

Changing a ‘culture’ of corruption: Evidence from an economic experiment in Italy

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Abstract

Empirical evidence demonstrates that bribery, extortion and graft are often the outgrowths of a deeper ‘culture of corruption’ which has proved disconcertingly resilient in the face of public sector reforms. This article investigates whether changing collective beliefs about how ‘most people in society’ will behave can reform prevailing cultural practices. Employing an economic experiment involving Northern and Southern Italian university students, this study shows that (costly) honest behavior can be sustained by conditional beliefs about the honesty of others. I also hypothesize that, given Southern Italians’ reputation for corruption, informing participants that they are interacting with Southerners should increase the level of bribery in the experiment. However, surprisingly, I find the opposite effect: when exposed to information about the identity of their fellow participants, Southern Italians are not only less corrupt, but they are also more likely to believe that their counterparts are less corrupt. I discuss several explanations which may account for these unexpected findings. Overall, the paper provides theoretical foundations and experimental support for how new cultural practices might emerge.

Keywords

Corruption, culture, experiment, social norms, Italy

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Introduction

Political scientists, economists and legal scholars have traditionally attributed the causes of endemic corruption to weak legal enforcement and misaligned bureaucratic incentives (Klitgaard, 1988; Rose-Ackerman, 1999). However, in recent years, a growing body of evidence has demonstrated that bribery, extortion and graft are often the outgrowths of a deeper ‘culture of corruption’ which has proved disconcertingly resilient in the face of public sector reforms (Barr & Serra, 2010; Fisman & Miguel, 2007; Husted, 1999; Licht et al., 2007). The case of Italy demonstrates this point powerfully: although largely sharing a unified legal structure and formal institutions, Italian regions exhibit enormous diversity in the honesty and effectiveness of local government (Charron et al., 2013a,b; Golden & Chang, 2001; Golden & Picci, 2005; Putnam, 1993). While the ‘civic’ North is characterized by high levels of social trust that enable citizens to place their common welfare above the pursuit of narrow particularist interests, behavior in the South is exemplified by the ethos of ‘amoral familism’: ‘maximize the material, short-run advantage of the nuclear family: assume that all others will do likewise’ (Banfield, 1958: 83). Putnam (1993) has famously traced these cultural patterns to differences in political and social organization arising from the Middle Ages. The cultural roots of the *Questione Meridionale* run deep indeed.

This paper contributes to the literature on anti-corruption reform by analyzing this notion of culture from the perspective of formal, rational-choice theory. Rather than conceptualizing corrupt practices as arising from a set of deeply-ingrained values which are held in some societies, but not in others (see Ekeh, 1975; Lipset & Lenz, 2000; Husted, 1999; Olivier De Sardan, 1999; Price, 1974), the rational-choice approach treats cultural differences as a contingent outcome of *individual choices* which, in equilibrium, are sustained through shared, mutually-enforcing beliefs about the consequences of deviating from the norm (Laitin & Zhang, 2012). For example, while corruption is generally condemned across societies (Rothstein & Torsello, 2014), an individual may be more likely to engage in corrupt practices when she believes that her fellow citizens are doing the same. In this context, bribery appears socially appropriate, and honesty achieves nothing except to leave her as the only ‘sucker’ (Persson et al., 2013). By contrast, if an individual believes that her peers are honest, she may refrain from taking advantage of corrupt opportunities in order to avoid triggering social disapproval. In this sense, the Italian South’s ‘culture of corruption’ and the North’s ‘civic culture’ can be reformulated as conditional choices, sustained by common knowledge beliefs about how other citizens will behave.

The equilibrium approach not only helps us to understand how cultural practices are maintained and reproduced over time, but also opens up vistas on the processes facilitating cultural change. Laitin (1998) shows how, in the context of Estonian language policy, changes in the economic calculus of educating children in Estonian rather than in Russian led to early moves toward national

assimilation amongst the formerly monolingual Russian-speaking minority. Once parents started to believe that most other parents would choose Estonian over Russian education (lowering the relative payoff to learning Russian), they too made the shift, setting off a cultural cascade towards an all-Estonian equilibrium. Can a similar dynamic work in the corruption context? That is, if we change collective beliefs about whether ‘most people in society’ are corrupt or honest, can we reform the culture of corruption?

To address this question, I first present a game theoretic model of cultural choice. Based closely on the tipping games popularized by Laitin (2007), Mackie (1996) and Schelling (1978), the model helps to illustrate the dynamics through which individual decisions produce continuity and change in cultural practices. To test the implications of the model, I report results from a laboratory experiment involving Italian university students in a stylized Corruption Game, in which I attempt to induce a change in cultural practices by activating stereotypes about other participants. In particular, if it is common knowledge that ‘All Southerners are corrupt,’ then informing participants about whether they are playing with Southerners should change both (a) beliefs how much corruption is likely to prevail within the group, and (b) participants’ own behavior.

I report some unexpected results: in the absence of information about their fellow participants in the Corruption Game, Southerners are indeed more likely than Northerners to accept bribes. Moreover, the likelihood of bribe-taking is significantly predicted by beliefs about the honesty of other participants. Yet, surprisingly, when informed that they are interacting with other Southerners, Southern participants are not only *less corrupt*, but they are also more likely to believe that their *counterparts* are less corrupt. In other words, the experiment confirms the dynamics illustrated in the tipping model, but the cultural equilibrium tips in the *opposite direction* to that hypothesized. I discuss several explanations that may account for these counter-intuitive findings, before concluding with some suggestions for future research.

An equilibrium approach to culture

Given that corrupt transactions are often extremely lucrative for the participants involved (or their immediate family or friendship circle), does it make sense to think of corruption as a collective choice? Why would individuals *not* take advantage of all corrupt opportunities that come their way, at least in cases where they will neither be easily detected nor harshly punished?

The obvious answer (at least to non-economists) is that we are often restrained from self-interested behavior not by the fear of legal sanctions, but rather by our sense of right and wrong. As Ariely (2013) shows, many individuals do not cheat (very much) when given the opportunity, even when it is common knowledge that the probability of detection is zero. Moreover, while sometimes our sense of justice is innately driven - for example, our private morality prevents most of us from killing¹ -

in many other cases we define right and wrong according to our beliefs about how *others* think we ought to behave. There is nothing innately immoral about wearing shorts to the opera, or running a red light at a deserted intersection at three in the morning, but *injunctive norms* spell out rules of appropriateness in these situations (Cialdini et al., 1990). Behavioral conformity to normative prescriptions/proscriptions is ensured not through appeal to material costs and benefits, but rather through social rewards and sanctions: praise for following the rules, shame or ostracism for norms transgressions, and guilt at the thought of violating others' expectations (Bicchieri, 2005; Elster, 1989; Sunstein, 1996). Once we introduce social rewards and punishments into the standard utility function, we can easily see how normative compliance leads individuals to take actions counter to their material self-interest.

