

Honesty Requires Time (and Lack of Justifications)

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Abstract

Recent research suggests that refraining from cheating in tempting situations requires self-control, which indicates that serving self-interest is an automatic tendency. However, evidence also suggests that people cheat to the extent that they can justify their unethical behavior to themselves. To merge these different lines of research, we adopted a dual-system approach that distinguished 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 rolled a die and reported the outcome to determine their pay. We manipulated the time available for participants to report their outcome (short vs. ample). The 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.

Keywords

cognitive processes, decision making, ethics, morality, temptation, dishonesty, dual system

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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 (Schweitzer & Hsee, 2002; Shalvi, Dana, Handgraaf, & De Dreu, 2011). But how do justifications influence cheating? Do people automatically tend toward honesty and yet feel liberated to cheat to serve their self-interest when they find private justification and have ample deliberation time? Or do people automatically try to serve their self-interest and refrain from cheating only when they have ample deliberation time and lack justifications?

In the study reported here, we linked the evidence on the automaticity of unethical behavior with the justifications needed

for cheating. We adopted a dual-system approach that distinguishes between the intuitive and deliberative cognitive systems (Haidt, 2007; Kahneman, 2011), to study ethical behavior (Bazerman & Tenbrunsel, 2011); this approach suggests that people first act on 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 an automatic tendency and that 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 that people's automatic tendency is to serve their self-interest, a tendency that people can overcome only when they are able to exert self-control. Work on the relationship between ego depletion

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and cheating, for example, has revealed that when 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 laboratory but also in work-related settings (Barnes, Schaubroeck, Huth, & Ghumman, 2011). Further support for the automaticity of self-interest comes from neuropsychological work showing that the right dorso-lateral prefrontal cortex, 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 (the anterior cingulate cortex and the ventrolateral prefrontal cortex), is 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, which suggests that 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 more likely to arrive at 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, Kobryniewicz, Dinnerstein, Kampf, and 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, Croson, & Murnighan, 2000; Pillutla & Murnighan, 1995; Steinel & De Dreu, 2004) and meeting the other person's expectations (Dana, Cain, & Dawes, 2006), rather than genuinely acting in a fair and honest way.

Recent work, however, suggests that people seek to appear fair and honest not only in the eyes of others but also in their own eyes (Dhar & Wertenbroch, 2012; Toure-Tillery & Fishbach, 2012). In a previous study (Shalvi, Dana, et al., 2011), participants were asked to roll a die under a paper cup with a small hole at the top (allowing only them to see the outcome) and to 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 with the distribution predicted by chance (Fischbacher & Heusi, 2008). Participants were asked to roll three times but to report the outcome of only 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 rolls (which were nonrelevant for pay)—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 (Jones, 1991; Schweitzer & Hsee, 2002). As Markman and colleagues (Markman, Gavanski, Sherman, & McMullen, 1993) pointed 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 (see also Epstude & Roese, 2008). In the context of ethical perceptions and behavior, people appear to feel that shuffling the facts in a self-serving way (reporting the outcome of the second, nonrelevant-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 did a single-roll setting. Furthermore, 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 tendencies and the justifications needed for lying, we hypothesized that (a) time pressure would increase lying and (b) private justifications would affect 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

In 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, Dana, et al., 2011).

This multiple-rolls die-under-cup task provides an effective setting in which people can 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 separate conditions under which there was high and low time pressure.

Participants and procedure

We seated 76 first-year students (36 females, 40 males) in individual cubicles, randomly assigned them to two time-pressure conditions (low or high), and asked them to perform the die-under-cup task. Participants received a six-sided die under a cup and 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 new Israeli shekels (NIS; 1 NIS = ~\$0.25), according to the number they reported multiplied by 10 (1 = 10 NIS, 2 = 20 NIS, etc.). Participants further learned that 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 s in the high-time-pressure condition) or had ample time to do so (no time limit in the low-time-pressure condition). 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 how long it took participants to roll the die three times and type their reported outcome. For participants in the high-time-pressure condition, reporting was no longer possible after the 20-s limit expired. 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"; $\alpha = .83$; in Hebrew, based on Mayer & Gaschke, 1988), 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 ($M = 10.8$ s, $SD = 4.4$ s) than those in the low-time-pressure condition ($M = 23.2$ s, $SD = 11.2$ s), $t(70) = -6.01$, $p < .001$, which indicates that the time-pressure manipulation was successful.

