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PERSONAL INFORMATION

Date of Birth: February 17, 1990

Gender: Male

Citizenship: Chinese (Canadian permanent resident)

EDUCATION

The University of Chicago, 09/2010-06/2015.

Ph.D. Candidate in Economics (M.A. 12/2011; A.B.D. 04/2014)

Thesis Title: "Premarital Investments: Theory and Evidence"

Gary S. Becker (Co-Chair), University of Chicago, deceased 05/2014.

Pierre-André Chiappori, Columbia University, (212) 854-6369, pc2167@columbia.edu

Scott D. Kominers, Harvard University, (301) 529-4162, kominers@fas.harvard.edu

Philip J. Reny (Co-Chair), University of Chicago, (773) 702-8192, preny@uchicago.edu

Hugo F. Sonnenschein, University of Chicago, (773) 834-5960, hfsonnen@uchicago.edu

University of Pennsylvania, 09/2007-05/2010.

M.A. Mathematics, B.A. Mathematics with Distinction, B.A. Economics with Distinction, minor in Statistics, *summa cum laude*, *Phi Beta Kappa*

EMPLOYMENT

Research Intern, Microsoft Research New England, Cambridge, MA, 06/2012-09/2012.

RESEARCH AND TEACHING FIELDS

Primary: Microeconomic Theory, Family Economics, Labor and Demographic Economics

Secondary: Market Design, Industrial Organization

HONORS, SCHOLARSHIPS, AND GRANTS

Women and Leadership Archives Research Grant, 2014.

Yahoo! Key Scientific Challenges winner (30 worldwide, 2 in economics), 2012.

Frank H. Knight Fellowship, University of Chicago, 2010-2015.

Lawrence R. Klein Prize, best undergraduate economics thesis, U Pennsylvania, 2010.

Bernard Shanbaum Prize, best undergraduate economics student, U Pennsylvania, 2010.

Class of 1880 Prize, first place in freshman math competition, U Pennsylvania, 2008.

RESEARCH PAPERS

Publication

[**Evolutionary Justifications for Non-Bayesian Beliefs**](#), *Economics Letters*, 2013, 121(2), 198-201.

Working Papers

Premarital Investments and Multidimensional Matching (Job Market Paper).

I build an equilibrium investment-and-matching model to study a set of marital and educational patterns that have not been satisfactorily addressed. In my model, people can go to college to improve both their income and marriage prospects. However, the improvements may not materialize immediately after college, so some people may wish to make a second investment and marry later. It is more costly for women to make the second investment because they become less reproductively fit over time. In equilibrium, the investment decisions, the distributions of marriage characteristics in the marriage market, the matching between overlapping generations of men and women, and the division of marriage surplus are all endogenously determined. First, the model explains the relationships between marriage age and personal income. Second, the recent global phenomenon that more women than men go to college arises in equilibrium because women receive an endogenously higher college marriage premium. Third, the model explains the relationship between a wife's marriage age and the husband's income. Finally, I show how uncertainty about future income deters people from marrying early.

Pre-Matching Gambles.

This paper explores gambling behavior in an equilibrium two-sided matching market and its implications for income inequality and occupational choices. I show that before a risk-averse agent enters a large assignment market, he may prefer to take an unfair lottery to alter his matching attribute. A fundamental stable reassignment effect drives the seemingly risky choice: gambles change not only one's marginal surplus contribution but also one's assigned partner. Remarkably, gambling incentive arises independently of the shape of the surplus function contrary to the possible misconception that complementarity plays a key role. The socially efficient gambling and matching can always be supported in equilibrium, but there may exist multiple equilibria with different equilibrium wealth distributions. Finally, I interpret pre-matching gambling as choosing careers with different wage distributions and account for gender-specific patterns of occupational choices and marital timing.

The Optimal Sequence of Costly Mechanisms (*R&R Games and Economic Behavior*).