Recent research shows that individuals in most societies do not internalize corruption as a legitimate part of their cultural repertoire (Rothstein & Torsello, 2014). Rather, even societies at the very bottom of cross-national corruption rankings possess injunctive norms against corruption (Miller, 2006; Persson et al., 2013). However, the force of these injunctions depends upon the underlying extent of normative violations: by observing the compliance/transgressions of others, individuals update their beliefs about the likelihood that their own actions will trigger social sanctions. For instance, if I see that most others cheat, I am likely to infer that they will not really mind if I cheat as well.² Indeed, to single me out in this environment would seem overly scrupulous, unfair, or even hypocritical. Applied to the corruption context, individuals act as conditional norm compliers (Bicchieri, 2005): the more corruption they believe exists in society, the less reluctant they become to engage in corruption themselves.³ This leads to my first hypothesis:

H1: *Although individuals understand that corruption is wrong, they will not abide by injunctive norms if they believe that such norms are commonly violated.*

Economists have long recognized that corruption outcomes constitute frequency dependent equilibria. However, their explanations have tended to focus on the material mechanisms underlying individuals' desires to coordinate with others (Andvig & Moene, 1990; Bardhan, 1997). For example, in societies where corruption is rampant, it is easier to find a corrupt partner since more people have the 'skills' to participate in corruption (Della Porta & Vannucci, 1999), there are more middlemen around to help match potential partners (Englebert, 2009), and there may exist informal institutions (e.g. the mafia) capable of enforcing illicit contracts (Gambetta, 2013). At the same time, law enforcement agencies may themselves be corruptible (Cadot, 1987), or prosecutors may be overwhelmed by the sheer number of corruption cases to try, leading to a lower probability that any one individual will be caught and punished (Lui, 1986).

The mechanism posited here - conditional norm compliance - represents a complement to these approaches.⁴ However, individual conformity to the modal behavior of society, rather than arising from an economic cost-benefit calculus, is sustained by the desire to receive social praise, or to

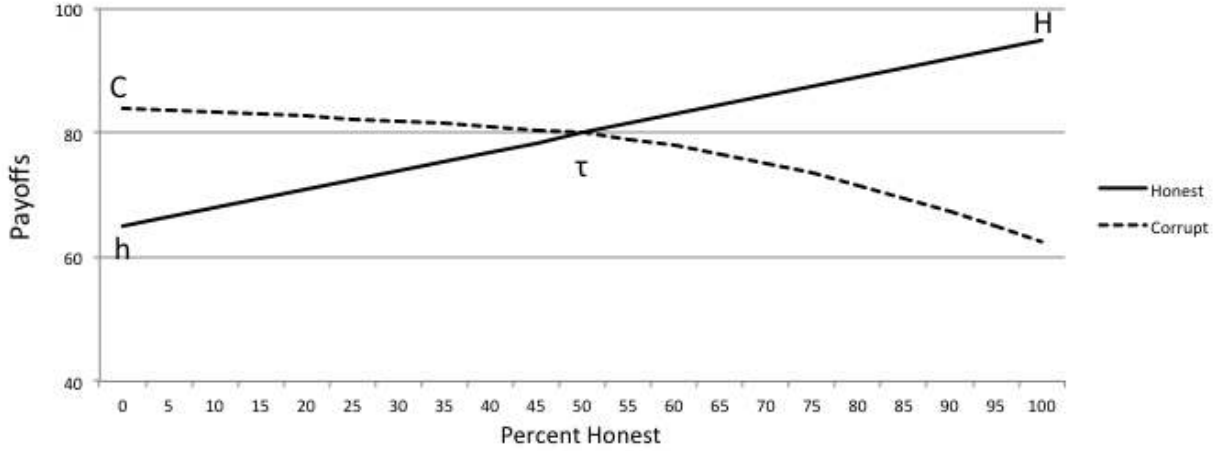


Figure 1: Tipping game for corruption decision

avoid shame and social exclusion. This mechanism is depicted in Figure 1, which represents an individual's decision to behave corruptly or honestly as a function of social costs. There exist two stable equilibria in which all are honest (H) or all are corrupt (C), along with a tipping point τ . At any point to the left of τ , because many others are corrupt, an individual does better by entering into corrupt transactions since there is likely to be little social stigma associated with the realization of illicit gains. By contrast, at any point to the right of τ , an individual is better off behaving honestly because many others are honest themselves, and are therefore likely to police corrupt behavior. In this case, violations of the integrity norm trigger social shame and feelings of guilt, while honest individuals are lauded as positive role models instead of ridiculed as suckers. These social rewards and sanctions lead to the second hypothesis:

H2: *Independently of the material costs and benefits, the likelihood that an individual behaves honestly is directly proportional to his belief that his peers are also honest.*

The tipping game neatly captures an important social dilemma: while better *collective* outcomes can be achieved by coordinating on H, people face strong *individual* incentives to engage in corruption when all others are doing so. Figure 1 thus illustrates how a 'culture of corruption' (represented by C) is sustained over time: individuals find it irrational to change their behavior unless they can be sure that others will switch as well. But since everyone believes that 'society' is corrupt, everyone behaves in a way that confirms these collective priors. Thus we can see how a so-called cultural predisposition towards corruption, while appearing natural and permanent *ex post*, is actually the product of complex inter-dependent choices *ex ante*.

By opening up the box of cultural (re)production, the tipping game also sheds light on the dynamics of cultural change. Suppose that at time t , society is at the all-corrupt equilibrium C. Now consider an individual i who (for whatever reason) believes that the population of honest people lies to the

right of τ . Given this belief, i will choose to act honestly (represented by point h), and thereby shift society closer to τ at time $t+1$. However, once i realizes that $h < C$, this shift is not sustained in equilibrium, and society eventually falls back to C .

But suppose instead that, in addition to i , individuals j through N also believe that society lies to the right of τ , and $N > \tau$. In this case, each individual's best course of action is to choose honesty over corruption, and since N individuals make this choice simultaneously, initial beliefs become self-fulfilling. As a consequence, cultural practice 'tips' from C to H .

The key to precipitating such a cultural shift lies in coordinating a *collective* revision of beliefs about the likely behavior of others in society. In what follows, I consider the possibility that a cultural tip may be set off by mixing two populations (Northern and Southern Italians) with different reputations for honesty. In particular, Southern Italians are often stereotyped as amoral and opportunistic (Banfield, 1958), while their Northern compatriots are perceived as more virtuous and civic-minded. Furthermore, public opinion data show that these characterizations do not merely embody Northern prejudice, but actually reflect how Southerners think about themselves. As shown in Table 1, when locally-representative samples of Italians are asked to rank how often other citizens *in their own region* engage in bribery, the average standardized score for Southern regions is -1.04, as opposed to +0.36 for Northern regions (with positive scores denoting greater honesty).

