# YUCHENG LIANG

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## CURRENT POSITION

**briq Institute** *September 2020 - June 2021*
Research Affiliate

**Carnegie Mellon University** *July 2021 -*
Assistant Professor

## EDUCATION

**Stanford Graduate School of Business** *September 2015 - June 2020*
Ph.D. in Economics

**Peking University**
B.A. in Economics *September 2011 - June 2015*
B.S. in Applied Mathematics *September 2012 - June 2015*

**University of California, Los Angeles** *September 2013 - December 2013*
Exchange Student

## RESEARCH AREAS

Behavioral economics, Experimental economics

## WORKING PAPERS

**Learning from Unknown Information Sources**

· Abstract: When an agent receives information from a source whose accuracy might be either high or low, standard theory dictates that she update as if the source has medium accuracy. In a lab experiment, subjects deviate from this benchmark by reacting less to uncertain sources, especially when the sources release good news. This pattern is validated using observational data on stock price reactions to analyst earnings forecasts, where analysts with no forecast records are classified as uncertain sources. A theory of belief updating where agents are insensitive and averse to uncertainty in information accuracy can explain these results.

· Presented at WISE 2018 (Xiamen), BEAT 2019 (Tsinghua), WZB, Hong Kong University, SITE 2019 (Stanford), EMCON 2019 (UChicago), Econometric Society European Winter Meeting 2019, RUD 2020 (virtual), PSE, Purdue, UCSD, CMU, NUS, CUFE, SJTU, LMU

**Social Comparison and the Value of Performance Trajectory Information: A Field Experiment in the Workplace** (with Hugh Xiaolong Wu and Shannon X. Liu)

· Abstract: New workers often compare themselves to their high-achieving senior coworkers, but they often do so without knowing how senior workers performed in the early stages of their careers. This upward social comparison under incomplete information can have adverse effects on new workers well-being and employee turnover. We study whether providing performance trajectory information to new workers mitigates the negative consequences of performance comparison. In a large-scale randomized control trial at a leading multinational spa chain in China, we sent workers twice-weekly messages on the performance trajectories of their high-performing senior coworkers. This information treatment reduces the attrition rate of new workers by 12%, and the effect is most pronounced for the more productive workers. The lower attrition rate is mostly driven by an improvement in new workers' stress levels and mental health due to the lowering of their beliefs about senior coworkers' past performance.

Overall, this study demonstrates that showing junior workers the "*Curricula Vitae*" of senior workers mitigates social comparison costs within firms.

**Information-Dependent Expected Utility**

- Abstract: In decision problems under uncertainty, the subjective evaluation of an outcome can depend on the information content of its realization. To accommodate this dependence, we introduce and axiomatize a model of information-dependent expected utility by allowing the utility of an outcome to flexibly depend on its information content in an (Anscombe-Aumann) act. Subjective beliefs are identified in a special class of our model where the utility of an outcome can be decomposed as the sum of consumption utility and information utility. Our model allows for both information seeking and information averse preferences, as well as a comparative theory of information preferences. For information seeking preferences, we introduce a Hidden Acts representation where the value of information is as if induced from the expected utility of the optimal choice in a fictitious future decision problem given that information.
- Presented at D-TEA 2017 (HEC Paris), the 2017 Econometric Society {Asian, China, North America Summer} Meetings

## WORK IN PROGRESS

**Belief-updating: Inference versus Extrapolation** (with Tony Q. Fan and Cameron Peng)

- Abstract: Survey forecasts of macroeconomic and financial variables show widespread overreaction to news, but laboratory experiments on belief updating typically find underinference from signals. We provide new experimental evidence to connect these two seemingly inconsistent phenomena. Building on a classic experimental paradigm, we study how people make inferences *and* revise forecasts in the same fully-specified information environment. Subjects *underreact* to signals when inferring about fundamental states ("underinference"), but *overreact* to signals when revising forecasts about future outcomes ("overextrapolation"). In the latter task, subjects appear to be using a mix of simplifying heuristics, such as focusing on the state most consistent with the signal and anchoring on the signal. Additional treatments link our results to the difficulty of recognizing the conceptual connection between inference and forecast revision problems.

**Truth-Telling and the Design of Flexible Commitment Contracts: A Field Experiment** (with Shengmao Cao and Tony Q. Fan)

- Abstract: We propose a novel commitment contract (CC) with exemption clauses to provide incentives for physical exercise while retaining flexibility. Like a traditional, rigid CC, some money is deposited into an account (by the participant or by a third party) and the participant is allowed to withdraw the money if she attends the gym. Unlike a rigid CC, if a participant reports that she did not go to the gym because of illnesses, injuries, unanticipated obligations, or other pre-specified conditions, she is allowed to withdraw the deposit as well. The participants' reports are not verified, so the effectiveness of such a CC depends on the participants aversion to lying. We conduct a field experiment at the Stanford athletic facilities to evaluate the demand for and the effectiveness of a CC with exemptions, in comparison to a rigid CC and a control contract without incentives.
- Status: Pilot completed

## GRANTS

**Russell Sage Foundation Small Grants in Behavioral Economics** $6,594

## TEACHING EXPERIENCE

**Course Assistant for Professor Edward Lazear** *2018, 2019*

· Incentives and Productivity (Stanford GSB, MBA)

**Teaching Assistant for Professor Alex White** *2014*

· Industrial Organization (Tsinghua, Graduate)

## TECHNICAL SKILLS

MATLAB, Mathematica, Python, SAS, SQL, Stata, oTree

## REFERENCES

| | | |
|---|---|---|
| **Douglas Bernheim** | Professor, Stanford Univesity | bernheim@stanford.edu |
| **Muriel Niederle** | Professor, Stanford University | niederle@stanford.edu |
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