



UvA-DARE (Digital Academic Repository)

Honesty requires time (and lack of justifications)

Shalvi, S.; Eldar, O.; Bereby-Meyer, Y.

DOI

[10.1177/0956797612443835](https://doi.org/10.1177/0956797612443835)

Publication date

2012

Document Version

Submitted manuscript

Published in

Psychological Science

[Link to publication](#)

Citation for published version (APA):

Shalvi, S., Eldar, O., & Bereby-Meyer, Y. (2012). Honesty requires time (and lack of justifications). *Psychological Science*, 23(10), 1264-1270.
<https://doi.org/10.1177/0956797612443835>

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

Honesty requires time (and lack of justifications)

Forthcoming in Psychological Science

Shaul Shalvi*

University of Amsterdam

Ori Eldar and Yoella Bereby-Meyer

Ben Gurion University

* Address correspondence to: s.shalvi@uva.nl, Weesperplein 4, 1018 XA Amsterdam, The Netherlands. Acknowledgment: This research was supported by the Israel Science Foundation grant number 1337/11

Abstract

Recent research suggests refraining from cheating in tempting situations requires self-control, indicating serving self-interest is an automatic tendency. However, evidence also suggests people cheat to the extent that they can justify their unethical behavior to themselves. To merge these different lines of research, we adopt a dual-system approach that distinguishes between the intuitive and deliberative cognitive systems. We suggest that for people to restrict their dishonest behavior, they need to have enough time and no justifications for self-serving unethical behavior. We employed an anonymous die-under-cup task in which participants privately roll a die and report the outcome to determine their pay. We manipulated the time available for participants to report their outcome (short vs. ample). Results of two experiments support our prediction, revealing that the dark side of people's automatic self-serving tendency may be overcome when time to decide is ample and private justifications for dishonesty are not available.

Key words: Decision Making, Ethics, Morality, Temptation, Dishonesty, Dual System.

Honesty requires time (and lack of justifications)

Receiving more change than one deserves is not uncommon. Although the immediate reaction might be to take the extra cash, thinking about it for an extra second will probably lead you to change your mind. Does taking time to reconsider one's impulses indeed increase honesty? To some extent, the decision of whether to behave honestly is a result of a conscious analysis in which one contrasts the potential profit that may result from behaving dishonestly with the likelihood of getting caught, multiplied by the magnitude of subsequent punishment (Becker, 1968). However, honest decisions may also depend on less conscious desires such as serving self-interest versus behaving ethically. Indeed, people seem to balance their competing desires: profiting from cheating while maintaining a positive self-view as an honest individual (Mazar, Amir, & Ariely, 2008). Accordingly, people lie to the extent that they can justify their lies (Shalvi, Dana, Handgraaf, & De Dreu, 2011). But how do justifications influence cheating? Do people automatically tend toward honesty, and yet when they find (private) justification and have ample deliberation time, they feel liberated to cheat to serve their self-interest? Or do people automatically try to serve their self-interest and only when they have ample deliberation time and lack justifications do they refrain from cheating?

Here, we link the evidence on the automaticity of unethical behavior with the justifications needed for cheating. We adopt a dual-system approach that distinguishes between the intuitive and deliberative cognitive systems (Gilbert, Pelham, & Krull, 1988; Haidt, 2007; Kahneman, 2011), suggesting that people first act upon their initial automatic intuition and only later deliberately reason about their action. Such deliberation allows people to overcome their automatic behavioral tendencies. Focusing on tempting situations, in which cheating allows

serving one's self-interest, we suggest that cheating is the automatic tendency and the need for justification matters only when people have time to deliberate. That is, people will refrain from lying when deliberation time is ample and no justifications for lying are available.

Cheating and Self-control

Several independent lines of research suggest people's automatic tendency is to serve their self-interest, a tendency people can only overcome when they are able to exert self-control. Work on the relationship between ego-depletion and cheating, for example, revealed that when their cognitive resources are depleted (after exerting self-control in a non-related task), people are more likely to lie than when their resources are not depleted (Gino, Schweitzer, Mead & Ariely, 2011; Mead, Baumeister, Gino, Schweitzer, & Ariely, 2009). Similarly, sleep-deprived people were more likely to engage in unethical behavior in the lab but also in work-related settings (Barnes, Schaubroeck, Huth, & Ghumman, 2011). Further support for the automaticity of self-interest comes from neuropsychological work showing the dorsolateral prefrontal cortex (DLPFC), a brain area involved in executive control, is associated with overriding selfish impulses in economic decisions (Knoch, Pascual-Leone, Meyer, Treyer, & Fehr, 2006), and that this area together with two other brain areas associated with self-control (anterior cingulate cortex and the ventrolateral prefrontal cortex) are activated when individuals attempt to refrain from lying (Greene & Paxton, 2009). Being able to exert self-control seems to be a prerequisite for ethical behavior, suggesting people's automatic tendency is to (unethically) serve their self-interest.

