Allen Vong

Address: Department of Economics Yale University New Haven, CT 06520-8268

Telephone: +1 224 382 5454, +853 6612 4567

E-mail: allenvongecon@gmail.com

Web page: https://allenvong.net/

Citizenship:

Macau SAR (with US J-1 visa, no two-year home-country physical presence requirement) Portuguese

Current Position:

UM Macao Fellow, University of Macau, and Visiting Postdoctoral Scholar, University of Pennsylvania

Fields of Concentration:

Game Theory Information Economics Organizational Economics

Desired Teaching:

Microeconomics Game Theory

Comprehensive Examinations Completed:

2017 (Oral): Microeconomic Theory, Financial Economics 2016 (Written): Microeconomics, Macroeconomics

Dissertation Title: Essays on Dynamic Games

Committee:

Professor Johannes Hörner (Co-Chair) Professor Larry Samuelson (Co-Chair) Professor Marina Halac

Degrees:

Ph.D., Economics, Yale University, 2021
M.Phil., Economics, Yale University, 2019
M.A., Economics, Yale University, 2017
B.Comm.(Hons.), Economics, University of Melbourne, 2014
D.Mathsc., Statistics/Stochastic Processes, University of Melbourne, 2013

Academic Appointments:

UM Macao Fellow in Social Sciences, University of Macau, June 2021—May 2024 Visiting Postdoctoral Scholar, University of Pennsylvania, August 2023—May 2024 Visiting Postdoctoral Scholar, Northwestern University, January 2023—June 2023

Fellowships, Honors and Awards:

Young Economist, Lindau Nobel Laureate Meeting on Economic Sciences, 2022 APAEM Seed Grant (MOP 100,000), University of Macau, 2021 University Dissertation Fellowship, Yale University, 2020 Carl Arvid Anderson Prize Fellowship, Cowles Foundation, 2018–2019 John Y. Campbell Fellowship, Yale University, 2016–2017, 2017–2018 Best Graduate Paper Award, UECE Lisbon Meetings, 2016 Kinsman Prize, University of Melbourne, 2016 Doctoral Fellowship, Yale University, 2015-2020 Cowles Foundation Fellowship, Cowles Foundation, 2015-2019 William Noall & Son Prize, University of Melbourne, 2015 Jean Polglaze Memorial Prize, University of Melbourne, 2015 Economics Honors Prize, University of Melbourne, 2015 Kinsman Studentship, University of Melbourne, 2015 C.S. Soper & Joan Rydon Scholarship, University of Melbourne, 2014 Dean's Honors List, University of Melbourne, 2013, 2014 Vacation Research Scholarship, University of Melbourne, 2013 Vacation Research Scholarship, Australian Mathematical Science Institute, 2012 Macao Foundation Special Scholarship, Macao Foundation, 2012

Teaching Experience:

Instructor, University of Macau: Industrial Economics, Spring 2022

Teaching Assistant, Yale University:

Choice Theory and its Critics, Spring 2021, by Professor Larry Samuelson Microeconomics (Ph.D.), Fall 2019, by Professor Larry Samuelson Advanced Microeconomic Theory (Ph.D.), Fall 2018, by Professor Larry Samuelson Financial Theory, Spring 2018, by Professor John Geanakoplos Microeconomics (Ph.D.), Fall 2017, by Professor Mira Frick

Tutor, University of Melbourne:

Intermediate Macroeconomics, Semester 2, 2014, by Professor Chris Edmond Macroeconomics, Semester 2, 2013 and 2014, by Dr. May Li Microeconomics, Semester 1, 2013 and 2014, by Professor Simon Loertscher Quantitative Methods 1, Semester 1, 2013, by Dr. Mike Pottenger and Professor Chris Skeels

Research and Work Experience:

Research Assistant to Professor Larry Samuelson, Fall 2018 Research Assistant to Professor Florian Ederer, Summer 2018 Research Assistant to Professor Johannes Hörner, Spring 2018 Research Assistant to Professor Dirk Bergemann, Spring 2018

Publications:

"<u>Strategic Manipulation in Tournament Games</u>" (2017), *Games and Economic Behavior*, 102, pp. 562-567.

