

Research Statement

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I believe basic research in the social and behavioral sciences can be integrated with broader policy-oriented considerations. Humans make decisions, big and small, every day. Yet what we decide doesn't always lead to the best results. Basic, laboratory experiments can help inform us about the systematic patterns of decision making - what we decide to do and why we decide to do it. This understanding is essential to devising policies that can nudge decision-makers in an optimal direction. My research has largely focused on this issue from the perspective of applied microeconomic topics in experimental economics, including behavioral game theory and mechanism design. Over the next few years I see my research in basic issues continuing, but I also anticipate exploring how to apply the results from the laboratory into practical nudges.

One central theme of my research is decision making in Principal-Agent interactions. Principal-Agent interactions are ubiquitous, but enforceable, complete contracts between them are not.¹ It is natural to ask how the strategic environment in which the Principal and Agent interact can be structured so that they reach efficient outcomes even in the absence of a complete contract. This theme cross-cuts areas within economics and management, and also areas within psychology and the cognitive/decision sciences. I also think this research bears in significant ways on socially important issues like gender inequity in wages and compensation, how women are perceived and how they perceive themselves in bargaining and negotiation environments, and the social costs of obesity and stigmatization for women. Below is a brief overview of how some of my research - published papers, manuscripts, and projects currently underway - fit into this theme.

One ingredient to understanding how the strategic environment can be made to encourage efficiency is understanding *why* Principals and Agents manage to

¹Some examples: firm/worker interactions, shareholder/CEO relationships, buyer/seller exchanges on the internet, the relationship between a parent and child when the former asks the latter to clean his room before the invited company arrives.

show any off-equilibrium choice behavior in the first place. It is now widely known that they do: in a variety of bargaining environments, a significant percentage of subjects choose cooperative but strictly dominated actions. Of particular interest is this result for investment and trust games, since here the equilibrium path is truly inefficient. Social preference models in behavioral game theory try to explain this behavior, by either positing some form of other-regarding preferences or by positing a non-trivial role for the Agent's beliefs about the intentions of the Principal. The data here preceded theory, so designing clear tests between classes of models has been an important area of research. Three papers address this problem directly:

- K. McCabe, M. Rigdon, and V. Smith (2002). Cooperation in Single Play, Two-Person Extensive Form Games. In R. Zwick and A. Rapoport (eds.) *Experimental Business Research*.
- K. McCabe, M. Rigdon, and V. Smith (2003). Positive Reciprocity and Intentions in Trust Games. *Journal of Economic Behavior and Organization* 52, 267-275
- A. Gillies and M. Rigdon (2008). Epistemic Conditions and Social Preferences in Trust Games. Working Paper.

Another ingredient is understanding how the structure of incentives affects choice behavior. For instance, do post-hoc incentives crowd-in cooperation or, as the "Paradox of Organizational Trust" suggests, crowd it out? Is there evidence in favor of a fair wage-effort hypothesis, and if so, how sensitive is it to cost of effort? What if pairing Principals and Agents is affected by their revealed preferences for off-equilibrium play, does that make the population as a whole better or worse off? Is it better to build trust slowly, taking incremental steps, or is it better to invest fully and backdown from that if necessary? All of these questions are ways of exploring how changes to the structure of incentives impacts efficiency.

- M. Rigdon (in press). Trust and Reciprocity in Incentive Contracting. *Journal of Economic Behavior and Organization*.
- M. Rigdon (2002). Efficiency Wages in an Experimental Labor Market. *Proceedings of the National Academy of Sciences* 99, 13348-13351.
- M. Rigdon, K. McCabe, and V. Smith (2007). Sustaining Cooperation in Trust Games. *Economic Journal* 117, 991-1007.
- R. Kurzban, M. Rigdon, and B. Wilson (in press). Incremental Approaches to Establishing Trust. *Experimental Economics*.

Role of Networks and Information on Cooperation My focus recently has been on a systematic exploration of networked exchange. Our question of interest is how the network structure Principals and Agents find themselves in impacts the level of cooperation reached and what role information and competition among the parties play in such environments. We develop a theoretical model about how investment by a Principal will be perceived by the Agents in the network, allowing us to generate our main hypothesis that information fosters cooperation on the side of the market with multiple traders. Our experimental results generally support this hypothesis.

- A. Cassar and M. Rigdon (2008). Trust and Reciprocity in 2-node and 3-node Networks, Working Paper.
- A. Cassar and M. Rigdon (2008). Relativized Trust and Reciprocity, Working Paper.

Solidarity in Hierarchical Relationships Another line of research is an exploration of strategic reputation building in coalitional games. This work is motivated by Weingast's (1997) political model of leader-subordinate relationships in terms of subordinates' ability to limit a leader's actions through punishment if the leader's actions violate social norms. Within the broad economic research agenda of how people consider other's welfare when making decisions, this project focuses on a particular question raised by prior theoretical and experimental research: when an authority figure attempts to exploit one of the subordinates, when and why do other subordinates, at a personal cost, choose to challenge that exploitation? When they challenge the authority, is it because they think the victim of the exploitation is being treated unjustly (an argument relying on social norms and social preferences)? Or is it because they want to reduce the likelihood of future exploitation that could target them by signalling to the authority that attempted exploitation is not in their interest as it will be resisted (an argument relying on reputations)? Our experimental design, using the divide-and-conquer game, provides a unique test of the underlying motives of those subordinates who challenge exploitation of others at a cost to themselves. This work is supported by a grant provided by the Interdisciplinary Committee on Organizational Studies at Michigan.

Correlates of Trust In addition to the strategic and incentive determinants of cooperation in environments like these, there are broader social and biological correlates. A current project with Stephanie Brown (Internal Medicine, University of Michigan) explores some of the social correlates of trust and trustworthy

behavior — how obesity affects judgments of trustworthiness — and the neuro-endocrinological correlates of trust. We are writing a draft reporting the results of the behavioral experiment entitled “Stigmatized Targets, Investment Opportunities, and Social Bonding” and I am the Principal Investigator on a grant pending at the Michigan Institute for Clinical and Health Research, “Social Influences on Health: The Role of Salivary Progesterone.”

Gender Differences in Giving and Negotiations In addition to these interests in strategic bargaining environments involving Principals and Agents, I also have an interest in a limit-case bargaining institution, the dictator game. I am particularly interested in gender differences in giving behavior by the dictators. Here are two projects on this broad topic. The first has to do with social distance and giving behavior. Giving, in both dictator and public goods games, tends to increase when choices are made less anonymously — whether that level of decreased social distance is between players in the game or between players and experimenter. If someone is watching, people give more. This is a robust effect: exposure to a stimulus consisting of three dots in a “watching-eyes” configuration increases dictator giving over a control treatment with the three dots arranged in a neutral configuration. We find, surprisingly, that the difference between treatment and control is due to a difference in *male* choice behavior. The second has to do with the well-known result that suggests the cost of giving matters differentially across genders: when giving is expensive, females give more; when it’s cheap, levels are more or less equal. But these decisions are made across budget sets with subjects taking on both the role of Dictator and Serf. So there is more variation than the cost of giving — there is, in addition, the expectations of what others may give. Controlling for these expectations in a systematic way eliminates the gender differences entirely, suggesting that rather than the cost of giving driving the gender difference, expectations were playing a crucial role.

- M. Rigdon, K. Ishii, M. Watabe, and S. Kitayama (2008). Minimal Social Cues in the Dictator Game, *Journal of Economic Psychology*, in press.
- M. Rigdon and A. Levine (in progress). Expectations and Gender Differences in Altruism.