Justified Ethicality

The idea that people need self-justifications for cheating is grounded in the notion that "people are likely to arrive to conclusions that they want to arrive at, but their ability to do so is

constrained by their ability to construct seemingly reasonable justifications for these conclusions” (Kunda, 1990, p. 480; see also Shafir, Simonson, & Tversky, 1993). Batson and colleagues (Batson, Kobrynowicz, Dinnerstein, Kampf, & Wilson, 1997) demonstrated that people seek to be able to justify their (unethical) behavior to others. In their study, they asked participants to decide whether they or another participant would have to perform an undesirable task. The authors provided participants with a coin they could toss to assist them in making this decision. Supporting their moral-hypocrisy prediction, people who reported using the coin to make the decision “won” significantly more often (~85%) than an honest toss would predict. Choosing to toss the coin allowed participants “to appear fair by flipping the coin, yet still serve self-interest by ignoring the coin” (Batson & Thompson, 2001, p. 55). Similarly, when dividing goods between themselves and another person while holding private information about the value of the goods, people are generally concerned with being able to appear fair (Boles, Corson, & Murnighan, 2000; Pillutla & Murnighan, 1995;2003; Steinel & De Dreu, 2004; Van Dijk, De Cremer, & Handgraaf, 2004) and meeting the other’s expectations (Dana, Cain, & Dawes, 2006), rather than genuinely acting in a fair and honest way.

Recent work, however, suggests people seek to appear fair and honest not only in the eyes of others, but also in their own eyes (Toure-Tillery & Fishbach, 2011; Dhar & Wertenbroch, 2011). Shalvi et al. (2011a) asked participants to roll a die under a paper cup with a small hole at the top allowing only them to see the outcome, and earn money according to what they reported rolling (1=\$1, 2=\$2, etc.). As participants’ rolls were truly private, the authors assessed lying by comparing the reported distribution to the distribution predicted by chance (Fischbacher & Heusi, 2008). Participants were asked to roll three times but to report only the outcome of the first roll. Although all three rolls were private, the distribution of reported outcomes resembled

the distribution of choosing the highest of the three observed rolls. Modifying the task to allow participants to roll only once reduced lying. Participants clearly found value in being able to justify their lies to themselves. The authors concluded that observing desired counterfactuals, in the form of desired (higher) values appearing on the second or third (non-relevant for pay) rolls, modified participants' ethical perceptions of what they considered to be lying. Observing desired counterfactual information enabled participants to enjoy both worlds: lie for money, but feel honest.

The finding that observing desired counterfactual information modifies ethical perceptions and subsequent behavior relies on the assumption that ethical evaluations are not a dichotomy between honesty and dishonesty, but rather a continuum stretching between the two ends (Hsee, 1995; Jones, 1991; Schweitzer & Hsee, 2002). As Markman and colleagues (Markman, Gavanski, Sherman, & McMullen, 1993; Markman, McMullen, & Elizaga, 2008) point out, when people are confronted with desirable (upward) counterfactuals, they engage in reflective "as if" thinking: they reflect on the counterfactual "as if" it were real, thereby reducing the contrast between this piece of counterfactual information and reality (Epstude & Roese, 2008). In the context of ethical perceptions and behavior, people appear to feel shuffling the facts in a self-serving way (reporting the outcome of the second, non-relevant for pay, die roll) is more legitimate than inventing facts (reporting a number they never saw). Further supporting this idea, Gino and Ariely (2012) replicated the multiple-rolls versus single-roll effect: multiple rolls led to more lying than a single-roll setting. Interestingly, the effect was attenuated for creative people (as well as people primed to think creatively). Creative people seem to be able to come up with their own counterfactual (self-benefiting) scenarios, regardless of whether they have observed counterfactual information to support their creative lies.

The Current Study

Given the evidence on the automaticity of unethical tendency and the justifications needed for lying, we hypothesize that (1) time pressure will increase lying and (2) private justifications impact ethical behavior only when people have time to deliberate. Provided with time to deliberate people will lie when they can justify the lie. Put differently, when time to deliberate is available, people will refrain from lying if they cannot justify such behavior.

Experiment 1

Participants rolled a die and earned money according to what they reported rolling. We placed the die under a paper cup with a small hole at the top and asked participants to shake the cup, roll the die, and look through the hole to see the result. We instructed participants to roll the die three times and report the outcome of the first roll to determine their pay. This procedure assured participants that we could not observe their first roll, even after they left the experiment (Shalvi et al., 2011a).

This multiple-rolls die-under-cup task is an effective setting in which people make use of the anonymity of their rolls to lie and benefit financially. Thus it was an ideal starting point for testing our hypothesis, as it allowed room to identify more, but also less, lying in the high compared to the low time-pressure condition.

