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Motivated motive selection in the lying-dictator game

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Abstract

Motivated motive selection in the lying–dictator game*

A large body of evidence suggests that people are willing to sacrifice personal material gain in order to adhere to a moral motive such as fairness or truth-telling. Yet less is known about what happens when moral motives are in conflict. We hypothesize that in such situations, individuals engage in what we term ‘motivated motive selection’, choosing to adhere to the motive that most closely aligns with their personal interest. We test this hypothesis using a laboratory experiment that induces in subjects a conflict between two of the most-studied moral motives: fairness and truth-telling. Our experimental design has the attractive features of being both parsimonious and closely related to both the classic dictator and lying games, implying comparability with a wealth of benchmark evidence. In line with our hypothesis, our results suggest that participants are more likely to adhere to the motive that is more in line with their self-interest.

Keywords: Motivated reasoning, dictator game, lying game, motives, moral dilemmas

JEL classification: C91; D01; D63; D90

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1 Introduction

There is ample evidence that many individuals are willing to sacrifice personal material gain in order to adhere to a moral principle (or moral motive). These individuals buy fair-trade and organic goods, donate to charity, or refuse to engage in profitable but unethical behavior such as tax evasion or corruption. Yet while a single moral motive may generate a clear moral imperative when only that motive is present, the situation changes when the presence of multiple motives leads to conflicting imperatives. Consumers choose between goods that are fair-trade or organic, politicians decide between different fairness principles when balancing the interests of different groups, and a sibling in an inheritance dispute may find a new version of the will that is unequal, and must decide whether to reveal it.

We propose that in such ethical dilemmas, where two or more moral motives are in direct conflict, individuals often choose to adhere to the motive that is most in line with their private interest. When choosing between different forms of ethical consumption, for example, consumers may favor the one with the lowest price. When deciding between different policy positions, politicians may adhere to the ethical principle that favors their support base and increases their popularity with the current electorate. And a sibling who finds an unequal but favorable will may be more willing to reveal it than one who finds an unfavorable and unequal will.

We term this behavior ‘motivated motive selection’ and study it in a setting that involves a conflict between two of the most-studied moral motives – truth-telling and fairness (equality). In particular, we study a setting where decision makers observe a random draw in $\{0, 1, \dots, 10\}$ and are asked to report its outcome. Decision makers receive the value of the number reported; the remainder of an endowment of 10 Euros is awarded to another individual. While truthfully reporting the observed draw may satisfy their desire to be honest, it may also lead to an unfair (unequal) allocation, thereby generating a conflict between the truth-telling and equality motives. Noting that our setting shares a common basic structure with both the classic workhorse dictator game and Fischbacher and Föllmi-Heusi (2013)’s influential lying game¹, we refer to this setting as the *lying-dictator game*.

We implement the *lying-dictator game* in a laboratory experiment to test whether decision makers engage in motivated motive selection. Our identification strategy relies on the random draw, which creates exogenous variation in the cost of adhering to the truth-telling motive. Consider an individual who wants to behave in a moral way, but cannot simultaneously satisfy both motives.

¹See, e.g., Shalvi et al. (2011), Gneezy et al. (2018) and Abeler et al. (2018) amongst many others for a few examples of key recent contributions to this literature.

Motive selection predicts that she will choose to satisfy the moral motive that most closely aligns with her private interest. For low random draws, it is more costly to tell the truth, and motive selection therefore predicts that the individual will adhere to the fairness motive instead. By contrast, for high random draws, adhering to the fairness motive is more costly, and hence motive selection predicts that individuals will choose to tell the truth instead.

Our results are consistent with the motivated motive selection hypothesis. 47% of participants with a low draw choose an equal division and only 14% tell the truth. By contrast, participants with high draws overwhelmingly (75%) choose to tell the truth with only 9% choosing to equalize payoffs. Indeed, we show that, in our sample, behavior for individuals with low draws closely approximates behavior observed in the classic dictator game, whereas individuals with high draws display similar behavior to that typically observed in the lying game.² We also study whether motive selection persists into a third-party version of the *lying-dictator game* where the role of self-interest is removed, but find no evidence that this is the case.

Our study builds on a large body of work investigating non-selfish motives theoretically and empirically. Early evidence on *social preferences* showed that people reliably deviate from selfish profit-maximization (e.g., Güth et al., 1982, Kahneman et al., 1986 and Forsythe et al., 1994). This inspired models of warm-glow giving and altruism (Andreoni, 1990), reciprocity (Rabin, 1993), inequity aversion (Fehr and Schmidt, 1999 and Bolton and Ockenfels, 2000) and efficiency concerns (Charness and Rabin, 2002; Engelmann and Strobel, 2004). More recent work examines distributional preferences in settings where income is earned through real-effort tasks (Cappelen et al., 2007; Cappelen et al., 2013; Almås et al., 2018), and shows that social preferences can be changed through early-life interventions (Cappelen et al., 2016; Kosse et al., 2018).

Evidence regarding *lying aversion* has predominantly been generated using the deception game (Gneezy, 2005; Dreber and Johannesson, 2008; Sutter, 2008; Hurkens and Kartik, 2009; Gneezy et al., 2013) and the lying game (Fischbacher and Föllmi-Heusi, 2013; Shalvi et al., 2011). These studies demonstrate that a large share of people are willing to significantly reduce their earnings in order to avoid telling a lie. Important recent contributions by Abeler et al. (2018), Dufwenberg and Dufwenberg (2018) and Gneezy et al. (2018) suggest that this behavior can best be understood as a psychological cost of lying that depends both on the size of the lie and whether the lie is detected by others. Other recent work suggests that laboratory measures of lying are predictive of cheating behavior in the field (Dai et al., 2018).

²In order to minimize the role of confounding factors, such as subject pool effects, or minor design choices influencing our results, we run additional dictator and lying game sessions using a similar experimental design to obtain comparable benchmark data.

Our results have potentially important implications for this line of inquiry. Whereas previous studies have tended to study individual intrinsic motives³ in isolation, in many important real world situations multiple motives may be active simultaneously. Our evidence suggests that in such situations individuals are likely to adhere to the motive that most closely aligns with their self-interest. This implies that predicting behavior optimally in such settings may require not just an understanding of the individual's intrinsic motives in isolation (e.g., calibrating their lying cost parameter), but also an understanding of how a particular motive is affected by the presence or absence of other intrinsic motives; and by their relative alignment with self-interest. This may have implications both for future theoretical work and for empirical studies that attempt to predict real-world outcomes using lying costs, social preferences or other measures of non-selfish preferences.

Our results also contribute to the literature on motivated reasoning and motivated beliefs. These studies show that an individual's self-interest may bias her judgment of what is fair (e.g. [Messick and Sentis, 1979](#); [Babcock et al., 1995](#); [Konow, 2000](#)), distort her beliefs (e.g., [Di Tella et al., 2015](#); [Palma and Xu, 2016](#)) and affect the way in which she gathers and processes information ([Babcock et al., 1996](#); [Ambuehl, 2017](#)). We show that an individual's self-interest may also lead her to engage in motivated motive selection, that is, to adhere to the moral motive that most closely corresponds to her self-interest. This is consistent with the idea that our participants use the presence of one moral motive as an excuse for not adhering to another, which is similar in spirit to [Exley \(2015\)](#), who shows that participants use risk as an excuse not to give, and [Danilov and Saccardo \(2019\)](#), who show that participants use a truth-telling norm as an excuse to discriminate.

Finally, there are several studies analyzing the dynamics of moral behavior ([Sachdeva et al., 2009](#); [Merritt et al., 2010](#); [Ploner and Regner, 2013](#); [Meub et al., 2016](#); [Houser et al., 2012](#); [Alempaki et al., 2018](#)). While these studies consider the relationship between social preferences and lying aversion sequentially, we contribute to this literature by analyzing whether the selection between two motives that are both present simultaneously spills over to a subsequent game.

The next section describes the experimental design and hypotheses. We present the results in section 3 and discuss them in section 4. Section 5 concludes.

³By *intrinsic motives*, we are referring to all motives other than the motive of acquiring material goods for oneself (for consumption). Typically these intrinsic motives are studied by measuring the quantity of material goods or money an individual is willing to forego to satisfy a particular intrinsic motive, holding all else constant—typically this *ceteris paribus* requirement is achieved by removing other motives from play. We argue in this paper that this implementation of *ceteris paribus* may be problematic in the study of *intrinsic motives* when the presence of multiple motives leads to complex interactions, e.g., through motivated reasoning or excuse-driven behavior.

2 Experimental design, hypotheses and procedures

We conducted the experiment at the WZB-TU laboratory for experimental economics in Berlin in December 2018. We programmed the experiment using zTree (Fischbacher, 2007) and invited participants using ORSEE (Greiner, 2015). Instructions were provided on-screen. A total of 288 participants took part in the experiments; 99% were students who were, on average, about 23 years old. A majority of the participants were men (64%). Twenty-four participants took part in each session.

In the remainder of this section, we first describe the four games we study in our experiment. We then separately discuss the procedures for two experimental treatments.

