



## New Advances in Experimental Research on Corruption

Chapter 10 Behavioral and Experimental Economics as a Guidance to Anticorruption  
Johann Graf Lambsdorff

### Article information:

**To cite this document:** Johann Graf Lambsdorff. "Chapter 10 Behavioral and Experimental Economics as a Guidance to Anticorruption" *In* New Advances in Experimental Research on Corruption. Published online: 09 Mar 2015; 279-300.  
Permanent link to this document:

[http://dx.doi.org/10.1108/S0193-2306\(2012\)0000015012](http://dx.doi.org/10.1108/S0193-2306(2012)0000015012)

Downloaded on: 28 March 2016, At: 01:27 (PT)

References: this document contains references to 52 other documents.

To copy this document: [permissions@emeraldinsight.com](mailto:permissions@emeraldinsight.com)

The fulltext of this document has been downloaded 179 times since NaN\*

### Users who downloaded this article also downloaded:

(2012), "Chapter 4 Anticorruption Policies: Lessons from the Lab", Research in Experimental Economics, Vol. 15 pp. 77-115

(2012), "Chapter 3 Experiments in Culture and Corruption: A Review", Research in Experimental Economics, Vol. 15 pp. 51-76

(2012), "Chapter 1 Experimental Research on Corruption: Introduction and Overview", Research in Experimental Economics, Vol. 15 pp. 1-11



Access to this document was granted through an Emerald subscription provided by emerald-srm:149425 []

### For Authors

If you would like to write for this, or any other Emerald publication, then please use our Emerald for Authors service information about how to choose which publication to write for and submission guidelines are available for all. Please visit [www.emeraldinsight.com/authors](http://www.emeraldinsight.com/authors) for more information.

### About Emerald [www.emeraldinsight.com](http://www.emeraldinsight.com)

Emerald is a global publisher linking research and practice to the benefit of society. The company manages a portfolio of more than 290 journals and over 2,350 books and book series volumes, as well as providing an extensive range of online products and additional customer resources and services.

Emerald is both COUNTER 4 and TRANSFER compliant. The organization is a partner of the Committee on Publication Ethics (COPE) and also works with Portico and the LOCKSS initiative for digital archive preservation.

\*Related content and download information correct at time of download.

# CHAPTER 10

## BEHAVIORAL AND EXPERIMENTAL ECONOMICS AS A GUIDANCE TO ANTICORRUPTION

Johann Graf Lambsdorff

### ABSTRACT

*This chapter argues that reciprocity provides a key to understanding corrupt behavior and its limitations. It allows for an understanding why agents not only are guided by explicit incentives but also serve those to whom they owe gratitude. It allows to observe how citizens disregard their narrow-minded interests and engage in altruistic punishment, potentially exercising negative reciprocity toward a corrupt leadership. It shows how reciprocity is at the center of criminal networks and how reform sometimes enhances rather than inhibits this dismal form of reciprocity. It finally reveals how humans are at risk of reciprocating toward their own self-image, which may inhibit them from impartially assessing their misdeeds. A thorough understanding of the power of reciprocity can inspire novel avenues for reform, some of which are presented here.*

At the beginning there is no specific, unambiguous word for bribe. There are only a range of reciprocities.

(John T. Noonan, 1984, p. 3)

---

New Advances in Experimental Research on Corruption  
Research in Experimental Economics, Volume 15, 279–300  
Copyright © 2012 by Emerald Group Publishing Limited  
All rights of reproduction in any form reserved  
ISSN: 0193-2306/doi:10.1108/S0193-2306(2012)0000015012

## INTRODUCTION

Some economists wonder why there is not much more corruption, in particular those who follow [Becker \(1968\)](#) and regard criminal behavior as being driven by rational calculus. A fully rational, risk-neutral actor opts for criminal behavior if the expected benefit exceeds the sanction multiplied by the probability of being convicted. But considering the mild sanctions that are often imposed in many countries around the world and the miniscule probabilities of detection for the sophisticated corruptors, illegal opportunities should be chosen more often. Why would citizens ever expect fair treatment by public servants? Why would prosecutors impose sanctions rather than striking side deals with suspects? What keeps politicians from milking the citizenry even more? But contrary to this calculus, we find heads of state who aim for serving their people, public servants who stick to the rules, businesspeople who abstain from profitable bribery, and citizens who risk their lives when fighting corruption. The rational, self-regarding calculus of detection and punishment seems to be only half of the answer to explain human decision making. What is the other half?

There is another strand of rational-choice theory with the opposite conclusion. If someone takes a bribe, why should he or she reciprocate? Why not sack the money and cheat the briber? Technically, bribery is not a subgame perfect Nash equilibrium and thus cannot be implemented ([Buccirossi & Spagnolo, 2006, p. 1287](#); [Pechlivanos, 2004](#)). There is no legal enforcement that helps corrupt actors. Many acts of corruption are one-shot, such that issues of reputation and repetition may not help. In other cases, an enduring exchange is known to terminate, suggesting that the final corrupt exchange ceases to be reliable and by help of backward induction all the previous ones as well. In this perspective, theorists wonder why there is not much less corruption. As we all know, also this is only half the answer. Corruption does exist, bribes are paid, and favors are reciprocated.

Rational choice theory emits two opposing messages, one with omnipresent and another with inexistent corruption. Both are only half of the truth and they do not add up to one inclusive answer. What is the missing link that helps us obtain a comprehensive viewpoint toward corruption? One approach has been to employ institutional economics. In the tradition of Williamson and North, with a focus on transaction costs it investigates the capacity to commit and thus determine future behavior upfront. It tells us about the many tricky methods employed for privately

enforcing illegal contracts (Gambetta, 2009; Lambsdorff, 2007). At the downside, institutional economics is not very specific with respect to behavioral assumptions but exchanges *Homo economicus* with a less rational but somewhat blurred substitute. Another approach has been to closely investigate human behavior.

At the 1997 anticorruption conference in Lima, Peru, I met John T. Noonan, whose excellent book on bribes provides a comprehensive historical review of the matter, starting with early documents from Egypt and Mesopotamia (Noonan, 1984). The focus of norms of these early societies refers to reciprocity. Documents ranging from 3000 BC until 1000 AD deplore failure to reciprocate and herald threefold punishment to nonreciprocators. No evidence can be found that public servants should behave differently. No legal codes are known that prohibit gift-taking (Noonan, 1984, p. 9). Citizens would thus not approach public officials empty-handed, nor even gods. They are not outraged about greedy public servants but about those who fail to keep their promises. But this marks only the beginning of societal organization. Noonan describes how the thought of impartial justice is introduced and conflicts with the norm of reciprocity. More and more historical documents show how the importance of gifts starts to be balanced against claims for justice, in particular for those who have little to offer. I still recall John Noonan's reply to my question as to why corrupt acts would ever function in reality: "It is the power of reciprocity." For an economist like me, who had only two half answers without the bridge in between, this was a thought-provoking challenge.