Participants and procedure

We seated 76 first-year students (36 females) in individual cubicles, randomly assigned them to one of two time pressure conditions (low vs. high), and asked them to perform the die-under-cup task. Participants received a six-faced die under a cup, were instructed to shake the cup once, check the outcome that determined their pay, and then roll at least two more times. We then asked them to write the first roll's outcome, which determined their pay in NIS (New Israeli

Shekels; 1NIS ~ US\$.25), according to the number they reported multiplied by 10 (i.e., 1=10NIS, 2=20NIS, etc.). Participants further learned we would randomly choose a number of participants to receive pay according to their reports. Critically, they either had to report the outcome quickly (within 20 seconds) or had ample time (no time limit) to do so. Specifically, after reading the instructions of the task on the computer screen, participants were guided to press a 'go' button which started the timer measuring the time it took participants to roll the die three times and type their reported die roll outcome. Participants in the high (but not low) time pressure condition had 20 seconds to type the number, after which reporting was no longer possible. Four participants did not manage to report within the time limit and were thus excluded from all analyses. After completing the task, participants reported how they felt on nine negative items (e.g., sad; $\alpha=.84$) and seven positive items (e.g., happy; $\alpha=.83$; Maslach & Jackson, 1981) with the means serving as negative and positive mood indices.

Results

Time. As we expected, participants in the high time-pressure condition took less time to report the outcome of the die role ($M=10.8$, $SD=4.4$) than those in the low time-pressure condition ($M=23.1$, $SD=11.2$), $t(70)=-6.01$, $p<0.001$, indicating the time-pressure manipulation was successful.

Lying. If people's automatic tendency is to (unethically) serve self-interest, we expect to find more lying in the high than the low time-pressure condition. As participants' rolls were completely anonymous, we detected lying by comparing the observed distribution to the expected distribution of a fair roll (Fischbacher & Heusi, 2008; Shalvi et al., 2011a; 2011b; and similarly Batson et al., 1997; Hao & Hauser, 2010; Lammers, Stapel, & Galinsky, 2010; Piff, et al. 2012). Participants in both low and high time-pressure conditions lied to increase their profits.

The distribution of reported outcomes differed from the uniform distribution expected from a fair die roll in both the low ($\chi^2(5)=13.47, p=.02$) and the high ($\chi^2(5)=17.88, p<.01$) time-pressure conditions, see Figure 1. Importantly, supporting our hypothesis, on aggregate participants lied significantly more in the high ($M=4.56, SD=1.48$) than in the low ($M=3.87, SD=1.61$) time-pressure condition, Mann-Whitney $Z=2.03, p<.05$.

To rule out the possibility that participants in the high time-pressure condition were not able to observe or remember the outcome of their first roll, an additional sample of 13 students received three dice under three cups. We instructed participants to roll each die once, observe the outcome, and move on to the next cup. Participants had to roll all three dice within 20 seconds and then report the outcome of the first roll without looking back into the first cup. Participants received 10NIS if they correctly remembered what they rolled. Critically, whereas in the experiment, only the participants saw the outcome of the first roll, in this setting, the first roll's outcome was revealed (by lifting the cup after participants reported the outcome) to determine whether participants correctly remembered what they had rolled. Twelve of the 13 (92%) participants correctly remembered the number they rolled first, which is a much higher proportion than predicted by reporting a number at random (16.7%; $p<.001$), thereby ensuring vision or memory factors were not factors in our design.

Mood. We observed no differences regarding participants' moods after the task: their (positive and negative) moods did not vary between the time-pressure conditions (both t 's $<.90$). Additionally, in both time-pressure conditions, we observed no correlations between participants' reported die rolls (i.e., earnings) and their post-task moods, r 's $<.19, p$'s $>.25$.

Experiment 2

Focusing on a setting that provides private justifications for lying (observing multiple die rolls), the results of Experiment 1 demonstrate participants lied in both time-pressure conditions. However, supporting our hypothesis, participants who had to respond quickly lied more. In Experiment 2, we aimed to gain further support for the dual model we suggested by focusing on a setting that provides no justifications for lying (observing only one die roll). We expected that in such a setting, under time pressure, and given the automaticity of the lying tendency, people would lie. However, given ample time, participants would refrain from lying as they would not be able to self-justify their lies.

In this experiment, we asked participants to roll the die only once. Such a single-roll setting reduced lying, because of participants' reduced ability to justify their lies (Shalvi et al., 2011a). Rolling only once prevented participants from observing desired counterfactual information in the form of higher outcomes in the second or third rolls, information that although irrelevant to the task, was found to justify lying using these specific outcomes.

