Zoë Hitzig
PhD Student

Harvard University
Dept. of Economics

Application for Funded Attendance
NBER Meeting on Measurement of Subjective Well-Being for Aging Research

§1 Statement of Interest

As an interdisciplinary researcher interested in subjective well-being from both a *behavioral economics* as well as a *philosophy of economics* perspective, I would be thrilled to attend the NBER Meeting on Subjective Well-Being. During my PhD, I hope to build on tools for the measurement subjective well-being in order to better address pressing questions in development economics. The NBER meeting would serve as a fantastic opportunity to learn about the cutting-edge of research in subjective well-being measurement in economics, in order to better inform my PhD research.

Thus far in my research career, my exposure to this area of research has been mostly through research in philosophy of the social sciences, which takes a meta-perspective on the progress of the field. Before starting my Economics PhD at Harvard in Fall 2017, I pursued an MPhil at Cambridge in History and Philosophy of Economics where I wrote several essays on methodological issues with measuring and tracking well-being in economics and other social sciences. There, I worked under the supervision of philosopher of social science Anna Alexandrova (author of *A Philosophy of the Science of Well-Being*, 2017) and developed my conviction that the science of well-being must be advanced alongside the philosophy of well-being. As I am now transitioning to more economics-focused research, it is an ideal time to meet other economists and social scientists working on subjective well-being. I would look forward to contributing to the conversations at the NBER meeting with an eye toward greater integration between social science and philosophy of science around issues in the tracking and measurement of well-being.

§2 Research Summary

I describe two projects related to my interest in subjective well-being: one past philosophy of science project ("Technocratic Targeting and the Subordination of Values"), and one ongoing behavioral economics project ("Understanding Attitudes about Targeted Social Benefits"). Both projects center on the targeting of social protection programs. I see targeting as a lightning rod for a cluster of related issues around the measurement of well-being and how well-being relates to policy-driven definitions of need.

Technocratic Targeting and the Subordination of Values: How do development economists measure need in order to apportion social benefits? How do these measurements of need relate to the subjective well-being of intended recipients? I consider how these core questions for development economists play out in the debate about the *targeting* of social protection and insurance programs. I claim that the debate about targeting methodology is a recent product of a transition in development economics from a discussion of foundational issues to the contemporary technocratic status quo, which concerns itself only with which method of targeting best achieves top-down objectives rather than bottom-up objectives related to well-being. My second claim is critical. Although the current technocratic debate does not claim to be value-free, it adopts what I call a *sequential model* on which the dangers and promises of different targeting methods are introduced as constraints only after the method of targeting has been selected. I argue that the sequential model, which prioritizes easily quantifiable measures of well-being, precludes a proper normative discussion about the ethics and politics of targeting.

Understanding Attitudes about Targeted Social Benefits: What is considered acceptable as a targeting policy for social protection and social safety net programs? In particular, how do public attitudes (and especially attitudes of non-beneficiaries) constrain the feasibility of particular policies, and how are those constraints influenced by the measurement of well-being? In this project, I take behavioral economics approach to understanding attitudes and beliefs about the acceptability of targeting based on various criteria. Thus far, I have developed a model that suggests that characteristics that more easily lend themselves to *counterfactual reasoning* are more likely to be considered acceptable as targeting criteria. I am in the process of designing lab experiments to test the intuition captured by this model. While this project aims to answer positive questions, a follow up project will be normative: I plan to study the design of optimal policy given the attitude-based constraints identified in the positive project.

§3 Completed PhD Coursework (Harvard AY 2017-2018)

- Economics 2010A: Economic Theory (Microeconomics I), Edward Glaeser and Eric Maskin
- Economics 2010B: Economic Theory (Microeconomics II), Mike Powell and Jerry Green
- Economics 2010C: Economic Theory (Macroeconomics I), David Laibson and Robert Barro
- Economics 2010D: Economic Theory (Macroeconomics II), Emmanuel Farhi and Ken Rogoff
- Economics 2120: Principles of Econometrics, Gary Chamberlain
- Economics 2140: Econometric Methods, Maximillian Kasy and Elie Tamer
- Economics 2030: Psychology and Economics, Andrei Shleifer and David Laibson

§4 Curriculum Vitae

Attached.