Reciprocity is at the center of behavioral approaches to human conduct and should be placed at the center for understanding corruption. To illustrate the point, take a quotation from Holger Pfahls, who was charged with taking bribes during his time as state secretary for defense in Germany from 1989 to 1992 (Lambsdorff & Frank, 2011, p. 124). He was accused and found guilty of accepting the equivalent of almost €2 million from German–Canadian businessman Karlheinz Schreiber to push through a deal to deliver 36 armored vehicles to Saudi Arabia that required support by the German government. In court Mr. Pfahls provided the following description of the alleged briber (own translation): "Schreiber told me that I was just one out of many who receives bribes. When Schreiber hates someone, his hatred is so profound that he wants to destroy him, even if that involves his own demise. On the other hand, he is a real buddy, highly talented in creating a pleasant atmosphere." Mr. Schreiber is portrayed as a person committed to reciprocity. He is kind to friends but retaliates when being

cheated. This reciprocal attitude, alongside with being perceived in such a way, serves as his device to enforce transactions.

Studying corruption from such a behavioral viewpoint is more than just bringing games on corruption to the lab or experimentally testing corrupt behavior in the field. Experimentally one can study the behavior of subjects within the orthodox paradigm of *Homo economicus*. In this spirit a variety of laboratory studies have determined the link between corruption and punishment or risk. Sequeira (2012) in this volume surveys a wide range of field studies that are helpful in estimating the extent of corruption in specific sectors. Many of these studies bring about interesting insights while leaving unchallenged the notion of humans as rational, self-seeking maximizers. I am concerned here more with experiments that follow a behavioral notion of man, recognizing nonstandard types of preferences, beliefs, and decisions.

Behavioral economics has changed economists' (and many others') view of man (Camerer, 2003; DellaVigna, 2009). Humans are not only driven by own-regarding motives but also by social motives. The preference function is more complex, including inequality aversion and reference points that invoke reciprocal action when being missed. They include ethical considerations and intrinsic motivations. Experiments on corruption show that this paradigmatic shift can be relevant for anticorruption. And behavioral economics can provide the missing link that integrates the two half answers that I raised above. It can explain why some corrupt acts are enforced by the power of reciprocity, but also why some public servants and politicians serve the public rather than following their narrow self-interest. This chapter reviews the relevant literature and puts it into the perspective of a behavioral economist, trying to show how the two half answers can add up to one.

The second section asks whether delegated tasks might be honored even when side deals are profitable. Are agents intrinsically motivated to reciprocate their principals, and if so, when? The third section asks whether citizens may engage in altruistic reciprocity and how this may be relevant to anticorruption. The fourth section deals with the reciprocity required among corrupt actors. How should anticorruption be organized if trust among criminals is scarce? The fifth section investigates how easily morality dissipates. It uses insights from experimental ethics to show how subjects seek justification for their misdeeds rather than ending them. In each of these sections, I will try to draw conclusion for anticorruption. The sixth section summarizes.

## AGENT'S RECIPROCITY

The principal–agent relationship, for example between employer and employee, has been widely applied to corruption. A key conclusion from theory is that agents must be incentivized by help of penalties or bonuses to such an extent that serving the principal is preferred to striking side deals. In a nutshell, principals are requested to outbid the briber. It requires little imagination to observe that this is a costly method that is often disregarded. Whether failure to implement this prescription would actually increase corruption has been widely investigated in the laboratory. Two results deserve notification. At first, as well reviewed by [Abbink and Serra \(2012\)](#) in this volume, imposing penalties on misbehaving agents does impact behavior, but this impact can exceed or fall short of rational choice predictions. As shown by [Abbink, Irlenbusch, and Renner \(2002\)](#), penalties imposed on agents with a miniscule probability can heavily influence behavior. The differences between a treatment with penalties and one without were substantial. With penalties the experimenter thus framed an environment where bribes are not tolerated and this was observed by subjects. Penalties seem to contribute to framing the normative environment, their impact thus going beyond consequentialist ethics. The second finding relates to a conflict between penalties and agents' intrinsic motivation to serve their principal.

The first experimental investigation of corruption, carried out by [Frank and Schulze \(2000\)](#), focused entirely on the behavior of public officials (or agents, more generally); bribe payers were fictitious and simulated by the experimenters. Subjects were students who attended the showing of a film organized by the students' film club, a self-financed nonprofit organization which volunteered as the "principal" in this experiment. Like many real world victims of corruption, the potential victim of corruption was deemed to be entirely passive. Before the film started, subjects were asked to make a decision on behalf of the film club in the following situation: a 200 DM banknote (about €102) which belongs to the film club has fallen into a drainpipe. It will be lost unless one of ten competing plumber firms retrieves the banknote. Each firm made a bid composed of two parts: the price which the film group would have to pay, and an amount of money the decision maker would receive from the plumber for obtaining the contract. Prices were positively linked with bribes, ranging from DM 20 (combined with a bribe = 0) to DM 200 (leaving a zero rent for the film club, combined with a bribe of DM 144). It was credibly announced that payments would actually

be made by the experimenters to the film club (DM 200 minus the payment to the successful plumber) as well as to two randomly chosen subjects (one per treatment).

In one treatment, corrupt agents could not be detected. In another (Schulze & Frank, 2003), there was a certain (publicly known) probability for detection, its size depending on the amount of the bribe taken, being up to 67% for the highest bribes (and hence for the most inefficient plumber firms). Subjects whose corruption was detected lost all income (which for some included a fixed income, reinforcing the deterrence). Unlike in the no-risk treatment, it was no longer income maximizing to take the highest bribe. This was observed by subjects, leading them to request more rational levels of bribes. The average bribe taken, however, did not decrease, as complete honesty (taking no bribe at all and choosing the most efficient firm for the principal) was almost completely crowded out due to the introduction of monitoring.

Another finding on agents' reciprocity relates to prosecutor's willingness to serve the public. Azfar and Nelson (2007) let students play in groups of eight, one taking the role of an executive who faces corrupt incentives and another taking the role of a monitor. In one treatment this monitor was randomly determined, in another he was elected. The elected monitor was observed to be more vigilant and devoted more resources to uncovering the executive's malfeasance. Election in this game, rather than random appointment, created bonds of reciprocity and cultivated a desire among monitors to serve their electorate. Barr, Lindelow, and Serneels (2009) found similar result with Ethiopian nursing students.

