Flash Report

Choice Architecture in Conflicts of Interest:

Defaults as Physical and Psychological Barriers to (Dis)honesty

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Abstract

Default options significantly influence individuals' tendencies to comply with public policy goals such as organ donation. We extend that notion and explore the role defaults can play in encouraging (im)moral conduct in two studies. Building on previous research into omission and commission we show that individuals cheat most when it requires passively accepting a default, incorrect answer (Omission). More importantly, despite equivalent physical effort, individuals cheat less when it requires *overriding* a default, correct answer (Super-Commission) than when simply giving an incorrect answer (Commission) – because the former is psychologically harder. Furthermore, while people expect physical and psychological costs to influence cheating, they do not believe that it takes a fundamentally different moral character to overcome either cost. Our findings support a more nuanced perspective on the implication of the different types of costs associated with default options and offer practical insights for policy, such as taxation, to nudge honesty.

Keywords: morality, lying, compliance, moral disengagement, self-deception, self-signaling

Choice Architecture in Conflicts of Interest:

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Individuals regularly confront conflicts between pursuing actions consistent with their moral self-concepts and pursuing competing economic, social, or personal goals inconsistent with those self-concepts. However, recent research suggests individuals can partially disengage internal moral control to permit immoral conduct without eroding their self-concepts and that the harder it is to disengage the less likely individuals will be to transgress (Bandura, 1986; Bodner & Prelec, 2002; Mazar & Ariely, 2006; Mazar, Amir, & Ariely, 2008a). This paper investigates a potentially important physical and psychological barrier to (im)morality: a default option.

Immoral Acts of Omission and Commission

Previous studies in moral psychology have shown that individuals tend to judge others' harmful acts of commission, where the immoral acts require an active response, as more morally reprehensible than harmful acts of omission, where the immoral act is the passive response. This omission bias (aka action principle) reflects a belief that harmful commissions involve malicious motives and intentions (Cushman, Young, & Hauser, 2006; Singer, 1979; Spranca, Minsk, & Baron, 1991). In addition, Cushman, Gray, Gaffey, and Mendes (2012) demonstrated that actively performing pretend violent actions leads to greater physiological arousal than witnessing such actions – implicating a role for action aversion in moral judgments.

Teper and Inzlicht (2011) posited that the omission bias in moral *judgments* may translate to more cheating *behavior* under omission. However, their empirical evidence may reflect differences in the framing of instructions: an explicit proscription in their commission condition ("do not do X") that was absent in their omission condition ("do X"). In addition, previous research on acts of omission and commission studied the impact of a default *immoral* response.

The existence of a default *moral* response and the role it might play in nudging behavior *toward* honesty – another perspective with practical relevance – has been neglected.

Building on these observations, we examine the effects of two opposing default-responses on people's likelihood to *cheat for financial gain*: (1) the existence of an incorrect but financially superior default that can be passively accepted to cheat (Omission) or actively rejected to be honest, and (2) the existence of a correct but financially inferior default that can be actively rejected to cheat (Super-Commission) or passively accepted to be honest. We also examine cheating in the absence of any default (Commission), where an active response in favor of the incorrect but financially superior option must be given to cheat or an active response in favor of the correct but financially inferior option must be given to be honest.

We hypothesize that the presence of an incorrect but financially superior default *facilitates* moral disengagement in comparison to no default. That is, individuals are more likely to cheat by omission than commission because of the absence of physical effort (action principle) that would signal malicious intentions (intention principle; Cushman et al., 2006). Additionally, we hypothesize that the presence of a correct but financially inferior default further *impedes* moral disengagement in comparison to no default. That is, individuals are less likely to cheat by super-commission than by commission even though both may require the same amount of active, physical effort. This is because cheating by super-commission requires the intentional rejection of the default (i.e., asserting that the correct answer is incorrect), a signal of stronger intentions (intention principle).

In sum, while the introduction of an incorrect but financially superior default can encourage dishonesty, the introduction of a correct but financially inferior default can encourage

honesty (in comparison to no default). Thus, physical and psychological barriers both influence (im)moral conduct.

