

Eighth Annual Conference: February 21-22, 2019

Radical Mechanisms 10 Years After the Financial Crisis



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Ten years after the financial crisis, soaring inequality and stagnant productivity are exerting increasing pressure on global capitalism. At the same time, prevailing economic policies are discredited and politics are increasingly polarized. Can the system be fixed? Should we embrace traditional policies or is fundamental change the only way out? This conference examined radical proposals to change key aspects of modern societies including property rights, taxation, decentralization, competition and voting, in the hope of building a better world.

The first session addressed private property and taxation. Anthony Lee Zhang (Stanford Graduate School of Business) kicked off the conference by showing that derivative contract prices may be vulnerable to manipulation. Zhang proposed a simple manipulation index, similar to the HHI (Herfindahl-Hirschman Index) used in antitrust, to detect vulnerability to manipulation in contract markets. Mathew Prewitt (RadicalxChange Foundation) took a more philosophical track in discussing questions concerning the origins of value and the role of network effects in value creation, the use of Harberger taxes, and the justification for private property rights.

Robin Hanson (George Mason University) discussed the application of Harberger taxes to regulate land use regulation and improve municipal decision-making. He proposed a governance system where policies are chosen with the objective of maximizing total value of all land in a city, and Harberger taxes are used to obtain precise estimates of property values. The system requires land owners to set and continuously adjust a declared property "value," while taxes are set as a percentage of the declared value, and owners must agree to sell their property at any offered price above the declared value.

The second session of the morning focused on decentralization and competition. Steve Randy Waldman (interfluidity.com) considered the virtues and pitfalls of decentralized versus centralized

systems of governance and concluded that society might wish to adopt a system that combines elements of both. Assuming that any degree of government requires the consent of the governed, the question that arises then is how does society select an optimal government? According to Waldman, democracy, where control is assigned through voting, is the "least-worst" way of assigning authority. However, the type of voting system strongly affects the outcome. Waldman argued that plurality voting systems tend toward an unsatisfactory two-party equilibrium. To avoid this, Waldman suggested injecting randomness into the system, by for example, "throwing all the ballots into a hat, and then randomly drawing one winning ballot." This type of "lottery" voting system would result in a truly representative legislative body even if any given individual representative would be "random." Would this work in reality? To move from theory to experiment, Waldman proposed using blockchain-based platforms to test novel institutional forms.

Rachel Cummings (Georgia Tech) analyzed the markets for data where large tech companies enjoy



Rachel Cummings, Assistant Professor of Industrial and Systems Engineering and Computer Sciences, Georgia Tech

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market power. She noted that many of the online services we use, such as Instagram, Facebook and Google, appear to be "free." In fact, they are not, we pay for online services with our personal data. Users provide information that is exploited by tech companies to manufacture profitable products. But users are not paid for the data they provide. Furthermore, there is currently no mechanism to determine how much should they be paid for their data. Cummings considers whether we can apply tools from market design to price personal data and finds that the personal data market presents a number of challenges such as the fact that data is often unverifiable, the networked nature of data, combining multiple datasets creates value, and many more. To overcome these challenges, Cummings advocates for the creation of data unions that would give users collective bargaining power and allow for negotiations with the large tech companies. She also envisions data markets where people provide high quality data to tech companies, data is recognized as labor, profits are fairly distributed and people are empowered to make decisions concerning their data.

Ioana Marinescu (University of Pennsylvania) talked about labor market concentration and monopsony power. Using the Herfindahl-Hirschman Index and data, she showed that the majority (60%) of labor markets in the U.S. are highly concentrated. The concentration is stronger in the heartland. And an increase in concentration is associated with lower posted wages implying that employers are able to exploit monopsony power to suppress wages. Marinescu suggests that in the current era of wage stagnation and inequality, antitrust law should be reformed so as to curb corporations' monopsony power and thereby increase competition and workers' wages.

The third session dealt with the theme of community, focusing broadly on how collective decisions are made. Devon Zuegel (Github) discussed the governance and funding issues that plague open source software (software made freely available, redistributed and modified). A current debate in the open source community is the sustainability and efficiency of the digital infrastructure. Zuegel drew comparisons between



Ioana Marinescu, Assistant Professor of Economics, University of Pennsylvania

digital and physical infrastructure. Similarly to the case of physical infrastructure, Zuegel found that just like physical infrastructure, open-source software suffers from systematic underinvestment. People have to rebuild things that have already been built by others, there is the need for collective decision-making (centralized or decentralized) and value is difficult to measure. Unlike physical infrastructure, digital infrastructure lacks a clear governance structure and marginal costs are close to zero. Zuegel is hopeful that the problems confronting open-source software will be solved, noting that the governance structure of the open-source software "Rust" offers a promising model.

Public goods are hard to fund. Purely private contributions lead to underfunding and centralized funding can often be poorly attuned to community needs. Zoe Hitzig (PhD candidate at Harvard) discussed matching grants as an effective way to fund public goods. In 1751, Benjamin Franklin used matching to fund the first public hospital in the colonies (The Pennsylvania Hospital). Is it possible to design a mechanism that would allow for centralization, harnesses decentralized information, and provide answers to questions such as which goods should receive matching funds,



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"Quadratic funding" would go a long way in designing an efficient way to fund public goods.

what ratio should be used to match the funds, and take account of budget constraints? Hitzig and co-authors Vasilik Buterin and E. Glen Weyl (2018) propose a funding mechanism, "quadratic funding," where the funding received by a project is proportional to the sum of the square roots of the contributions made by the funders. Holding contributions constant, this mechanism has the property that funding grows with the square of the number of members, small contributions are heavily subsidized and large contributions are least subsidized. Quadratic funding overcomes many of the design problems of linear matching and Hitzig suggests it can be applied to campaign finance reform, open source software communities and news media finance.