Jacquemet (2007) shows that a principal can lower the agent's willingness to engage in corruption by deliberately choosing a higher wage. Agents who take bribes are in a conflict of interest, being confronted with two people who request reciprocity. Should they serve the principal or the briber? With a higher wage obtained from the principal, some agents more often reject bribes. Others take bribes but have a (slightly) higher tendency to cheat the briber. Interestingly, this effect is not explained by income. Richer agents are not more honest. The causation does not run from principals paying higher wages, thus increasing income and causing more honesty. Agents who are endowed with a higher initial payoff reciprocate even more often to the briber, thus showing less reciprocity toward the principal. The key to understanding agents' behavior is reciprocity toward the principal. It must be the principal rather than nature who causes an increase in income if he or she wants to achieve the agent's gratitude.



These studies fit into the broader picture of agent reciprocity. Principals are often confronted with the alternative of either trusting their agents or controlling their agents' performance. Principals who opt for control have more pessimistic beliefs about the agent's performance and are thus regarded as distrusting and as expecting little effort – and they are served according to their expectations (Falk & Kosfeld, 2006). The explicit incentives they set may then backfire. Gneezy, Meier, and Rey-Biel (2011) review the widespread evidence where explicit, monetary incentives have been found to reduce performance in areas such as blood donation, collection of charitable contributions, or charging late-coming parents in daycare. Principals who want to limit the corruption among their agents may not be successful when they focus only on extrinsic motivations, such as bonuses, punishment, and detection. They must instead also shape the normative environment.

This induces a dilemma. Penalties have been found to be effective not only for the rational calculating subject but also for those who observe how penalties shape societal norms. But a principal who implements penalties is regarded to distrust the agent, thus undermining an intrinsic motivation. Due to this the impact of penalties on corruption are heterogeneous. One may conjecture that the perfect environment may thus be one where a division of labor is implemented, the role of the principal being split into two: The ideal public employer cultivates strong ties to the agent, shows how much he trusts, and provides a good precedent. His position would be separated from that of an ideal law enforcer who controls and imposes penalties without regard of personal matters. Such a division of labor replicates the classical “good guy bad guy” game, that is successfully implemented for the interrogation of suspects. When agents are confronted with these two principals, they might deliver fear of punishment and respect of norms to the law enforcer and reciprocate effort to the public employer.

## CITIZEN'S RECIPROCITY

Punishment is not only exercised by courts. It is widely employed by regular citizens in their attempt to uphold civic cooperation. Citizens penalize by ending cooperation, by discriminating, destroying ones reputation, or even by physical violence. Citizens defend the collective morality and altruistically impose punishment, even if this is costly to them (Bowles & Gintis, 2011, pp. 24–45). This type of altruistic punishment among citizens often complements the legal sanctions. In the laboratory, it has been observed

how public goods provision is supported by expressions of disapproval toward free-riders (Masclet, Noussair, Tucker, & Villeval, 2003), or by costly altruistic punishment (Fehr & Gächter, 2000). If someone spends less for the public good than the group average, he or she runs the risk of being sanctioned. Some subjects are willing to spend money for sanctioning these free-riders.

Yet, the possibility to sanction others is not always employed to advance cooperation. Herrmann, Thöni, and Gächter (2008) run public goods games with opportunities for punishment in 15 different cities and find that in some of these not free-riders are punished but those who contribute the most to the public good. These are suspected for having punished free-riders in previous rounds and are thus the target of retaliation. The extent of this type of “antisocial punishment” is depicted in Fig. 1. As can be seen, there is correlation with the level of perceived corruption in the respective countries. Simple least squares regression analysis confirms that the correlation is significant and is not driven by income per head. This finding suggests that countries shape the normative environment that accounts for the type of punishment exercised. Countries with low levels of corruption cultivate

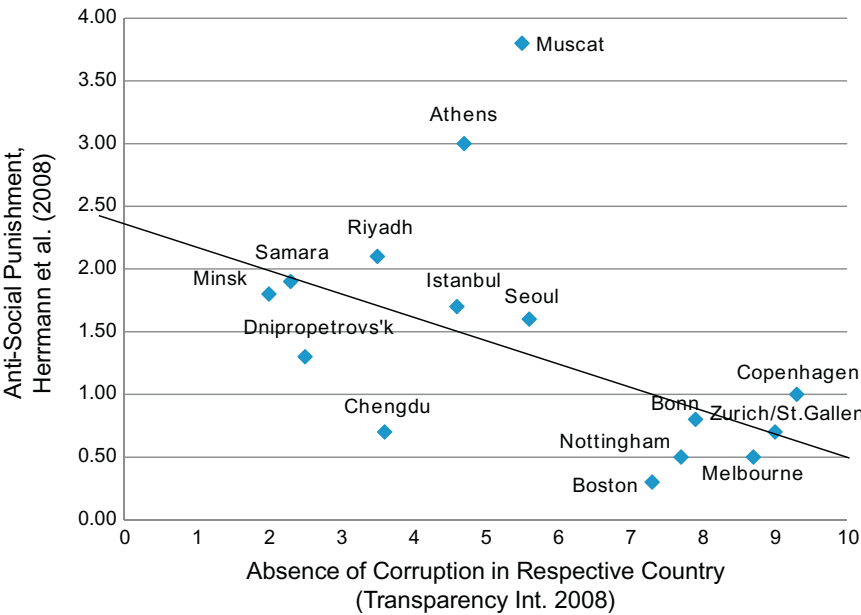


Fig. 1. Antisocial Punishment and Absence of Corruption.

societal norms of group solidarity and the punishment of free-riders. Where levels of corruption are high, the group-minded are ostracized for showing their moral superiority.

People do not only punish those who hurt them but also those who hurt others. Negative reciprocity is thus not confined to guarding ones selfish long-term interests and reputation (Bowles & Gintis, 2011, pp. 31–32). This type of indirect reciprocity has been observed in dictator games, where greedy dictators were punished by third parties. Punishment seems to reflect more general ethical norms.