2.1 Experimental Games

Our primary interest in this paper is to investigate behavior in the LYING-DICTATOR GAME, which involves two players: a decision maker (DM) and a recipient. The DM observes a random draw, d , from a uniformly distributed variable with support $\{0, 1, \dots, 10\}$. She then chooses a number to report, r , which may differ from the randomly drawn number d . The DM receives the value of the number reported in Euros, whereas the recipient receives $(10 - r)$. The payoff-maximizing action for the DM is to report $r = 10$; however, she may choose to report a lower number if she has social preferences or a psychological cost of lying.

We compare the decision making in the LYING-DICTATOR GAME to two classic experimental paradigms: the DICTATOR GAME and a version of Fischbacher and Föllmi-Heusi's (2013) LYING GAME. The LYING GAME is similar to the LYING-DICTATOR GAME, except that there is no recipient. That is, any money not taken for oneself is returned to the experimenter. The DICTATOR GAME is also similar to the LYING-DICTATOR GAME, except that there is no random draw. That is, none of the allocations implemented involve telling a lie.

Finally, we also consider behavior in a THIRD-PARTY LYING-DICTATOR GAME. In this game, the DM also observes a random draw d and subsequently decides what number r to report. The difference is that the number reported now affects the payment of two other players: player A and player B. Player A receives the value of the number reported in Euros, whereas player B receives $(10 - r)$. Hence, the DM's decision does not affect her own payment in this game.

We implemented these four games in two separate treatments, as shown in Table 1. In treatment LYING-DICTATOR, participants play the LYING-DICTATOR GAME followed by the THIRD-PARTY LYING-DICTATOR GAME. This allows us to observe behavior in the LYING-DICTATOR GAME, and study whether there are spillovers in decision making from one game to the other.

In treatment BASELINE, participants play the two canonical games in a random order. This provides us with two benchmark cases against which to compare behavior observed in the LYING-DICTATOR GAME. We will now explain both treatments in greater detail.

Table 1: Treatment conditions

Treatment	Game A	Game B	Order of Games	<i>N</i>
LYING-DICTATOR	LYING-DICTATOR GAME	THIRD-PARTY LYING-DICTATOR GAME	A then B	144
BASELINE	LYING GAME	DICTATOR GAME	Random	144

2.2 Treatment LYING-DICTATOR

Treatment LYING-DICTATOR consists of three parts. In part 1, participants play the LYING-DICTATOR GAME. In part 2, they play a third-party version of the Lying Dictator Game, namely the THIRD-PARTY LYING-DICTATOR GAME. In part 3, we elicit the appropriateness of different actions in the third-party lying dictator game using the elicitation technique proposed in [Krupka and Weber \(2013\)](#). Finally, participants complete a brief questionnaire and receive their payments.⁴

Upon entering the laboratory, participants were assigned to be one of two player types: Active and Passive players. Active players served as a DM in part 1 and 2. Passive players did not make any decision in part 1, and served as the third party (player A or player B) in part 2. There were always exactly 4 Passive players in each session; the remaining 20 participants in each session were assigned to be Active players.

2.2.1 Part 1

Active players then received the instructions for part 1, the LYING-DICTATOR GAME. Specifically, they were told that they would be presented with a screen containing 11 boxes (see Figure 1).

Figure 1: Stylized depiction of the screen containing the 11 boxes



⁴We preregistered this treatment on the AEA registry, including a pre-analysis plan, power calculation and a detailed discussion of the relationship to the two classical benchmark games (see <https://www.socialscienceregistry.org/trials/3617>).

Participants were told that they would be asked to click one of the boxes, which would then reveal a random number $d \in \{0, 1, \dots, 10\}$. They were told they would then move on to another screen and would be asked to report the number they had just seen. They were also told that they would be paid the value of the number reported, r , and any remaining money $10 - r$ would be sent to another participant, the recipient. Other than the presence of the recipient, these procedures are very similar to [Gneezy et al. \(2018\)](#)'s implementation of the LYING GAME. Note that a key advantage of this procedure is that it allows us to record both the report r and the value of the random draw d .

A key difference between our study and previous work lies in the way participants make their reports. Specifically, we told participants that they could report the number in one of four ways:

1. Tell the truth and report: "The number I saw was [*number seen*]."⁵
2. Equalize payments and report: "The number I saw was 5."
3. Maximize your payment and report: "The number I saw was 10."
4. Maximize the other participant's payment and report: "The number I saw was 0."

This design feature serves two purposes. First, it makes the fact that this is a decision between different motives more salient to participants. We view this as an appealing feature since we are interested in studying situations in which there is a tension between motives, and the salient framing makes this tension explicit. Second, it reduces the number of available reports from 11 (all the possible numbers) to either four or three (depending on whether truth-telling overlaps with one of the other options).⁶ This prevents participants from making intermediate choices that do not correspond directly to any of the relevant motives, and sharpens our analysis by making it easier to classify responses as either truth-telling, equalizing or payoff maximization. It should also be noted that standard linear models of social preferences and lying costs predict no intermediate choices in the LYING-DICTATOR GAME.⁷

We also told participants that after choosing their report they would be asked to provide a brief written explanation for why they chose this report. To maximize the number of participants in the role of DM we used the strategy method (role uncertainty). Specifically, we asked all Active

⁵The order of the first two reports was randomized between subjects, and kept constant across part 1 and part 2.

⁶Even in cases in which truth-telling overlapped with one of the other options, the participants could choose between four options corresponding to the four ways in which the report could be made described above.

⁷For example, [Fehr and Schmidt \(1999\)](#)'s model of inequity aversion predicts either equality or payoff maximization in all linear dictator games. Similarly, [Abeler et al. \(2018\)](#)'s model of lying costs predicts no partial lying in settings where the experimenter can observe the random draw and hence all lies are immediately detected. As a result, any linear combination of these models also predicts either truth-telling, payoff maximization or equality in our experiment.

players to make decisions as-if they were the DM, but told them that there was only a 50% chance that their choice was implemented. If not, they would act as recipients for another DM's decision. Roles were only revealed at the end of the experiment. We also told participants that for those whose decisions were implemented, their report (e.g., "The number I saw was 5") would be transmitted to the recipient when payments were revealed at the end of the experiment.

Meanwhile, Passive players were told that they would not make a decision in this part of the experiment. We did present them with the Active players' instructions on their screen. Part 1 of the experiment ended after all Active players had made their reports.

2.2.2 Part 2

Active players then received the instructions for part 2, the THIRD-PARTY LYING-DICTATOR GAME. Similar to part 1, participants were told that they would have to click on a box on their screen to reveal a number, and would then have to report this number in one of four ways:

1. Tell the truth and report: "The number I saw was [*number seen*]."
2. Equalize payments and report: "The number I saw was 5."
3. Maximize player A's payment and report: "The number I saw was 10."
4. Maximize player B's payment and report: "The number I saw was 0."

Relative to part 1, the main difference is that the number reported now does not affect the DM's monetary payoff – it affects the payment of two other players: player A and player B. These are Passive players who do not make decisions in part 2 (although they are able to read the Active players' instructions, as in part 1).

The fact that the DM's part 2 decision is payoff-irrelevant for her implies that it is a pure choice between motives, without her monetary self-interest in play. At the end of the experiment, in each session two of the Active players' decisions are then randomly chosen to determine the payment for the two pairs of Passive players. As in part 1, the reports that were implemented were also sent to the recipients (in this case, player A and player B). Active players did not have to explain their decision in this part of the experiment. Part 2 of the experiment ended after all Active players had made their reports.

2.2.3 Part 3

All participants then received the instructions to part 3, the **NORM ELICITATION TASK**. Following [Krupka and Weber \(2013\)](#), we asked participants to consider the four possible reports made by a hypothetical participant who faced the **THIRD-PARTY LYING-DICTATOR GAME** and received a random draw of 8. We then asked participants to rate each of the four possible reports in terms of its “social appropriateness” on a six point scale ranging from “very socially inappropriate” to “very socially appropriate.” Participants were told that one of the four reports would be randomly drawn at the end of the experiment, and that they would receive a payment of EUR 2 if their response corresponded to the modal response chosen by participants in the session. Any ties were broken randomly. Part 3 of the experiment ended after all participants had completed all four evaluations.

2.2.4 Questionnaire and Payment

Participants then arrived at a payment screen and were informed about which (if any) of their decisions were implemented, as well as the payment they received from each part of the experiment. All participants subsequently went through a brief questionnaire that elicited basic demographics, such as their gender, age, and field of study. In total, each session in this treatment took approximately thirty minutes including payment. The average payment was EUR 12.93 and payments ranged from EUR 7 to EUR 19.

2.3 Treatment BASELINE

Treatment **BASELINE** consists of two parts. In part 1, participants play either the **LYING GAME** or the **DICTATOR GAME**, determined at random. In part 2, they then play the game they did not play in part 1. Randomizing the order of the two games allows us to check for order effects. At the end of the experiment, one of the two parts is randomly selected for payment. While both these games share the same basic structure as the **LYING-DICTATOR GAME**, the **LYING GAME** removes the equality motive, while the **DICTATOR GAME** removes the truth-telling motive.

