Parth **Parihar**

Political Economy · Microeconomic Theory

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Employment

W. Allen Wallis Institute of Political Economy - University of Rochester — *Rochester, NY*
Post-Doctoral Fellow — *Aug 2021 - Present*

Undergraduate Studies

Princeton University — *Princeton, NJ*
B.A. in Mathematics with Honors — *Sep 2011 - Jun 2015*
- Cum laude; Thesis: "The Dynamics of Consensus from Models of Learning on Networks"

Graduate Studies

Princeton University — *Princeton, NJ*
Ph.D. in Economics — *Aug 2015 - July 2021*
- Thesis Title: "Essays in Dynamic Cooperation: Bargaining and Contribution Games"
- Degree Completed July 2021 (to be received September 2021)

M.A. in Economics — *Jun 2017*

References

Professor Leeat Yariv — *(609) 258-4021*
Department of Economics, Princeton University — *lyariv@princeton.edu*

Professor Matias Iaryczower — *(609) 258-1018*
Department of Politics, Princeton University — *miaryc@princeton.edu*

Professor Wolfgang Pesendorfer — *(609) 258-4017*
Department of Economics, Princeton University — *pesendor@princeton.edu*

Teaching and Research Fields

Primary Fields

Political Economy, Microeconomic Theory

Secondary Fields

Behavioral Economics, Industrial Organization

Teaching Experience

Fall 2017	**Teaching Assistant for Prof. Leeat Yariv**, ECO 317: Economics of Uncertainty
Spr 2018-21	**Teaching Assistant for Prof. Kelly Noonan**, ECO 100: Introduction to Microeconomics
Fall 2018	**Teaching Assistant for Prof. Harvey Rosen**, ECO 100: Introduction to Microeconomics
Fall 2019	**Grader for Prof. Leeat Yariv**, ECO 511: Advanced Economic Theory I (Graduate)
Fall 2019	**Grader for Prof. Leeat Yariv**, ECO 520: Economics and Politics (Graduate)
Spr 2020	**Teaching Assistant for Prof. Andrea Wilson**, ECO 310: Microeconomic Theory: A Mathematical Approach

Publications

Continuous Selections of the Inverse Numerical Range Map (with Brian Lins). *Linear and Multilinear Algebra*, 64:1, 87-99, 2016.

ABSTRACT

For a complex n-by-n matrix A, the numerical range $F(A)$ is the range of the map $f_A = x^*Ax$ acting on the unit sphere in $\mathbb{C}^n$. We ask whether the multivalued inverse numerical range map f_A^{-1} has a continuous single-valued selection defined on all or part of $F(A)$. We show that for a large class of matrices, f_A^{-1} does have a continuous selection on $F(A)$. For other matrices, f_A^{-1} has a continuous selection defined everywhere on $F(A)$ except in the vicinity of a finite number of exceptional points on the boundary of $F(A)$.

Working Papers

When Incumbency Limits Productivity (Job Market Paper).

ABSTRACT

I study dynamic contributions from two agents to a joint project that has characteristics in two dimensions. Costly advancements are made by a single agent— the project leader— at any point of time and allow her to endow the project with her own preferred characteristics. Yet, advancements must also be approved by her collaborator—the respondent—in order to be realized. I assume agents differ in which characteristic they prefer and that one agent can contribute more efficiently as the project leader. I show that increasing the persistence (incumbency) of any project leader— regardless of her type— increases contributions from the inefficient agent but decreases them from the efficient one. I relate these findings to government turnover and spending. I also show that the requirement of receiving the respondent's approval slows progress on the project.

Endogenous Contribution Cycles (with Matias Iarcyzower and Santiago Oliveros).

ABSTRACT

We study sequential contributions to public goods in a decentralized environment in which commitment to a contribution schedule is not feasible. A natural (partial) solution to dynamic free-riding incentives in this context is for agents to alternate in making small steps towards completion of the project, dividing the larger project into smaller parts. In this paper, we consider a model in which agents with different valuation for the good are selected at random to contribute in each period. We show that if the project is sufficiently large, the unique equilibrium of the model displays endogenous contribution cycles, in which agents of different types alternate making gradual contributions towards the completion of the project. We characterize these cycles in terms of the primitives of the model, and study the efficiency of equilibrium outcomes.

Limited Foresight and Gridlock in Bargaining (Under Review).

ABSTRACT

This paper contributes to the study of gridlock— or inefficient delay in bargaining— by analyzing a model of repeated two-party bargaining in which status-quo agreements and proposal power are in general both endogenous. I introduce a key object, the foresight horizon, to index the number of downstream agreements agents incorporate into their decision-making on current policy. I find that gridlock occurs in equilibrium if and only if foresight is limited. While temporal discounting and the foresight horizon both measure "patience," they affect gridlock in exactly opposite ways. Finally, I relate equilibrium behavior within the specific setting of legislative bargaining to observed phenomena in public policy-making and democratic politics.

Work in Progress

Polarization and the Threat of Third-Party Entry

ABSTRACT

The role that minor parties and dissonant factions play in affecting the behavior of the two large parties in a two-party polity is an understudied phenomenon. In this paper, I study a dynamic model of entry and spatial competition over a two-dimensional issue space in which entry is costly for minor parties. When this cost is sufficiently small so that there is credible threat of competition from a new entrant, the "incumbent" major parties both separate from the median voter's ideal policy in equilibrium order to thwart the entry of the minor party. Minor parties thus never enter electoral competition in equilibrium, but yet affect the actions of the two main parties. I show that when the cost of entry increases, polarization decreases and all agents– the median voter, both major parties, as well as the minor party– are better off in equilibrium. The historical relevance of this phenomenon to minor parties in the United States is discussed.

Sequential Contributions to Multiple Joint Projects (with Matias Iaryczower and Santiago Oliveros).

Professional Activities

2021	**Invited Speaker**, Cornell University Microeconomic Theory and Public Economics Joint Workshop; Kansas Workshop in Economic Theory; University of Manchester
2021	**Poster Presentation**, Stony Brook International Conference on Game Theory
2020-Pres.	**Referee**, American Economic Journal: Microeconomics; Games and Economic Behavior; Journal of Theoretical Politics; Young Economist Symposium (YES)
2017-18	**Co-Organizer**, Princeton University Political Economy Research Seminar

Honors & Awards

2019-20	**Contributor**, NSF Award, Project: "Sequential Bargaining with Externalities"	*National Science Foundation*
2017-20	**Recipient**, William S. Dietrich II Economic Theory Center Summer Grant	*Princeton Univ.*
2015-20	**Recipient**, Graduate Fellowship	*Princeton Univ.*
2011-15	**Recipient**, James Leslie, Class of 1759 Scholarship	*Princeton Univ.*
2011	**Recipient**, CWA Union Plus Scholarship	*Comm. Workers of America*
2007-08	**National Champion**, Amer. Scholastic Achievement League (ASAL) Scholastic Challenge	*ASAL*