In this spirit some researchers set up experiments to investigate issues of corruption more closely. Cameron, Chaudhuri, Erkal, and Gangadharan (2009) and Alatas, Cameron, Chaudhuri, Erkal, and Gangadharan (2009) observe how (students allotted to the role of) citizens react to collusion among firms and officials and the subsequent reduction of their payoff.<sup>1</sup> These citizens were given the opportunity to punish officials or firms. Interestingly, the authors find that this type of altruistic punishment was more pronounced among female participants. Where corrupt actors victimized innocent actors, women appear to be more willing to contribute to collective morality by penalizing this malfeasance. In a similar experiment, as described in this volume by Banuri and Eckel (2012), the authors observe more punishment exercised in the United States and link this to the distrust in governmental institutions in Pakistan, suggesting that bribery less violates social norms there.

The findings by Cameron et al. (2009) and Alatas et al. (2009) are noteworthy also with respect to cross-country comparisons. Contrary to Fig. 1, they do not find levels of corruption, nor those of punishment, to correlate with countrywide perceptions. Experimental results for Singapore reveal high levels of corruption and little altruistic punishment in contrast to perceptions for the country as being largely free of corruption. While some authors suggest that more recent institutional changes in Singapore may account for this finding, from my point of view Singapore's particular anticorruption strategy may better explain the findings. Unlike other countries reputed for low levels of corruption Singapore obtains bad scores with respect to press freedom. Anticorruption is driven by top-down implementation rather than bottom-up cooperation among citizens. These top-down methods may correlate with a failure in cultivating citizens' resistance toward corruption and altruistic attitudes toward punishing free-riders.

The strength of bottom-up in contributing to anticorruption is more systematically investigated by Serra (forthcoming). Her game involves five

“officials,” five “citizens,” and five “other members of society.” The official can initiate a corrupt transaction and request a bribe from a client in exchange for preferential treatment. When paid, a favor is delivered to the client but negative externalities are imposed on the other members of society. Serra investigates two regimes for punishing the official, one “top-down regime” where the transaction is detected with 4% probability and another “bottom-up regime” where this probability of detection arises only at the client’s request (who is never punished for his involvement in bribery). The official should observe that the latter treatment implies a lower risk of detection. Nonetheless, bribe demands are observed to diminish. It remains difficult to trace the reasons for this finding. The official may regard the citizen no longer as being reliably complicit in the corrupt transaction but as being assumed also for the role of the whistle-blower. The involvement of clients in the anticorruption regime may thus contribute to fostering a norm of anticorruption. Overall, this is a wonderful piece of evidence, suggesting how important societal norms contribute to a lasting culture of anti-corruption. One may contend, still, that the clients option to pressure the official may also backfire and serve as a method for ascertaining corrupt reciprocity, an issue to which we turn in the fourth section.

While laboratory experiments provide us with a clear mandate to involve citizens as watchdogs, they are not specific on how this should be done in practice. [Olken \(2007\)](#) describes results from a natural field experiment, comparing the extent of missing expenditures with respect to funds granted to Indonesian villages for the construction of village roads. Grassroots monitoring was increased in some of these villages either by circulating invitations to attend local meetings, where officials account for how they spent the resources. In a second treatment, this invitation was accompanied by an anonymous comment form. Participation of the meetings was successfully increased by 40% relative to a control treatment where no such invitations were circulated. While Olken finds some significant effects for other treatments of his study where government audits were more often implemented, grassroots involvement remained insignificant, helping only more open debate at the meetings but no measurable impact on missing expenditures. One explanation he provides relates to how the invitations were distributed. Circulation via village schools guaranteed a broader participation while controlled distribution by village governments fostered fears of elite capture of the participatory process.

This is an important insight which brings laboratory and field experiments into perspective. Participation seems to limit bribery in experiments, but only if it is perceived to be unbiased and not at the risk of capture. For

example, the field studies surveyed by Gallego and Wantchekon (2012) in this volume show how well vote-buying can be contained if experimenters run treatments with unbiased and extensive participation mechanisms. Similar to the laboratory, the experimenters perfectly control the delivery of information and the participatory process. Yet, the success of participation may diffuse if citizens fear the process to be biased and suspect local capture. If such suspicions arise in the real world, experimenters are at risk of overestimating the external validity of bottom-up mechanisms.

## CRIMINAL'S RECIPROCITY

Bribery is an arduous enterprise. It requires trusted relationships, supported by reputation-building or surrounding networks that safeguard against opportunism. Institutions that support enforcement are often scarce. Corrupt businesspeople retain considerable uncertainty as to whether they will be served after having paid a bribe. More often than not, bribers hope for reciprocal attitudes rather than being sure they will be served. Reciprocity, in a word, exists but it falls short of operating with certainty.

The extent of illegitimate reciprocity is investigated in a field study on Japanese Sumo Wrestling by Duggan and Levitt (2002). They note wrestlers' urgency to win the 8th out of 15 fights in a tournament in order to advance in ranking and observe that few end up with only 7 victories. This opens the door to collusion as wrestlers can trade the more valuable 8th victory against a less important victory by the opponent. The authors show that in a succeeding match the opponent is more likely to win, this way being reciprocated for his willingness to lose.

Because of the difficulty of enforcing corrupt transactions these are often carried out only among insiders, limited to a network of trusted actors and repeat customers (Lambsdorff, 2007, pp. 136–163). This generates a form of inefficiency of its own. Efficient firms may not obtain contracts when they are not part of a trusted circle of insiders. Even if they are willing to pay bribes, they are set at a disadvantage. Insiders to a corrupt network are preferred because applicants are screened according to the likelihood to reciprocate favors. An interesting experiment on this issue is reported by Banuri and Eckel (2012) in this volume. They run a trust game in the United States and Pakistan. Subjects in the role of a trustor pick with whom to play a trust game, either with a peer from their own primary group or with an anonymous player from the population. Choosing a peer may enhance

confidence that investments will be reciprocated but comes at a cost, resembling the fact that nepotism reduces competition and diminishes the chances of contracting with high-quality applicants. The authors find that peers are chosen by 44% of subjects in the United States and by 69% in Pakistan, revealing that nepotism is less pronounced in the United States. Similar results on reciprocity as an impediment to organizational efficiency have been obtained by [Fiedler, Haruvy, and Li \(2011\)](#).

Investigating criminal reciprocity has also widely inspired reform. Rather than deterring bribery by help of detection and punishment, the idea is to seek methods for inhibiting corrupt reciprocity and rather encourage corrupt actors to cheat each other. One method for achieving this relates to the recruiting process. Applicants might be screened according to their attitudes toward corrupt reciprocity, giving preference to those who are willing to cheat bribers. Certainly, preferring honest applicants who never take bribes will always obtain priority. But honesty is scarce and when choosing among the second-best those who cannot be trusted in corrupt transactions can legitimately be preferred.