2.3.1 The Lying Game

Our main design goal for the **LYING GAME** was to keep it as similar to the **LYING-DICTATOR GAME** as possible, while still capturing the key elements characterizing standard lying games observed in the literature. For this purpose, participants again drew a random number by clicking

on one of 11 boxes on their screen. They then moved on to another screen where we asked them to report their number in one of four ways:

1. Report: “The number I saw was [*number seen*].”
2. Report: “The number I saw was 5.”
3. Report: “The number I saw was 10.”
4. Report: “The number I saw was 0.”

This implementation ensured that participants could choose between four reports, as in the LYING-DICTATOR GAME. It also kept the decision screens and instructions as similar as possible to the LYING-DICTATOR GAME. The main difference is that the report no longer affects another participant’s payment.⁸ The purpose of this is to remove the equality motive.⁹

2.3.2 The Dictator Game

Our main design goal for the DICTATOR GAME was also to keep it as similar to the LYING-DICTATOR GAME as possible, while capturing the key characteristics of the standard dictator game. For this purpose, we asked participants to choose between four allocations corresponding to equality, a random draw, payment maximization and payment minimization respectively, just as in the LYING-DICTATOR treatment.¹⁰ As in the LYING-DICTATOR treatment, we asked participants to make decisions as if they were the DM, but told them that there was only a 50% chance that their decision would actually be implemented.¹¹

This implementation ensured that participants could choose between 4 allocations, as in the LYING-DICTATOR GAME. It also kept the decision screens and instructions as similar as possible to the LYING-DICTATOR GAME. The key difference is that the random draw was done behind the

⁸As in the LYING-DICTATOR GAME, we randomized the order of the first two reports. We also informed participants that depending on the number drawn it was possible that two of the reports would be identical.

⁹It is worth noting here that this statement assumes that the participant’s social preferences are not defined with respect to the experimenter as a recipient. If instead, one does view the experimenter as equivalent to another participant, then this game is even closer to the LYING-DICTATOR GAME, which would suggest that any difference that we find is a lower bound on the true effect size. Interestingly, while *social preferences* towards the experimenter are not normally considered – e.g., in many lying experiments, regarding the distribution of money between subject and experimenter – *lying aversion* with respect to the experimenter often is considered; e.g. in the discussion of differences between the observed and unobserved lying games (Gneezy et al., 2018; Abeler et al., 2018).

¹⁰As in the LYING-DICTATOR treatment, we randomized the order of the first two reports between subjects.

¹¹When the randomly drawn number coincided with one of the three other options (i.e. in 3/11 of cases), we stated to participants that two of the four possible allocations were identical to ensure they did not think there was a mistake.

scenes by the computer, instead of being done explicitly by the participant, which ensured that the truth-telling motive could no longer play a role.

2.3.3 Remaining Procedures

Upon entering the laboratory, participants were informed that the experiment consisted of two parts and they would be paid for either part 1 or for part 2. Participants then went through the two parts; each part ended only after all participants had finished making their decision in the respective part. All participants subsequently went through a brief questionnaire that elicited basic demographics, such as their gender, age, and field of study. After part 2 we presented participants with a payment screen notifying participants which of the two games had been selected for payment and displaying their earnings. In total, each session in this treatment took approximately twenty minutes including payment. The average payment was EUR 13.37 and payments ranged from EUR 7 to EUR 17.

2.4 Hypotheses

Faced by a tension between two moral motives, do individuals choose to adhere to the moral motive that coincides with their self-interest? We address this question in our experiment by testing whether an individual's random draw in the LYING-DICTATOR GAME affects their tendency to select a particular motive. In particular, the random draw provides exogenous variation with respect to which of the moral motives, *truth-telling* and *equality*, most closely aligns with self-interest. Thus, when a participant receives a LOW random draw (i.e., a draw lower than 5), of the two moral motives, the *equality* motive is more aligned with her self-interest. However, when she receives a HIGH random draw (i.e., a draw higher than 5), the *truth-telling* motive is more closely aligned with her self-interest. We hence predict the rate of truth-telling to be higher for a HIGH draw than for a LOW draw and the rate of choosing equality to be higher for a LOW draw than for a HIGH draw.¹²

One potential issue with identifying motivated motive selection based solely on the LYING-DICTATOR GAME is that the random draw may also affect behavior for reasons other than motivated motive selection. Notably, participants who care only about the truth-telling motive also

¹²In our pre-analysis plan, we discuss two simple conceptual frameworks that consider the psychological underpinnings for why one might expect this pattern of behavior. In brief, the *mental representations framework* allows each participant to observe her random draw and then represent the LYING-DICTATOR GAME as either a dictator game, or as a lying game, and then act according to her representation. In contrast, the *motives framework* allows each subject to observe her random draw and then choose the relative weight she places on each of her moral motives in a motivated way. Both theoretical frameworks yield largely the same predictions – behavior is closer to that in a dictator game after a LOW draw, and closer to that in a lying game after a HIGH draw.

have less of an incentive to lie when faced with a high random draw. Indeed, a higher rate of truth-telling for high draws has also been observed empirically in many LYING GAME experiments (Abeler et al., 2018; Gneezy et al., 2018). We control for this type of behavior by comparing the effect of the random draw in the LYING-DICTATOR GAME to the effect in the LYING GAME and the DICTATOR GAME.

The two classic games also allow us to identify motivated motive selection in a second way. To see this, note that our predictions also imply that individuals with low draws may behave more ‘as-if’ playing the lying game, whereas those with high draws may behave more ‘as-if’ playing the dictator game. If true, then average behavior in the LYING-DICTATOR GAME should be closer to the DICTATOR GAME for low draws, and closer to the LYING GAME for high draws. Taken together, these predictions leads to the following hypothesis:

Hypothesis 1. (*Motivated motive selection*) *Participants in the LYING-DICTATOR GAME choose to adhere to the moral motive that is most closely aligned with their self-interest. This implies that:*

- (i) *The rate of truth-telling will be higher and the rate of choosing equality will be lower after a HIGH draw compared to a LOW draw.*
- (ii) *Behavior after a LOW draw will be closer to behavior in the DICTATOR GAME, whereas behavior after a HIGH draw will be closer to behavior in the LYING GAME.*

Our second hypothesis pertains to spillovers between games. If we observe motivated motive selection in the LYING-DICTATOR GAME, as predicted by Hypothesis 1, one might conjecture that this may spill over to other games played subsequently by the participants. More specifically, if participants who receive a LOW draw in the LYING-DICTATOR GAME are more likely to adhere to the equality motive, they may also be more likely to choose equal split in the subsequently played THIRD-PARTY LYING-DICTATOR GAME. Similarly, if participants with a HIGH draw in the LYING-DICTATOR GAME are more inclined to tell the truth, they may also be more likely to tell the truth in the subsequently played THIRD-PARTY LYING-DICTATOR GAME.¹³

Hypothesis 2. (*Persistence of motive selection*) *Participants who received a LOW draw in the LYING-DICTATOR GAME will choose equality at a higher rate and truth-telling at a lower rate in a subsequent THIRD-PARTY LYING-DICTATOR GAME, relative to participants who received a HIGH draw.*

¹³In the THIRD-PARTY LYING-DICTATOR GAME, we remove any chance for the individual’s monetary self-interest to play a role, so that there is no further scope for motivated reasoning.