Experiment 1: Omission, Commission, Super-Commission

Procedure

One hundred seventy-two students (119 females, M_{age}=22.05, *SD*=4.08) from the University of Toronto participated in 40-minute sessions in exchange for $7. Participants were asked to engage in a computer-based visual perception ("Dots") task adopted from Mazar and Zhong (2010) that has been used to study deception to earn more money (see also Gino, Norton, & Ariely, 2010; Mazar, Amir, & Ariely, 2008b; Sharma, Mazar, Alter, & Ariely, 2014; for people's perceptions of this task, see Appendix A).

The task consisted of two identical rounds of 100 trials (one practice round, one paid round). Each trial displayed a pattern of 20 dots scattered inside a box divided by a diagonal line. The dots were displayed for 1s after which participants' task was to indicate whether the left or right side of the diagonal line had had more dots[1]. The instructions emphasized accuracy but financially rewarded people to give a specific answer that was not always accurate (see Appendix B). Specifically, in the experimental conditions participants were informed that "because most people can more easily estimate the number of dots on the left side" they would earn only 0.5¢ for trials identified as having more dots on the left, but 5¢ for trials identified as having more dots on the right (no matter if correct or incorrect). This unequal payment scheme created a direct conflict between earning more money and responding honestly when there were more dots on the lower-pay, left side (60 out of 100 trials). This type of conflict mimics the conflict one might experience when completing a tax return or filing an insurance claim.

[1] In general, 1s is enough time for people to identify the correct answer. People are fairly accurate in this task (Sharma et al., 2014).

As individuals could unintentionally err on either side (e.g., due to perceptual limitations), we calculated each participant's "biased" error rate toward the higher pay side (percentage of trials *incorrectly* identified as having more dots on the higher-pay side minus percentage of trials *incorrectly* identified as having more dots on the lower-pay side) as a measure of cheating. That is, honest participants were expected to have a biased error rate of zero, and participants who were maximally cheating for higher pay to have a biased error rate of +100.

We manipulated the physical and psychological effort to cheat for higher pay across three conditions. In the *Omission*-condition, participants read that their response would be automatically recorded as "more on the right" unless they indicated "more on the left" within two seconds (for details, see Appendix B). Thus, cheating for higher pay did not require any physical action. Participants in the *Commission*-condition were forced to give a response indicating which side had more dots before continuing to the next trial. Thus, on trials with more dots on the left, cheating for higher pay required a physical action: actively indicating "more on the right." Finally, in the *Super-Commission*-condition, participants read that their responses would be automatically recorded as "more on the left" unless they indicated "more on the right" within two seconds. Thus, cheating for higher pay required the same physical action from participants as the *Commission*-condition. However, cheating also required overriding a default, correct answer. Finally, we included a *Control*-condition that required an act of commission to respond but did not involve a conflict due to an equal payment scheme (2.3¢ for either side). Participants were randomly assigned to four between-subject conditions: one equal pay (control) and three unequal pay conditions. Their total pay if completely honest was the same: $2.30. In addition to examining participants' biased error rates we measured reaction times to capture the

hypothesized differences in ease or difficulty of the mental processing required for moral disengagement.

We added several potential process measures after the visual perception. First, given people's aversion performing harmful actions (Cushman et al.'s 2012), we elicited self-reported mood and arousal ("How do you feel right now?") as potential mediators. Next, we administered a cognitive depletion task adopted from Baumeister et al., (1998), that required solving 20 anagrams within five minutes. This was done to examine the extent to which the hypothesized differences in mental processing required for moral disengagement in our tasks might be cognitively depleting and in turn affect the amount of cheating (e.g., Mead et al. 2009). Finally, we asked participants to estimate how many of the 100 trials they had solved correctly in the Dots-task. We subtracted from those estimates the number of trials participants actually solved correctly to measure the accuracy of their performance perceptions. Previous research (Chance, Norton, Gino, & Ariely, 2011; Mijovic-Prelec & Prelec, 2010) suggests that people who manage to transgress without eroding their self-concept are able to deceive themselves: they reinterpret their dishonest performance and thus, overestimate their true performance, suggesting a positive correlation between our biased error rate and overestimation of true performance measures. We hypothesized that the variations in physical and psychological costs for cheating established in our three experimental conditions not only affect the amount of cheating, but also affect the relationship between the magnitude of cheating and magnitude of overestimation: The more difficult the moral disengagement, the less likely is self-deception, reducing the positive correlation.