As surveyed in this volume, [Chaudhuri \(2012\)](#) notes that women are sometimes found to be more pro-social and more risk averse. This per se may put them at an advantage for public offices. Another gender effect relates to the preference for reciprocity. [Cox \(2002\)](#) finds a higher tendency of men to reciprocate. This invites for more focused research with a corrupt framing, testing whether women would less frequently reciprocate a bribe. [Lambsdorff and Frank \(2011\)](#) play a simple one-shot bribery game in a lecture hall and find 21 men out of 76 to reciprocate a bribe but only 5 women out of 96. This is in contrast to 62 women who cheat the briber while only 39 men opt for this type of cheating. Men have a higher sense for positive reciprocity. But they may also have a higher expectation of negative reciprocity. Bribers were given the option to exercise costly punishment. This option was exercised by 16 (31%) out of 51 cheated men but only by 5 (16%) out of 32 cheated women. Similar results are reported by [Rivas \(2008\)](#) who runs a more complicated game across many periods. This suggests that women may be preferable for routine inspections, in workplace situations that are comparable to the anonymous setting that was tested in the experimental laboratory. Men, on the other hand, may need clearer gift-limit rules, given that they cannot resist reciprocation after taking gifts.

Criminal reciprocity is also key to understanding the effects of the four-eyes principle. Subjecting individual decisions to peer review is a standard organizational method. Having a second, independent person supervise important decisions is seen to ensure that a control mechanism is in place.

Reports on anticorruption in the public sector thus often emphasize a rigid application of the four-eyes principle as a method for containing corruption. Bribing two, it seems, is more demanding than bribing just one. What appears most intuitive to the layman, however, has been critically challenged by laboratory experiments. [Schikora \(2010\)](#) designs a corruption experiment where bribe-takers may cheat the briber. He compares a treatment played among individuals with a treatment where officials decide in groups of two. Only if both agree to the bribe it will be accepted and rejected otherwise. This appears as a safeguard against corruption, because consent among two corrupt officials is required to arrange a bribe. Nonetheless, there is more bribery in the group treatment. This can be traced to the fact that the game is played repeatedly such that issues of reputation become salient. Schikora reviews experimental evidence that groups are more self-seeking than individuals and they are better at cultivating a reputation for reliable reciprocity. The mutual control exercised between two actors backfires, because rather than serving the public it is employed to serve the actors' corrupt reputation. This piece of research thus casts doubt on naïve expectations toward the four-eyes principle. How peer review should be organized to better contain risks of corruption will have to be food for future research.

Whistle-blowing systems combined with leniency provisions have been widely recommended to destabilize corrupt transactions ([Yadlin, 2006](#)). But an understanding of reciprocal behavior is important to observe the extent to which leniency can backfire. Imagine a briber who waits for his contract to be awarded and fears the bribe-taker may cheat. Will the briber be entitled to obtain leniency in exchange for reporting? Apparently, this type of leniency would backfire. If those who were cheated are invited to report, bribe-takers will not dare to cheat. In a rational choice perspective this type of leniency has been investigated and observed to enhance corrupt reciprocity, supporting the enforcement of bribe transactions ([Buccirossi & Spagnolo, 2006](#); [Lambsdorff & Nell, 2007](#)). [Engel, Goerg, and Yu \(2012\)](#) compare a punishment regime where briber and bribee are sanctioned symmetrically with one, often observed in reality, where the briber is less severely punished, reducing his costs for whistle-blowing. They observe more whistle-blowing by cheated bribers in the second regime. As a result, officials are reluctant to cheat bribers and reciprocate more often. Overall they observe that mild punishment of bribers brings about significantly more successful corrupt transactions. This finding is particularly strong in their experiment in China, while in Germany the effect is more attenuated. [Schikora \(2011\)](#) investigates behavior in a more complex game where both,

briber and bribe, can initiate a corrupt transaction and the size of the bribe is not fixed. He obtains similar results. On the one hand, leniency given to whistle-blowers deters bribery. Players more often opt for an outside option although this generates low individual payoffs (but no negative externalities). Subjects in the role of officials are thus reluctant to ask for bribes as they fear reporting by the client (and vice versa). At the downside, once bribes are paid they are larger and more often reciprocated. Whistle-blowing thus helps stabilize corrupt transactions. Officials refrain from taking or requesting bribes without delivering afterward. Interestingly, this effect is more pronounced among men, confirming the above findings on gender effects. Men more often negatively reciprocate after having been cheated. Given these ambivalent findings, Schikora paves an avenue for reform by help of a third treatment. Based on [Lambsdorff and Nell \(2007\)](#) he suggests an asymmetric design of penalties, giving leniency to a cheating bureaucrat who blows the whistle and allowing him to keep the bribe. Corruption was least frequent in this session. Bribes are rarely reciprocated but often accepted and reported. This type of an asymmetric design of sanctions successfully counters the stabilizing effect of leniency.

## THE LIMITS OF MORALITY

Moral behavior within the confines of *Homo economicus* reduces to an act of consequentialist rationality. Collectively preferred outcomes are supposed to be attained with minimal costs. Decisions are carried out consciously, weighing the costs and benefits of alternatives. Issues of reciprocity are already in conflict with consequentialist ethics. In addition to this caveat, a growing body of interdisciplinary research has emerged that tells us how easily ethics is diverted to myopic behavior, self-deceit, or misled by framing effects or simple heuristics ([Appiah, 2008](#)). A new field of *experimental ethics* emerged that can help us better understand our limits in moral judgment. We are not primarily concerned with the goodness of our behavior but with good emotions that we seek to attach to our behavior. Rather than balancing the costs and benefits of doing good, we balance costs against the benefits of feeling good. We may reciprocate toward our own self-image rather than only to others. This becomes problematic in particular when we exercise a self-serving bias in how we view the world ([Dana, Weber, & Xi Kuang, 2007](#)).



Anticorruption has been a moral crusade, highly successful in initiating legal reform at the global level. But we are at risk of falling into some of the traps that can be identified in experimental ethics. These risks arise when reform assumes excessive levels of individual rationality that are in contrast to us morally fallible creatures.

Monin and Miller (2001) ran a variety of psychological experiments with undergraduates. In one of them they requested subjects to fill out a questionnaire to express approval or disapproval of blatantly sexist statements, such as “most women need a man to protect them.” This question aimed at allowing subjects to voice rejection and provide them with an accompanying self-esteem of being nonsexist. For a control group the word “most” was exchanged with “some,” which makes it more difficult to answer and inhibits subjects in submitting emotional expressions of disapproval. The first group was subsequently observed to more often favor a man for a stereotypically male job. They had obtained the *moral license* to such conduct by having expressed their dislike of sexist statements upfront.