3 Results

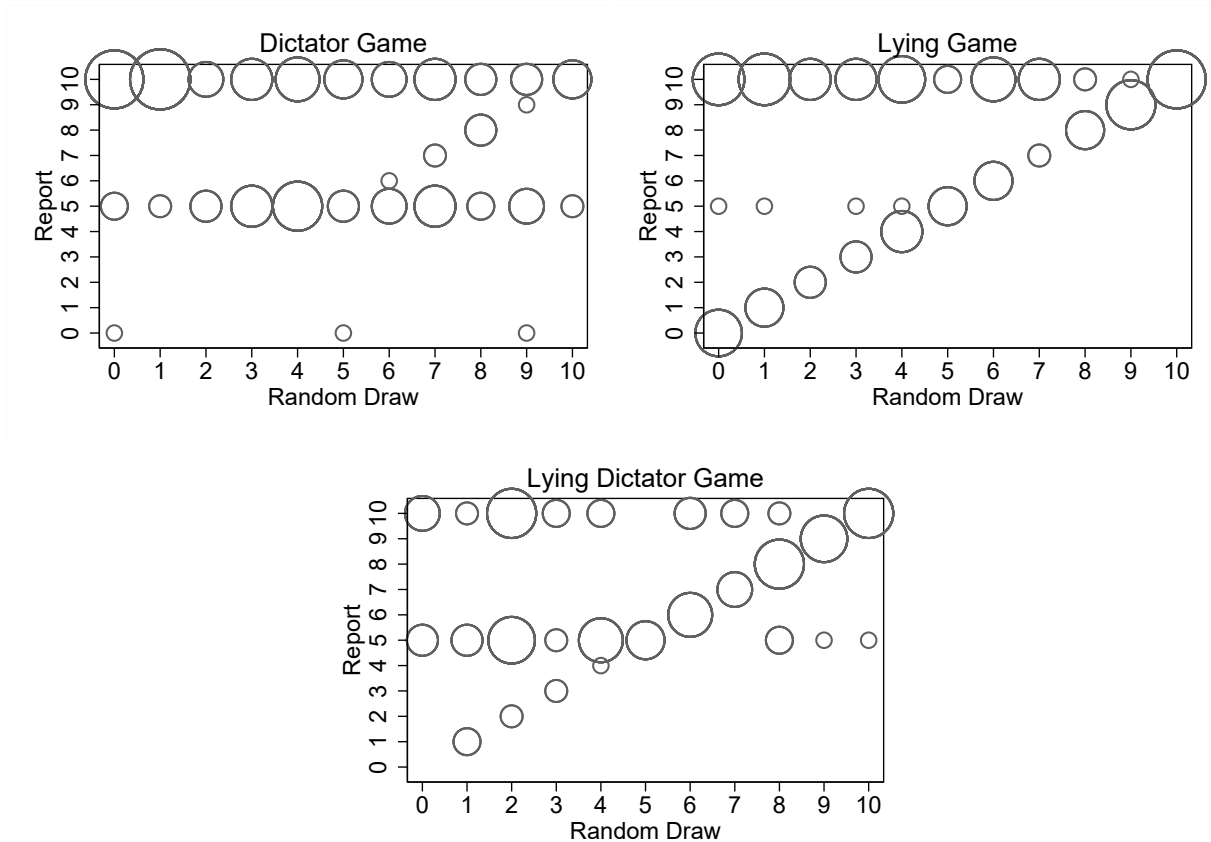
We organize our results into three parts. In Section 3.1, we test Hypothesis 1 by comparing behavior in the LYING-DICTATOR GAME with behavior in the LYING GAME and DICTATOR GAME. In Section 3.2, we then test Hypothesis 2 by investigating whether the motive selected in the LYING-DICTATOR GAME spills over to the THIRD-PARTY LYING-DICTATOR GAME. Finally, in Section 3.3 we compare our results to those observed in the well established literatures studying the lying and dictator games individually.

3.1 Motivated Motive Selection

Figure 2 and 3 provide a visual representation of our data. Figure 2 plots the frequency of observed choices as a function of the random draw for each game. The circles' sizes correspond to the fraction of subjects in each random draw-choice cell. Figure 3 summarizes these results by plotting the fraction of subjects choosing an allocation consistent with each motive after a LOW (> 5) draw or a HIGH (< 5) draw in each of the three games. Note that while the truth-telling and equality motive are only defined in two of the three games, for consistency we use the same labeling for all games. For example, we always label someone who reports their random draw as a truth-teller, even though in the DICTATOR GAME they are actually just implementing the randomly determined allocation.

In the two baseline games, our results are largely similar to previous work. In the DICTATOR GAME, participants typically choose either the equal split (5) or maximize their own payment (10), although a few participants follow the randomly suggested split if it is larger than five. In the LYING GAME, the vast majority of subjects choose either to tell the truth (i.e. to choose a report equal to the random draw), or to maximize their own payoff (10). Only 4 subjects (2.78%) neither tell the truth nor maximize their own payoff. The random draw itself appears to matter in both games: participants are less likely to lie in the LYING GAME and more likely to implement the randomly selected allocation in the DICTATOR GAME after a HIGH draw than after a LOW draw (two-tailed test of proportions, $p < 0.001$ in both cases). These results are consistent with previous work; we will provide a more detailed comparison in section 3.3 below.

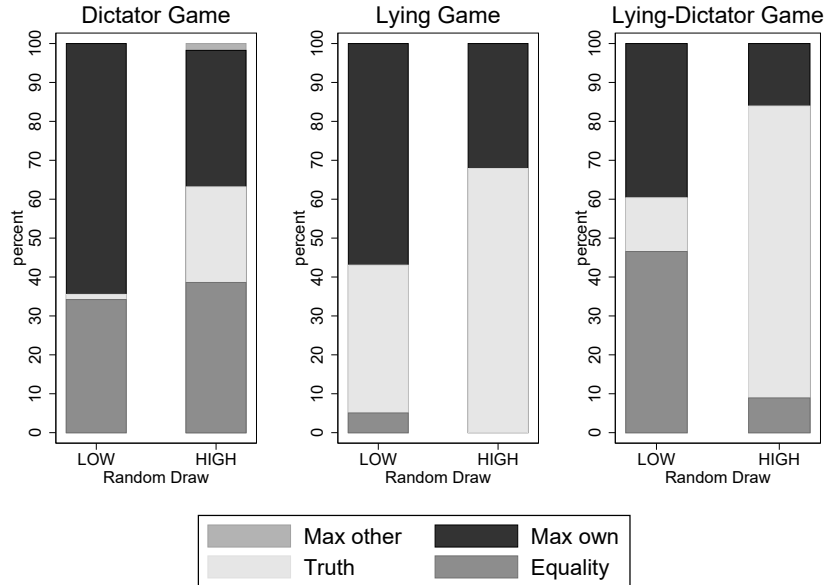
Figure 2: Distributions of choices across the three games



Note: The figure shows the distribution of reports by random draw for each of the three games. Circle sizes correspond to the number of subjects.

The striking feature of both Figures, however, is the behavior observed in the LYING-DICTATOR GAME. The motivated moral selection hypothesis (H1) predicts that participants in this game will choose to adhere to the moral motive that is most closely aligned with their self-interest: equality for HIGH draws and truth-telling for LOW draws. The visual evidence in Figure 2 and 3 is strongly consistent with this hypothesis. For random draws lower than 5, few participants (14%) tell the *truth* and almost half (47%) choose to equalize payoffs. By contrast, for random draws greater than 5, the vast majority (75%) tell the truth and only very few (9%) choose to equalize payments. In other words, participants appear to select the moral motive that most closely aligns with their self-interest, in line with the motivated moral selection hypothesis.

Figure 3: Motive choices across game types



Notes: The figure shows the distribution of motive choices for a LOW (> 5) draw or a HIGH (< 5) random draw for each of the three games. Note that in the LYING GAME and DICTATOR GAME it was not possible to equalize payments or tell the truth respectively. Instead, for the LYING GAME ‘Equality’ refers to choosing to take 5 for oneself. For the DICTATOR GAME, ‘Truth’ refers to choosing to take the randomly drawn number for oneself.

We formally test Hypothesis 1 in Table 2. As a first step, column 1 confirms that participants in the LYING-DICTATOR GAME were indeed more likely to select the truth-telling motive (Panel A) and less likely to select the equality motive (Panel B) after a HIGH draw. However, while this evidence is suggestive of motivated motive selection, it is not conclusive. In particular, we observed a similar pattern in the LYING GAME and DICTATOR GAME, where participants were also more likely to tell the truth (or choose the randomly drawn allocation) following a HIGH draw. In order to identify motivated motive selection, we therefore need to test whether the effect of the random draw in the LYING-DICTATOR GAME is greater than in either of the respective baseline games.

The results are presented in columns 2 and 3. For truth-telling (Panel A), the ‘High Draw’ coefficient confirms that the truth-telling motive was indeed selected significantly more often after a HIGH draw in the two baseline games. For equality, we do not see a consistent effect in the baseline games (Panel B). More importantly, however, the interaction effect for both motives demonstrates that the effect of a HIGH random draw was greater (in an absolute sense) in the LYING-DICTATOR GAME than in either of the two baseline games. Columns 4 and 5 show that we

obtain very similar results when we control for age, gender, year of study and previous exposure to similar experiments.

This evidence is consistent with the motivated motive selection hypothesis. For LOW draws, participants in the LYING-DICTATOR GAME favor the equal split and rarely choose to truthfully report their number. For HIGH draws, they overwhelmingly tell the truth and only rarely choose the equal split. The fact that these patterns are significantly starker than in the baseline games indicate that these results only arise when two motives are present simultaneously, in line with motivated motive selection. As we will discuss further in Section 3.3, the rather high rate of lying after a LOW draw is also intriguing when considered against the backdrop of the wider lying game literature.

As an alternative way to test our hypothesis, we investigate whether behavior is indeed closer to the DICTATOR GAME for LOW draws and closer to the LYING GAME for HIGH draws. Starting with LOW draws, both the truth-telling rate (13.8%) and the rate of equalizing payments (46.6%) are indeed quite similar to the DICTATOR GAME (1.3% and 34.2% respectively), and appear further removed from the LYING GAME (38.0% and 5.1% respectively). More formally, the absolute distance between the truth-telling and equality rate in the LYING-DICTATOR GAME and the respective baseline games is indeed smaller for the DICTATOR GAME than for the LYING GAME, though significantly so only for equality (29.2pp, $p < 0.001$) but not for truth-telling (11.6pp, $p = .286$).¹⁴

For HIGH draws, both the truth-telling rate (75.0%) and the rate of equalizing payments (8.9%) appear similar to the LYING GAME (67.9% and 0% respectively), and further removed from the DICTATOR GAME (38.6% and 24.6% respectively). Here, the absolute distance between the truth-telling and equality rate in the LYING-DICTATOR GAME and the respective baseline games is indeed larger for the DICTATOR GAME than for the LYING GAME for equality (18.7pp, $p = .056$) and for truth-telling (42.9pp, $p < .001$). Taken together, the results of this alternative tests of hypothesis 1 are also consistent with the motivated motive selection hypothesis: behavior was closer to the DICTATOR GAME for HIGH draws and closer to the LYING GAME for LOW draws respectively.

