

# The Road to Bribery and Corruption: Slippery Slope or Steep Cliff?



Nils C. Köbis, Jan-Willem van Prooijen,  
Francesca Righetti, and Paul A. M. Van Lange

Department of Experimental and Applied Psychology, Vrije Universiteit Amsterdam

Psychological Science  
2017, Vol. 28(3) 297–306  
© The Author(s) 2017  
Reprints and permissions:  
sagepub.com/journalsPermissions.nav  
DOI: 10.1177/0956797616682026  
www.psychologicalscience.org/PS



## Abstract

Major forms of corruption constitute a strong threat to the functioning of societies. The most frequent explanation of how severe corruption emerges is the slippery-slope metaphor—the notion that corruption occurs gradually. While having widespread theoretical and intuitive appeal, this notion has barely been tested empirically. We used a recently developed paradigm to test whether severely corrupt acts happen gradually or abruptly. The results of four experimental studies revealed a higher likelihood of severe corruption when participants were directly given the opportunity to engage in it (abrupt) compared with when they had previously engaged in minor forms of corruption (gradual). Neither the size of the payoffs, which we kept constant, nor evaluations of the actions could account for these differences. Contrary to widely shared beliefs, sometimes the route to corruption leads over a steep cliff rather than a slippery slope.

## Keywords

corruption, slippery slope, steep cliff, bribery, unethical behavior, open data, open materials

Received 12/23/15; Revision accepted 11/10/16

New cases of corruption are reported in the media almost daily, and these cases occur in various contexts, such as banking, sports, and politics. Such scandals raise questions about how severe corruption emerges. Following the popular media, many scientists suggest that severe ethical transgressions such as corruption occur gradually, a process that is frequently referred to as a *slippery slope* (Ashforth & Anand, 2003; Bandura, 1999; Darley, 2005; Festinger & Carlsmith, 1959; Gino & Bazerman, 2009). The belief is that power holders progressively neglect the interests of other individuals while pursuing selfish interests and thus “slide into” corruption (Kipnis, Castell, Gergen, & Mauch, 1976). While this widespread belief has strong intuitive appeal, no experimental research has examined whether such a gradual process indeed leads to major forms of corruption. In four experimental studies, using a recently developed methodology, we examined the validity of the slippery-slope metaphor and contrasted it with a steep-cliff metaphor that posits that corruption occurs when people seize a one-time opportunity for severe corruption.

## Slippery Slope Versus Steep Cliff

Corruption is an unethical behavior that is defined as “the abuse of entrusted power for private gain” (Transparency International, 2010, response to Question 1). In explaining why people commit ethical transgressions such as corruption, researchers suggest that people consistently seek to maximize material self-interest while maintaining a positive self-image (Festinger & Carlsmith, 1959; Mazar, Amir, & Ariely, 2008a). Extensive research shows that people can commit minor ethical transgressions while retaining their positive moral self-view (cf. Ariely, 2012). Severe ethical transgressions, on the other hand, require an update of one’s self-concept (Mazar et al., 2008a) and are widely believed to be the result of a gradual transformation process—a slippery slope (cf. Darley, 2005). This

### Corresponding Author:

Nils C. Köbis, Vrije Universiteit Amsterdam, Department of Experimental and Applied Psychology, Van der Boerhorstraat 1 Amsterdam 1081 BT, The Netherlands  
E-mails: nilskobis@hotmail.com, n.c.kobis@vu.nl

view implies that people start with minor corrupt transgressions that they view as implicit benchmarks from which to make decisions about new ethical dilemmas (Gino & Bazerman, 2009). Because of several moral-disengagement processes such as rationalization (Bandura, 1986, 1999), over time, more and more ethical transgressions can be incorporated into the moral self-concept (Tenbrunsel & Messick, 2004). Eventually, corruption becomes normalized (Ashforth & Anand, 2003). These lines of reasoning add credence to the widely shared belief that people gradually engage in more increasingly severe forms of corruption (Darley, 2005).