In light of these stereotypes, it may be possible to change beliefs about whether 'society' lies to the right or left of τ by manipulating the proportions of Northerners and Southerners in a group. Furthermore, if the choice between corruption and honesty is conditional upon beliefs about the likely behavior of others, then as the probability of interacting with Southerners increases, so should the propensity to engage in illicit behavior. This leads us to our final two hypotheses:

H3: *Informing Italians that they are interacting with individuals from the South strengthens the belief that others are dishonest.*

H4: *Informing Italians that they are interacting with individuals from the South increases the likelihood of corrupt behavior.*

In the following section, I describe an experiment designed to test these four hypotheses.

Methodology

Experiments have gained increasing currency in applied social science as a tool to help researchers understand the dynamics underlying individual decision-making. They have proven particularly useful when real-world data are scarce or difficult to observe directly. For this reason, experiments represent valuable research tools in the study of corruption, as such behavior is usually hidden due

Table 1: Perceptions of corruption across Italian regions

Northern Regions	Bribe	Central Regions	Bribe	Southern Regions	Bribe
Bolzano	0.89	Marche	-0.04	Abruzzo	-0.44
Trentino Alto-Adige	0.87	Umbria	-0.16	Basilicata	-0.88
Friuli-Venezia-Giulia	0.83	Lazio	-0.54	Molise	-0.9
Valle d’Aosta	0.55	<i>Average</i>	<i>-0.25</i>	Sicilia	-1.05
Toscana	0.42			Puglia	-1.18
Veneto	0.37			Calabria	-1.21
Emilia-Romagna	0.07			Campania	-1.63
Piemonte	-0.02			<i>Average</i>	<i>-1.04</i>
Liguria	-0.09				
Lombardia	-0.31				
<i>Average</i>	<i>0.36</i>				

Data from the 2013 European Quality of Governance Index (Charron et al., 2013a,b). Scores are based on survey responses about the amount of perceived bribery committed by others in respondents’ area. All ratings have been standardized.

to its illicit nature (Abbink & Serra, 2012; Armantier & Boly, 2013). Secondly, experiments can help us to disentangle multiple mechanisms that produce equivalent results in observational data. As noted in the previous section, both economic incentives and social rewards and punishments are frequency dependent: by simply observing that individuals are more prone to engage in corruption in highly corrupt environments, we cannot be sure which mechanism is at work. Scholars employing experimental methods can gain analytical leverage over these issues by holding economic incentives constant, thereby isolating the effects of normative constraints. Finally, experimental techniques can directly illustrate the mechanisms represented in Figure 1 by measuring agents’ beliefs, and mapping such beliefs to individual actions.

Description of experimental tasks

The experiment described in this section embeds participants in a framed hospital setting where they are given the opportunity to offer and accept bribes, and also to report corrupt behavior on the part of other individuals.⁵ In each session of the Corruption Game, a maximum of 24 participants are randomly assigned to one of three roles: {Nurse, Early Patient (PE), Late Patient (PL)}. Both PE and PL begin each round with an initial endowment of 32 Tokens. Players in both Patient roles are told to imagine that they are waiting in line at a public hospital to see the doctor. Waiting is costly for Patients, but because PEs have arrived early at the hospital, they face a very short wait, and therefore maintain their initial endowment. However, PLs face a very long wait, and will lose 16 Tokens as a result. PLs therefore retain $32 - 16 = 16$ Tokens in the round.

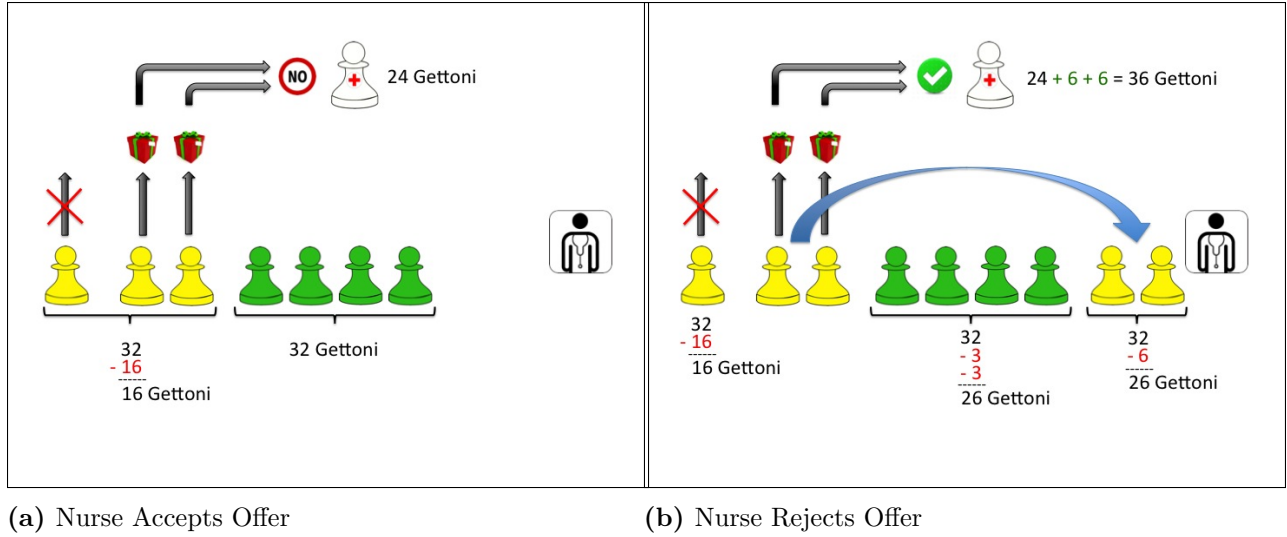


Figure 2: Screenshots of PL and Nurse decisions

However, PLs also have the possibility of skipping the line and avoiding the loss of 16 Tokens. Each PL is randomly matched to one Nurse, and has the option of offering this Nurse a ‘gift’ worth 6 Tokens, in exchange for being allowed to skip the line. In other words, if the PL makes an offer and the Nurse accepts, the PL jumps the queue and earns $32 - 6 = 26$ Tokens. Although in this case the PL pays the cost of the gift, he is much better off at the front of the queue (with 26 Tokens) than at the back (with 16 Tokens). However, as a consequence of the exchange between the PL and the Nurse, all of the PEs must wait a little longer to see the doctor and, as a consequence, *each* suffers a small loss of 3 Tokens.

Notice that offering a gift is a dominant strategy in the game. If the PL chooses not to offer a gift, he is sure to lose 16 Tokens. The same result obtains if the PL offers a gift, but his offer is rejected by the Nurse (however, having your offer rejected carries no additional cost). On the other hand, the PL’s earnings increase from 16 to 26 if his offer is accepted. Therefore, PLs can only gain by offering.

For their part, Nurses must decide whether to accept gifts from Patients. Nurses begin the game with 24 Tokens, and retain this amount if they are offered no gifts, or if they refuse to accept PL offers. On the other hand, if they decide to accept gifts, and in exchange permit PLs to skip the line, they will receive 6 additional Tokens for each gift they receive. Because PLs and Nurses are randomly matched, it is possible that Nurses interact with more than one PL in the round, and also that Nurses interact with no PLs. However, in either case, a Nurse must choose what he/she *would do* in case a gift is offered. In this way, I can elicit players’ full strategies while allowing them to make decisions simultaneously rather than sequentially.