Importantly, recall that in each of the three games, the choice sets are identically generated in terms of own material payments. Therefore, observed differences in behavior between the games can be attributed to non-monetary motives (e.g. the moral motives in play). For example, when comparing the LYING-DICTATOR GAME and the LYING GAME, it is non-trivial to rationalize the

¹⁴The latter result is driven by the fact that participants in the LYING-DICTATOR GAME are even less likely to report the randomly drawn number (i.e., tell the truth) than participants in the DICTATOR GAME.

Table 2: Comparing Motive Choices Across Games

	(1)	(2)	(3)	(4)	(5)
<u>Panel A:</u>					
	<u>Dependent Variable: Truth-Telling</u>				
Lying-Dictator Game		-0.242*** (0.072)	0.125** (0.048)	-0.287*** (0.073)	0.138** (0.052)
High Draw	0.612*** (0.074)	0.299*** (0.084)	0.232*** (0.059)	0.295*** (0.079)	0.228*** (0.060)
Lying-Dictator Game * High Draw		0.313** (0.112)	0.380*** (0.095)	0.312** (0.109)	0.384*** (0.097)
Constant	0.138** (0.046)	0.380*** (0.055)	0.013 (0.013)	0.515*** (0.066)	0.036 (0.033)
<u>Panel B:</u>					
	<u>Dependent Variable: Equality</u>				
Lying-Dictator Game		0.415*** (0.071)	0.123 (0.086)	0.405*** (0.071)	0.104 (0.088)
High Draw	-0.376*** (0.077)	-0.051* (0.025)	0.044 (0.085)	-0.058* (0.026)	0.027 (0.082)
Lying-Dictator Game * High Draw		-0.326*** (0.080)	-0.420*** (0.114)	-0.334*** (0.081)	-0.435*** (0.114)
Constant	0.466*** (0.054)	0.051* (0.025)	0.342*** (0.055)	0.085* (0.038)	0.442*** (0.069)
Controls	No	No	No	Yes	Yes
Comparison Group	NA	Lying Game	Dictator Game	Lying Game	Dictator Game
Observations	114	249	247	249	247

Notes. OLS Estimates, robust standard errors in parentheses. Dependent variable is a dummy variable for choosing to tell the truth (Panel A) or equalizing payments (Panel B). “Lying-Dictator Game” is a dummy variable for the LYING-DICTATOR GAME, “High Draw” is a dummy variable for randomly drawing a high (> 5) number, and the final variable is the interaction of these two variables. Control variables in column (4) and (5) include age, gender, years of study and previous exposure to similar experiments. The comparison group is the baseline game behavior from the LYING-DICTATOR GAME is compared to. In case behavior is compared to the LYING GAME, choosing equality amounts to choosing five for oneself; in case it is compared to the DICTATOR GAME, truth-telling amounts to implementing the randomly chosen allocation.

*** p<0.001, ** p<0.01, * p<0.05, + p<0.1

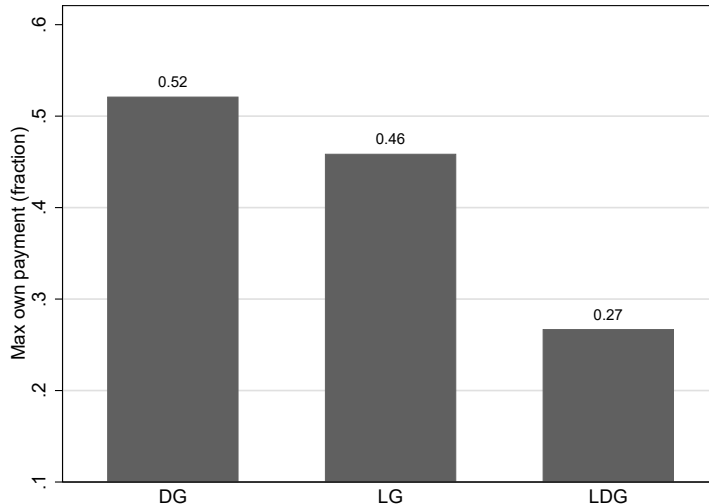
substantially higher lying rate observed after a LOW draw, but (weakly) lower lying rate observed after a HIGH draw in the LYING-DICTATOR GAME, without recourse to an explanation that involves motivated motive selection.

To elaborate on this point, the evidence from the following exercise provides additional support that behavior in the LYING-DICTATOR GAME is not obtained from simple combinations of behavior in the two classic games. We do not only find differences in behavior between games conditional on the HIGH or LOW random draw, but also find stark differences in the unconditional distribution of choices. The distributions observed in both DICTATOR GAME and the LYING GAME are significantly different from the LYING-DICTATOR GAME distribution (Kolmogorov-Smirnov tests, $p=0.004$, and $p=0.006$, respectively) as described in more detail in Appendix A.¹⁵ We also find that taking any linear combination of the distribution of choices observed in the LYING GAME and the DICTATOR GAME leads to a distribution that is statistically significantly different from the distribution of choices observed in the LYING-DICTATOR GAME. That is, if we generate 10 distributions of choices that are the weighted averages of the distribution of choices of the LYING GAME and the DICTATOR GAME, with the weight $\alpha \in \{0, 0.1, 0.2, \dots, 1\}$, then each of these distributions is significantly different from the distribution of choices of the LYING-DICTATOR GAME as indicated by Kolmogorov-Smirnov tests.

One particularly intriguing implication of the behavior described above – namely, participants taking advantage of the possibility to comply with the more advantageous moral motive as an excuse to avoid adhering to the less advantageous moral motive – is that we observe a substantial drop in purely selfish behavior in the LYING-DICTATOR GAME relative to the other two games. Figure 4 shows that the fraction of subjects choosing the selfish option is only 27% in the LYING-DICTATOR GAME in comparison to 46% in the LYING GAME and 52% in the DICTATOR GAME respectively. These differences are statistically significant both if we consider behavior in the pooled sample containing both HIGH and LOW draws ($p = 0.001$ and $p < 0.001$), and when considering the conditional sample of only LOW draws ($p = 0.004$ for the DICTATOR GAME and $p = 0.045$ for the LYING GAME, respectively) or only HIGH draws ($p = 0.020$ for the DICTATOR GAME and $p = 0.047$ for the LYING GAME, respectively). Hence, the presence of two competing motives (in the LYING-DICTATOR GAME) appears to draw participants away from selfish behavior relative to settings where only one moral motive is present (LYING GAME and DICTATOR GAME).

¹⁵Average payoffs are 7.26€ in the LYING-DICTATOR GAME, 7.58€ in the LYING GAME and 7.85€ in the DICTATOR GAME and not significantly different between the three games.

Figure 4: Propensity to maximize own payoff, across games



Taken together, these results suggest that participants conveniently implement the moral motive that provides them with a higher personal payment, while also maintaining their self-image (due to conforming with one of the moral motives in play). When their draw is HIGH, they report the truth, whereas when it is LOW they implement the equal split. The presence of two moral norms in the LYING-DICTATOR GAME serves to both (i) increase the intrinsic cost of purely selfish behavior, since it involves violating two social norms, and (ii) reduces the monetary cost of adhering to at least one moral motive (since the subjects can self-servingly select the moral motive that is more advantageous). Together these two forces may explain why we observe less selfish behavior in the LYING-DICTATOR GAME.

3.2 Spillovers to other games

In this section we explore whether the motivated motive selection that we observe in the LYING-DICTATOR GAME leads to a persistent shift in the relative weighting of different moral motives. In particular, we ask whether playing the LYING-DICTATOR GAME leads to spillovers in moral decision making in a subsequent game that involves evaluations regarding the same moral motives, but where, importantly, self-interest no longer plays a role.