In opposition to the slippery-slope argument, the steep-cliff metaphor posits that people are often somewhat overwhelmed by an unexpected opportunity—a chance that might appear to be a golden opportunity. An abruptly occurring situation characterized by the immediacy of large benefits is extremely tempting (Ariely, 2012). The combination of large and immediate benefits paired with the apparent uniqueness of the opportunity might pave the way for corruption-enhancing justifications. A single severe act might be easier to rationalize than repeated unethical acts (Mazar & Ariely, 2006), in that single behaviors can be more easily discounted (recalling the German proverb “einmal ist keinmal,” or “once does not count”). Conversely, repeated challenges to the moral self-concept might be psychologically demanding—especially within a short time span. Thus, although the belief that corruption is a slippery slope is widely promulgated within and outside the scientific literature, there are also arguments in support of the steep-cliff metaphor.

In the present research, we conducted four novel experiments that put both metaphors to a test. Overall, little quantitative research has investigated sequential unethical behavior. Previous studies have focused on third-party observers' acceptance of gradual versus abrupt unethical acts (Gino & Bazerman, 2009) or on the role of self-control and moral disengagement on the slippery slope of minor cheating acts (Welsh, Ordóñez, Snyder, & Christian, 2014), but experimental investigation comparing gradual with abrupt occurrences of corruption is lacking altogether. Recent advances in experimental methodology on corruption research (cf. Serra & Wantchekon, 2012) allow a first examination of these different processes while keeping the economic costs and benefits constant. In the present research, we used a recently developed corruption game (Köbis, van Prooijen, Righetti, & Van Lange, 2015).

## Study 1

In Study 1, we conducted a first test of whether severe corruption is more likely to emerge gradually or abruptly.

## Method

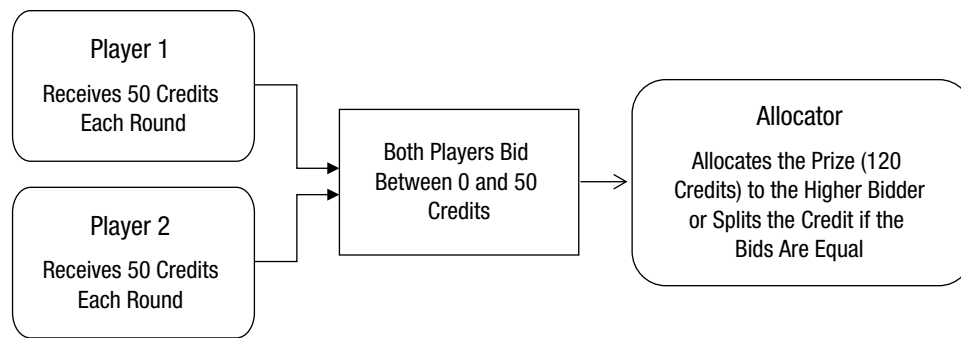
**Participants.** A total of 86 students (age:  $M = 21.63$  years,  $SD = 6.47$ ; 62.8% female, 37.2% male) participated for money (€2.50) or course credit. Each was randomly assigned to either the steep-cliff condition, in which severe corruption would occur immediately, or the slippery-slope condition, in which the severity of corruption would gradually increase. Since the dependent variable was binary, we calculated the a priori sample size for binary logistic regressions (for details, see Demidenko, 2007). To achieve a power ( $1 - \beta$ ) of at least .8 and a detectable odds ratio of 3.0, we set the cutoff criterion to 40 participants per cell. Participants who had already begun the study when this threshold was met were still included.<sup>1</sup>

**Measures and procedure.** The corruption game is a three-player auction game consisting of five rounds. Two competing players receive a budget of 50 credits in every round. In an auction fashion, they make bids (between 0 and 50 credits) for a prize of 120 credits. The third player (the allocator) awards the prize to the highest bidder (see Fig. 1). The competing players lose the credits they allocate and keep the credits that they do not allocate in a bid. The player with the highest bid wins the total prize. If both players offer the same bid, the prize is split equally between the two. Earned credits accumulate across all five rounds.