Lying. If people's automatic tendency is to (unethically) serve self-interest, then we would expect to find more lying in the

high-time-pressure condition than in the low-time-pressure condition. As participants' rolls were completely anonymous, we detected lying by comparing the observed distribution with the expected distribution of a fair roll (Fischbacher & Heusi, 2008; Shalvi, Dana, et al., 2011; Shalvi, Handgraaf, & De Dreu, 2011; similarly, Batson et al., 1997). Participants in both 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-time-pressure condition, $\chi^2(5, N = 38) = 13.47$, $p = .02$, and the high-time-pressure condition, $\chi^2(5, N = 34) = 17.88$, $p < .01$ (see Fig. 1). Supporting our hypothesis, participants in aggregate lied significantly more, by reporting higher die-roll outcomes, in the high-time-pressure condition ($M = 4.56$, $SD = 1.48$) than in the low-time-pressure condition ($M = 3.87$, $SD = 1.61$), 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, we conducted a follow-up study in which 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 s and then report the outcome of the first roll without looking back into the first cup. Participants received 10 NIS 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. Of the 13 participants, 12 (92%) correctly remembered the number they rolled first, which is a much higher percentage than that predicted by reporting a number at random (16.7%; $p < .001$). This procedure indicated that vision and memory were not factors in our design.

Mood. We observed no differences regarding participants' moods after the task: Their positive and negative moods did

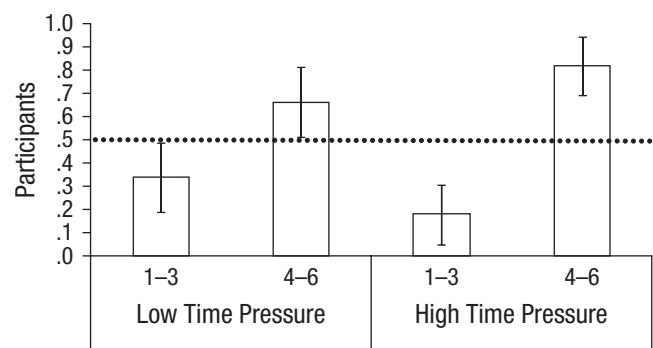


Fig. 1. Results of Experiment 1: proportion of participants who reported die rolls of 1 to 3 versus 4 to 6 as a function of time pressure. The dashed line represents the distribution predicted by chance (50% for rolling a number ≤ 3 and 50% for rolling a number ≥ 4). Error bars represent 95% confidence intervals.

not vary between the time-pressure conditions (both t s < .90). Additionally, in both conditions, we observed no correlations between participants' reported die rolls (i.e., earnings) and their posttask moods, r s < .19, p s > .25.

Experiment 2

Focusing on a setting that provides private justifications for lying (observing multiple die rolls), we found in Experiment 1 that participants lied in both time-pressure conditions. However, supporting our hypothesis, participants who had to respond quickly lied more than participants who were not under any pressure to respond. In Experiment 2, we aimed to gain further support for the dual model that 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, Dana, et al., 2011). 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.

Participants and procedure

As in Experiment 1, participants rolled a die under a cup and earned money according to what they reported rolling. In Experiment 2, 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 a cup. We asked participants to roll and check the outcome, but we did not instruct them to roll again. To assure participants that 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 that people observed before reporting the outcome of the first roll (see Shalvi, Dana, et al., 2011, for a detailed comparison between the multiple- and single-roll settings). We manipulated time pressure by instructing participants in the high-time-pressure condition to report the outcome of their roll within 8 s. Because we asked participants to roll the die only once, we gave them 8 s instead of 20 s, as in Experiment 1. Participants in the low-time-pressure condition were also instructed to report the outcome of their roll but were not given a time limit in which to do so.

We randomly assigned 74 first-year students (51 females, 23 males) to two time-pressure conditions (low or 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-time-pressure condition had to report the outcome of the die roll within 8 s. 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 items: $\alpha = .79$; positive items: $\alpha = .83$).

Results

Time. As in Experiment 1, participants in the high-time-pressure condition took less time to report the outcome of the roll ($M = 4.56$ s, $SD = 1.7$ s) than those in the low-time-pressure condition ($M = 10.29$ s, $SD = 6.7$ s), $t(70) = -5.13$, $p < .001$, which indicates that the manipulation was successful.

Lying. Replicating past results (Gino & Ariely, 2012, Experiment 3; Shalvi, Dana, et al., 2011, Experiment 1), our findings showed no evidence that participants in the low-time-pressure condition were lying. As Figure 1 shows, the distribution of reported outcomes did not differ from the uniform distribution expected from a fair roll, $\chi^2(5, N = 33) = 1.73$, $p = .89$. 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, $\chi^2(5, N = 39) = 17.77$, $p < .01$. As predicted, participants in aggregate lied significantly more, by reporting higher die-roll outcomes, in the high-time-pressure condition ($M = 4.38$, $SD = 1.50$) than in the low time-pressure-condition ($M = 3.42$, $SD = 1.84$), Mann-Whitney $Z = 2.18$, $p < .05$.