Results

In the following we present all paid-round results. First, as can be seen in Figure 1A, an ANOVA revealed a highly significant effect of condition on biased error rate and thus, amount of cheating for higher pay. Individuals cheated most in the *Omission*-condition, which required the least amount of effort, followed by the *Commission*-condition ($t(168)=2.82$, $p<.01$, $d=-.43$). Most importantly, when the act of commission involved overriding a default response that was accurate (*Super-Commission*-condition), cheating was eliminated. That is, errors toward the higher-pay side were no more likely than errors toward the lower-pay side (difference from a biased error rate of 0: $t(41)=1.15$, $p=.26$, $d=.18$; difference from *Commission*-condition: $t(168)=2.01$, $p<.05$, $d=.31$). In addition, there was no significant difference ($t(168)=1.25$, $p=.21$, $d=.19$) between participants in the *Control*-condition without the temptation to cheat and participants in the *Super-Commission*-condition, where cheating was most effortful (i.e., it required both physical *and* psychological effort).

The idea that overriding a default, honest response involves greater psychological costs (more difficult mental processing to morally disengage) than simply producing a dishonest response was further supported by a repeated-measure ANOVA with reaction times for both types of commission: telling the truth as well as cheating for higher pay in the *Super-Commission* and *Commission*-conditions. First, participants required significantly more time to respond when cheating (M=0.568s, SD=0.156s) than when telling the truth (M=0.480s, SD=0.118s; $F(1,80)=36.86$, $p<.001$, $\eta^2=.32$). This main effect suggests that people experience conflict in both commission conditions when there are more dots on the lower-paying side. More importantly, participants used more time to cheat for higher pay in the *Super-Commission*-condition (M=0.601s, SD=0.164s) than in the *Commission*-condition (M=0.537s, SD = 0.144s;

$t(80) = -1.86$, $p<.07$, d=-.41), but the reaction times in these two conditions did not differ when going for higher pay was the honest thing to do (Super-Commission: M=0.474s, SD=0.116s vs. Commission: M=0.485s, SD=0.121; $t(82)=0.45$, $p<.65$, d=.1; interaction: $F(1,80)=5.25$, $p=.02$, $\eta^2=.06$). Thus, the moral disengagement required for cheating likely involved more difficult mental processing for participants in the *Super-Commission*-condition than in the *Commission* condition despite the equivalence in physical effort. Similarly, with regards to self-deception, in line with our hypotheses, the positive correlation (overall $r(170)=.48$, $p<.001$) between participants' biased error rates and overestimations of their true performances (demonstrating successful self-deception) differed significantly by condition ($F(3,168)=8.02$, $p<.001$, $\eta^2=.13$). The higher the physical and psychological barriers to cheating, the weaker was the positive correlation (Omission: $r(43)=.75$, $p<.001$; Commission: $r(41)=.5$, $p<.001$; Super-Commission: $r(40)=.01$, $p=.95$; Control: $r(40)=.08$, $p=.63$).

Finally, we did not find any evidence that the effect of our conditions on cheating were mediated by mood, arousal, or general cognitive depletion (see Figures 1B-D and Appendix B).

In the second experiment, we examined individuals' predictions and judgments about the differing physical and psychological costs of cheating in the four variants of the Dots-task. Specifically, building on previous research showing how action and intention principles guide the judgment of the morality of an *act*[2] (Cushman et al., 2006; Spranca et al., 1991), we wanted to investigate whether these principles also guide the judgment of the morality of an *actor in general*. That is, we examined whether people believe that it takes a fundamentally different moral character to cheat by way of acts of super-commission, commission, or omission (ceteris

[2] Spranca et al. (1991) equate the morality of an act of omission or commission to the morality of the actor in the specific omission/commission situation (see p. 82).

paribus). To do this, we measured the perceived general morality of an actor who achieved the same positive biased error rate (i.e. same outcome/harm) in each condition.

Experiment 2: Predictions of Cheating and Judgments of Moral Character

Procedure

Thirty-eight students (28 females, M_{age}=22.26, SD=3.78) from the University of Toronto participated independently in a 15-minute paper and pencil survey (part of a multi-experiment session) in exchange for $5.