The payoff matrix (Table 1) depicts all possible outcomes of this bidding process. Bidding 50 credits is the best strategy for both players to maximize winnings—this option results in a strict Nash equilibrium (Nash, 1950). However, one of the two players gets the option to circumvent the fair bidding process by bribing the allocator. In the present study, the participant was assigned to this role of the potentially corrupt player. After each round, participants were told who won the prize.

We translated the basic structure of the auction game and the credits (numbers were multiplied by \$1,000) into a real-life scenario. The competing players took the role of CEOs of a construction company, and the allocator played a public official. We used several scenarios, asked three test questions to ensure that players understood the bidding process (> 84.9% answered correctly), and provided participants with extensive explanations in case they gave a wrong answer.<sup>2</sup>

In the steep-cliff condition, participants had the option to directly invite the public official on a private vacation (severe bribery), which ensured that participants had an advantage in all rounds of the bidding. Specifically, when both player's bids were equal, the player who engaged in severe bribery would receive the full prize rather than the half he or she would otherwise have been awarded. In



**Fig. 1.** Schematic showing the steps in a round of the auction game. After receiving a credit allocation, players make their bids, and then the prize is either allocated to the highest bidder or split between the two players.

the slippery-slope condition, participants initially had the option to invite the public official to a banquet (mild bribery), which ensured that participants had an advantage in 50% of the bidding rounds. That is, in rounds in which both players' bids were equal, players who engaged in mild bribery would be awarded the full prize, but only half of the time. After extending the invitation, participants in the slippery-slope condition could increase their advantage to 100% in the following round by also inviting the official on vacation (severe bribery; see Fig. 2). The costs for abrupt, severe bribery and the aggregated costs for both steps of slippery-slope bribery were identical (i.e., \$40,000).

In addition to standard demographic measures (age, gender, education), we assessed how corrupt and fair participants perceived their behavior to be with one item each ("How corrupt [fair] do you think your own actions were?"). Answers were given on a scale from 1, *not at all*, to 6, *very*.

## Results

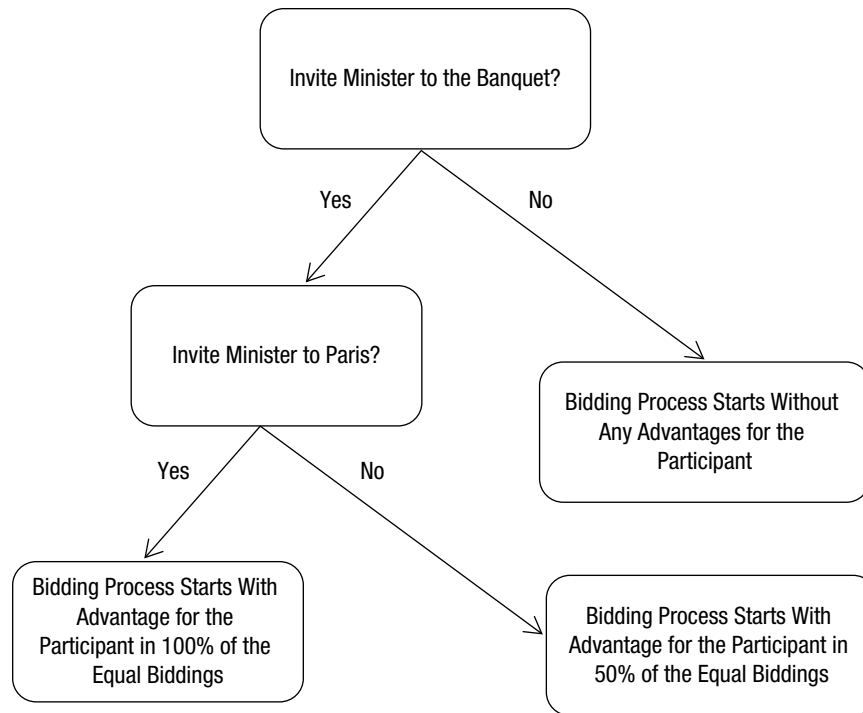
A binary logistic regression analysis with condition (steep cliff vs. slippery slope) as a predictor and the likelihood of severe corruption as a dependent variable showed a significant difference between conditions,  $b = 1.57$ , Wald = 11.35,  $p = .001$ ,  $\exp(b) = 4.82$ . The odds of abrupt severe bribery were 4.82 times higher compared with the odds of gradual severe bribery (see Table 2).<sup>3</sup>