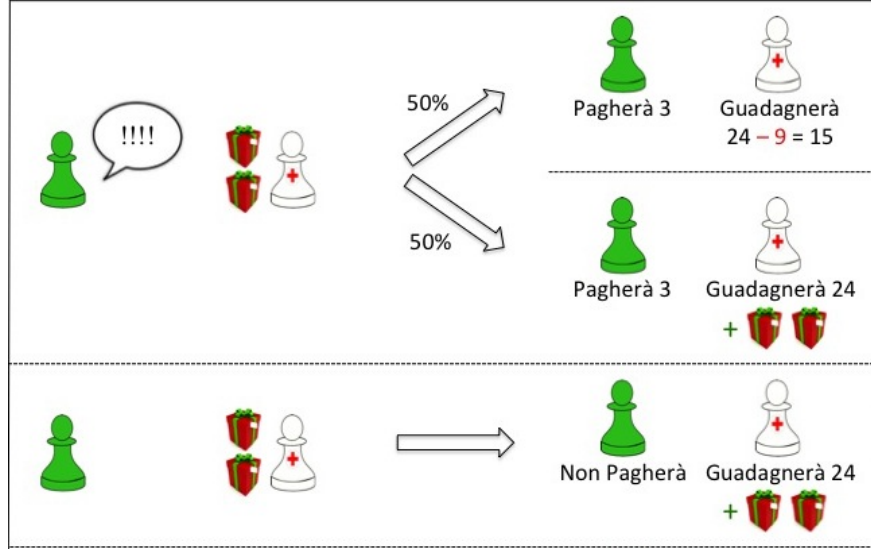


Figure 3: Screenshot of the reporting decision

The decisions that can be taken by PLs and Nurses (and the effect of these decisions on all players' earnings) are shown in Figure 2.⁶ Note that although skipping the line is mutually beneficial to both Nurses and PLs, it is harmful to 'society.' This is because there are 8 PEs in each round, and therefore PEs as a group lose $3 \times 8 = 24$ Tokens for each corrupt transaction, while the total gain for the other players is only 16 (10 for the PL and 6 for the Nurse).

Another point to note is that, unlike PLs, for whom corruption is a dominant strategy, Nurses must make their decisions in the shadow of punishment. In particular, the game contains an element of monitoring and sanctioning, implemented through the role of PEs. PEs are randomly matched to one Nurse, and are told that they can 'overhear' conversations between this Nurse and other patients, so that they will know if the Nurse has exchanged any favors. PEs then have the option of reporting the Nurse to the hospital administration, which may or may not act on the report (see Figure 3).

The report is effective 50% of the time, in which case the Nurse forfeits any gifts he has received, and also pays a fine of 9 Tokens, so that he retains only $24 - 9 = 15$ Tokens at the end of the round. But the other 50% of the time, the report is ignored and the Nurse is not sanctioned.⁷ However, no matter what happens to the Nurse, reporting is costly to the PE, who must pay a reporting 'fee' of 3 Tokens. In fact, from the PE's perspective, reporting is *never* rational in a one-shot game: even if the Nurse is punished, PLs who have skipped the line remain at the front. In other words, PEs *still* lose Tokens for every PL that skips the line, irrespective of their own actions. If participants played as perfectly rational payoff maximizers, the one-shot game has a single equilibrium outcome: all PLs offer gifts, no PEs report corrupt exchanges, and all Nurses accept offers.

The Corruption Game is played for 3 rounds. In each round, players are randomly assigned to a (new) role, so that by the end of the game players have had the chance to play in all 3 roles. Players are only shown the results of each round at the end of the session. This feature, coupled with the fact that players are randomly rematched in each period, means that behavior in the game should not be influenced by concerns about reputation or retaliation. Finally, since the rules are somewhat complex and the payoffs hard to keep track of, at the moment they make their decision, players are shown a summary of their choices and the possible consequences for themselves and for other participants. In general, self-reported understanding of the game was excellent.⁸

Next, participants take part in an incentivized belief elicitation task to measure their perceptions of the relevant injunctive norms prevailing in the Corruption Game, as well as the extent of compliance with these norms. In particular, participants are first asked whether they personally AGREE with, DISAGREE with, or have NO OPINION about three statements:

1. ‘A participant in the role of PL should not offer gifts.’
2. ‘A participant in the role of Nurse should refuse gifts that are offered.’
3. ‘A participant in the role of PE should report an exchange of favors.’

Next, participants are asked to guess the total number of individuals in their session who:

- *Q1*: chose OFFER in the Corruption Game
- *Q2*: chose ACCEPT in the Corruption Game
- *Q3*: chose REPORT in the Corruption Game

Finally, participants are asked to guess (separately for each question pair) the total number of individuals in their session who:

- *Q4a and Q4b*: AGREE and DISAGREE with the statement: ‘A participant in the role of PL should not offer gifts.’
- *Q5a and Q5b*: AGREE and DISAGREE with the statement: ‘A participant in the role of Nurse should refuse gifts that are offered.’
- *Q6a and Q6b*: AGREE and DISAGREE with the statement: ‘A participant in the role of PE should report an exchange of favors.’

In all, players make a total of nine guesses, and earn tokens based on the accuracy of their answers.

Questions Q1 - Q3 are direct measures of the degree of normative compliance. However, operationalizing the injunctive norm itself is more complicated. First, answers to the separate AGREE and DISAGREE segments from Q4 - Q6 are converted into percentages by dividing by the total number of participants in each session. Next, the DISAGREE segment is subtracted from the AGREE segment, yielding a variable that captures how strongly any particular individual believes

that an action would meet with social disapproval. For example, if I answered that 30% of people agree with the statement ‘*A Nurse should refuse gifts*’, and also that 30% disagree, my Q5 score would be $30 - 30 = 0$, reflecting the fact that I have no strong beliefs about what constitutes socially appropriate behavior for Nurses.⁹ On the other hand, if I believe that most people viewed the acceptance of gifts as socially inappropriate, then I would be likely to answer that more people agree with the previous statement than disagree.

After completion of the main experimental tasks, participants take part in a lottery game designed to measure their risk preferences (see Appendix 1). Once players have completed all of the tasks, they are shown the results for each part of the experiment, as well as their total earnings. Participants then answer a short debrief questionnaire before receiving payment. In total, each session lasts about 1 hour and 10 minutes, and participants are paid about €13.50 (\$17.50) for their time.

Participants and treatment manipulation

The experiment was conducted at the University of Bologna’s Laboratory for Experiments in Social Science (BLESS) in March and April 2013. A total of 93 student participants were recruited to one of nine sessions at BLESS.¹⁰ Overall, 52 participants were female (56%) and 41 were male (44%). The average age was slightly over 25 years. Column (1) in Table 2 presents basic descriptive statistics.