Zoë K. Hitzig

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Education

Harvard, PhD in Economics **2017 - present**
Fields (Expected): Development, Theory, Behavioral

Cambridge, MPhil (*1st class with distinction*) in History & Philosophy of Science **2017**
Dissertation Title: Bridging the 'Normative Gap': Mechanism Design and Social Justice
Supervisors: Anna Alexandrova, Jacob Stegenga, Stephen John

Harvard, AB (*magna cum laude*) in Mathematics, Philosophy **2016**
Senior Thesis Title: The Evolutionary Dynamics of Distributive Justice
Senior Thesis Advisors: Scott Kominers, Martin Nowak, Ned Hall

Research

- "**Bridging the Normative Gap: School Choice and Social Justice**" (submitted).
- "**The Perils of P-hacking and the Promise of Pre-Analysis Plans**," with Jacob Stegenga (draft available).
  Invited talks: American Philosophical Associated Pacific Division (San Diego); European Association for Evolutionary Political Economy, (Budapest); Cambridge Philosophy of Science Workshop (Cambridge UK); Issues in Medical Epistemology (Cologne); Workshop on Occam's Razors (Copenhagen); Radcliffe Workshop on Causal Pluralism (Cambridge MA).
- "**Technocratic Targeting and the Subordination of Values**" (in prep.).
  Invited talks: Evolution of the Economic Theory of Decision Making Workshop (Lake Como).
- "**Information, Incentives and Carpooling**" with Abhijit Banerjee and Rema Hanna (in prep.).

Fellowships, Honors and Awards

- Honorable Mention, NSF Graduate Research Fellowship Program (2017)
- Prize Research Grant, Centre for History and Economics at Cambridge (2016)
- Frank Knox Memorial Fellowship, Harvard (2016)
- Thomas Temple Hoopes Prize, Harvard (2016)
- Lester Kissel Grant in Practical Ethics, Safra Center for Ethics at Harvard (2015)
- Undergraduate Fellowship in Ethics, Safra Center for Ethics at Harvard (2014)
- Program for Research in Science and Engineering Fellowship, Harvard (2013)

Research and Work Experience

- Research Assistant to Prof. Emily Breza (June - Dec. 2017)
- Research Fellow with Prof. Rema Hanna (Jan - Aug. 2016)
- Research Intern at Kensho Technologies (Summer 2015)
- Investment Associate Intern at Bridgewater Associates (Summer 2014)

Teaching and Professional Service

- Supervisor for Harvard Mathematics 23a: Linear Algebra & Real Analysis
- Teaching Fellow for Harvard Economics S-1024: Economics & Philosophy (2016, 2018)
- Mentor in MIT PRIMES Circle (2015)
- Teaching Assistant for MIT 14.11: Insights from Game Theory into Social Behavior (2013)
- Referee for: *Politics, Philosophy & Economics.*

Skills

Expert in MATLAB, Mathematica, Stata, Palantir Metropolis, Excel, R.
Proficient in French.



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Scott Duke Kominers
MBA Class of 1960 Associate Professor of Business Administration
Faculty Affiliate, Harvard Department of Economics

May 21, 2018

Dear NBER Measurement and Tracking of Subjective Well-Being for Aging Research Committee:

I am excited to give Zoë Hitzig my highest recommendation for appointment as a funded attendee of the NBER Meeting on the Measurement and Tracking of Subjective Well-Being for Aging Research.

Zoë is brilliant. Her work focuses on applied theory and development, combining economics with approaches from behavioral sciences, mathematics, and philosophy. Her research provides insight into (1) the influence of social norms on inequality, (2) methodology, and (3) practical questions of applied economics. This work is in the style of some of the greatest economist–philosophers of our time; in terms of intellectual character, Zoë herself is perhaps most closely similar to Amartya Sen.