To rule out the possibility that participants in the high-time-pressure condition were not able to observe or remember the

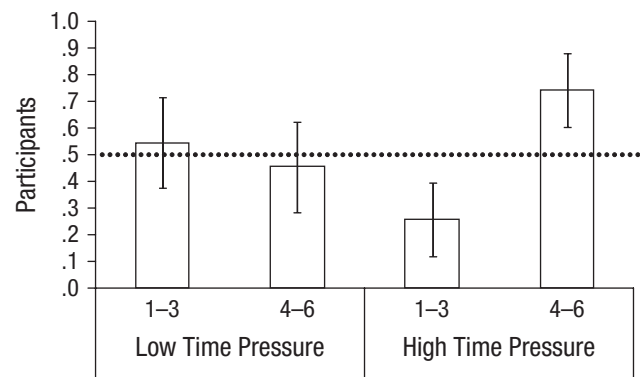


Fig. 2. Results of Experiment 2: proportion of participants who reported die rolls of 1 to 3 versus 4 to 6 as a function of time pressure. The dashed line represents the distribution predicted by chance (50% for rolling a number ≤ 3 and 50% for rolling a number ≥ 4). Error bars represent 95% confidence intervals.

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 8 s. Participants received 10 NIS 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 they correctly remembered what they had rolled. All 13 participants correctly remembered the number they had rolled, ensuring again that vision and memory were not factors in our design.

Mood. Five participants did not complete the mood questionnaire and were thus not included in the mood analyses. As in Experiment 1, we observed no differences in participants' moods after the task: Participants' positive and negative moods did not vary between conditions (both t s < 1.5). As in Experiment 1, we observed no correlations between participants' reported die rolls (i.e., earnings) and their posttask moods (r s < .15, p s > .39) in the low-time-pressure condition. However, in the high-time-pressure condition, the die rolls that participants reported were positively correlated with their posttask negative moods, $r(34) = .48$, $p < .01$, but not with their posttask positive moods, $r(34) = -.06$, n.s.

General Discussion

A growing body of research (e.g., Bazerman & Tenbrunsel, 2011; DePaulo, Kashy, Kirkendol, Wyer, & Epstein, 1996; Lundquist, Ellingson, Gribbe, & Johannesson, 2009; Mazar et al., 2008) has repeatedly revealed that in anonymous settings, when lying pays, people lie. In the experiments reported here, we provided novel evidence, based on a time-pressure manipulation, suggesting that in an anonymous setting, people's 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 reported more quickly, they lied more. In Experiment 1, we found that time pressure amplified lying in a setting in which people typically lie (because of their ability to justify their lies by the desired information they observed). Experiment 2 further demonstrated that time pressure evokes lying even in settings in which people typically refrain from lying (when self-justifications are lacking). 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 can people 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 is 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 inbreeding). 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 this thinking, 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 one's own moral behavior rather than judgment of other people's behaviors, the current results reveal that in tempting situations, when people have to act quickly, they yield to temptation (act on their greed) and serve their self-interest by cheating. When they have time to deliberate, people restrain the amount of their lying to the extent that they may justify it, or they avoid lying altogether when justifications are not available. Exploring whether people who tend to be driven by self-interest (on the basis of 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 that social inference consists of two stages: an initial characterization stage and a correction stage. The authors contend that general characterization requires fewer cognitive resources, whereas correction demands more resources. Similarly, Roskes, Sligte, Shalvi, and De Dreu (2011) studied people's tendency to bisect lines in their actual center when they were in approach- rather than avoidance-motivated mind-sets. The idea is that approach motivation leads to left-hemispheric activation, which in turn leads to right-oriented behavioral biases. It is interesting that 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, Dana, et al., 2011; Shalvi, Handgraaf & DeDreu 2011; based on Fischbacher & Heusi, 2008; see also Lewis et al., 2012) allowed us to study participants' ethical behavior while excluding factors such as fear of detection and social evaluation of one's behavior. Participants engaging in this low-tech paradigm understood that 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 because they fear detection (see related work by Ekman, 2001; Verschuere & De Houwer, 2011; Vrij, Granhag, Mann, & Leal, 2011). Assessing the

moderating role of anonymity on people's automatic dishonest tendencies seems a promising path to explore. Every method has its downsides, and this method is no different. Clearly, analyzing data at only the aggregated level does not allow us to assess how individual differences affect one's likelihood of lying. We believe that when studying situational factors such as time pressure and its interplay with private justifications (or 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 (nonrelevant for pay) times that people are instructed to roll the die allows researchers to study questions of self-signaling (Chance, Norton, Gino, & Ariely, 2011; Dhar & Wertenbroch, 2012; Toure-Tillery & Fishbach, 2012) in truly anonymous settings.

It is interesting that in Experiment 2, we observed that for people reporting the result of a single roll under time pressure, the higher their reported outcome (and consequent payment), the higher their negative posttask 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 unethical behavior to satisfy their self-interest, lying makes them feel bad. Although this finding is in line with work linking negative emotions and unethical decisions (Mellers, Schwartz, & Ritov, 1999; Ritov & Baron, 1995; Zeelenberg et al., 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. In the experiments reported here, we found that when people are faced with temptations, their 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 of justifications).

Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

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