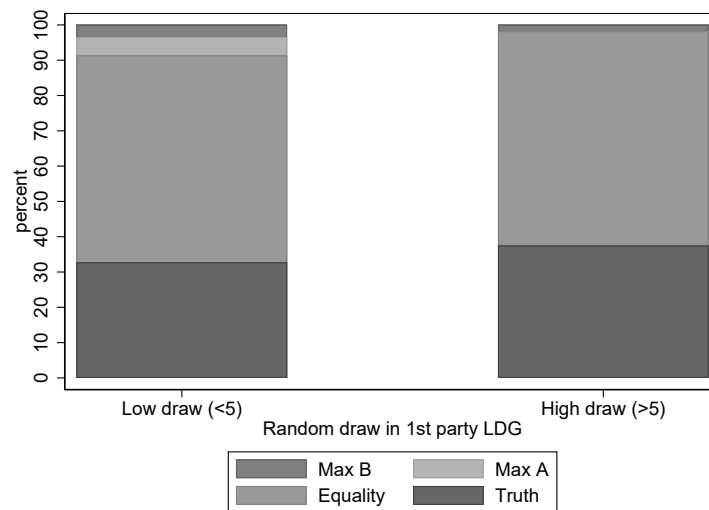
3.2.1 The Third-Party Lying-Dictator Game

In the LYING-DICTATOR GAME, we saw that the random draw had a significant impact on the tendency to choose an equal division (46.6% after a LOW draw, 8.9% after a HIGH draw) and to

choose to tell the truth (13.8% after a LOW draw, 75% after a HIGH draw), $p < .001$ in a test of proportions in both cases.¹⁶ In other words, the random draw gives us exogenous variation in the motive selected in the LYING-DICTATOR GAME.¹⁷ Furthermore, in the THIRD-PARTY LYING-DICTATOR GAME, 95% of the participants choose either to tell the truth or to divide the endowment equally between the two passive participants. Therefore, with self-interest removed, almost all participants choose to conform with one of the moral motives.

To analyze whether the motivated motive selection that we observe in the LYING-DICTATOR GAME leads to spillovers in the subsequently played THIRD-PARTY LYING-DICTATOR GAME, we exploit the exogenous variation in alignment between self-interest and moral motives in LYING-DICTATOR GAME generated by the random draw. Figure 5 provides a description of choices in the THIRD-PARTY LYING-DICTATOR GAME as a function of the random draw in the LYING-DICTATOR GAME.

Figure 5: Persistence in motive choices between 1st and 3rd Party LDG (by random draw)



In contrast to our hypothesis regarding spillovers, the figure indicates that the random draw in the 1st stage LYING-DICTATOR GAME did not have a statistically significant impact on the motive selected in the THIRD-PARTY LDG. For example, in Figure 5, the truth-telling rate after a LOW draw was 33%, while it was 38% after a HIGH draw. While the point estimates go in

¹⁶These differences remain significant in a pre-registered regression analysis that also controls for the exact random draw in the LYING-DICTATOR GAME.

¹⁷Note that a random draw of 5 in the THIRD-PARTY LYING-DICTATOR GAME implies that a participant can satisfy both moral motives simultaneously. However, if hypothesis 2 is correct, these participants may still be more likely to choose the same motive they previously selected in the LYING-DICTATOR GAME. Hence we will keep these observations in our analysis; however our results are robust to removing them as well.

the direction of our hypothesis, this difference is small and not statistically significant (test of proportions, $p = 0.596$). The equality results are analogous (59% in LOW vs 61% in HIGH, $p = 0.820$). Therefore, we do not observe evidence that the motivated motive selection that we observe in the LYING-DICTATOR GAME leads to spillovers to subsequently played games. The results are robust to excluding participants who made selfish choices in part 1 or to only focusing on those participants.¹⁸

3.2.2 The Krupka-Weber norm evaluations

The results from the previous section are echoed by the results from the Krupka-Weber norm elicitation task. The majority of participants (72/120) assess equality as being a more appropriate motive than truth-telling (two-tailed Wilcoxon signed-rank test $p < 0.001$). Importantly, we see no difference in our preregistered analysis of the relative appropriateness ratings for the two motives depending on the stage 1 random draw (two-tailed Mann-Whitney U test, $p = 0.506$). Taken together, the results from the THIRD-PARTY LYING-DICTATOR GAME and the norm elicitation task both imply that we observe no evidence that the motive selection we observe in the first-party LYING-DICTATOR GAME spills over into subsequently played games.

3.3 Comparability of our LYING and DICTATOR GAME

This section proceeds in two steps. Firstly, in order to show that our findings are not driven by peculiar outcomes in our DICTATOR GAME and LYING GAME, we show that the results in the DICTATOR GAME and in the LYING GAME replicate the patterns of behaviour observed in earlier studies. Secondly, we show that the sequence of play for these two games in the Treatment BASELINE does not influence our findings.

3.3.1 Relation to previous literature: dictator games and lying games

The LYING GAME

We first compare the results from our LYING GAME to the findings of [Gneezy et al. \(2018\)](#), whose implementation of the lying game is similar to ours — they also ask subjects to click on a

¹⁸We also find no evidence of spillovers in the additional robustness analysis we included in the pre-analysis plan; the full results are available upon request.

box on the screen and to report the observed number.¹⁹ Crucially, this implementation of the lying game allows the researcher to observe lying at the individual level.

The comparison yields the following findings: First, in line with [Gneezy et al. \(2018\)](#), we find that reported numbers are significantly higher than observed numbers (two-tailed t-test, $p < 0.001$), because a substantial fraction of subjects lie. Second, as in [Gneezy et al. \(2018\)](#) we find a significant negative correlation between the number observed and the probability of lying (Spearman's $\rho = -0.329$, $p < 0.001$). Hence, subjects who observe a lower number are more likely to lie. Third, in line with [Gneezy et al. \(2018\)](#), conditional on lying, we find no correlation between the observed and reported number (Spearman's $\rho = 0.114$, $p = 0.349$). Fourth, as in [Gneezy et al. \(2018\)](#) we find that most subjects who lie, lie maximally and report a 10. In our data, of the subjects who lie, 94% of subjects report a 10 (while 6% report a 5).²⁰ This statistic is robust to restricting attention to the subjects who observe a LOW draw and lie – of these 49 subjects, only four (8%) lie partially and report a 5, while 45 (92%) lie maximally and report a 10.

Thus, the findings in our LYING GAME resemble the pattern found in [Gneezy et al. \(2018\)](#). However, we do observe a greater degree of lying. The fraction of subjects who lie in our LYING GAME is 49% which is significantly higher than the 26% of subjects that lie in the Numbers treatment of [Gneezy et al. \(2018\)](#) (two-tailed test of proportions, $p < 0.001$). One potential reason for this is our restriction of the choice set to four items — in order to facilitate comparability with our LYING-DICTATOR GAME, in our LYING GAME subjects also do not freely enter a number, but rather choose between four options. This element of the experimental implementation may legitimize lying slightly and induce a higher rate of lying. Since this is held constant across our games, we do not view it as a major concern for treatment comparisons.

The DICTATOR GAME

Similarly, when considering our DICTATOR GAME, we can again conclude that our results are in line with those observed in the literature. Given the large pre-existing literature studying the

¹⁹One difference is that in [Gneezy et al. \(2018\)](#) subjects can observe a number between one and 10, while in our study the random number varies between zero and 10 (see the *Numbers treatment* of their *Observed Game*). In our setting it is important to allow subjects to be able to choose zero, as it facilitates symmetry of the own-other allocation choices, and enhances comparability with our DICTATOR GAME. A second difference is that we focus directly on the tension between motives by restricting each participant's choice set to four items in each of the three games.

²⁰In the [Gneezy et al. \(2018\)](#) Numbers treatment, 68% of subjects who lie, lie maximally. This number increases to 80% in their Numbers Mixed treatment, and to 91% in their Words treatment. We view these results as being completely in line with ours. In particular, since subjects in our experiment can only lie to 0, 5 or to 10, and the most of those who do not lie maximally in [Gneezy et al. \(2018\)](#), lie to 9 or 8. In our paper and in all three treatments in [Gneezy et al. \(2018\)](#), fewer than 10% of those who lie, report a 5 or less. In both papers, there is almost no evidence of downward lying.

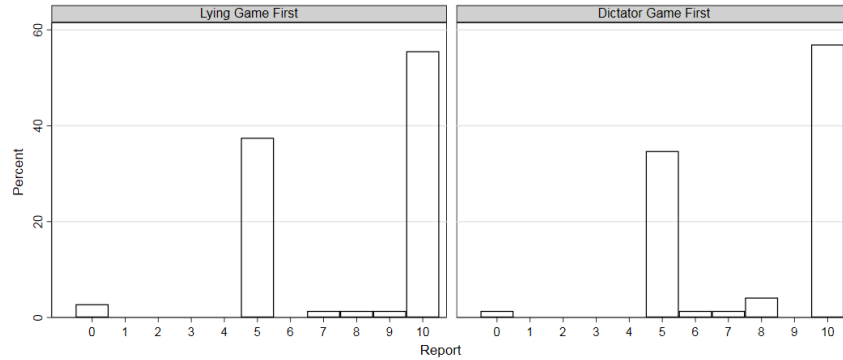
dictator game, we view the most appropriate benchmark for comparison as being the aggregated behaviour observed across all these studies. We therefore compare our findings to the results reported in the meta-analysis of Engel (2011) – more specifically to Engel’s (2011) distribution of individual giving rates obtained from based on 328 treatments and 20,813 observations.