I co-advised Zoë's undergraduate thesis, and worked with Zoë in a classroom setting, as well (she took my PhD-level "Market Design" topics course in Fall, 2015). I have also been one of Zoë's main advisors since she returned to Harvard to pursue her PhD.

Zoë works tirelessly, and almost entirely independently. She can teach herself anything—be it statistical computing or a branch of theory—within a week or two. She is driven, inquisitive, and incredibly creative. And she is deeply attuned to the subtle methodological questions that underpin the linkages between economic theory and practice.

Zoë's thesis—which received one of Harvard's top thesis honors, the Thomas Temple Hoopes Prize—explores how and when bargaining theory can lend insight into theories of justice and the underpinnings of social inequality. Zoë developed a novel asymmetric version of the Nash bargaining game, in which agents are heterogeneous in their abilities to demand resources, and participate in a sequence of bargains before the population is refreshed according to an intra-class update dynamic. Using a mixture of quantitative methods, Zoë then characterized when and how small initial inequalities in bargaining positions can lead to large-scale disparities across the population. Along the way, Zoë identified how the *stochastic stability* concept of Foster and Young (1990) can be more appropriate than prior solution concepts for understanding the fairness of social arrangements. Zoë complemented her formal model with a broader philosophical investigation of the relationship between evolutionary theory and normative ethics, seeking to understand when it is possible to draw normative conclusions from mathematical descriptions of the evolution of social norms like the inequality Zoë found in her model.

Zoë's thesis work is incredibly—and beautifully—interdisciplinary, drawing upon approaches from economics, mathematics, evolutionary biology, and philosophy to address questions in the theory of justice. Zoë's particular reassessment of the power and limitations of game theory for normative reasoning is sophisticated, and of significant value on its own. But moreover, the type of reassessment Zoë undertook represents a kind of thinking that requires both tenacity and deep maturity—and that economics will need more of, as the field grapples with how its insights can be used to address social problems fairly and equitably.

Immediately after completing her thesis, Zoë gained a strong grounding in empirical development economics, through work with Rema Hanna (Harvard Kennedy School)—first as an RA and then as a coauthor. In "Information, Incentives and Carpooling," Zoë, Hanna, and Abhijit Banerjee carried out a randomized experiment with users of mobile ride-hailing app GrabTaxi in Jakarta, Kuala Lumpur, and Singapore. Surprisingly, they found that supplying drivers with information about passenger surplus led to a *decrease* in carpooling on the application.

At Cambridge on a prestigious Knox Fellowship, Zoë then developed several extraordinary methodological works. Two projects on normative approaches respectively examine (1) how economists should assess poverty reduction strategies and (2) how economic theory can be used to inform our understanding of social justice. A joint project of hers with Jacob Stegenga uses Bayesian confirmation theory and model selection theory to articulate the perils of p-hacking and assess the promise of pre-analysis plans.

Measurement and tracking of subjective well-being is a natural next focus for Zoë: as she continues studying the causes and consequences of inequality, it is essential for her to gain a solid understanding of non-material welare gaps, such as inequality of life outcomes and lived experiences. This will plug-in to an existing project of hers on how different conceptions of need impact policy in developing countries, and will also contribute to her ongoing work expanding economic methodology.

Two brief personality notes:

- Zoë is a "force of nature," with unmatched tenacity. At one point in her thesis research, for example, she realized that simulations that had taken her months to compute were ineffective because their scale did not allow her to tell whether convergence had been achieved. Instead of giving up on simulation methods—which is what her advisors recommended at the time—Zoë "doubled down," switching over to a research computing cluster and developing improved simulations within a week.

- Zoë herself works hard to eliminate inequality within economics and surrounding disciplines. In this, she is a true leader: she helped found a student group at Harvard dedicated to improving gender inclusivity in mathematics, and actively advises students of non-normative gender, ethnic, and social backgrounds. As a result, working with Zoë has been a source of growth to me personally—her commitment to inclusivity has deepened my own.

In summary: Zoë is a brilliant, driven, and truly unique economist and methodologist. She is a scholar for our future—and your program will be extremely valuable for her development. I thus am excited to give her my highest recommendation.

Sincerely,



Scott Duke Kominers