An impatient seller sells one unit of an indivisible good within a fixed number of periods. In each period, the seller can either run a reserve price auction incurring a cost or post a price without the cost. Buyers with independent, private values enter the market over time. I characterize the optimal sequence of mechanisms that maximizes the seller's expected profit. When there are an infinite number of periods, repeatedly running auctions with the same reserve price or posting a constant price is optimal. When the number of periods is finite, the seller's problem is non-stationary but tractable. The optimal selling strategy is a sequence of declining prices, a sequence of auctions with declining reserve prices, or the combination of the two. Most interestingly, a sequence of auctions before a sequence of posted prices is never optimal. The mechanism sequence of posted prices followed by auctions remains optimal under various extensions and resembles a Buy-It-Now option.

Optimal Mechanisms in Dynamic Homogeneous Goods Markets.

This paper studies the dynamic markets in which infinitely many unit-supply short-lived sellers and unit-demand long-lived buyers with persistent private values are matched according to a frictional process. Although reserve price auctions are expected revenue maximizing in the unique steady state equilibrium, the optimal revenue decreases when the market becomes more consumer friendly, namely when the buyers survive longer, face fewer bidding competitors, and become more patient. In particular, the revenue advantage from running an auction with a reserve price over simply posting that reserve price reduces as the market becomes more buyer friendly, making sellers more likely to use posted prices whose prevalence however results in market-wide externalities and inefficiencies.

Research in Progress

Occupational Choices with Marital Concerns (with Junjian Yi).

Market Effects on the Choices between Auctions and Posted Prices.

An Evolutionary Justification for Overconfidence (with Ryan Yuhao Fang).

Other Publications

To Risk or Not to Risk? Improving Financial Risk Taking of Older Adults by Online Social Information, *ACM-CSCW*, 2015 (with Jason Chen Zhao, Wai-Tat Fu, Henry Been-Lirn Duh, and Shengdong Zhao).

Cohort Profile: The China Jintan Child Cohort Study, *International Journal of Epidemiology*, 2010, 39(3), 668-674 (with Jianghong Liu, Linda McCauley, Yang Zhao, and J. Pinto-Martin).

Two-Player Zero-Sum Poker Models with One and Two Rounds of Betting, *Penn Science*, 2010, 9(1), 27-30.

ACADEMIC ACTIVITIES

Conference and Seminar Presentations

2015: ASSA.

2014: ASSA, Chicago-Northwestern Workshop in Family Economics, Midwest Theory, Meeting of the Society for Social Choice and Welfare, Stony Brook Game Theory, Sao Paulo Workshop on Game Theory and Economic Applications, Fields Institute Optimal Transportation and Equilibrium in Economics, U Chicago Family Economics, IEA, UW-Whitewater.

2013: ASSA, Chicago-Northwestern Market Design Workshop, Stony Brook Game Theory, U Chicago Family Economics.

2012: Midwest Control and Game Theory, IEA, Stony Brook Game Theory, Midwest Theory.

Services

Organizer, Economic Theory Working Group, University of Chicago, 01/2013 - .

Co-organizer, Market Design Reading Group, University of Chicago, 04/2012 - .

Member, Kravis Award for Outstanding Undergrad Teaching in Economics, U Penn, 2009-2010.

Refereeing

The American Mathematical Monthly, Games, Information Systems Research

TEACHING EXPERIENCE

Guest Lecturer

Honors Game Theory (ECON207), 11/2012 (Auctions), 11/2013 (Matching).

Advanced Micro Theory in a Math Mode (ECON244), 11/2012.

Teaching Assistant

MBA Game Theory (BUSF421), Emir Kamenica, 04/2014-06/2014.

Honors Game Theory (ECON207), Hugo Sonnenschein, 10/2012-12/2012, 10/2013-12/2013.

Adv. Micro Theory in a Math Mode (ECON244), Hugo Sonnenschein, 10/2012-12/2012.

Elements of Economic Analysis 2: Honors (ECON201), E. Glen Weyl, 10/2012-12/2012.

Theory of Auctions (ECON208), Philip J. Reny, 01/2012-03/2012.

Last updated: November 14, 2014