Without mentioning morality, participants were given the written instructions of the commission version of the Dots-task and were instructed on the three additional variations used in Experiment 1. In addition, to convey task difficulty, instructions noted "human's visual perception is very good. That is, participants should be VERY accurate in the task. There should basically be no errors!" For each Dots-task variation (within-subject design) participants estimated the percent of trials they thought people, on average, would erroneously identify trials as having more dots on the right side when there were actually more dots on the left; and vice versa. We subtracted the latter from the former to calculate the predicted biased error rates.

Next, participants were asked to imagine that for 80% of the trials with more dots on the lower-pay, left side a person identified more dots on the right but was accurate on the trials with more dots on the higher-pay, right side. To minimize demand effects, we did not suggest that these were intentional or accidental responses and we refrained from using moral words (e.g., cheating, lying, honesty). For each Dots-task variation participants then answered how they would evaluate such a *person's* moral standards, moral self-image, mood, arousal, and self-performance perceptions (see Table 1, rows 2-6).

Results

Table 1 row 1 shows that participants' predictions matched the biased error rate pattern found in Experiment 1. More importantly, we examined whether people believe that it takes a fundamentally different moral character to achieve the same biased error rate across conditions. Interestingly, participants did not differentiate between the three cheating conditions (Table 1, rows 2 and 3). Participants evaluated the moral standards and moral self-image of a person with an 80% biased error rate leading to higher pay as equally immoral. Finally, participants did not expect any differences between conditions in terms of the person's mood, arousal, or accuracy of self-performance perceptions. The latter suggests that participants failed to anticipate situational influences on self-deception across conditions.

General Discussion

Previous research has shown that the power of default options is rooted in individuals' status-quo bias (Saumeslon & Zeckhauser, 1988): people's preference to keep the current state of affairs for example, due to loss aversion (Kahneman &Tversky, 1984 Thaler, 1980) or a bias toward omission (i.e. "inertia"; Ritov & Baron, 1992). In line with this notion, Experiment 1 demonstrated that people were more likely to transgress when cheating for higher pay required no more than a passive act (omission) of accepting the morally questionable default compared to a physical act (commission).

More importantly, we extend previous work by examining the influence of a default response in the opposite direction: the default represents an accurate but financially inferior response if passively accepted and requires a physical act to override it to cheat for higher pay (super-commission). A status-quo hypothesis would predict that people stick with the default response regardless of the financial consequences. Thus, we should have observed a bias in the

opposite, less financially rewarding direction (i.e. negative biased error rates). Alternatively, an economic rational-agent perspective would suggest positive biased error rates in the *Super-Commission* condition similar to those in the *Commission* condition since the physical effort or cost required to cheat is the same in both conditions. However, we found neither; instead, we observed honest behavior in the Super-Commission condition.

The reaction time and self-deception measures suggest that overriding a correct response in order to cheat is psychologically difficult. The correct default makes it harder for individuals to disengage internal moral control relative to simply committing a dishonest act because, not only does cheating require physically giving an incorrect answer, it also requires rejecting the correct default, asserting that it is incorrect.

Previous work has shown that actively performing harmful actions is physiologically aversive (Cushman et al., 2012; see also Crockett, 2013), which may suggest the implication of mood or arousal as mediators of *the Super-Commission* and *Commission* conditions' effects on cheating. The fact that we don't find any evidence for their role could mean that cheating by (super-)commission in our task was not experienced as an aversive action (vis-à-vis the violent acts examined in Cushman et al., 2012). It could, however, also mean that some emotional and physiological processes not captured by our measures were, in fact, at play in mediating the reported cheating behavior. Previous work has shown that people do not necessarily have good insight into their emotional states when asked to self-report (e.g., Berridge & Winkielman, 2003). In addition, we did not ask participants to report mood and arousal *while* engaging in the Dots-task.