Nicole Immorlica (Microsoft Research) addressed the question of how to design a system of voting rules that elects highly valued candidates. Immorlica maintains that majority rule easily results in an outcome where the candidate of most benefit to society actually loses. The problem is that majority rules gives each person one vote but that vote does not reflect the strength of the preference of the voter among different options. In order to incorporate preference strength, Immorlica proposed a quadratic voting system where voters purchase votes from a clearing house at a price proportional to the square of the votes purchased. In theory quadratic voting produces optimal outcomes, but can it be implemented in practice? It requires large societies, fair elections (it is susceptible to collusion), decentralized identity, quasi-linear utilities, and rational voters. Although these conditions are not usually present, Immorlica cited promising work that is addressing these issues so that quadratic voting can become a reality.

The last session was devoted to organization. Ananya Chakravarti (Georgetown University), gave an overview of RadicalXChange where she serves as a member of the Board of Directors. Conceived as a community that seeks to harness the insights from mechanism design to imagining an alternative vision for a humane and equitable future, RadicalXChange spouses four core values: open, egalitarian, dignity and social innovation.



Nicole Immorlica, Senior Researcher Microsoft Research New England

The organization's research agenda encompasses economics, politics, space, collective action and identity.

Can we make the internet more open without sacrificing security? Lucas Geiger (Wireline) addressed the design of internet infrastructure capable of seamlessly supporting privacy, security and openness to commerce. Currently applications rely on data kept in "silos" controlled by different operators, resulting in multiple copies and requiring trust in each of the operators of the silos. This results in liabilities for companies and privacy risks for individuals. Wireline, a peer-to-peer network for open-source applications, is developing WeB3, a digital infrastructure that will allow developers to create applications without requiring data silos. It could also support applications for health and financial data. But to make this a reality, it is necessary to have a network infrastructure that guarantees verifiability, inclusivity and neutrality. WeB3 is building this decentralized infrastructure with applications for payment, decentralized identity, routing and others. Geiger invited all disciplines to join him in working on creating this infrastructure which will determine the future of privacy and security, and possibly the future of commerce.

Aparna Krishnan (Blockchain Berkeley) addressed

Wireline is developing WeB3, a digital infrastructure that will allow developers to create applications without the need for personal data "silos."



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mechanism design and decentralized finance. She argued that blockchain technology represents a new paradigm for mechanism design. Krishnan illustrated her ideas with a case study based on Augur, a trading platform that uses blockchain technology. Krishnan emphasized the fact that these new technologies have the potential to democratize access to financial instruments but they can also be used to facilitate unmitigated evil, and therefore she advocated for more debate on the ethics of decentralized finance.

The conference keynote speaker, Glen Weyl (Microsoft Research and Princeton University) spoke about the political economy of increasing returns. Weyl noted that the most important notion to have in mind when thinking about political economy is the notion of increasing returns. However, some of the most basic results in economics tell us that with increasing returns, capitalism fails. And increasing returns are all around us. The internet, for example, exhibits increasing returns and has public goods characteristics, yet, it is treated as private property. It is not surprising then, that it is dominated by tech giants such as Google and Facebook. Treating the planet as private property gets us to global warming. Similar problems arise with the broadcast spectrum or international trade. On the political side, we have one person one vote in democracies operating over nation states that are random arbitrary divisions with little relation to the underlying social structures. In these systems, minorities and local communities are often exterminated or oppressed.

Weyl offered a vision of a political economy using mechanisms that try to go beyond capitalism and one person one vote democracy. His vision would have “near-optimal emergent public goods funded by efficiency-enhancing taxes that move us beyond private property and governed by a near-optimal voting creating a world that breaks apart the divide between corporations, economics, individuals on the one hand and nations, politics and collectives on the other.” One mechanism is quadratic finance (see Hitzig above), a system using matching funds to support emerging private goods and Harberger taxes. On the



Glen Weyl '07 *08, Principal Researcher, Microsoft Research and Princeton University

political side, Weyl spouses the ideas of Danielle Allen, a philosopher at Harvard who advocates “polypolitanism.” Rather than nation-states or profit-driven corporations, polypolitanism envisions a world governed by some extended notion of civil society where there are a whole plurality of diverse emergent, accountable organization that are internally and democratically governed. People belong to overlapping organizations that provide them with the goods they require. While there are many questions of how this vision would be implemented in practice, there is a growing diverse community dedicating themselves to a “democratic conversation as scholars participating and learning about these ideas” and Weyl invites all to be part of that community.





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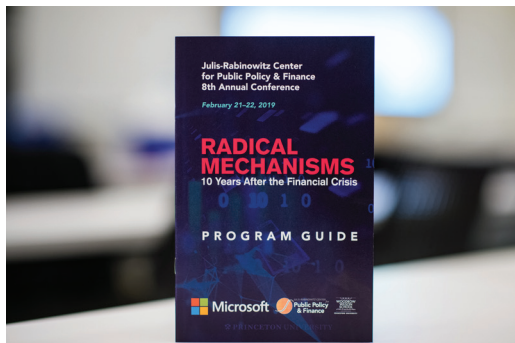
Conference Organizers

Atif Mian, Princeton University

Glen Weyl, Microsoft Research

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Hosted by the Julis-Rabinowitz Center for Public Policy the conference will be focusing on new instruments to leverage private sector investment, risk management in fragile states, and China's approach to financing development through the Belt & Road initiative.

The JRCPFF conference offers a unique and invaluable opportunity to interact with preeminent researchers, industry practitioners, and policy experts from across the globe who are addressing the most pressing economic issues of our time.