collaborative social systems lab

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Northeastern University
Network Science Institute

School of Business
D'Amore-McKim
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Research Opportunities in the Collaborative Social Systems Lab

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Design and Implement Interactive Virtual Environments to Uncover the Hidden Laws that Govern Society

Research Questions

Does ***competition***:
- promote *creative performance*?
- affect *accuracy or fairness* of evaluation?

Does ***social influence***:
- foster inference from noisy signals?

Does ***group diversity***:
- improve performance and group effort?

Would a new ***incentive structure***:
- facilitate coordination and cooperation?
- achieve greater group success?

Collaborative Social Systems Lab

Christoph Riedl
Chris is Assistant Professor for Information Systems at the D'Amore McKim School of Business. He employs business analytics and data science to investigate research questions about group-decision making, network science, and social media, and develops novel computational approaches to study collective intelligence mechanisms.

Samuel Fraiberger
Post-Doc (PhD in Economics, NYU)
Economic and social significance (big data, econometrics)

Jake Moody
Undergraduate
Influence in social media (big data, econometrics)

Stefano Balietti
Post-Doc (PhD in Computational Social Science, ETH Zurich)
Consensus formation and social influence (experiments & ABM)

Tina Lee
Undergraduate
(Human-computer interaction, artificial intelligence)

Michael Foley
3rd year PhD student
Role of networks in distributed problem-solving (ABM)

Christina Sirabella
Undergraduate
(socio-cultural networks)

Brennan Klein
2nd year PhD student
Role of networks in distributed problem-solving (experiments, Volunteer Science)

collaborative social systems lab

We're hiring!

Know any of these?

Want to design experiments and games for cutting edge scientific research?

Send us your resume by October 15th, 2016

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Platform 1: nodeGame

nodeGame
http://nodegame.org

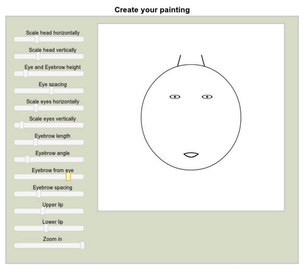
nodeGame is a free and open source JavaScript framework for online, multiplayer, real-time games and experiments in the browser.

Platform 2: Volunteer Science

VOLUNTEER SCIENCE
http://volunteerscience.com

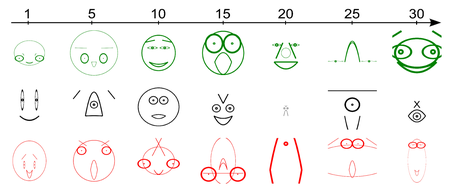
Volunteer Science is an online laboratory where everyday people can participate in citizen science by playing a number of classic behavioral games.

Sample Game: Art Exhibition Game



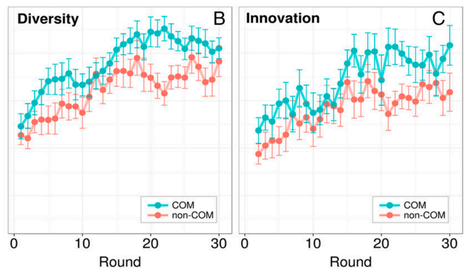
Gameplay: users create their painting using sliders on the left

"You're the artist and the art critic."

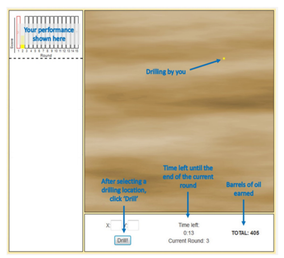


Behind the scenes: user behavior changes and evolves over time

Results:
- Competition fosters innovation and diversity
- Competition also leads to more unfair reviews of a peer's work

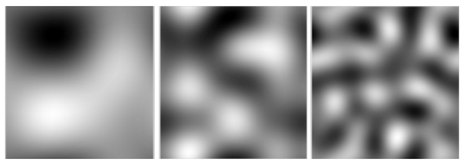


Sample Game: Wildcat Wells



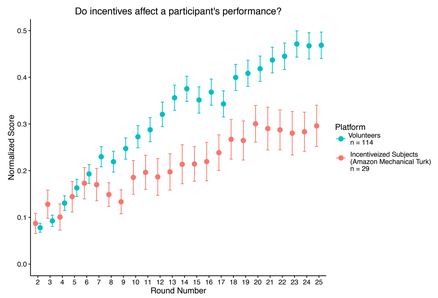
Gameplay: users maximize payout on a sandy landscape

"Strike it rich while drilling for oil."



Behind the scenes: we vary the complexity of the distribution of oil

Results:
- Incentives boost performance in a complex problem solving task
- Satisficing behavior emerges when a problem is too complex



Funding and Selected Publications

National Science Foundation (IIS-1514283)
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Balietti, S., Goldstone, R. L., & Helbing, D. (2016). Peer review and competition in the Art Exhibition Game. *Proceedings of the National Academy of Sciences*, 201603723.

Keegan, Brian, Katherine Ognyanova, Brooke Foucault Welles, Christoph Riedl, Ceyhun Karbeyaz, Waleed Meleis, David Lazer, Jason Radford, and Jefferson Hoye. "Conducting Massively Open Online Social Experiments with Volunteer Science." In *Second AAAI Conference on Human Computation and Crowdsourcing*. 2014.