Method

As in Experiment 1, participants rolled a die under a cup and earned money according to what they reported rolling. In the current experiment, participants first saw a box containing all dice used in their experimental session and were allowed to test them. After testing the dice, participants received instructions and a die-under-cup. We asked participants to roll and check the outcome, but did not instruct them to roll again. To assure participants their outcomes were private, the experimenter passed around a box into which participants swept their cup and die. The experimenter demonstrated the procedure before participants began the actual task. Thus the only difference between the multiple- and single-roll settings was the number of rolls people observed before reporting the outcome of the first roll (see Shalvi et al. (2011a) for a detailed

comparison between the multiple- and single-roll settings). We manipulated time pressure by instructing participants in the high (but not the low) time-pressure condition to report the outcome of their roll within eight seconds. Because we asked participants to roll the die only once, we gave them eight seconds instead of 20 as in Experiment 1.

Participants and procedure

We randomly assigned 74 first-year students (51 females) to a time-pressure condition (low vs. high). We introduced participants to the same task as in Experiment 1; however, this time, after receiving an opportunity to test all the dice used in the study, participants received a die under a cup and were instructed to roll only once before reporting the outcome of the roll to receive payment. Participants in the high (but not low) time-pressure condition had to report the outcome of the die roll within eight seconds. Two participants did not manage to report within the time limit and were thus excluded from all analyses. After reporting the outcome, participants reported how they felt on the same items used in Experiment 1 (negative, $\alpha=.79$; positive, $\alpha=.83$).

Results

Time. As in Experiment 1, participants in the high time-pressure condition took less time to report the outcome of the role ($M=4.56$, $SD=1.7$) than those in the low time-pressure condition ($M=10.29$, $SD =6.7$), $t(70)=-5.13$, $p<0.001$ indicating the manipulation was successful.

Lying. Replicating past results (Shalvi et al., 2011a; Gino & Ariely, 2012, Exp. 3), we observed no evidence of lying in the low time-pressure condition. As Figure 2 shows, the distribution of reported outcomes did not differ from the uniform distribution expected from a fair roll ($\chi^2(5)=1.73$, $p=.89$). In the high time-pressure condition, however, participants lied and the distribution of reported outcomes differed from the uniform distribution expected from a fair roll ($\chi^2(5)=17.77$, $p<.01$). Importantly, as predicted, on aggregate people lied significantly more

in the high ($M=4.38$, $SD=1.50$) than the low ($M=3.42$, $SD=1.84$) time-pressure condition, Mann-Whitney $Z=2.17$, $p<.05$.

To rule out the possibility that participants in the high time-pressure condition were not able to observe or remember the outcome of their first roll, we asked an additional sample of 13 students to roll a die once, observe the outcome, and report it within eight seconds. Participants received 10NIS if they correctly remembered the value they had rolled. Critically, whereas in the experiment only participants saw the outcome of the roll, in this setting, the outcome was revealed (by lifting the cup after participants reported the outcome) to determine whether participants correctly remembered what they had rolled. All 13 participants correctly remembered the number they had rolled, assuring again that vision or memory factors were not factors in our design.

Mood. As in Experiment 1, we observed no differences in participants' moods after the task: Participants' (positive and negative) moods did not vary between the time-pressure conditions (both t 's <1.5). As in Experiment 1, we observed no correlations between participants' reported die rolls (i.e., earnings) and their post-task (positive or negative) moods (r 's $<.15$, p 's $>.39$) in the low time-pressure condition. Interestingly, however, in the high time-pressure condition, participants' reported die rolls were positively correlated with their post-task negative ($r(34)=.48$, $p<.01$) but not positive ($r(34)=-.06$, *ns.*) moods.

General Discussion

A growing body of research (e.g., Bazerman & Tenbrunsel, 2011; Mazar et al., 2008; Atanasov & Dana, 2011; DePaulo, et al. 1996, Lundquist, Ellingson, & Johannesson, 2009; Schweitzer, Ordóñez, & Douma, 2004) repeatedly reveals that in anonymous settings, when lying pays, people lie. Here we provided novel evidence, based on a time-pressure manipulation,

suggesting that in anonymous setting, peoples' automatic tendency is to serve their self-interests - even if doing so requires acting dishonestly. In two experiments, we found that when given the opportunity to privately roll a die under a cup and report the outcome of the roll to receive payment, when people report quickly, they lie more. In Experiment 1, we found time pressure amplifies lying in a setting in which people typically lie (due to their ability to justify their lies by the desired information they observe). Experiment 2 demonstrated further that time pressure evokes lying even in settings in which people typically refrain from lying (when self-justifications are lacking). Importantly, when participants had enough time, they lied when justifications existed but refrained from lying when no justifications existed.