In line with previous work on judgments about acts of omissions and commissions (Cushman et al, 2006; Spranca et al., 1991) and people's ability for moral disengagement

(Bandura, 1986; Mazar, Amir, & Ariely, 2008a), Experiment 2 reveals that participants appreciate the differences in physical and psychological costs of cheating for higher pay when predicting outcomes in the four variants of our Dots-task. At the same time, however, they don't think that it takes a fundamentally different moral character to overcome the differing costs and achieve the same outcome through acts of omission, commission, or super-commission. To some extent the co-existence of these two findings may seem surprising. At the same time, however, previous research has demonstrated that when judging others' enduring dispositions, people often focus more on outcomes than on situational factors (correspondence bias; Gilbert & Malone, 1995; Ross, 1977). In addition, given the hypothetical nature of the experiment, our participants may have relied more on conscious reasoning than intuition and as such recognized that judging general moral character requires more than one data point. That is, they may have been (perhaps unusually) careful to generalize from one specific situation. In sum, while previous work as well as our own (see Appendix C) demonstrates that action and intention principles guide the judgment of the morality of an *act* (or actor in a specific situation), we extend that work by showing that these principles may not equally guide the judgment of the morality of an *actor in general*.

Conclusion

Johnson and Goldstein (2003) have shown that the presence or absence of a default option can significantly influence individuals' tendency to comply with a public policy goal (e.g., organ donation). Building on that work, we show that default options can also encourage honest behavior by creating a psychological barrier to dishonesty. This finding has great practical relevance (see Amir et al., 2005). For example, an effort in the United Kingdom to nudge people toward increased tax compliance (Behavioural Insights Team, 2011) is contemplating new tax

forms that require an applicant to write (i.e. action) “nil” in key fields rather than a blank response (i.e., inaction) being taken to mean the equivalent. Our research suggests it might be even more effective to go one step further and have tax software automatically pre-fill key fields with available information and require applicants to actively override them rather than typing amounts into blank fields. This should further increase the psychological effort needed to cheat and, therefore, promote honest self-reporting. In a recent op-ed piece, Sunstein (April 14, 2013) wrote that in the US, some economists, including a former chairman of the Council of Economic Advisers, have proposed that tax authorities should allow automatic tax returns, where eligible taxpayers receive completed tax returns and only have to correct for errors and sign the return. While the primary aim of this suggestion is to reduce reporting costs, our research suggests that it may also increase tax compliance. More generally, our research suggests that changing the default may improve compliance in any domain that relies particularly on self-reports (e.g., submitting insurance claims, claiming business expenses, reporting billable hours). Small changes might prove powerful in efficiently and effectively nudging moral conduct (Thaler & Sunstein, 2008).

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Both authors contributed to developing the study concept and experimental design as well as to the interpretation of the results, and the drafting and revising of the paper. N.M conducted the data collection and analysis. Both authors approved the final version of the paper for submission.