Importantly, the University of Bologna enrolls a large student body, and admits students not only from the surrounding region of Emilia-Romagna, but also from across Italy, including many students from the South. Since the geographical composition of the BLESS participant pool is likely to reflect the underlying composition of the student body, I am able to recruit individuals from diverse regions of Italy with varying reputations for honesty. I then test whether providing information based on these reputations can induce a ‘shock’ to collective beliefs, and thereby ‘tip’ cultural practices.

Specifically, immediately prior to the Corruption Game, participants are shown one of following messages:

Primed: ‘Most participants in the session today come from the South of Italy.’

Neutral: ‘Participants in the session today come from all over Italy.’

The messages attempt to manipulate beliefs about the likely behavior of other participants in the Corruption Game by activating stereotypes that ‘All Southerners are corrupt.’

In order to avoid deceiving participants, the manipulation of the messages could only be accomplished by actually controlling the composition of each session. Consequently, invitations to poten-

Table 2: Summary statistics and covariate balance

	Total (1)	North-Neutral (2)	South-Neutral (3)	South-Primed (4)
Male	0.441 (0.499)	0.514 (0.507)	0.308 (0.471)	0.469 (0.507)
Age	25.161 (3.896)	25.629 (4.023)	24.808 (3.007)	24.938 (4.428)
Years in Bologna	7.086 (7.100)	10.800* (9.728)	4.731 (2.523)	4.938 (3.959)
Previous Participation in Experiments	0.667 (0.474)	0.714 (0.458)	0.615 (0.496)	0.656 (0.483)
Risk Preference	3.753 (1.487)	3.800 (1.511)	3.654 (1.623)	3.781 (1.385)
N	93	35	26	32

Note: Means with standard deviations in parentheses. Asterisks indicate whether differences in sample means across treatment groups are statistically significant in t-tests. * p -value < 0.05 (adjusted p -values).

tial participants were sent on the basis of their region of origin. In three sessions, only individuals from Southern regions were invited to take part, and these participants saw the primed message.¹¹ In six sessions, recruitment was open to the entire BLESS participant pool, meaning that each session contained a mix of Southern and Northern participants. All of these individuals were exposed to the neutral message. In total, as shown in Table 2, 35 participants came from the North, and 58 participants were from the South. Of these 58 individuals, 26 received the neutral message, and 32 received the primed message. There are no statistically significant differences in individual-level characteristics across the three groups, apart from the obvious fact that Northerners tend to have lived in Bologna for a longer period of time.

In summary, the experiment compares the behavior of a cultural group (Southern Italians) under two conditions: a *primed* condition where individuals believe that they are interacting with other Southerners (who have a reputation for dishonesty), versus a *neutral* condition where participants believe that they are interacting with an ‘average’ Italian. The expectation is that, given common knowledge stereotypes, we should see an increase in corruption levels in the primed condition, as well as stronger beliefs that other participants are also dishonest. Finally, the inclusion of Northerners in the experiment also allows us to compare North-South behavioral differences, and provides an opportunity to examine the extent to which the stereotype that ‘Southerners are corrupt’ holds in reality.

Results

Overall, 73% of PLs offered gifts, 34% of Nurses accepted, and 45% of PEs reported corrupt exchanges. Clearly, outcomes in the Corruption Game differ from what we would expect under the assumption that players are completely rational payoff maximizers. Can we attribute this divergence to concerns about complying with anti-corruption norms? And if so, how do normative beliefs and behavior change between the message treatments?

To address these questions, I first consider behavioral differences between Northerners and Southerners in the mixed sessions. This will allow me to build a case for the validity of common stereotypes. Next, I examine the extent to which behavior tracks social beliefs and expectations as predicted by the tipping model. Finally, I compare the play of Southerners in the mixed sessions who received the neutral message to Southerners who received the primed message.

Baseline North-South differences

Figure 4 shows the differences in behavior between Northerners and Southerners receiving the geographically neutral message. I find that there are no statistically significant differences in terms of how participants play the patients' roles: PLs offer gifts (Z-test p -value = 0.630) and PEs report exchanges of gifts (Z-test p -value = 0.791) at roughly the same rates. However, a large and statistically significant North-South difference emerges in the behavior of Nurses: Southerners are almost twice as likely to accept gifts as Northerners (Z-test p -value = 0.046).

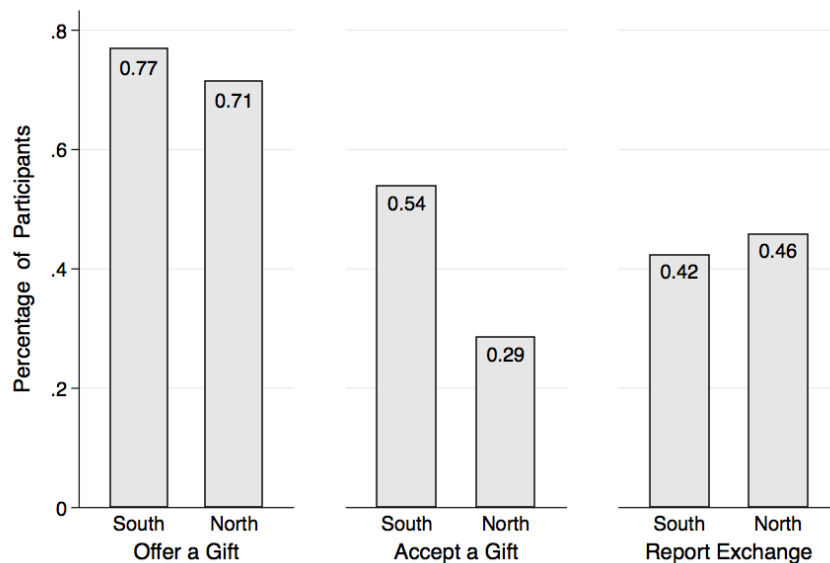


Figure 4: Differences in behavior between Northerners and Southerners: Neutral message

These results give us some confidence that observations and perceptions about the level of corruption in real-world groups can be replicated, at least partially, in the lab (see Barr & Serra, 2010). Moreover, the fact that a North-South gap only appears in the behavior of Nurses may reflect a specific definition of corruption in the Italian context: simply, it may not be considered an act of corruption for an individual *in his private capacity* to offer a gift in order to circumvent the formal rules, but it would be corrupt and improper for a person *in a position of public responsibility* (in this case, the Nurse) to accept one. As one participant stated in a debrief questionnaire:

It is *normal* that PLs try to jump the line by offering gifts to Nurses, but it is then up to the Nurse to do the right thing for the other patients...(my emphasis)

This distinction between appropriate public and private responsibilities highlights the fact that a corrupt transaction is a two-sided affair, and its success depends upon the willingness of the bribe-taker to circumvent official rules. The South’s ‘culture of corruption,’ and the North’s ‘civic culture,’ may in fact characterize only a narrowly professional, rather than a widespread popular, ethos.¹²

Social appropriateness and illicit behavior

To what extent is the behavior of Nurses linked to individuals’ perceptions of the social appropriateness of accepting a gift? We can address this question using data from the belief elicitation task. As noted above, cross-national survey evidence has shown that people in almost all societies view corruption as wrong. This result is replicated amongst the experimental participants. Figure 5 shows the distribution of answers to $Belief^{Disapprove}$, which measures the difference in the participants’ guesses about the number of individuals who agreed versus disagreed with the statement ‘A participant in the role of Nurse should refuse gifts that are offered’ (converted into percentage terms). We see that the vast majority of participants (more than 80%) score > 0 on this question, meaning they understand bribe-taking to violate injunctive norms.

