PSY 607: Psychology in a Networked Society (Fall 2018)
Tuesdays, 1:00 PM – 2:50 PM, 257 Straub

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Office hours: Wed 11-12 in 329 Straub, or by appointment

The massive growth of the Internet and online social media has raised new questions and new opportunities for psychologists. Human behavioral data is now available on an unprecedented scale and complexity, creating opportunities for psychologists who embrace "big data" methods and thinking. And an increasing amount of our lives is spent online, raising new questions about how technology is changing human psychology in a digital, networked world.

In this course we will consider recent advances in both methodology and substantive research in psychology. We will examine the possibilities and limitations of new methods in computational psychological science, including natural language processing, machine learning, and network analysis. We will also read and discuss substantive research on how social media is affecting communication, politics and public opinion, morality, and personality.

Class meetings and discussion questions

Class meetings will consist primarily of discussion. The night **before** each class meeting (no later than midnight), you should post to Canvas three discussion questions based on the readings. We will use these discussion questions to guide our discussion.

Workload and grading

Your grade will be based on class participation, on-time posting of discussion questions, and on-time completion of other assignments as assigned. Everyone will be allowed one "free" absence; if you need to miss more than that, talk to me. If you are absent you are still responsible for any work assigned outside of class (posting discussion questions, homework, etc.).

In addition, students who enroll for 4 credits will also be required to turn in a paper or other final project.

Accessibility

My goal is to make this class inclusive and accessible. If the course design poses a potential barrier to you because of a disability, please meet with me as soon as possible.

Changes

Any aspect of this course, including topics, readings, or grading criteria, may be changed at my discretion. Changes will be announced in class or on Canvas.

Schedule and readings

September 25: Introductions and organization

No assigned readings

October 2: The social media ecosystem

In-class presentations. Assigned readings are on a per-student basis (read and present 1 piece of scholarship about your chosen social media service)

October 9: What is big data, and how can and should psychologists study it?

Yarkoni, T. (2014). Big Data, n. A kind of black magic. *[citation needed]*. https://www.talyarkoni.org/blog/2014/05/19/big-data-n-a-kind-of-black-magic/

Kosinski, M., Wang, Y., Lakkaraju, H., & Leskovec, J. (2016). Mining big data to extract patterns and predict real-life outcomes. *Psychological Methods, 21*, 493-506.

Tufekci, Z. (2014). Big questions for social media big data: Representativeness, validity and other methodological pitfalls. *ICWSM*, *14*, 505-514.

October 16: What gets communicated online?

Walther, J. B. (2011). Theories of computer-mediated communication and interpersonal relations. In M. L. Knapp & J. A. Daly (Eds.), *The Handbook of Interpersonal Communication* (4th ed., pp. 443-479). SAGE.

Gosling, S. D., Augustine, A. A., Vazire, S., Holtzman, N., & Gaddis, S. (2011). Manifestations of personality in online social networks: Self-reported Facebook-related behaviors and observable profile information. *Cyberpsychology, Behavior, and Social Networking*, *14*, 483-488.

October 23: Natural language processing 1 – Dictionary approaches

Tausczik, Y. R., & Pennebaker, J. W. (2010). The psychological meaning of words: LIWC and computerized text analysis methods. *Journal of Language and Social psychology*, *29*, 24-54.

Park, G., Schwartz, H. A., Eichstaedt, J. C., Kern, M. L., Kosinski, M., Stillwell, D. J., ... & Seligman, M. E. (2015). Automatic personality assessment through social media language. *Journal of Personality and Social Psychology*, *108*, 934.

October 30: NLP 2 – Modern approaches

NSS (2017). "An Intuitive Understanding of Word Embeddings: From Count Vectors to Word2Vec." *Analytics Vidhya.* https://www.analyticsvidhya.com/blog/2017/06/word-embeddings-count-word2veec/
> *(Note: Some parts of this get pretty technical relative to a typical psychology student's background. Make a serious effort to absorb as much as you can but do not be frustrated if this hits your limits in some places. It hits mine too!)*

Garten, J., Hoover, J., Johnson, K. M., Boghrati, R., Iskiwitch, C., & Dehghani, M. (2018). Dictionaries and distributions: Combining expert knowledge and large scale textual data content analysis. *Behavior Research Methods*, *50*, 344-361.

Garg, N., Schiebinger, L., Jurafsky, D., & Zou, J. (2018). Word embeddings quantify 100 years of gender and ethnic stereotypes. *Proceedings of the National Academy of Sciences*, *115*, E3635-E3644.

November 6: Social networks

Clifton, A., & Webster, G. D. (2017). An introduction to social network analysis for personality and social psychologists. *Social Psychological and Personality Science*, *8*, 442-453.

Brady, W. J., Wills, J. A., Jost, J. T., Tucker, J. A., & Van Bavel, J. J. (2017). Emotion shapes the diffusion of moralized content in social networks. *Proceedings of the National Academy of Sciences*, *114*, 7313-7318.

November 13: Mobile sensing

Harari, G. M., Lane, N. D., Wang, R., Crosier, B. S., Campbell, A. T., & Gosling, S. D. (2016). Using smartphones to collect behavioral data in psychological science: opportunities, practical considerations, and challenges. *Perspectives on Psychological Science*, *11*, 838-854.

Place, S., Blanch-Hartigan, D., Rubin, C., Gorrostieta, C., Mead, C., Kane, J., ... & Deckersbach, T. (2017). Behavioral indicators on a mobile sensing platform predict clinically validated psychiatric symptoms of mood and anxiety disorders. *Journal of Medical Internet Research*, *19*.

November 20: Politics and disinformation

Tufekci, Z. (2018). It's the (Democracy-Poisoning) Golden Age of Free Speech. *Wired.* https://www.wired.com/story/free-speech-issue-tech-turmoil-new-censorship/

Tucker, J., Guess, A., Barberá, P., Vaccari, C., Siegel, A., Sanovich, S., ... & Nyhan, B. (2018). *Social Media, Political Polarization, and Political Disinformation: A Review of the Scientific Literature.*

November 27: TBD

Wildcard week – class decides on a topic

NO FINAL EXAM