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Bargaining under surveillance: Evidence from a three-person ultimatum game

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ABSTRACT

This paper investigates how the transparency of decision-making affects preferences over distributional outcomes. We also examine what motivates individuals to voluntarily invest economic resources to monitor decision-making processes. We find that third-party monitoring does not affect distributional outcomes in a three-person ultimatum game. Our results show that a large majority of individuals is willing to pay for a right to monitor decision-making processes despite pecuniary incentives to the contrary. We observe that third-parties are over-confident in believing that an opportunity to scrutinize decision-making processes changes distributional outcomes for their own benefit. Our results suggest that people may over-estimate the effect of transparent decision-making on economic outcomes.

1. Introduction

Many economic and political decisions are made either in transparent or secretive circumstances. We regularly observe political, legal and private disputes over citizens' rights to monitor decision-making processes. Historically, influential political movements have been launched aiming to increase the transparency of political and economic decision-making by granting citizens access to government records and decision-making venues to monitor political decision-making processes.[1] Currently, the emergence of modern information technologies, particularly the Internet and social media, is chang-

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[1] There is a long history of demanding unimpeded public access to government documents. Sweden was probably the first country to adopt laws granting all citizens unrestricted access to government documents which were not deemed particularly confidential. These laws were adopted in Sweden in 1776.

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ing the traditional landscape of governance, management and negotiations by fuelling even greater public demand for more transparent decision-making.[2]

This paper experimentally investigates how the knowledge of being under surveillance during a negotiation process influences preferences over distributional outcomes. We also examine what motivates individuals to voluntarily invest economic resources to monitor decision-making processes. Laboratory experiments provide a controlled environment where these questions can be studied. In particular, our experiment renders it possible to investigate how the knowledge of being under surveillance influences resource allocation through bargaining and whether people have an intrinsic motivation to observe bargaining processes that determine distributional outcomes.

Scientific interest in the influence of surveillance on human behavior is not new. The well-known illumination experiments with a modest aim to measure the impact of factory lighting on worker productivity at the Hawthorne Works between 1924 and 1932 turned out to be a landmark event in the development of social sciences (Mayo, 1933). The later re-analysis of these experiments let Landsberger (1958) to coin the term "Hawthorne effect" to describe a phenomenon that occurs when individuals alter their behavior due to the feeling that they are under surveillance or given indirect attention by measuring their performance.[3] The experiments at the Hawthorne Works not only laid a foundation for studies that focus on the effects of scrutiny on human behavior but also provide important guidance on how to develop new experimental practices to avoid the fate of the original Hawthorne experiments.

An important contribution of the original Hawthorne experiments and the follow-up studies has been the insight that scrutiny may alter subjects' behavior in behavioral experiments. This knowledge has sensitized researchers to develop research methodologies that enable them to control for confounds due to experimental demand effects. A related issue often raised in the literature pertains to the external validity of laboratory experiments conducted under the surveillance of the experimenter. Hence, Levitt and List (2007) mention the scrutiny associated with participation in economic experiments as one of the greatest threats to the external validity of economic experiments.

This paper connects to a voluminous literature studying the importance of social structure on economic behavior. Social identity and social distance between agents are known to influence preferences for redistribution both in experimental investigations (Hoffman, McCabe, & Smith, 1996; Klor & Shayo, 2010) and naturally-occurring situations (Alesina & Giuliano, 2009). In particular, experimental evidence indicates that reduced social distance by different means such as knowing the other person's name (Charness & Gneezy, 2008) and seeing the other person's picture (Andreoni & Petrie, 2004; Eckel & Petrie, 2011) increase the salience of other-regarding concerns in economic decision-making. Likewise, people are known to behave more pro-socially when their decisions are observable to their teammates (Cason & Mui, 1997). In addition to the literature documenting the effects of social distance on economic behavior between two directly involved parties, there is substantial evidence showing that third-parties whose economic outcome is not directly affected by a norm violation are willing to alter distributional outcomes at their own cost (Fehr & Fischbacher, 2004). Furthermore, it appears that the strength of third-party punishment is proportional to the size of the pay-off inequality between the individuals and can largely be explained by other-regarding motivations (Leibbrandt & López-Pérez, 2012).

Recent research has established that the relationship between distributional outcomes and social distance is sensitive to low-level cues. Pro-social behavior towards anonymous recipients and contributions to public goods are known to increase under watching eyes (Bateson, Nettle, & Roberts, 2006). In the same vein, Haley and Fessler (2005), Burnham and Hare (2007) and Rigdon, Ishii, Watabe, and Kitayama (2009) report experimental results indicating that the presence of subtle eye-like stimuli guides choice behavior towards more generous allocations.[4] Drawing on the extensive evidence suggesting the importance of social distance on human behavior, our study examines the role of third-party monitoring as a means to reduce social distance between the decision-makers and an inactive third-party.

Communication between agents is known to play a pivotal role in economic bargaining and strategic interaction. One of the most conspicuous results in the experimental literature is that pre-play communication between the actors enhances cooperativeness and equalizes distributional outcomes (Isaac & Walker, 1988; Ledyard, 1995; Ostrom, Gardner, & Walker, 1994). This has in turn led to important refinements of economic theory showing that the dissemination of information about players' preferences and intentions increases the likelihood of establishing stable agreements among independent decision-makers (Crawford, 1998; Farrell, 1995; Rabin, 1994). However, very little is known about the influence of third-party surveillance on the diffusion of information between individuals and the contents of pre-play communication. Even though there is no prior evidence directly showing that third-party surveillance alters the contents of communication, it

[2] There have traditionally been differences in access to government documents. For instance, while the Federal Reserve Open Market Committee and the US Supreme Court have for long published their minutes and released the votes of individual committee members, the views of the individual members of the Governing Council of the European Central Bank and the EU Court of Justice have typically not been publicly accessible. The European Central Bank published the minutes of a governing council meeting for the first time on February 19, 2015.

[3] There is persistent interest in the original Hawthorne data leading to several attempts to re-analyze and reinterpret the original data. Levitt and List (2011) suggest in a recent contribution that the original interpretation of the data is likely to be fictional due to deficiencies in the experimental design.

[4] The study by Haley and Fessler (2005) has led to several follow-up studies examining the robustness of the watching eyes effect. For example, Raihani and Bshary (2012) report no watching eyes effect in the Dictator Game. Fehr and Schneider (2010) report no effect in the Trust Game. Nettle et al. (2013) conduct a meta-analysis of the studies of the watching eyes effect in Dictator Game experiments published to date and conclude that the effect is robust. However, they suggest that instead of making people directionally more generous, watching eyes primarily reduce variation in social behavior.