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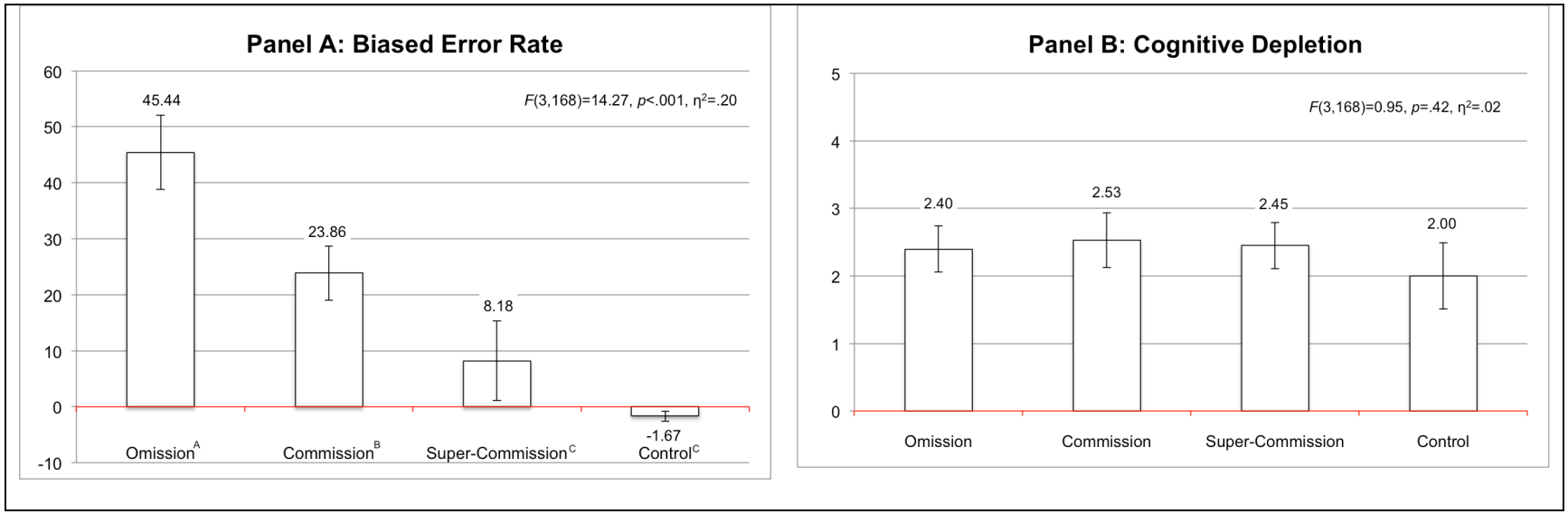
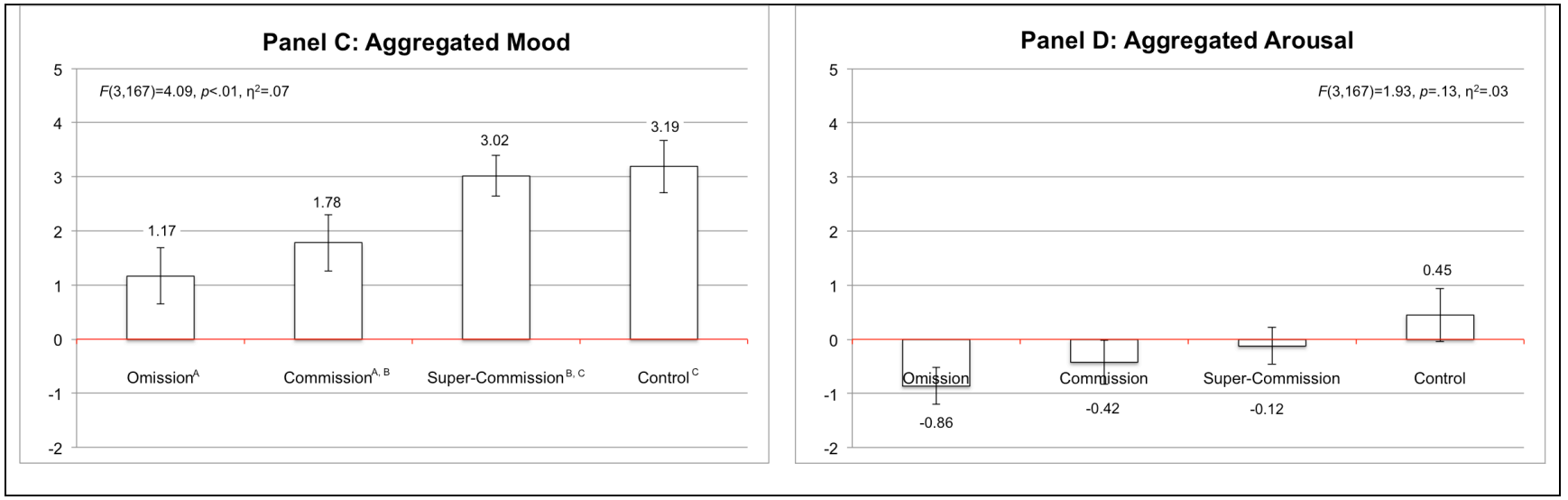
Figure 1

Means and test-results by condition in between-subject design in Experiment 1





Note. In each panel, the error bars represent standard errors of the means. Means connected by different superscripted letters are significantly different from each other with $p < .05$ based on 2-tailed *t*-tests. Panel A: The calculated biased error rate range from -100 to +100; positive numbers indicate an error rate biased towards the right (i.e. higher pay side in the *Omission*, *Commission*, and *Super-Commission*-conditions). Panel B: Cognitive depletion was measured in terms of number of correctly solved anagrams. The higher the number the lesser the cognitive depletion. Panel C and D: Each of the four mood (*bad/good, disappointed/satisfied, sad/happy, displease/pleased*; Cronbach's $\alpha = 0.93$) and arousal (*calm/excited, tired/energetic, down/elated, sedated/aroused*; Cronbach's $\alpha = 0.72$) items were elicited on 17-points scales ranging from -8 to +8. One participant did not answer the mood and arousal questions.