We are at risk of seeking similar moral licenses in anticorruption, generating reform that paints a favorable image of ourselves rather than effectively changing reality. While direct evidence in this respect is still missing, it goes without saying that political and corporate efforts are not immune to moral licensing. The problem is not only one of hypocrisy and window dressing. Incentives to those who engage in anticorruption are not only such that paying lip service is preferred to effective action. The problem is the inclination to self-deception. Corporations, for instance, have been busy in designing compliance systems. But these systems can also function as a moral license (Lambsdorff, 2009). They allow managers to express outrage at the designing stage so as to be more tolerant when bribery is thought to be unavoidable.

Delegation is another challenge to the rationality of our moral calculus. We judge acts differently when we did not commit them ourselves. Action invokes immediate moral sentiments that are attenuated when the same consequences result from inaction (Cushman, Young, & Hauser, 2006). We carry a lighter moral burden if third parties commit the misdeeds on our behalf. Hamman, Loewenstein, and Weber (2010) showed for dictator games that contributions to recipients decreased almost to zero when dictators chose between competitive agents who announced upfront how much of the dictator’s money they would transfer to the recipient. Acting through the intermediary allowed dictators to distance themselves from the norm of fairness. Consequently, they expressed little responsibility for the recipients’ payoffs when having made use of intermediaries. Coffman (2011)

introduces a fourth player who observes how fair the game is played and is provided with the capacity to punish the dictator. Coffmann observes that unfair dictators are less punished if they engage an intermediary rather than acting directly. This suggests that it is not only the dictator's self-serving bias that allows him to escape responsibility. There exists a public norm according to which delegated malfeasance is less bad.

This insight has been applied to corruption by Drugov, Hamman, and Serra (2011). A citizen can offer a bribe to an official, which entails negative externalities to be borne by a third, individual player. This bribe can either be paid directly or, in a separate treatment, via a fourth player, the intermediary. They find that officials expressed a higher willingness to take bribes from intermediaries, and subsequently accepted lower bribes. Clients more frequently offered bribes when this was arranged by intermediaries. Intermediaries may thus enhance corruption by reducing the moral costs of bribery.

We also tend to depart from a consequentialist ethics when assigning guilt according to levels of knowledge. Criminal judges assess the *mens rea*, the guilty mind as a subjective part of a criminal act. This comprises whether the perpetrator intentionally and knowingly committed the perpetration. As reviewed by Sunstein (2005), this is in line with folk psychology but it can generate absurd consequences. He illustrates this with the rule: *Do not knowingly cause a human death* (Sunstein, 2005, p. 536), which implies that "trading dollars for a known number of deaths, is morally unacceptable." Convincing as it appears at first sight, it implies that we give pardon to someone who fails to know. We would, for example, condemn a car company that accepts 10 deaths after calculating that avoidance would amount to 100 million dollars and thus be too costly. But we give pardon if the company never carried out the cost-benefit analysis. This boils down to condemning not the behavior itself but the company's respective knowledge. It is easy to imagine that we employ a similar logic with respect to bribery: *Do not knowingly bribe officials*. This appears to be a convincing anticorruption strategy and has found broad access to legislation (Lambsdorff, forthcoming). But it backfires by inducing managers to avoid knowledge and request those who do the dirty work to leave them uninformed.

Loewenstein, Cain, and Sah (2011) depart from the idea of moral licensing to write a disturbing paper on the effects of transparency, widely believed to be a universal tool in anticorruption. They report on experiments where "advisors" should communicate to a "chooser" the payoffs and risks involved with two options and submit a recommendation about which option to pick. While one option involves a higher expected payoff to the "chooser," the other induces a bonus to the advisor, putting him or her in a

conflict of interest. Contrary to rational expectations, revealed conflicts of interest increased rather than decreased the chooser's compliance with the recommendation. Choosers may have disliked insulting the advisor with the suspicion that the conflict of interest corrupted his or her behavior. Other choosers may have felt pressured to reciprocate and to help the advisor satisfy his or her personal interests. These findings are in line with evidence obtained in the field. Voters often fail in showing the expected outrage to questionable behavior of the incumbent government; their voting behavior being often ambiguous, as reviewed by [Hollyer \(2012\)](#) in this volume. While this is often explained by voters' hopes to profit from clientelism, the above-mentioned psychological effects may also be at play. Voters may dislike hurting politicians' self-respect by suspecting conflicts of interest. [Winters, Testa, and Fredrickson \(2012\)](#) in this volume note that some stronger reactions by voters seem to emerge if media campaigns provide a platform to cultivate disapproval of corruption. It may require a third party to raise accusations and express public dismay, to provide "specific information about particular politicians on which voters can actually take action" ([Winters et al., 2012](#)). The "chooser," it seems, is overburdened when left alone.

"Choosers" also reported a lower level of trust in the "advisor" if the conflict of interest was revealed. In a game framed as one between a doctor and a patient/chooser they were less likely to seek the doctor's advice again in the future ([Loewenstein et al., 2011, pp. 425–426](#)). This is strikingly in line with reduced electoral participation as noted by [Winters et al. \(2012\)](#), contrary to rational expectations that would motivate all voters to expel corrupt politicians from office.

Also the behavior of "advisors" is likely to differ once their conflict of interest has been disclosed. [Loewenstein et al. \(2011, p. 424\)](#) investigated this in another experiment. "Estimators" guessed the value of a jar of coins, being paid according to the accuracy of their estimates. "Advisors" were given better information and put into a conflict of interest with a payoff being made only if the estimator overestimated. When this conflict was concealed the advisors mildly biased their advice. When it was disclosed advisors anticipated that their advice would be discounted by the estimator and thus engaged in strategic exaggeration, biasing their decision even further. Estimators, however, did not discount enough and consider also the advisor's exaggeration. They ended up suffering from disclosure. [Loewenstein et al. \(2011\)](#) link their findings to moral licensing. A person whose conflict of interest was disclosed may feel a license to offer biased advice, knowing that responsibility to adjust for the bias has shifted to those who

were informed about the conflict. Disclosure of a conflict of interest may then undermine the motivation to adhere to professional standards.