A dual-processing model accounts for this novel evidence (Haidt, 2007; Kahneman, 2011) and suggests that in tempting situations, people's automatic tendency is to serve their self-interest even when such behavior requires lying. Only with time to deliberate people can correct this tendency, restrain it, and lie in moderation or avoid lying altogether. Our results relate to Haidt's (2001) social intuitionist model which suggests that moral judgment (e.g., it's wrong for siblings to have sex) is driven first by an intuitive emotional reaction (e.g., disgust), followed by a post-hoc search for reasons justifying the initial intuition (e.g., dangers of in-breeding). As proposed by Haidt: "one feels a quick flash of revulsion at the thought of incest and one knows intuitively that something is wrong. Then, when faced with a social demand for a verbal justification, one becomes a lawyer trying to build a case rather than a judge searching for the truth." (p. 814). In line with that, in situations evoking moral conflict, time pressure increases emotional (deontological) judgment (Suter & Hertwig, 2011). Along these lines of differentiating between intuitive and deliberative modes of thought, and focusing on own moral behavior rather than judgment of others behaviors, the current results reveal that in tempting situations when

people have to act quickly, they yield to temptation (act upon their greed) and serve their self-interest by cheating. When having time to deliberate, people restrain the amount of their lying to the extent that they may justify it, or avoid lying altogether when justifications are not available. Exploring whether people who tend to be driven by self-interest (based on their social value orientation; Van Lange, 1999) are more likely to exhibit the observed effect, seems like a promising avenue for future research.

The finding that cognitive resources are required for overcoming automatic tendencies is not restricted to ethical behavior. Gilbert, Pelham, and Krull (1988) have shown social inference consists of two stages: an initial characterization stage and a correction stage. The authors contend general characterization requires fewer cognitive resources, whereas correction demands more resources. Similarly, Roskes et al. (2011) studied people's tendency to bisect lines in their actual center when under approach-rather than avoidance-motivated mindsets. The idea is that approach motivation leads to left-hemispheric activation, which in turn leads to right-oriented behavioral biases. Interestingly, this bias appears when people act under time pressure but is attenuated when deliberation is possible. With time, people are better able to calibrate their behavior and overcome their automatic tendencies.

Employing the die-under-cup task (Shalvi et al. 2011a; 2011b; Lewis, et al., in press; based on Fischbacher & Heusi, 2008) allowed us to study participants' ethical behavior while excluding factors such as fear of detection or social evaluation of one's behavior. Participants engaging in this low-tech paradigm understood their behavior could not be detected and that their rolls were truly private. High anonymity was critical to our design, as compromising anonymity may lead people to report honestly under time pressure due to fearing detection (Verschuere & De Houwer, 2011, see also Ekman, 2001). Assessing the moderating role of anonymity on

people's automatic dishonest tendencies seems promising path to explore. Every method has its downsides, and this method is no different. Clearly, analyzing data only at the aggregated level does not allow us to assess how individual differences impact one's likelihood of lying. We believe that when studying situational factors such as time pressure and its interplay with (the lack of) private justifications for lying, aggregate data provide a useful tool (e.g., Batson et al., 1997; Greene & Paxton, 2009). Furthermore, varying the amount of (non-relevant for pay) times people are instructed to roll the die allows to study questions of self-signaling (Toure-Tillery & Fishbach, 2011; Dhar & Wertenbroch, 2011; Chance et al. 2011) in truly anonymous settings.

Interestingly, in Experiment 2, we observed that for people reporting the result of a single roll under time pressure, the higher their reported outcome (and consequently payment), the higher their negative post-task mood. We did not observe this pattern in Experiment 1 in which the situation provided room for self-justifications. Together, these results suggest that when people cannot justify their (automatic, self-interest satisfying) unethical behavior, lying makes them feel bad. Although this finding is in line with work linking negative emotions and (unethical) decisions (Mellers, Schwartz, & Ritov, 1999; Ritov, 1996; Ritov & Baron, 1992; 1995; Zeelenberg, 1999; Zeelenberg et al., 1996; 1998), more research is needed to validate the link between the lack of self-justifications, automatic lying tendencies, and subsequent negative feelings.

Conclusion

Serving self-interest is critical to one's survival. Serving self-interest by adhering to unethical behavior, however, may have negative social costs. Being able to justify one's lies (even to oneself) may alleviate such costs. Here we found that faced with temptations, peoples' automatic tendency is to lie. Under time pressure, regardless of whether they could find private

justifications for their lies, people lied more than when deliberation was possible. Although our results reveal a dark side of human automatic tendencies, they also suggest a bright prospect. Even under conditions of complete anonymity, when dishonesty could not be detected, being able to deliberate led people to restrict how much they lied or avoid lying altogether. People can behave in an ethical way – they just need time (and lack justifications).