Working Papers:

"Mediated Repeated Moral Hazard", Job Market Paper

"<u>Certification for Consistent Quality Provision</u>", revise and resubmit, *American Economic Journal: Microeconomics*

"<u>Perverse Ethical Concerns: Online Misinformation and Offline Conflicts</u>", with Dongkyu Chang, revise and resubmit, *Journal of Economic Theory*

"The Crisis of Expertise"

Work In Progress:

"Mediated Efficiency in Moral Hazard Mixing Games", with Beixi Zhou

"Randomized Rating Systems"

"Sharing Data", with Beixi Zhou

Seminar and Conference Presentations: (* indicates scheduled)

2023: APIOC (HKUST)*, HKU*, Penn, ITAM, Tsinghua BEAT, UTokyo, TSE Digital Economics Conference

2022: NTU, CityU Hong Kong, HKBU, CUHK, HKUST, HKU, Bonn, NUS, TSE Economics of Platforms Seminar

2021: Fudan, SJTU Antai, SUFE, EARIE, University of Macau, GAMES, ES Summer Meetings (Asian, Australasian, China, European, North American), SIOE, Tsinghua BEAT, PKU-NUS Conference, LED YES, Mannheim Virtual IO Seminar, NBER/MIT Junior Researcher Series

2020: Boston University, YES (Penn), ES World Congress, University of Macau, HKBU

2019: Columbia, ES Summer Meeting (North American), SICS Marketing & Economic Theory Day, CETC, NYU, NSF/CEME Decentralization Conference, Oxford

2018: YES (NYU), Monash Early Career Economist Conference, SAET, ES Summer School (NUS)

2016: UECE Lisbon Meetings, GAMES, Stony Brook Game Theory Conference

Professional Services and Activities:

Seminar/Conference Organization:

Co-organizer (with Dongkyu Chang), SAET session on Information Economics, June 2022 Organizer, Seminars in Economics, University of Macau, September 2021—May 2022 Organizer, Conference in Microeconomics, University of Macau, July 2021 Co-organizer (with Dongkyu Chang), SAET session on Dynamic Games, June 2021

Doctoral Supervision:

Yonghang Ji, University of Macau, September 2022-Present

Referee Service for Journals:

American Economic Review: Insights, Journal of Mathematical Economics, Journal of Sports Economics, Mathematical Social Sciences, Management Science

Referee Service for Conferences:

Young Economist Symposium, 2017 and 2020

Workshop Attendances:

Dynamics and Information Workshop, Tel-Aviv University, January 2020

Short Research Visits:

University of Bonn, September 2022 University of Cambridge, February 2019 Toulouse School of Economics, May 2018

Languages:

Cantonese (native), English (fluent), Mandarin (intermediate)

References:

Prof. Johannes Hörner Université Toulouse Capitole Toulouse School of Economics 1, Esplanade de l'Université 31080 Toulouse Cedex 06 Phone: +33(0)5 61 12 85 89 joh.horner@gmail.com Prof. Larry Samuelson Yale University Department of Economics New Haven, CT 06520 PO Box 208281 Phone: +1 203 432 6737 larry.samuelson@yale.edu Prof. Marina Halac Yale University Department of Economics New Haven, CT 06520 PO Box 208281 Phone: +1 203 432 3693 marina.halac@yale.edu

Dissertation Abstract

"Mediated Repeated Moral Hazard" (Job Market Paper)

Managers play a key role in motivating workers' productivity within organizations. This role is challenging, owing to the scarcity of options to create incentives. Consider for example a frontline manager supervising a worker who performs tasks over time for different clients or divisions within an organization. This manager cannot control the worker's wage, and this worker lacks the required skills for promotion. The tools that are available to this manager are to tell the worker his expectations from the worker for her tasks and to evaluate her actual performances. How does this manager best address the worker's moral hazard?

I study a model in which a worker faces a sequence of short-run clients under a manager's supervision, earning fixed wages until she is fired. Each client chooses whether to use the worker; if she does, then the worker privately chooses whether to shirk or exert costly effort, producing a noisy output that future clients do not observe. To focus on the manager's role to motivate effort, I take the manager as a mediator who communicates with the worker and the clients to sustain a perfect communication equilibrium that is *ex ante* Pareto-efficient for the worker and the average client. A layoff of the worker is an instance in which the manager convinces the clients to no longer use the worker. As a benchmark, if the manager tells each client all past outputs, or if he censors past outputs from them, then the Pareto-efficient equilibrium is known from the literature: efficient periods in which the worker is used and exerts effort occur repeatedly, until she is fired following too many unlucky bad outputs. Effort incentives stem only from this surplus-depleting punishment.