However, is knowledge of injunctive norms alone sufficient to ensure honest behavior? Column (1) in Table 3 presents estimation results from the following basic logit model:

$$Accept_i = \beta_1 Belief_i^{Disapprove} + \epsilon_i$$

where $Accept_i$ is a dummy outcome variable denoting whether participant i accepted a gift, $Belief_i^{Disapprove}$ is a measure of i ’s understanding that bribe-taking violates an injunctive norm, and ϵ_i represents an individual-specific error term. We see that the coefficient, while correctly signed, is not significant at traditional levels.

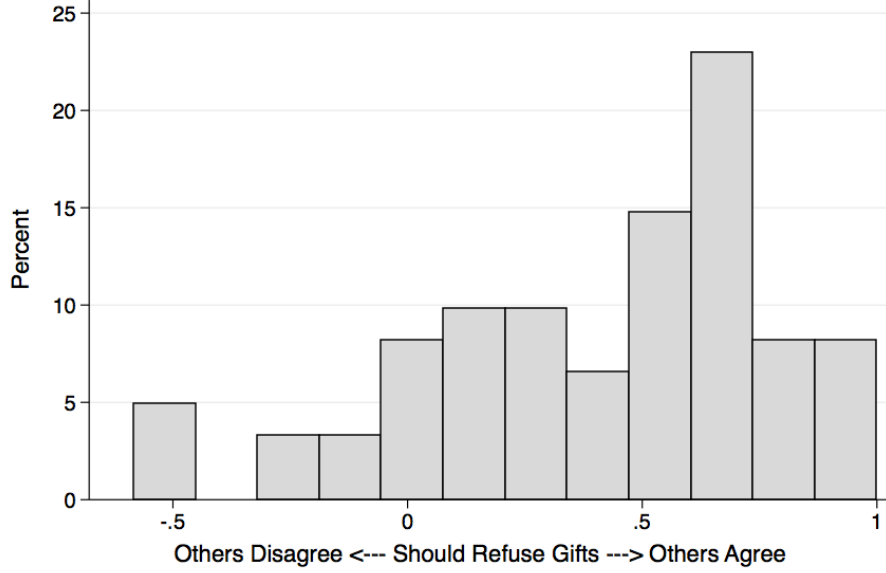


Figure 5: Distribution of beliefs about the social acceptability of corruption: Neutral message

In column (2), I estimate instead:

$$Accept_i = \beta_1 Belief_i^{Accept} + \epsilon_i$$

where $Belief_i^{Accept}$ measures a participant's best guess about the percentage of other participants who accepted a gift. We see now that the coefficient of interest is highly significant. Since smaller values of $Belief_i^{Accept}$ represent expectations of greater honesty, the positive association with $Accept_i$ indicates that individuals will be more likely to engage in corruption themselves if they believe others are doing likewise.

This result is exactly what we would predict from **H1** and **H2**, which hold that even though corruption is understood to be wrong, illicit behavior in the context of widespread normative violations are likely to generate little social disapproval. Rather, individuals behave as conditional norm compliers, choosing honesty only when they believe that others are also honest. As shown in columns (3) and (4), these results are robust to the inclusion of individual-level controls for gender, age, and risk-preferences as measured in the lottery task.

The relationship between an individual's own behavior and her expectations concerning others' behavior is also substantively meaningful: on average, participants believe that 61% of their counterparts would accept gifts (SD = 22%). Moving from half a standard deviation below this mean to half a standard deviation above the mean is associated with a 37% increase in the likelihood that any individual will accept a gift. This is a large effect, considering that the average gift-acceptance rate is only 33%.

Table 3: Logit results: Beliefs and Nurses' behavior

	Dependent Variable: Accepting a Gift			
	(1)	(2)	(3)	(4)
<i>Belief^{Disapprove}</i>	-1.407 (0.129)		-1.780 (0.089)	
<i>Belief^{Accept}</i>		8.423*** (0.000)		8.864*** (0.000)
Male			-0.199 (0.788)	0.347 (0.715)
Age			-0.0950 (0.350)	-0.0195 (0.893)
Lotto			1.056 (0.149)	1.099 (0.113)
Constant	0.116 (0.727)	-6.003*** (0.000)	2.525 (0.321)	-6.150 (0.079)
Observations	61	61	61	61
Pseudo R^2	0.049	0.275	0.088	0.302

All standard errors clustered within sessions. p -values (in parentheses).

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

In summary, we see from Table 3 that it is not so much an understanding that ‘one ought not to be corrupt’ that predicts honest behavior, but rather a belief that few others are corrupt. Figure 6 presents a graphical illustration of the relationship between social beliefs and individual corrupt behavior. The key point to note is that, amongst those participants who understood accepting a gift to be wrong (represented by points on the righthand side of the plot), many were nonetheless willing to take bribes *if* they expected illicit behavior on the part of others (represented by dots in the upper-righthand corner of the plot).

Messaging effects

So far, we have seen that behavior in the Corruption Game follows the predictions of the tipping model. Next, I investigate whether a message about the proportion of Southerners in the room can tip behavior even further towards the all-corrupt equilibrium. In particular, given the common knowledge belief that ‘Southerners are corrupt,’ exposure to the primed message should lead to an *increase* in the perceived social acceptability of corruption, and also to a higher level of gift-acceptance in the Corruption Game.

Figure 7 shows the differences in Nurses' behavior between Northerners, Southerners who received a neutral message, and Southerners under the Southern prime. Surprisingly, we see that the likelihood