Disclosing conflicts of interests is not an instrument by itself. It transfers the moral dilemma to the recipients of the respective pieces of information without resolving it. Disclosure can be justified only if it allows for improved regulation or clarification of societal norms. If left by ourselves we do not seem to be rational enough to process information on conflicts of interest in the way predicted. Transparency, it seems, is not a silver bullet.

## CONCLUSIONS

At the beginning of mankind there was no term for bribery. Humans were occupied with the avoidance of warfare and the organization of cooperation, across families, kin, and ethnic groups. Reciprocity became part of our genes, supported by cultural transmission and contributing to our evolutionary fitness (Bowles & Gintis, 2011, pp. 13–18). But the more complex organizations grew the more it became apparent that reciprocity needs to be better targeted, directed to the benefit of societies, and avoided where it counters public interest. Norms of universal justice emerged and started to fine-tune norms of reciprocity, stating when reciprocity should be valid and when respective norms need to be prohibited. Along these lines mankind started to regulate gift-giving and prohibit unjust reciprocity.

This conflict between norms, those of reciprocity and those of justice, are at the core of an understanding of corruption. *Homo economicus* is either horribly corrupt, because he feels no moral impediments, regards all temptations to be legitimate and takes advantage of risks of punishment being commonly low. Or *Homo economicus* is averse to corruption, because corruption is arduous to enforce. *Homo reciprocans* provides a better approach to understanding corruption. As now widely evidenced in experimental research, humans are sometimes willing to reciprocate a bribe but they also devote resources to an altruistic punishment of bribe-takers and like to serve their principals. These pieces of evidence allow us to develop a more comprehensive picture of humans who face corrupt incentives.

I surveyed here the widespread findings on reciprocal attitudes. Humans reciprocate their principals, society at large but sometimes also criminals and quite often only toward their self-image. These insights should help us better design systems that contain corruption. Much remains to be done. Experimental researchers interested in issues of corruption need only take a look into the behavioral toolbox, which offers a wide range of nonstandard

preferences, beliefs, and decisions, such as overconfidence, loss-aversion, or lack of self-control. These wait to be readily applied to experiments on corruption, shaping a better understanding of the best practice that societies need for reform.

## NOTE

1. Unlike the previous public goods games, citizens are not involved during the first phase of the game, the one where firms may pay bribes to officials. Given that they cannot misbehave, they have no reason to dislike the ethical precedent of others and thus no incentive to engage in antisocial punishment. Considering antisocial punishments may be an interesting extension also to experiments on corruption.

## REFERENCES

- Abbink, K., Irlenbusch, B., & Renner, E. (2002). An experimental bribery game. *Journal of Law, Economics and Organization*, 18(2), 428–454.
- Abbink, K., & Serra, D. (2012). Anticorruption policies: Lessons from the lab. In D. Serra & L. Wantchekon (Eds.), *New advances in experimental research on corruption*. Research in Experimental Economics (Vol. 15). Bingley, UK: Emerald Group Publishing.
- Alatas, V., Cameron, L., Chaudhuri, A., Erkal, N., & Gangadharan, L. (2009). Gender and corruption: Insights from an experimental analysis. *Southern Economic Journal*, 75, 663–680.
- Appiah, K. A. (2008). *Experiments in ethics*. Cambridge, MA: Harvard University Press.
- Azfar, O., & Nelson, W. (2007). Transparency, wages, and the separation of powers: An experimental analysis of corruption. *Public Choice*, 130, 471–493.
- Banuri, S., & Eckel, C. (2012). Experiments in culture and corruption: A review. In D. Serra & L. Wantchekon (Eds.), *New advances in experimental research on corruption*. Research in Experimental Economics (Vol. 15). Bingley, UK: Emerald Group Publishing.
- Barr, A., Lindelow, M., & Serneels, P. (2009). Corruption in public service delivery: An experimental analysis. *Journal of Economic Behavior and Organization*, 72, 225–239.
- Becker, G. S. (1968). Crime and punishment: An economic approach. *Journal of Political Economy*, 76, 169–217.
- Bowles, S., & Gintis, H. (2011). *A cooperative species: Human reciprocity and its evolution*. Princeton, NJ: Princeton University Press.
- Buccirossi, P., & Spagnolo, G. (2006). Leniency policies and illegal transactions. *Journal of Public Economics*, 90, 1281–1297.
- Camerer, C. F. (2003). *Behavioral game theory: Experiments in strategic interaction*. Princeton, NJ: Princeton University Press.
- Cameron, L., Chaudhuri, A., Erkal, N., & Gangadharan, L. (2009). Propensities to engage in and punish corrupt behavior: Experimental evidence from Australia, India, Indonesia and Singapore. *Journal of Public Economics*, 93(7-8), 843–851.

- Chaudhuri, A. (2012). Gender and corruption: A survey of the experimental evidence. In D. Serra & L. Wantchekon (Eds.), *New advances in experimental research on corruption*. Research in Experimental Economics (Vol. 15). Bingley, UK: Emerald Group Publishing.
- Coffman, L. C. (2011). Intermediation reduces punishment (and reward). *American Economic Journal: Microeconomics*, 3, 77–106.
- Cox, J. (2002). Trust, reciprocity, and other-regarding preferences: Groups vs. individuals and males vs. females. In R. Zwick & A. Rapoport (Eds.), *Experimental business research* (pp. 331–349). Dordrecht: Kluwer Academic Publishers.
- Cushman, F., Young, L., & Hauser, M. (2006). The role of conscious reasoning and intuition in moral judgment: Testing three principles of harm. *Psychological Science*, 17(12), 1082–1089.
- Dana, J., Weber, R. A., & Xi Kuang, J. (2007). Exploiting moral wiggle room: Experiments demonstrating an illusory preference for fairness. *Economic Theory*, 33, 67–80.
- DellaVigna, S. (2009). Psychology and economics: Evidence from the field. *Journal of Economic Literature*, 47(2), 315–372.
- Drugov, M., Hamman, J., & Serra, D. (2011). *Intermediaries in corruption: An experiment*. Unpublished manuscript.
- Duggan, M., & Levitt, S. (2002). Winning isn't everything: Corruption in sumo wrestling. *American Economic Review*, 92, 1594–1605.
- Engel C., Goerg, S. J., & Yu, G. (2012). Symmetric vs. asymmetric punishment regimes for bribery. Issue 2012/01, Max Planck Institute for Research on Collective Goods, Bonn. Retrieved from [www.coll.mpg.de/pdf\\_dat/2012\\_01online.pdf](http://www.coll.mpg.de/pdf_dat/2012_01online.pdf). Accessed on February 7, 2012.
- Falk, A., & Kosfeld, M. (2006). The hidden costs of control. *American Economic Review*, 96(5), 1611–1630.
- Fehr, E., & Gächter, S. (2000). Cooperation and punishment in public goods experiments. *American Economic Review*, 90(4), 980–994.
- Fiedler, M., Haruvy, L., & Li, S. (2011). Social distance in a virtual world experiment. *Games and Economic Behavior*, 72, 400–426.
- Frank, B., & Schulze, G. (2000). Does economics make citizens corrupt? *Journal of Economic Behavior and Organization*, 43(1), 101–113.
- Gallego, J. & Wantchekon, L. (2012). Experiments on clientelism and vote-buying. In D. Serra & L. Wantchekon (Eds.), *New advances in experimental research on corruption*. Research in Experimental Economics (Vol. 15). Bingley, UK: Emerald Group Publishing.
- Gambetta, D. (2009). *Codes of the underworld: How criminals communicate*. Princeton, NJ: Princeton University Press.
- Gneezy, U., Meier, S., & Rey-Biel, P. (2011). When and why incentives (don't) work to modify behavior. *Journal of Economic Perspectives*, 25(4), 191–210.
- Hamman, J. R., Loewenstein, G., & Weber, R. A. (2010). Self-interest through delegation: An additional rationale for the principal-agent relationship. *American Economic Review*, 100, 1826–1846.
- Herrmann, B., Thöni, C., & Gächter, S. (2008). Antisocial punishment across societies. *Science*, 319(5868), 1362–1367.
- Hollyer, J. R. (2012). Is it better to empower the people or the authorities? Assessing the conditional effects of 'top-down' and 'bottom-up' anticorruption interventions. In D. Serra & L. Wantchekon (Eds.), *New advances in experimental research on corruption*.