References

- Atanasov, P., & Dana, J. (2011). Leveling the playing field: Dishonesty in the face of threat. *Journal of Economic Psychology, 32*, 809-817.
- Barnes, C. M., Schaubroeck, J., Huth, M., & Ghumman, S. (2011). Lack of sleep and unethical conduct. *Organizational Behavior and Human Decision Processes, 115*, 169-180.
- Batson, C. D., Kobrynowicz, D., Dinnerstein, J. L., Kampf, H. C., & Wilson, A. D. (1997). In a very different voice: Unmasking moral hypocrisy. *Journal of Personality and Social Psychology, 72*, 1335–1348.
- Batson, C. D., & Thompson, E. R. (2001). Why don't moral people act morally? Motivational considerations. *Current Directions in Psychological Science, 10*, 54-57.
- Bazerman, M. H., & Tenbrunsel, A. E. (2011). *Blind Spots: Why We Fail to Do What's Right and What to Do about It*. Princeton University Press.
- Becker, G. S. (1968). Crime and Punishment: An Economic Approach. *Journal of Political Economy, 76*, 169.
- Boles, T. L., Corson, R. T. A., & Murnighan, J.K (2000). Deception and retribution in repeated ultimatum bargaining. *Organizational Behavior and Human Decision Processes, 83*, 235-259.
- Chance, Z., Norton, M. I., Gino, F. & Ariely, D. (2011). Temporal View of the Costs and Benefits of Self-Deception. *Proceedings of the National Academy of Sciences 108*, 15655-15659.
- Dana, J., Cain, D. M., & Dawes, R. M. (2006). What you don't know won't hurt me: Costly (but quiet) exit in dictator games. *Organizational Behavior and Human Decision Processes, 100*, 193-201.

- DePaulo, B. M., Kashy, D. A., Kirkendol, S. E., Wyer, M. M., & Epstein, J. A. (1996). Lying in everyday life. *Journal of Personality and Social Psychology, 70*, 979-995.
- Dhar, R., & Wertenbroch, K. (2011). Self-signaling and the costs and benefits of temptation in consumer choice, *Journal of Marketing Research*.
- Ekman, P. (2001). *Telling lies: Clues to deceit in the marketplace, politics, and marriage* (3rd ed.). New York: Norton.
- Epstude, K., & Roese, N. J. (2008). The functional theory of counterfactual thinking, *Personality and Social Psychology Review, 12*, 168-192.
- Fischbacher, U., & Heusi, F. (2008). Lies in disguise, an experimental study on cheating. TWI Working Paper 40, Thurgau Institute of Economics, University of Konstanz.
- Gilbert, D. T., Pelham, B. W., & Krull, D. S. (1988). On cognitive busyness: When person perceivers meet persons perceived. *Journal of Personality and Social Psychology, 54*, 733-740.
- Gino, F., & Ariely, D. (in press). The dark side of creativity: Original thinkers can be more dishonest, *Journal of Personality and Social Psychology*.
- Gino, F., Schweitzer, M. E., Mead, N. L., & Ariely, D. (2011). Unable to resist temptation: How self-control depletion promotes unethical behavior, *Organizational Behavior and Human Decision Processes, 115*, 191-203.
- Greene, J. D., & Paxton, J. M. (2009). Patterns of neural activity associated with honest and dishonest moral decisions. *Proceedings of the National Academy of Sciences USA, 106*, 12506-12511.
- Haidt, J. (2001). The Emotional Dog and Its Rational Tail: A Social Intuitionist Approach to Moral Judgment, *Psychological Review, 108*, 814-834.