Table 1

Within-Subject Test-Results and Descriptive Statistics of Predictions and Judgments in Experiment 2

	MANOVA $F(3, 35)$ (p)	η^2	M (SD)			
			Omission	Commission	Super-Commission	Control
(1) Predicted Biased Error Rate	6.31 (< .01)	.35	26.26^{A} (36.41)	12.89^{B} (27.06)	0.71^{C} (39.13)	0.34^{C} (1.42)
			Assumption of 80% biased error rate			
(2) How would you evaluate this person's moral standards?	2.9 (< .05)	.2	3.82^{A} (1.61)	3.87^{A} (1.8)	3.95^{A} (1.9)	4.5^{B} (1.56)
(3) How moral do you think that person considers him/herself to be?	3.19 (.04)	.22	4.71^{A} (1.54)	$4.92^{A, B}$ (1.6)	4.87^{A} (1.63)	5.32^{B} (1.4)
(4) After completion of the task, what do you think is the mood of that person?	1.29 (.29)	.1	2.16 (3.84)	2.47 (3.75)	1.97 (4.27)	3.29 (3.7)
(5) After completion of the task, what do you think is the excitement level of that person?	1.53 (.22)	.12	2.95 (3.29)	3.13 (2.96)	2.34 (4.05)	3.37 (3.41)
(6) If we asked that person to estimate how many out of 100 trials s/he had solved correctly, what do you think s/he would say?	0.25 (.86)	.02	66.62 (24.13)	71.76 (34.26)	67.16 (24.65)	67.51 (25.6)

Note. In each row, means connected by different superscripted letters are significantly different from each other with $p < .05$ based on 2-tailed *paired t*-tests. (1) The predicted biased error rate could range from -100 to +100; positive numbers indicate an error rate biased towards the right (i.e. higher-pay side in the *Omission*, *Commission*, and *Super-Commission*-conditions), (2) was measured on a scale from *1:low moral standards* to *7:high moral standards*; (3) was measured on a scale from *1:immoral* to *7:moral*; (4) and (5) were measured on scales from *-8:negative* and *low* to *+8:positive* and *high*, respectively.

Supplementary Material [SM]

Appendix A

Pre-Test: Perceptions of the Dots Task

In a pre-test of the instructions (i.e. commission condition), 29 students from the University of Toronto (16 females, age not elicited) were asked (1) what they thought the task was and (2) how (dis)honest it would be to identify a trial as having more dots on the right side if in fact they have seen more dots on the left side. The results showed unanimous agreement that the task was to correctly identify which side had more dots rather than going for higher pay (participants made a forced choice between these two options, which were presented in counterbalanced order). Furthermore, going for higher pay instead of accuracy was rated as very dishonest on a 7 point-scale ranging from *-3:very dishonest* to *3:very honest*, M=-2.21, SD=.98 (t-test for difference from 0: $t(28)$=-12.16, p<0.001).

Appendix B

Experiment 1

Procedure. Consistent with previous research, the Dots task instructions emphasized the need to be accurate because the goal of the experiment was "to get a better understanding of how fast humans can perceive visual differences in quantities" and that the results of this visual perception task would be used to design a future study. At the same time, the instructions said that we would pay them for their performance to motivate participants' efforts. Also note that our biased error rate measure controls for unintentional errors, which might be a factor driving the effect in Teper and Inzlicht's findings (2011).

Two second-default. Previous findings with this Dots-task (Mazar & Ariely, 2008b) suggest participants take on average less than 0.7s to give an answer. Similarly, in our Control-condition, reaction times were substantially below two seconds (trials with more dots on the left: M = 0.504s, SD = 0.150 vs. trials with more dots on the right: M = 0.496s, SD = 0.157; paired-t(41) = -0.84, p = .41, d = -0.13). Thus, the observed biased error rates in the Omission and Super-Commission-conditions, which involved default responses that must be overridden within 2 seconds, were not likely due to participants having inadequate time to respond.

Potential Mediators. The four conditions had a significant effect on mood: the easier a condition made it for participants to cheat (i.e., the lower the cost of cheating) the less positive their mood. However, an ANCOVA testing the effect of condition on biased error rate while controlling for mood showed no significant effect of mood ($F(1, 166) = 0.16$, $p = .69$, $\eta^2 < .01$); only a significant effect of condition ($F(3, 166) = 12.93$, $p < .001$, $\eta^2 = .19$).

