion in Psychology*, 31, 1-6. <https://doi.org/10.1016/j.copsyc.2019.06.025> (4 pages)



- Look at the social media accounts of some of your good friends, and see if you can imagine how your impression of them might differ if you didn't know them

### Social interactions

- Ryan, S., McDonnell, D., & Meade, S. (2020). "Lock, Load, n' Thank the Driver": The Positive Influence of Prosocial Activity on Language in Online Social Groups. *Social Media + Society*, 6(2), 205630512091399. <https://doi.org/10.1177/2056305120913990> (7 pages)
- Lieberman, A., & Schroeder, J. (2020). Two social lives: How differences between online and offline interaction influence social outcomes. *Current Opinion in Psychology*, 31, 16–21. <https://doi.org/10.1016/j.copsyc.2019.06.022> (4 pages)
- Combs, A., Tierney, G., Guay, B., Merhout, F., Bail, C. A., Hillygus, D. S., & Volfovsky, A. (2023). Reducing political polarization in the United States with a mobile chat platform. *Nature Human Behaviour*, 7(9), 1454–1461. <https://doi.org/10.1038/s41562-023-01655-0> (6 pages)
- Find threads of people interacting on at least two different platforms and save screenshots of the interactions. Could be Reddit, comments on social media posts, comments on a forum, etc.

### Nudging and decision-making

- Lorenz-Spreen, P., Lewandowsky, S., Sunstein, C. R., & Hertwig, R. (2020). How behavioural sciences can promote truth, autonomy and democratic discourse online. *Nature human behaviour*, 4(11), 1102-1109. <https://doi.org/10.1038/s41562-020-0889-7> (6 pages)
- Wu, A. X., Taneja, H., & Webster, J. G. (2021). Going with the flow: Nudging attention online. *New Media & Society*, 23(10), 2979-2998. <https://doi.org/10.1177/1461444820941183> (18 pages)
- Use the app one sec on your phone and as a browser extension

### Misinformation and disinformation

- Pennycook, G., & Rand, D. G. (2021). The psychology of fake news. *Trends in cognitive sciences*, 25(5), 388-402. <https://doi.org/10.1016/j.tics.2021.02.007> (13 pages)
- Globig, L. K., Holtz, N., & Sharot, T. (2023). Changing the incentive structure of social media platforms to halt the spread of misinformation. *Elife*, 12, e85767. <https://doi.org/10.7554/eLife.85767> (19 pages)
- Linden, J. R., Melisa Basol, Sander van der. (2021, February 22). A New Way to Inoculate People Against Misinformation. *Behavioral Scientist*. <https://behavioralscientist.org/a-new-way-to-inoculate-people-against-misinformation/> (Play the three games highlighted in the article)

### Mental health

- Twenge, J. M. (2020). Why increases in adolescent depression may be linked to the technological environment. *Current Opinion in Psychology*, 32, 89–94. <https://doi.org/10.1016/j.copsyc.2019.06.036> (5 pages)

- Kross, E., Verduyn, P., Sheppes, G., Costello, C. K., Jonides, J., & Ybarra, O. (2021). Social Media and Well-Being: Pitfalls, Progress, and Next Steps. *Trends in Cognitive Sciences*, 25(1), 55–66. <https://doi.org/10.1016/j.tics.2020.10.005> (10 pages)
- Beyens, I., Pouwels, J. L., Van Driel, I. I., Keijsers, L., & Valkenburg, P. M. (2020). The effect of social media on well-being differs from adolescent to adolescent. *Scientific Reports*, 10(1), 10763. <https://doi.org/10.1038/s41598-020-67727-7> (9 pages)

#### Changes to cognition

- Firth, J., Torous, J., Stubbs, B., Firth, J. A., Steiner, G. Z., Smith, L., Alvarez-Jimenez, M., Gleeson, J., Vancampfort, D., Armitage, C. J., & Sarris, J. (2019). The “online brain”: How the Internet may be changing our cognition. *World Psychiatry*, 18(2), 119–129. <https://doi.org/10.1002/wps.20617> (9 pages)
- Uncapher, M. R., & Wagner, A. D. (2018). Minds and brains of media multitaskers: Current findings and future directions. *Proceedings of the National Academy of Sciences*, 115(40), 9889–9896. <https://doi.org/10.1073/pnas.1611612115> (7 pages)
- Heersmink, R. (2016). The Internet, Cognitive Enhancement, and the Values of Cognition. *Minds and Machines*, 26(4), 389–407. <https://doi.org/10.1007/s11023-016-9404-3> (16 pages)

#### Artificial intelligence

- Pataranutaporn, P., Liu, R., Finn, E., & Maes, P. (2023). Influencing human–AI interaction by priming beliefs about AI can increase perceived trustworthiness, empathy and effectiveness. *Nature Machine Intelligence*, 5(10), 1076–1086. <https://doi.org/10.1038/s42256-023-00720-7> (8 pages)
- De Freitas, J., Agarwal, S., Schmitt, B., & Haslam, N. (2023). Psychological factors underlying attitudes toward AI tools. *Nature Human Behaviour*, 7(11), 1845–1854. <https://doi.org/10.1038/s41562-023-01734-2> (7 pages)
- Chat with at least three different AI chatbots and save your conversations with them. Talk to them about anything you’d like: your day, a current dilemma, etc.

#### Folk beliefs

- Dogruel, L. (2021). Folk theories of algorithmic operations during Internet use: A mixed methods study. *The Information Society*, 37(5), 287–298. <https://doi.org/10.1080/01972243.2021.1949768> (10 pages)
- Huang, S. A., Hancock, J., & Tong, S. T. (2022). Folk theories of online dating: Exploring people’s beliefs about the online dating process and online dating algorithms. *Social Media+ Society*, 8(2), 20563051221089561. <https://doi.org/10.1177/20563051221089561> (10 pages)
- Try to find a description from a tech company about how their algorithm works

#### Humor and memes

- Wong, E. F., & Holyoak, K. J. (2021). Cognitive and motivational factors driving sharing of internet memes. *Memory & Cognition*, 49(5), 863–872. <https://doi.org/10.3758/s13421-020-01134-1> (9 pages)

- Akram, U., & Drabble, J. (2022). Mental health memes: Beneficial or aversive in relation to psychiatric symptoms? *Humanities and Social Sciences Communications*, 9(1), 370. <https://doi.org/10.1057/s41599-022-01381-4> (5 pages)
- Pick a humorous meme that is popular now or has been popular recently. Save some examples of variations of the meme, and try to find its origin. <https://knowyourmeme.com/> may prove useful.

### Activism

- Leach, C. W., & Allen, A. M. (2017). The Social Psychology of the Black Lives Matter Meme and Movement. *Current Directions in Psychological Science*, 26(6), 543–547. <https://doi.org/10.1177/0963721417719319> (4 pages)
- Greijdanus, H., De Matos Fernandes, C. A., Turner-Zwinkels, F., Honari, A., Roos, C. A., Rosenbusch, H., & Postmes, T. (2020). The psychology of online activism and social movements: Relations between online and offline collective action. *Current Opinion in Psychology*, 35, 49–54. <https://doi.org/10.1016/j.copsy.2020.03.003> (4 pages)
- Priante, A., Ehrenhard, M. L., Van Den Broek, T., & Need, A. (2018). Identity and collective action via computer-mediated communication: A review and agenda for future research. *New Media & Society*, 20(7), 2647–2669. <https://doi.org/10.1177/1461444817744783> (18 pages)