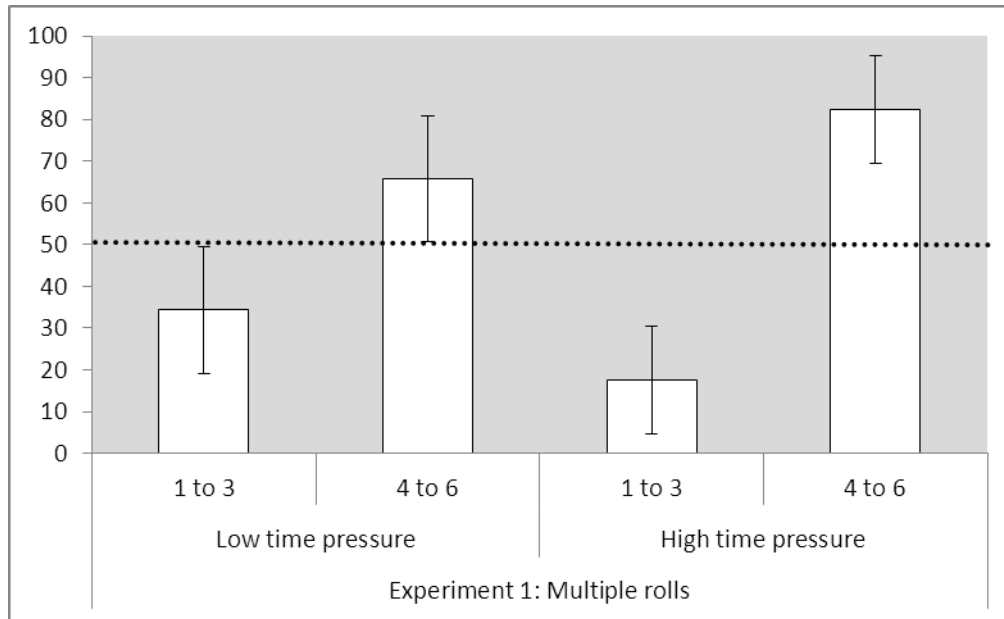
- Haidt, J. (2007). The new synthesis in moral psychology, *Science*, *316*, 998-1002.
- Hao, L. & Hauser, D. (2010). Honest Lies, *GMU Working Paper in Economics*, No. 11-16.
- Hsee, C. K. (1995). Elastic justification: How tempting but task irrelevant factors influence decisions. *Organizational Behavior and Human Decision Processes*, *62*, 330-337.
- Jones, T. M. 1991. Ethical decision-making by individuals in organizations: An issue-contingent model. *Academy of Management Review*, *16*, 366–395
- Kahneman, D. (2011). *Thinking: Fast and Slow*, Farrar Straus and Giroux
- Knoch, D., Pascual-Leone, A., Meyer, K., Treyer, V., & Fehr, E. (2006). Diminishing reciprocal fairness by disrupting the right prefrontal cortex. *Science*, *314*, 829–832.
- Kunda, Z. (1990). The case for motivated reasoning. *Psychological Bulletin*, *108*, 480-498.
- Lammers, J., Stapel, D. A., & Galinsky, A. D. (2010). Power Increases Hypocrisy Moralizing in Reasoning, Immorality in Behavior, *Psychological Science*, *21*, 737-744.
- Lewis, A., Bardis, A., Flint, C. Mason, C., Smith, N., Tickle, C., & Zinser, J. (in press). Drawing the line somewhere: An experimental study of moral compromise, *Journal of Economic Psychology*.
- Lundquist, T., Ellingson, T., & Johannesson, M. (2009). The Aversion to Lying. *Journal of Economic Behavior and Organization*, *70*, 81-92.
- Markman, K. D., Gavanski, I., Sherman, S. J., & McMullen, M. N. (1993). The mental simulation of better and worse possible worlds. *Journal of Experimental Social Psychology*, *29*, 87-109.
- Markman, K. D., McMullen, M. N., & Elizaga, R. A. (2008). Counterfactual thinking, persistence, and performance: A test of the reflection and evaluation model. *Journal of Experimental Social Psychology*, *44*, 421-428.

- Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Occupational Behavior*, 2, 99–113.
- Mazar, N., Amir, O., & Ariely, D. (2008). The dishonesty of honest people: A theory of self-concept maintenance. *Journal of Marketing Research*, 45, 633-644.
- Mead, N., Baumeister, R. F., Gino, F., Schweitzer, M., & Ariely, D. (2009). Too tired to tell the truth: Self-control resource depletion and dishonesty. *Journal of Experimental Social Psychology*, 45, 594-597.
- Mellers, B., Schwartz, A., Ritov, I. (1999). Emotion-based choice. *Journal of Experimental Psychology: General*, 128, 332–345.
- Piff, P.K. Stancato, D.M., Côté, S., Mendoza-Denton, R., & Keltner, D. (2012). Higher social class predicts increased unethical behavior, *Proceedings of the National Academy of Sciences of the USA*, doi: 10.1073/pnas.1118373109
- Pillutla, M. M., & Murnighan, J. K. (1995). Being Fair or Appearing Fair: Strategic Behavior in Ultimatum Bargaining. *The Academy of Management Journal*, 38, 1408-1426.
- Pillutla, M. M. and Murnighan, J. K. (2003). Fairness in bargaining. *Social Justice Research*, 16, 241-262.
- Ritov, I. (1996). Probability of regret: Anticipation of uncertainty resolution in choice. *Organizational Behavior and Human Decision Processes*, 66, 228-236.
- Ritov, I. & Baron, J. (1992) Status-quo and omission biases. *Journal of Risk and Uncertainty*, 5, 49-61.
- Ritov, I. & Baron, J. (1995). Outcome knowledge, regret, and omission bias. *Organizational Behavior and Human Decision Processes*, 64, 119-127.

- Roskes, M., Sligte, D., Shalvi, S., & De Dreu, C. K. W. (2011). The right side? Under time pressure approach motivation leads to right-oriented bias. *Psychological Science, 22*, 1403-1407.
- Schweitzer, M. E., & Hsee, C. K. (2002). Stretching the truth: Elastic justification and motivated communication of uncertain information. *The Journal of Risk and Uncertainty, 25*, 185-201.
- Schweitzer, M. E., Ordonez, L., & Douma, B. (2004). Goal setting as a motivator of unethical behavior. *Academy of Management Journal, 47*, 422-432.
- Shafir, E., Simonson, I., & Tversky, A. (1993). Reason-based choice. *Cognition, 49*, 11-36.
- Shalvi, S., Dana, J., Handgraaf, M. J. J., & De Dreu, C. K. W. (2011a). Justified ethicality: Observing desired counterfactuals modifies ethical perceptions and behavior. *Organizational Behavior and Human Decision Processes, 115*, 181-190.
- Shalvi, S., Handgraaf, M. J. J., & De Dreu, C. K. W. (2011b). Ethical Maneuvering: Why People Avoid both Major and Minor Lies. *British Journal of Management, 22*, s16-s27.
- Steinel, W., & De Dreu, C. K. W. (2004). Social motives and strategic misrepresentation in social decision making. *Journal of Personality and Social Psychology, 86*, 419-434.
- Suter, R.S. & Hertwig, R. (2011). Time and moral judgment. *Cognition, 119*, 454-458.
- Toure-Tillery, M., & Fishbach, A. (2011). The end justifies the means, but only in the middle. *Journal of Experimental Psychology: General*. doi: 10.1037/a0025928.
- Van Dijk, E., De Cremer, D. & Handgraaf, M. J. J. (2004). Social value orientations and the strategic use of fairness in ultimatum bargaining. *Journal of Experimental Social Psychology, 40*, 697-707.