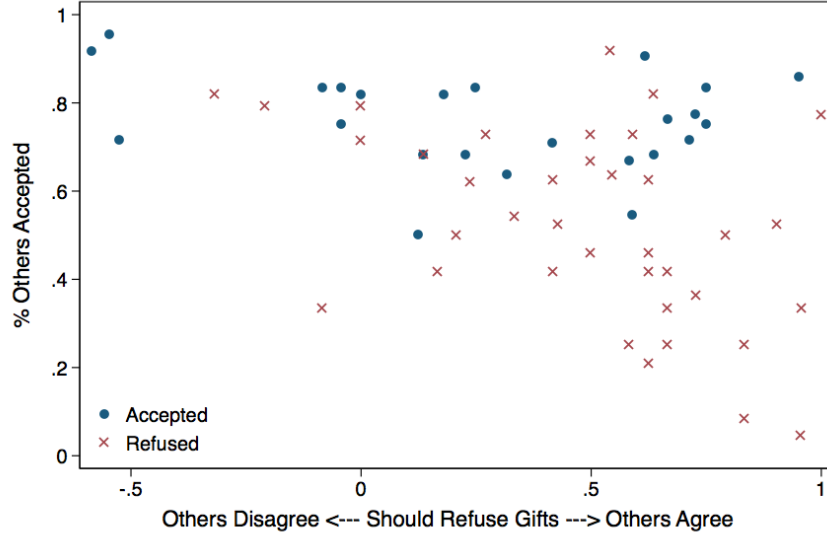


Figure 6: Social beliefs, others' actions and own behavior: Neutral message

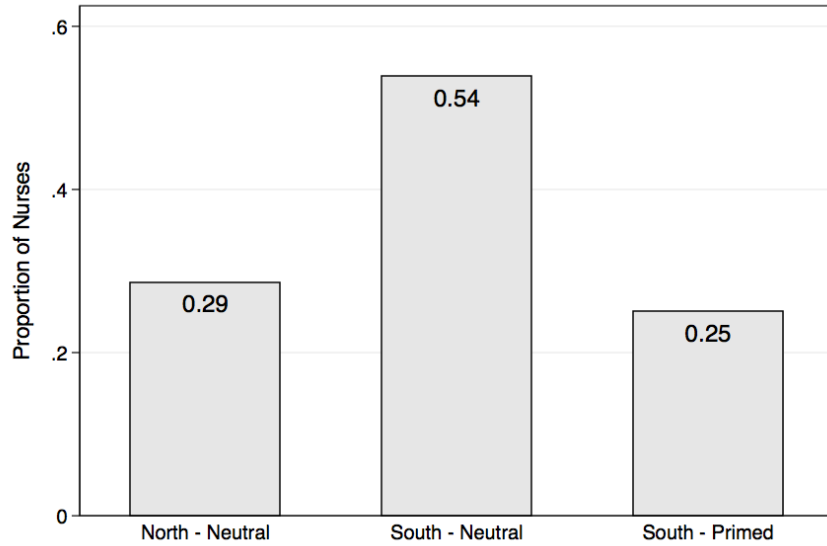


Figure 7: Nurses' behavior: Acceptance of gifts across groups

of accepting a gift actually *falls* when Southern participants are exposed to the primed message: acceptance rates drop dramatically from 54% to 25% (Z-test p -value = 0.024). In fact, the behavior of Southerners under the prime is statistically indistinguishable from Northerners (Z-test p -value = 0.741).

Moreover, as shown in Figure 8, individuals exposed to the Southern prime are also more likely to believe that their counterparts are *more honest*, compared to Southerners in the neutral message

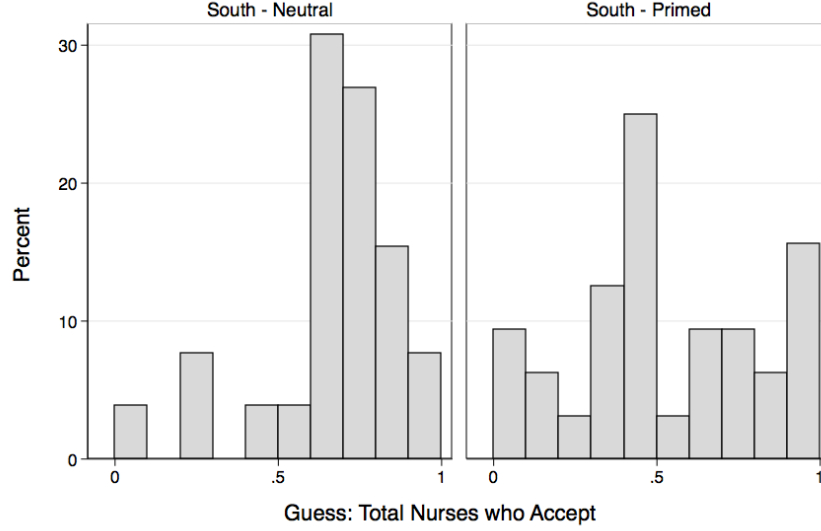


Figure 8: Change in $Belief_i^{Accept}$ across message conditions

condition. A Wilcoxon Rank-Sum test confirms that this difference is statistically significant around the 5% level (p -value = 0.054). In summary, it appears that exposure to the primed message does indeed alter collective beliefs and ‘tip’ group behavior, but these effects go in the *opposite direction* to that predicted by **H3** and **H4**. In the next section, I present several conjectures that may account for these counter-intuitive results.

Discussion

What social mechanisms may produce the surprising results we observe in response to the primed message that ‘Most participants are from the South of Italy?’ Here, I consider three possible explanations: (i) selection, (ii) in-group favoritism and (iii) social stigma. First, it may be the case that the Southerners in this experiment constituted a self-selected sample: perhaps only Southerners who are frustrated with corruption in their home regions migrate to the North. In response to the Southern prime, these individuals then become especially scrupulous in their behavior. However, the fact that Southern participants in the non-primed sessions behaved more corruptly than any group in the experiment suggests that selection is unlikely to drive the messaging effects we observe.

A second possibility is that the messaging effects are attributable to in-group favoritism.¹³ Recall that the structure of the corruption game represents a social dilemma: bribe-taking is individually beneficial, but harmful to the group as a whole. Thus, when informed that they are interacting with other members of their in-group, Southern participants may be more willing to engage in pro-social behavior (here: not taking a bribe) as compared to a situation where they are interacting with

‘anonymous’ Italians. Furthermore, Southerners’ positive feelings towards their fellow Southerners may also explain why $Belief^{Accept}$ shifts in the direction of greater honesty between the neutral and primed conditions.

A third possibility may be that Southerners, especially those living in the North of Italy, are all too aware that they are looked down upon by their compatriots, in part *because* of their reputation for dishonesty. Such stigmatization may become especially salient in the context of a framed Corruption Game in which Southerners are shown an explicit message priming their Southern identity. Consequently, Southern participants may attempt to rebel against these common stereotypes, thereby trading off small monetary losses against significant gains in personal pride, as well as the possibility of upgrading their social status.¹⁴ In other words, individuals may be willing to pay 6+ Tokens in order to state a defiant belief (‘We are *not* all corrupt!’) from which consistent behavior (‘...and I’ll be honest to prove it to you!’) naturally follows. Such a dynamic may explain why we observe a shift in both the probability of accepting a gift and in $Belief^{Accept}$ between the neutral and primed conditions.

External evidence consistent with this interpretation of the laboratory results can be found in a historical case study of anti-corruption reform in early 20th century Boston. At the time, the proliferation of electoral corruption was largely blamed on the voting patterns of immigrants, poorly schooled in the responsible practice of democracy, whom many believed were firmly in the pockets of corrupt machine bosses (Brownell, 1983; Cornwell, 1964; Huthmacher, 1962; Reid & Kurth, 1992). In order to escape this social stigma and prove themselves the political equals of Boston’s native-born Anglo elite, the city’s Irish leaders organized their communities in a political fight against patronage, bosses, and party machines (Connolly, 2009). To a large extent, this effort was successful in shifting the Irish vote (particularly amongst these middle-classes) in favor of Progressive municipal reforms.