The distribution of choices observed in our DICTATOR GAME shares the following features with the one reported in Engel (2011). Firstly, the majority of subjects retain 100% of the endowment for themselves. Secondly, the second most commonly chosen option is to give 50% of the endowment to the recipient and to keep 50% for oneself. Thirdly, besides these two prominent choice options, higher numbers are chosen more often than lower numbers, i.e., more subjects choose to retain 60% - 90% of the endowment than 10% - 40% of the endowment (diff.: 5 pp, two-tailed test of proportions, $p=0.004$). Hence, generally, the distribution of DICTATOR GAME-giving obtained in our experiment replicates the major stylized facts established in various earlier studies and summarized in Engel (2011).

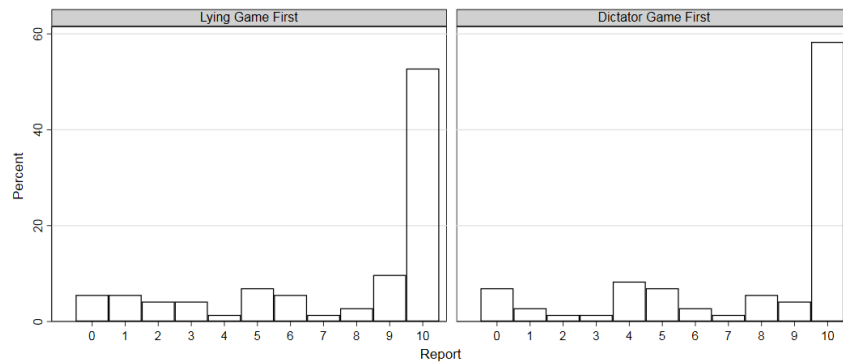
Specific to our setup is the finding that a larger fraction of subjects choose to retain 100% of the endowment (56% vs. 36% in Engel (2011), two-tailed test of proportions, $p<0.001$) and a smaller fraction choose to retain more than 50% but less than 100% (between 7% and 9% in Engel (2011), but between 2% and 5% in this study). This concentration of choices on the options 0, 5, and 10 is likely a mechanical consequence of our four-option design, which implies that only one out of every 11 subjects in our experiment can choose each of the outcomes other than 0, 5 and 10. Hence, a participant that, for instance, would like to keep 7, 8, or 9 € for themselves might end up choosing 10 €. A similar logic can explain the increase in the proportion of subjects choosing to retain 50% (36% vs. 17% in Engel (2011), two-tailed test of proportions, $p<0.001$). One implication of these differences is that we observe a mean contribution in our setup that is slightly lower than the mean from all reported or constructed means in Engel (2011) (22% vs. 28% in Engel (2011), two-tailed t-test, $p<0.001$).

3.3.2 Order effects

Figure 6: Unconditional distributions for the first and second choice made in Treatment BASELINE



(a) Dictator Game



(b) Lying Game

Note: The figure shows the unconditional distributions for the DICTATOR GAME and the LYING GAME both for participants who played the DICTATOR GAME and who played the LYING GAME first.

The sequence in which the two games played in the Treatment BASELINE does not influence our findings. For the DICTATOR GAME, the reported distributions are not significantly different from one another (Kolmogorov-Smirnov test, $p=1$). For the LYING GAME, we also find that the distribution of choices made first or second are not statistically different from one another (Kolmogorov-Smirnov test, $p=0.996$). These findings are illustrated in Figure 6. Equally, average choices in the DICTATOR GAME are EUR 7.94 for participants who first play the DICTATOR GAME and EUR 7.76 for participants who play the LYING GAME first (two-tailed t-test, $p=0.682$) and in the LYING GAME are EUR 7.47 for participants who first play the DICTATOR GAME and EUR 7.69 for participants who play the LYING GAME first (two-tailed t-test, $p=0.696$).

4 Conclusion

How do people behave in situations where two moral motives are in direct conflict, implying the presence of competing moral imperatives? This paper sheds some light on whether individuals use the presence of two moral motives as an opportunity to both adhere to a moral motive – possibly in order to maintain a positive self-image – and to pursue their own private interest. We term this behavior ‘motivated motive selection’ and test for its presence using a simple game (the LYING-DICTATOR GAME) that is isomorphic to the classic dictator game, and standard lying game in terms of the mapping from choices into the individual’s own payoffs. The only difference between the three games is that we *switch on* or *off* the presence in the choice environment of two moral motives – truthfulness and fairness.

We implement the LYING-DICTATOR GAME in a laboratory experiment and find that participants in our experiment tend to adhere to the more favorable moral motive when more than one is available, consistent with the motivated motive selection hypothesis. We also show that participants in the LYING-DICTATOR GAME behave as if they are playing a DICTATOR GAME when it is in their private interest to do so, and behave as if they are playing a LYING GAME when this is relatively more advantageous. In addition, having a second moral motive (as in the LYING-DICTATOR GAME) also appears to increase the propensity that an individual chooses to adhere to a moral motive instead of maximizing his own payoff. Finally, we find no evidence that motivated motive selection spills over into a third-party version of the LYING-DICTATOR GAME where the role of self-interest is removed.

One potential implication of these results is that the lessons learned from simple decision making contexts, in which there is a tension between monetary gain and satisfying a single moral motive, may not translate directly into more complex decision making contexts where multiple motives are present. In these complex contexts with multiple moral motives, individuals may focus more on satisfying at least one of the moral motives, but choose which one in a motivated way. For instance, one crucial finding in the literature on lying costs is that the psychological costs of lying seem to be rather large and widespread (Abeler et al., 2014). However, our results suggest that individuals may be able to avoid these psychological costs when they are presented with a second moral motive. Specifically, among participants who are made better off by adhering to another moral motive (equality), we find much lower rates of truth-telling than are commonly found in the literature and in our own LYING GAME experiment. On a similar note, our participants are much less likely to implement the equal split if the truth-telling motive gives them an excuse not to do so.

Our results are in line with previous work on motivated reasoning, demonstrating its applicability to situations where one faces conflicting motives. In contrast to much of the previous work in this area, a key feature of our experimental design is to strip away much of the context, using only small deviations from two workhorse games in experimental economics. This allows us, firstly, to increase the complexity of the choice environment in a controlled way – by adding and removing the presence of motives. Secondly, by staying close to the much-studied dictator and lying games, the LYING-DICTATOR GAME game can be analyzed with reference to a wealth of benchmark evidence.

However, the consequences of this type of reasoning being applicable to all situations in which multiple competing motives are present are wide-ranging. Many of the most important decisions in life are complex, and involve an intricate web of competing forces pulling in different directions. From political decision-making to tricky ethical decisions in business to everyday decision-making, complex situations of this nature abound. Our findings imply that understanding and predicting behavior in these contexts may require a more nuanced understanding of the way in which individuals choose which motives they focus on in a given context. Motivated motive selection may provide a first step towards a better understanding of decision making in these types of situations.

References

- ABELER, J., A. BECKER, AND A. FALK (2014): “Representative evidence on lying costs,” *Journal of Public Economics*, 113, 96 – 104.
- ABELER, J., D. NOSENZO, AND C. RAYMOND (2018): “Preferences for truth-telling,” *Econometrica*.
- ALEMPAKI, D., G. DOĞAN, AND S. SACCARDO (2018): “Deception and reciprocity,” *Experimental Economics (forthcoming)*.
- ALMÅS, I., A. W. CAPPELEN, AND B. TUNGODDEN (2018): “Cutthroat Capitalism versus Cuddly Socialism: Are Americans More Meritocratic and Efficiency-seeking than Scandinavians?” *Mimeo*.
- AMBUEHL, S. (2017): “An Offer You Can’t Refuse? Incentives Change How We Think,” Tech. rep., Stanford University Working Paper.
- ANDREONI, J. (1990): “Impure Altruism and Donations to Public Goods: A Theory of Warm-Glow Giving,” *The Economic Journal*, 100, 464.
- BABCOCK, L., G. LOEWENSTEIN, S. ISSACHAROFF, AND C. CAMERER (1995): “Biased judgments of fairness in bargaining,” *The American Economic Review*, 85, 1337–1343.
- BABCOCK, L., X. WANG, AND G. LOEWENSTEIN (1996): “Choosing the Wrong Pond: Social Comparisons in Negotiations That Reflect a Self-Serving Bias*,” *The Quarterly Journal of Economics*, 111, 1–19.
- BOLTON, G. E. AND A. OCKENFELS (2000): “ERC: A Theory of Equity, Reciprocity, and Competition,” *American Economic Review*, 90, 166–193.
- CAPPELEN, A. W., A. D. HOLE, E. Ø. SØRENSEN, AND B. TUNGODDEN (2007): “The Pluralism of Fairness Ideals: An Experimental Approach,” *American Economic Review*, 97, 818–827.
- CAPPELEN, A. W., J. KONOW, E. Ø. SØRENSEN, AND B. TUNGODDEN (2013): “Just Luck: An Experimental Study of Risk-Taking and Fairness,” *American Economic Review*, 103, 1398–1413.
- CAPPELEN, A. W., J. A. LIST, A. SAMEK, AND B. TUNGODDEN (2016): “The Effect of Early Education on Social Preferences,” *NBER Working Paper*.