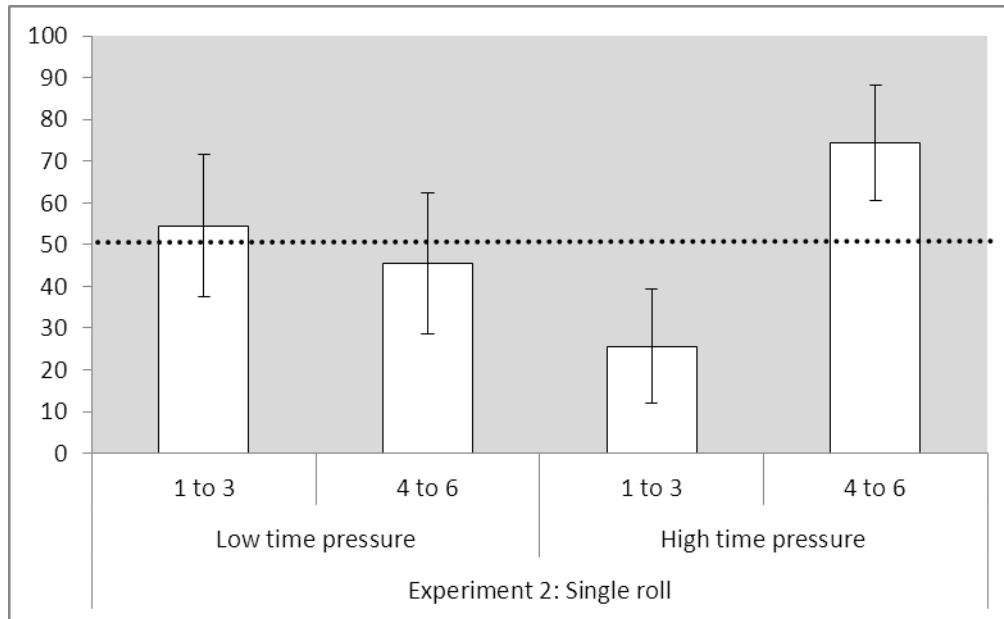
- Van Lange, P. A. M. (1999). The pursuit of joint outcomes and equality in outcomes: An integrative model of social value orientation. *Journal of Personality and Social Psychology, 77*, 337-349.
- Verschuere, B. & De Houwer, J. (2011). Detecting concealed information in less than a second: Response-latency based measures, in B. Verschuere, G. Ben-Shakhar, E. Meijer (Eds.), *Memory detection*, Cambridge University Press, London.
- Zeelenberg, M. (1999). Anticipated regret, expected feedback and behavioral decision making. *Journal of Behavioral Decision Making, 12*, 93–106.
- Zeelenberg, M., Beattie, J., van der Pligt, J., & de Vries, N. K. (1996). Consequences of regret aversion: Effects of expected feedback on risky decision making. *Organizational Behavior and Human Decision Processes, 65*, 148–158.
- Zeelenberg, M., van Dijk, W. W., van der Pligt, J., Manstead, A. S. R., van Empelen, P., & Reinderman, D. (1998). Emotional reactions to the outcomes of decisions: The role of counterfactual thought in the experience of regret. *Organizational Behavior and Human Decision Processes, 75*, 117–141.

Figure 1. Proportion of participants reporting low (1 to 3) versus high (4 to 6) outcomes as a function of condition (Experiment 1)



Note to Figure 1: The dashed line represents the honest distribution predicted by chance (50% for rolling a number ≤ 3 and 50% for rolling a number ≥ 4). The error bars represent the 95% confidence interval around the proportion.

Figure 2. Proportion of participants reporting low (1 to 3) versus high (4 to 6) outcomes as a function of condition (Experiment 2)



Note to Figure 2: The dashed line represents the honest distribution predicted by chance (50% for rolling a number ≤ 3 and 50% for rolling a number ≥ 4). The error bars represent the 95% confidence interval around the proportion.