Others. Condition did not have a significant effect on cognitive depletion when controlling for differences in biased error rate condition ($F(4, 167) = .77$, $p = .54$, $\eta^2 = .02$).

Appendix C

Post-Test: Predictions of Cheating and Judgments of Moral Character versus the Specific Act

Procedure

Sixty people (28 females, M_{age}=33.0, *SD*=10.68) in the United States from Amazon's Mechanical Turk (MTurk) website were recruited for a 20-minute, online Qualtrics survey in exchange for $2. As in Experiment 2, participants first predicted the percent error rates and then, assuming an 80% biased error rate, evaluated such a person's moral standards and how moral they thought that person would consider him/herself to be. Following previous work on the omission bias and adopting a measure from Experiment 1 in Spranca et al. (1991), we assessed the morality of *the specific acts* (see question (4) in Table C1) – that is, of achieving an 80% biased error rate through commission, omission, and super-commission for higher pay and through commission for equal pay (*Control*-condition). Finally, similar to our pre-test in Experiment 1, we sought to find out whether, in each of our four variants of the Dots-task, participants considered it at all (im)moral to deliberately "err" on the right side. Thus, we asked participants in general, how (im)moral they considered it to be if a person identified a trial as having more dots on the right side when in fact s/he had seen and, thus, knew that there were more dots on the left side.

Results

Six participants were excluded because they had difficulty understanding the questions or technical problems (e.g., couldn't see the entire survey).

All questions and results are displayed in Table C1. We replicate the findings from Experiment 2 with stronger results and a more demographically diverse sample. In addition, we

replicate Spranca et al.'s (1991) findings about the morality of the different types of acts: omissions for higher pay are judged to be less immoral than commissions for higher pay. Finally, we replicate and extend the findings from the pre-test to Experiment 1 showing that going for higher pay instead of accuracy in each of the unequal pay-variants of the Dots-task is viewed to be immoral and significantly worse than deliberately giving an inaccurate answer in the absence of a higher reward (*Control*-condition).

Table C1

Within-Subject Test-Results and Descriptive Statistics of Predictions and Judgments in Post-Test, MTurk, N=54

	MANOVA $F(3, 51)$ (p)	η^2	M (SD)			
			Omission	Commission	Super-Commission	Control
(2) Predicted Biased Error Rate	3.89 (.01)	.19	18.76^{A} (35.87)	$12.72^{A, B}$ (31.68)	$7.28^{B, C}$ (32.97)	4.06^{C} (14.92)
Assumption of biased error rate = 80; No information about intentions						
(7) How would you evaluate that person's moral standards?	8.42 (<.001)	.33	-1.33^{A} (3.62)	-1.96^{A} (3.93)	-1.85^{A} (4.06)	0.50^{B} (3.20)
(8) How moral do you think that person considers him/herself to be?	5.35 (<.01)	.24	0.56^{A} (4.26)	0.09^{A} (4.09)	0.69^{A} (4.30)	2.11^{B} (3.60)
(9) How would you rate that person's morality in this task?	8.97 (<.001)	.35	-1.00^{A} (3.99)	-1.76^{B} (4.20)	$-1.46^{A, B}$ (4.04)	0.69^{C} (3.14)
Equated intentions						
(10) In general, how (im)moral do you consider it to be in this task if a person identifies a trial as having more dots on the right side when in fact s/he has seen and thus, knows that there were more dots on the left side?	8.00 (<.001)	.32	-2.44^{A} (4.07)	-2.81^{A} (4.06)	-2.98^{A} (4.04)	-0.78^{B} (3.18)

Note. In each row, means connected by different superscripted letters are significantly different from each other with $p < .05$ based on *2-tailed paired t*-tests. (1) The predicted biased error rate could range from -100 to +100; positive numbers indicate an error rate biased towards the right (i.e. higher-pay side in the *Omission*, *Commission*, and *Super-Commission*-conditions). Questions (2)-(5) were measured on a scale from *-10:very low moral standards/very immoral* to *0:moderate moral standards/neither immoral nor moral* to *+10:very high moral standards/very moral*.