- CHARNESS, G. AND M. RABIN (2002): “Understanding Social Preferences with Simple Tests,” *The Quarterly Journal of Economics*, 117, 817–869.
- DAI, Z., F. GALEOTTI, AND M. C. VILLEVAL (2018): “Cheating in the Lab Predicts Fraud in the Field: An Experiment in Public Transportation,” *Management Science*, 64, 1081–1100.
- DANILOV, A. AND S. SACCARDO (2019): “Disguised Discrimination,” *Mimeo*.
- DI TELLA, R., R. PEREZ-TRUGLIA, A. BABINO, AND M. SIGMAN (2015): “Conveniently Upset: Avoiding Altruism by Distorting Beliefs about Others’ Altruism,” *American Economic Review*, 105, 3416–42.
- DREBER, A. AND M. JOHANNESSON (2008): “Gender differences in deception,” *Economics Letters*, 99, 197–199.
- DUFWENBERG, M. AND M. A. DUFWENBERG (2018): “Lies in disguise—A theoretical analysis of cheating,” *Journal of Economic Theory*, 175, 248–264.
- ENGEL, C. (2011): “Dictator games: A meta study,” *Experimental Economics*, 14, 583–610.
- ENGELMANN, D. AND M. STROBEL (2004): “Inequality Aversion, Efficiency, and Maximin Preferences in Simple Distribution Experiments,” *American Economic Review*, 94, 857–869.
- EXLEY, C. L. (2015): “Excusing selfishness in charitable giving: The role of risk,” *The Review of Economic Studies*, 83, 587–628.
- FEHR, E. AND K. M. SCHMIDT (1999): “A Theory of Fairness, Competition, and Cooperation,” *Quarterly Journal of Economics*, 114, 817–868.
- FISCHBACHER, U. (2007): “z-Tree: Zurich toolbox for ready-made economic experiments,” *Experimental Economics*, 10, 171–178.
- FISCHBACHER, U. AND F. FÖLLMI-HEUSI (2013): “Lies in disguise—an experimental study on cheating,” *Journal of the European Economic Association*, 11, 525–547.
- FORSYTHE, R., J. HOROWITZ, N. SAVIN, AND M. SEFTON (1994): “Fairness in Simple Bargaining Experiments,” *Games and Economic Behavior*, 6, 347–369.
- GNEEZY, U. (2005): “Deception: The role of consequences,” *American Economic Review*, 95, 384–394.

- GNEEZY, U., A. KAJACKAITE, AND J. SOBEL (2018): “Lying Aversion and the Size of the Lie,” *American Economic Review*, 108, 419–53.
- GNEEZY, U., B. ROCKENBACH, AND M. SERRA-GARCIA (2013): “Measuring lying aversion,” *Journal of Economic Behavior & Organization*, 93, 293 – 300.
- GREINER, B. (2015): “Subject pool recruitment procedures: organizing experiments with ORSEE,” *Journal of the Economic Science Association*, 1, 114–125.
- GÜTH, W., R. SCHMITTBERGER, AND B. SCHWARZE (1982): “An experimental analysis of ultimatum bargaining,” *Journal of Economic Behavior & Organization*, 3, 367–388.
- HOUSER, D., S. VETTER, AND J. WINTER (2012): “Fairness and cheating,” *European Economic Review*, 56, 1645–1655.
- HURKENS, S. AND N. KARTIK (2009): “Would I lie to you? On social preferences and lying aversion,” *Experimental Economics*, 12, 180–192.
- KAHNEMAN, D., J. L. KNETSCH, AND R. H. THALER (1986): “Fairness and the Assumptions of Economics,” *The Journal of Business*, 59, S285.
- KONOW, J. (2000): “Fair Shares: Accountability and Cognitive Dissonance in Allocation Decisions,” *American Economic Review*, 90, 1072–1091.
- KOSSE, F., T. DECKERS, P. PINGER, H. SCHILDBERG-HÖRISCH, AND A. FALK (2018): “The Formation of Prosociality: Causal Evidence on the Role of Social Environment,” *Cesifo Working Papers*, 7068, 1–65.
- KRUPKA, E. L. AND R. A. WEBER (2013): “Identifying social norms using coordination games: Why does dictator game sharing vary?” *Journal of the European Economic Association*, 11, 495–524.
- MERRITT, A. C., D. A. EFFRON, AND B. MONIN (2010): “Moral self-licensing: When being good frees us to be bad,” *Social and personality psychology compass*, 4, 344–357.
- MESSICK, D. M. AND K. P. SENTIS (1979): “Fairness and preference,” *Journal of Experimental Social Psychology*, 15, 418–434.

- MEUB, L., T. PROEGER, T. SCHNEIDER, AND K. BIZER (2016): “The victim matters – experimental evidence on lying, moral costs and moral cleansing,” *Applied Economics Letters*, 23, 1162–1167.
- PALMA, M. AND Z. XU (2016): *Essays on Fairness Preferences: An Experimental Approach*, chap. Shadow of a Doubt: Moral Excuse in Charitable Giving.
- PLONER, M. AND T. REGNER (2013): “Self-image and moral balancing: An experimental analysis,” *Journal of Economic Behavior & Organization*, 93, 374 – 383.
- RABIN, M. (1993): “Incorporating Fairness into Game Theory and Economics,” *American Economic Review*, 83, 1281–1302.
- SACHDEVA, S., R. ILIEV, AND D. L. MEDIN (2009): “Sinning saints and saintly sinners: The paradox of moral self-regulation,” *Psychological science*, 20, 523–528.
- SHALVI, S., M. J. J. HANDGRAAF, AND C. K. DE DREU (2011): “Ethical Manoeuvring: Why People Avoid Both Major and Minor Lies,” *British Journal of Management*, 22, S16–S27.
- SUTTER, M. (2008): “Deception Through Telling the Truth?! Experimental Evidence from Individuals and Teams,” *The Economic Journal*, 119, 47–60.

Appendix A: Supplementary Tables and Figures

Figure 7: Unconditional distributions of choices across the three games

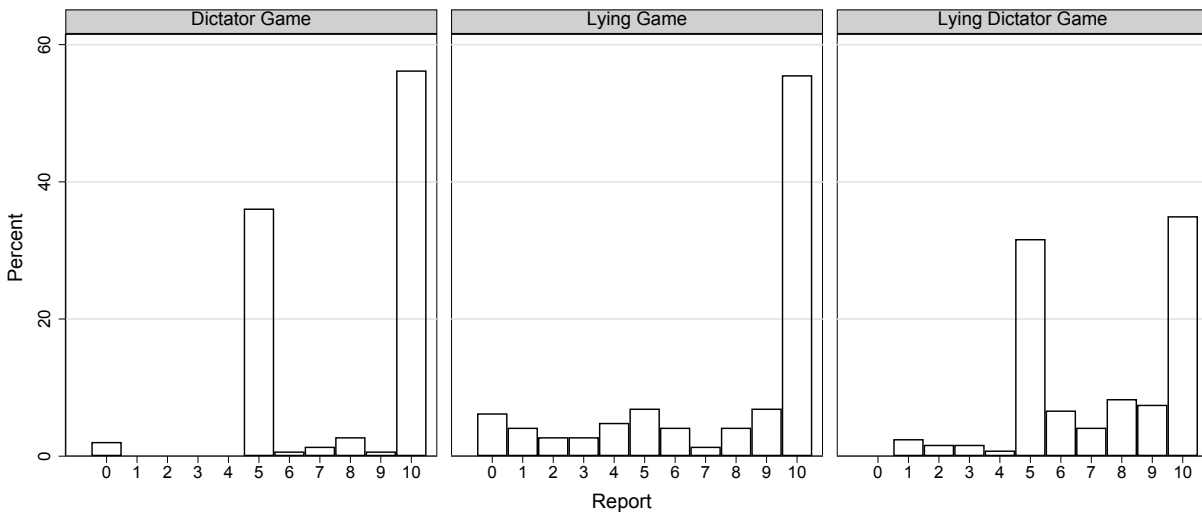
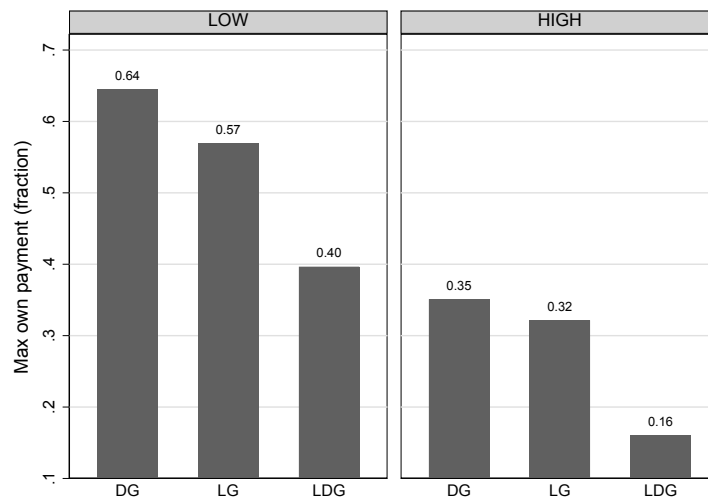


Figure 8: Propensity to maximize own payoff, conditional on draw



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