We also tested whether participants perceived bribing the official as corrupt and unfair. We found a significant difference in perceived corruption,  $F(2, 83) = 15.37$ ,  $p < .001$ ,  $\eta_p^2 = .27$ , and perceived fairness,  $F(2, 83) = 9.87$ ,  $p < .001$ ,  $\eta_p^2 = .19$ , between the different bribery decisions (no bribery vs. mild bribery vs. severe bribery). Bonferroni-corrected pairwise comparisons indicated significant differences in perceived corruptness among all three bribery decisions ( $ps < .032$ ). Obtaining full advantages in the game through bribery was perceived as more

**Table 1.** Outcomes for Both Players in a Single Round of the Bidding Game

Player 1's bid	Player 2's bid											
	50		40		30		20		10		0	
	P1's outcome	P2's outcome	P1's outcome	P2's outcome	P1's outcome	P2's outcome	P1's outcome	P2's outcome	P1's outcome	P2's outcome	P1's outcome	P2's outcome
50	60	60	120	10	120	20	120	30	120	40	120	50
40	10	120	70	70	130	20	130	30	130	40	130	50
30	20	120	20	130	80	80	140	30	140	40	140	50
20	30	120	30	130	30	140	90	90	150	40	150	50
10	40	120	40	130	40	140	40	150	100	100	160	50
0	50	120	50	130	50	140	50	150	50	160	50	50

Note: The table illustrates the outcomes for Player 1 (P1) and Player 2 (P2) when the option to bribe the allocator was not introduced into the game. The outcome is equal to the number of credits that the player did not bid plus any credits earned by the division of the 120-credit prize that the players were bidding on. For both players, bidding 50 credits was the best strategy to maximize winnings.



**Fig. 2.** An illustration of the decision steps in the slippery-slope condition. Participants could mildly bribe a public official by inviting him to a banquet, after which they could severely bribe him on the next round by inviting him on vacation. This gave participants different advantages depending on which options they chose. Reproduced from Köbis, van Prooijen, Righetti, and Van Lange (2015).

corrupt ( $M = 3.75$ ,  $SD = 1.52$ ) than obtaining partial advantages ( $M = 2.89$ ,  $SD = 1.25$ ), which in turn was perceived as more corrupt than refraining from bribery altogether ( $M = 1.68$ ,  $SD = 1.05$ ; see Table 3).

For perceived fairness, we found significant differences between severe bribery and both other choices ( $ps < .043$ ), while the difference between no bribery and mild bribery was not significant ( $p = .159$ ). Severe bribery was perceived as significantly less fair ( $M = 2.97$ ,  $SD = 1.54$ ) than mild bribery ( $M = 3.85$ ,  $SD = 1.26$ ) and no bribery ( $M = 4.68$ ,  $SD = 1.33$ ; see Table 3). We found no interaction with condition for either corruptness or fairness ratings (all  $ps > .250$ ), which indicates that participants perceived obtaining full advantages as most corrupt and least fair independently of whether they invited the official on vacation directly or only after the banquet invitation.

## Discussion

Study 1 revealed that severe corruption is more likely to occur when presented as a single choice than as one of a series of choices. Bribing the public official was perceived as more corrupt and less fair than refraining from bribery—independently of the path toward corruption.