My main insight is that the manager can leverage private communication to improve incentive provision. I find that Pareto efficiency calls for not only punishment and efficient periods, but also "reward periods." These periods mirror efficient periods except that, with some probability, the manager secretly asks the worker to shirk and assures her that a bad output today does not lead to any punishment. Reward periods do not just transfer surplus from the clients to the worker. Relative to the above benchmark, the manager reduces the probability of firing the worker both directly because reward periods do not lead to punishment, and indirectly because the worker's high payoffs in reward periods strengthen effort incentives in other periods. Thus, the worker gains from shirking and a longer career. The average client also gains from the worker being less likely to be fired and unable to supply effort, even if some clients turn out to lose from the secret shirking.

My results contribute to the mediation literature by showing a novel role of private communication in dynamic moral hazard with myopic players. By deriving explicit equilibrium dynamics with fixed discounting, my results also contribute to the repeated-games literature which, for the most part, is limited to either implicit solutions or characterizations in the no-discounting limit. These dynamics contrast with prior work and give a new perspective on managerial supervision practices. I show that in the Pareto-efficient equilibrium, reward periods are initially likely to be prescribed upon good outputs and eventually, reward periods become less frequent over time and the worker is fired upon bad outputs. Thus, the manager improves incentives by letting the worker "cut corners" for a while, with the understanding that underperformance will eventually be punished.

"Certification for Consistent Quality Provision"

(Revise and resubmit, American Economic Journal: Microeconomics)

A competent firm trades with a sequence of consumers who are unsure about this firm's competence and effort to supply quality. I study the design of certification rating systems that provide this firm with incentives to consistently supply quality. I characterize necessary and sufficient conditions given which these rating systems are viable, and explicitly construct one such rating system. This system reveals the firm's competence upon sufficiently many consecutive good trade outcomes and hides all information otherwise. It illuminates the role of initial audit, coarse ratings, graduated punishments, and low certification standard in providing incentives for consistent quality provision.

"Perverse Ethical Concerns: Online Misinformation and Offline Conflicts"

(Revise and resubmit, Journal of Economic Theory)

We investigate a setting in which a large number of consumers acquire personalized signals about a hidden state from a platform. This platform imperfectly filters misinformation in these signals, triggering disagreements about the state and in turn harmful conflicts among the consumers. We show that a platform with an ethical concern to internalize and improve consumer welfare could perversely reduce consumer welfare by aggravating these harmful conflicts. We show that societal efforts that aim to improve consumer welfare, such as investments in ethical algorithms, public awareness campaigns, and government policies, are effective if and only if their implementation is sufficiently aggressive.

"Strategic Manipulation in Tournament Games"

(Published, Games and Economic Behavior)

I consider the strategic manipulation problem in multistage tournaments. In each stage, players are sorted into groups in which they play pairwise matches against each other. The match results induce a ranking over players in each group, and higher ranked players qualify to the next stage. Players prefer qualifying to higher stages. In this setting, a player may potentially profit by exerting zero effort in some matches even when effort exertion is costless. Since such behavior manipulates the tournament, it is desired that full effort exertion is an equilibrium and any equilibrium ranking of qualifying players is immune to manipulation. To this end, I show that it is both necessary and sufficient to allow only the top-ranked player to qualify from each group. Otherwise, rankings can become a noisy indicator of players' strengths, while effort cost and heterogeneous prize spread can be of little relevance to players' effort choices.

"The Crisis of Expertise"

A careerist expert sells advice to decision makers who doubt that the expert is truly informed. I find that a "crisis of expertise" can emerge, in which a decision maker dismisses an informed expert's correct advice and relies only on public information to guide his action. Remarkably, this crisis happens if and only if public information has mediocre quality, and so high-quality public

information helps the decision maker efficiently utilize the informed expert's knowledge. My analysis elucidates a novel complementarity between the quality of public information and the quality of expert advice.