

## Yujie Qian

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**Citizenship:** China, F-1 Visa

**Fields of Concentration:**

Microeconomic Theory  
Behavioral Economics  
Political Economy

**Desired Teaching:**

Microeconomics  
Game Theory  
Behavioral Economics

**Comprehensive Examinations Completed:**

2016 (Oral): Microeconomic Theory, Behavioral Economics  
2015 (Written): Microeconomics, Macroeconomics

**Dissertation Title:** *Essays on Strategic Transmission of Information*

**Committee:**

Professor Dirk Bergemann (Chair)  
Professor Marina Halac  
Professor Larry Samuelson  
Professor Philipp Strack

**Expected Completion Date:** May 2021

**Degrees:**

Ph.D., Economics, Yale University, 2021 (expected)  
M.Phil., Economics, Yale University, 2016  
M.A., Economics, Yale University, 2015  
M.A., Mathematics, Johns Hopkins University, 2014  
B.A., Mathematics, Economics, Applied Mathematics and Statistics, Johns Hopkins University, 2014 (with honors)  
Special Programme in Mathematics, National University of Singapore, 2010-2012

**Fellowships, Honors and Awards:**

University Dissertation Fellowship, 2019-2020  
Harry Hoffman and Anna Deborah Hoffman Fellowship, 2018-2019  
Yale University Doctoral Fellowship, 2014-2019  
Cowles Foundation Fellowship, 2014-2018  
J.J. Sylvester Award for Excellence in Mathematics, Johns Hopkins University, 2014  
Max Hochschild Award, Johns Hopkins University, 2014

**Teaching Experience:**

**Yale College**

Summer 2015 Teaching Assistant to Prof. Donald Brown, Introduction to Finance,  
Fall 2016 Teaching Assistant to Prof. Evangelia Chalioti, Econ Models of New Technology  
Spring 2017 Teaching Assistant to Prof. Aleh Tsyvinski, Introductory Macroeconomics  
Fall 2017 Teaching Assistant to Prof. Marina Halac and Prof. María Sáez Martí, Game Theory  
Spring 2018 Teaching Assistant to Prof. Evangelia Chalioti, Intermediate Microeconomics  
Summer 2018 Teaching Assistant to Prof. Tolga Koker, Introductory Microeconomics  
Fall 2018 Teaching Assistant to Prof. María Sáez Martí, Game Theory,  
Spring 2019 Teaching Assistant to Prof. Eduardo Davila, Financial Theory  
Summer 2020, Teaching Assistant to Prof. Zvika Neeman, Game Theory

**Johns Hopkins University**

Fall 2013 Teaching Assistant to Prof. Carl McTague, Differential Equations with Applications  
Spring 2014 Teaching Assistant to with Prof. Maxim Arap, Calculus II

**Working Papers:**

“Content Moderation” , *Job Market Paper*

“Endogenous Polarization under Word-of-Mouth Learning”

“Less Privacy for Better Service?” *with Dirk Bergemann*

**Seminar and Conference Presentations**

2019 International Conference on Game Theory, Stony Brook University, USA

**Languages:**

Mandarin (native), English (fluent)

**References:**

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**Dissertation Abstract**

This collection of papers analyzes three aspects of information transmission related to digital economies and social media communication: the impact of a social media platform that proactively screens misinformation; social learning in the presence of inauthentic signals; and the incentives for consumers to voluntarily disclose information about their willingness to pay.

**Content Moderation [Job Market Paper]**

Social media services devote significant effort to mitigate the impact of misleading information but achieve only mixed results. This paper analyzes the strategic implications of such content moderation practices and the factors that determine their effectiveness.

I propose a model of indirect persuasion, in which a sender (political campaigner) tries to influence a receiver's (voter) action subject to intervention by a moderator (platform). The moderator publicly announces a moderation policy specifying how it will filter messages from the sender. Given the policy, the sender then chooses the accuracy and bias of its messages. The moderator then privately observes the sender's message and makes a recommendation. With an exogenous probability, the recommendation follows the policy prescription; otherwise the moderator is free to recommend its preferred action instead, which may also differ from the receiver's optimal choice. Finally, a receiver chooses an action that affects all three players' payoffs based solely on the moderator's recommendation.

In equilibrium, the moderator's commitment power and preferences jointly contribute to the strictness of policies it can enforce. A policy is considered stricter if it requires the sender to reveal more information. Conditional on compliance, stricter policies benefit the receiver but create

stronger incentives for the sender to adopt an opportunistic strategy that influences the receiver only when the moderator has a chance to revise its policy ex-post. Reconciling the tension between ex-ante information elicitation and ex-post revelation, the optimal policy is just lenient enough to make the sender always comply with its requirement. Therefore, optimal content moderation relies on its deterrence effect. A platform can efficiently curtail misinformation production without actively removing user-generated posts if it commits to a set of well-defined and widely-applicable standards. As a prominent example, some news outlets persistently spread inaccurate information against fact-checking rules on Facebook, because the platform sometimes withholds penalty to violators over fear about accusations of bias. The model implies that Facebook can improve the effectiveness of content moderation by relaxing the formal rules and eliminating deviations in execution.

### **Endogenous Polarization under Word-of-Mouth Learning,**

This paper studies a flexible class of non-Bayesian learning rules on social networks by which agents update their beliefs about an unknown state through repeated communication with each other. When every agent is truthful, these rules can represent learning behaviors motivated by common behavioral heuristics. The population converges to a consensus under weak connectivity conditions. However, the possible existence of untruthful agents introduces a dilemma between learning from the wisdom of the crowd and curtailing the spread of misinformation. The logic of convergence implies that the consensus is easily manipulable. A truthful agent on a connected network can avoid convergence to a false belief only if she stops learning from anyone who is indirectly influenced by misinformation. Without common knowledge of who the manipulators are, even truthful agents on a highly connected network can be locked in isolated groups, each with a different long-term belief.

### **Less Privacy for Better Service?** with Dirk Bergemann

Collection and utilization of consumer data have become a common practice in the modern economy. Individuals who supply the data rarely receive explicit compensation despite their contribution to a valuable dataset. Within a model of Cournot competition, we study the incentives of consumers to commit to an information revelation scheme (in the form of a privacy policy agreement) and characterize the monetary and non-monetary compensations needed to induce socially efficient full disclosure from consumers. A consumer can send a noisy signal of her private valuation of a product, which has a common and an idiosyncratic component. When the common component is dominant, the consumers voluntarily reveal all their information to every firm. Otherwise, consumers were reluctant to reveal too much about their idiosyncratic type, and firms need to pay for the extra data, but the amount of monetary transfers is an order of magnitude smaller than the utility gains due to voluntary revelation. Moreover, the total payment from all firms to all consumers shrink to zero when the number of consumers is large enough.