- Research in Experimental Economics (Vol. 15). Bingley, UK: Emerald Group Publishing.
- Jacquemet, N. (2007). *Corruption as betrayal: Experimental evidence*. Mimeo. Retrieved from <http://ces.univ-paris1.fr/membre/jacquemet/Corruption.pdf>. Accessed on December 4, 2011.
- Lambsdorff, J. G. (2007). *The new institutional economics of corruption and reform: Theory, policy, and evidence*. Cambridge, MA: Cambridge University Press.
- Lambsdorff, J. G. (2009). The organization of anticorruption – Getting incentives right. In R. Rotberg (Ed.), *Corruption, global security, and world order* (pp. 389–415). Washington, DC: Harvard Kennedy School and the Brookings Institution Press.
- Lambsdorff, J. G. (forthcoming). Corrupt intermediaries in international business transactions: Between make, buy and reform. *European Journal of Law and Economics*. doi: 10.1007/s10657-010-9214-7
- Lambsdorff, J. G., & Frank, B. (2011). Corrupt reciprocity – Experimental evidence on a men's game. *International Review of Law and Economics*, 31, 116–125.
- Lambsdorff, J. G., & Nell, M. (2007). *Fighting corruption with asymmetric penalties and leniency*. CeGe-Discussion Paper No. 59, February, University of Göttingen, Göttingen.
- Loewenstein, G., Cain, D. M., & Sah, S. (2011). The limits of transparency: Pitfalls and potential of disclosing conflicts of interest. *American Economic Review: Papers and Proceedings*, 101(3), 423–428.
- Maslet, D., Noussair, C., Tucker, S., & Villeval, M.-C. (2003). Monetary and nonmonetary punishment in the voluntary contributions mechanism. *American Economic Review*, 93(1), 366–380.
- Monin, B., & Miller, D. (2001). Moral credentials and the expression of prejudice. *Journal of Personality and Social Psychology*, 81(1), 33–43.
- Noonan, J. T. (1984). *Bribes*. Berkeley, CA: University of California Press.
- Olken, B. A. (2007). Monitoring corruption: Evidence from a field experiment in Indonesia. *Journal of Political Economy*, 115(2), 200–249.
- Pechlivanos, L. (2004). Self-enforcing corruption: Information transmission and organizational response. In J. Graf Lambsdorff, M. Schramm & M. Taube (Eds.), *The new institutional economics of corruption: Norms, trust, and reciprocity*. London: Routledge.
- Rivas, F. (2008). *An experiment on corruption and gender*. Working Paper. Department of Economic Theory and Economic History, University of Granada, Spain.
- Schikora, J. (2010). *Bringing the four-eyes-principle to the lab*. Paper presented at the annual meeting of the Verein für Socialpolitik in Kiel, Germany. Retrieved from <http://www.econstor.eu/dspace/handle/10419/37465>. Accessed on April 12, 2011.
- Schikora, J. (2011). *Bringing good and bad whistle-blowers to the lab*. Munich Discussion Paper No. 2011-4. Department of Economics, University of Munich, Germany. Retrieved from [http://epub.ub.uni-muenchen.de/12161/1/WB\\_Schikora.pdf](http://epub.ub.uni-muenchen.de/12161/1/WB_Schikora.pdf). Accessed on November 28, 2011.
- Schulze, G., & Frank, B. (2003). Deterrence versus intrinsic motivation: Experimental evidence on the determinants of corruptibility. *Economics of Governance*, 4(2), 143–160.
- Sequeira, S. (2012). Advances in measuring corruption in the field. In D. Serra & L. Wantchekon (Eds.), *New advances in experimental research on corruption*. Research in Experimental Economics (Vol. 15). Bingley, UK: Emerald Group Publishing.
- Serra, D. (forthcoming). Combining top-down and bottom-up accountability: Evidence from a bribery game. *Journal of Law, Economics and Organization*. doi: 10.1093/jleo/ewr010

- Sunstein, C. (2005). Moral heuristics. *Behavioral and Brain Sciences*, 28(4), 531–542.
- Winters, M. S., Testa, P., & Fredrickson, M. M. (2012). Using field experiments to understand information as an antidote to corruption. In D. Serra & L. Wantchekon (Eds.), *New advances in experimental research on corruption*. Research in Experimental Economics (Vol. 15). Bingley, UK: Emerald Group Publishing.
- Yadlin, O. (2006). The conspirator dilemma: Introducing the ‘Trojan Horse’ enforcement strategies. *Review of Law and Economics*, 2(1), 25–43.



**This article has been cited by:**

1. Krisztina Kis-Katos, Günther G. Schulze. 2013. Corruption in Southeast Asia: a survey of recent research. *Asian-Pacific Economic Literature* **27**:10.1111/apel.2013.27.issue-1, 79-109. [[CrossRef](#)]