Drawing from this experience, it is plausible that a similar reaction against social stigma may explain our laboratory results. That said, I currently do not have the data to conclusively distinguish the stigmatization hypothesis from in-group favoritism. I would argue, however, that pro-social in-group feelings are unlikely to account for the experimental results. While norms of in-group solidarity certainly prevail in the South of Italy, they exist primarily within closely-knit personal circles (Banfield, 1958). In fact, Southerners are as likely to engage in rivalry with people from other Southern regions as they are with Northerners, suggesting that no special pro-social feelings are generated by simply knowing that others are from the South. On the other hand, since negative stereotypes apply to all Southern regions, the uniform reaction of Southerners is more consistent with the social stigma hypothesis. A formal test to disentangle these two explanations, however, must unfortunately await a future date.

Conclusion

The general failure of formal, institutional-design-based approaches to reduce corruption has engendered an updated understanding of corruption as primarily a cultural phenomenon (Andrews, 2013). This article, through the lens of a tipping model, provides a new perspective on the processes underlying cultural stability and change. Rather than painting corrupt practices as legitimate components of specific cultural repertoires, formal equilibrium theory understands cultures of corruption and honesty as the products of conditional choices, formulated in the shadow of shared beliefs about the likely behavior of others. This approach implies that cultures are not static, immutable, or hard-coded. Instead, when the collective beliefs of a society change, that society may tip towards a new set of culturally-prescribed behaviors.

The experiments reported in this paper provide support for the behavioral mechanisms underlying this tipping model. They also show that attempts to revise collective beliefs can produce some surprising results: when informed that they are interacting with other Southern Italians, Southern participants are not only more likely to believe that their counterparts are *honest*, but they are also more likely to behave honestly themselves. I have discussed three possibilities that may explain these counter-intuitive findings, although clearly more work needs to be done to understand the mechanisms at work. Nevertheless, the fact that we can reduce levels of malfeasance by changing beliefs suggests some exciting new possibilities for tackling entrenched cultures of corruption.

Appendix: Lottery task

Participants take part in a lottery game designed to measure their risk preferences (Eckel & Grossman, 2002, 2008). They are told that they must select one out of the 6 lotteries displayed in Table 4. Then the computer flips a fair coin. If the coin comes up heads, participants receive the high payoff listed in the lefthand column. However, if the coin comes up tails, then participants receive the low payoff listed in the righthand column. The average expected payoff increases as one moves from lotteries 1 to 5, but the consequences of losing become more painful as well. Finally, there is no difference in expected earnings between lotteries 5 and 6: the only difference is the variance between high and low outcomes.

Table 4: Lottery game payoffs

	Earnings if Coin = HEADS	Earnings if Coin = TAILS
Lotto I	17.5	17.5
Lotto II	22.5	15.0
Lotto III	27.5	12.5
Lotto IV	32.5	10.0
Lotto V	37.5	7.5
Lotto VI	44.0	1.0

Table 5 gives the distribution of lotto choices by message condition. None of the differences is statistically significant.

Table 5: Distribution of lottery choices

Lottery Choice	North-Neutral		South-Neutral		South-Primed		Total	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Lotto I	2	5.7%	2	7.7%	2	6.2%	6	6.5%
Lotto II	5	14.3%	6	23.1%	4	12.5%	15	16.1%
Lotto III	9	25.7%	4	15.4%	5	15.6%	18	19.4%
Lotto IV	8	22.9%	6	23.1%	14	43.8%	28	30.1%
Lotto V	4	11.4%	3	11.5%	2	6.2%	9	9.7%
Lotto VI	7	20.0%	5	19.2%	5	15.6%	17	18.3%
Total	35	100%	26	100%	32	100%	93	100%

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Notes

¹Even in the case of killing, the fact that homicide is permissible in a variety of situations - war, judicially-sanctioned death penalties, honor killings - points to a formidable social component to our private morality.

²Although, as Heckathorn (1989) notes, there might exist a significant number of hypocritical punishers in society who themselves cheat, but nonetheless police cheating on the part of others.

³For discussions of this phenomenon in other contexts, see Bicchieri & Xiao (2009); Fehr & Fischbacher (2005) and Nannestad et al. (2014).

⁴Recent evidence from cognitive science supports our treating social rewards as complements to material benefits: fMRI studies show that when individuals conform to injunctive norms (such as altruistic punishment or social cooperation), this activates the same primary reward centers in the brain that are also triggered by the enjoyment of material benefits (food, drink, money) (Mazar et al., 2008).

⁵The experiment was programmed in z-Tree (Fischbacher, 2007). All interactions take place via computer, and participants sit in partitioned computer terminals to preserve their anonymity.

⁶This is the screen that participants see when the rules of the game are explained to them.

⁷The purpose of this feature is to simulate highly corrupt environments in real life where oversight agencies are often ineffective.

⁸70% of participants rated their understanding of the rules as 10 out of 10, and 95% rated their understanding as at least 7 out of 10.

⁹There is no restriction that the answers to the A and B parts of each question add up to 100%, meaning participants could have answered 100% for Agree and 100% for Disagree. In this case, the difference is again 0.

¹⁰Each session was actually designed for 24 individuals. However, half of these individuals were randomly chosen to receive an experimental manipulation which is not relevant to this paper, but which caused them to play the subsequent games differently (in other words, there is an interaction effect between the manipulation they received and the treatment effects this paper examines). Therefore, I report only the results for the 12 individuals in each session who did not receive this manipulation. However, in the description of the Corruption Game below, the payoffs are designed with the full session of 24 individuals in mind. In addition, some participants were dropped from this analysis because they were not Italian. Recruitment was conducted electronically through ORSEE (Greiner, 2004).

¹¹I defined the ‘South’ to include the regions of Abruzzo, Basilicata, Calabria, Campania, Molise, Puglia and Sicilia. All other regions are defined as ‘North.’ Definitions of South and North are extremely fluid in Italy, and often depend on the group to which one makes a comparison. For example, Romans would consider their region ‘North-Central’ when interacting with Neapolitans, but few Milanese would consider Rome as belonging to the North. I chose my list of Southern regions to include only those that can be classified incontrovertibly as being in the South.

¹²Another explanation for why we see no North-South gap in patients’ behavior may be that the roles of ‘early arriving’ and ‘late arriving’ patients were randomly assigned, and therefore held no emotional significance for participants. By contrast, in a situation where participants believe that PEs actually *deserve* to be at the front of the line (for example, imagine that PE and PL roles were assigned on the basis of performance in a real effort task), Northerners may be more reluctant to try and skip the queue.

¹³Many thanks to Ryan Muldoon for alerting me to this possibility.

¹⁴For a discussion of this phenomenon in the context of military enlistment, see Petersen (1989).

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