## Study 2

In Study 2, we added a third condition, in which the second corrupt act was less severe than the first. With this reverse-slippery-slope condition, we tested whether the repeated engagement or the increasing severity of the slippery slope would keep participants from engaging in a second corrupt decision.

## Method

**Participants.** In total, 244 participants recruited via Amazon Mechanical Turk (age:  $M = 33.52$  years,  $SD = 10.49$ ; 41.6% female, 58.4% male) were randomly assigned to three conditions (slippery slope, reverse slippery slope, steep cliff). Because this data set was collected online, we increased the cell sizes to at least 80 participants per cell. We excluded 13 participants from the analysis because they did not complete all questions.

**Measures and procedure.** Procedures were the same as in Study 1, except as follows. We created a reverse-slippery-slope condition, and to make it comparable with the slippery-slope condition, we adopted the following cost-and-benefit scheme. Inviting the public official to

**Table 2.** Distribution of Bribery Decisions in Studies 1 Through 4

Study and condition	No bribery		Mild bribery		Severe bribery	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Study 1						
Steep cliff	15	34.9	—	—	28	65.1
Slippery slope	4	9.3	27	62.8	12	27.9
Study 2						
Steep cliff	27	33.8	—	—	53	66.3
Slippery slope	29	44.6	9	13.8	27	41.5
Reverse slippery slope	30	34.9	9	10.5	47	54.7
Study 3						
Steep cliff	7	16.7	—	—	35	83.3
Slippery slope	10	24.4	11	26.8	20	48.8
Reverse slippery slope	11	26.2	7	16.7	24	57.1
Study 4						
Steep cliff	24	24.0	—	—	76	76.0
Slippery slope	18	18.0	17	17.0	65	65.0

Note: Mild bribery occurred when participants extended the invitation to the banquet but not to the vacation. Severe bribery occurred when participants extended the vacation request either abruptly (without extending the banquet request first) or gradually (by first extending the banquet request and then extending the vacation request).

the banquet cost \$10,000 and yielded an advantage in 25% of the bidding rounds. Inviting the official on vacation cost \$30,000 and yielded an advantage in 75% of the bidding rounds. The slippery-slope and reverse-slippery-slope conditions merely differed in the order in which these options were presented. The steep-cliff condition consisted of one decision (invitation to the vacation), which instantly yielded advantages in all bidding rounds and cost \$40,000. The costs for obtaining full advantages

in the bidding were identical across all three conditions. We assessed perceived corruptness and fairness using the same items as in Study 1.

## Results

We again found a significant group difference in severe bribery between the steep-cliff and the slippery-slope condition,  $b = 1.01$ , Wald = 8.66,  $p = .003$ ,  $\exp(b) = 2.76$ ,

**Table 3.** Self-Evaluations of Perceived Corruptness and Fairness in Studies 1, 2, and 4

Study and outcome	Perceived corruptness		Perceived fairness	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Study 1				
No bribery	1.68 <sub>a</sub>	1.05	4.68 <sub>a</sub>	1.33
Mild bribery	2.89 <sub>b</sub>	1.25	3.85 <sub>a</sub>	1.26
Severe bribery	3.75 <sub>c</sub>	1.52	2.97 <sub>b</sub>	1.54
Study 2				
No bribery	1.55 <sub>a</sub>	1.02	4.86 <sub>a</sub>	1.21
Mild bribery	3.11 <sub>b</sub>	1.97	4.17 <sub>a</sub>	1.54
Severe bribery	4.25 <sub>c</sub>	1.69	2.66 <sub>b</sub>	1.72
Study 4				
No bribery	29.50 <sub>a</sub>	29.50	—	—
Mild bribery	59.59 <sub>b</sub>	23.70	—	—
Severe bribery	66.58 <sub>b</sub>	31.32	—	—

Note: Mild bribery occurred when participants extended the invitation to the banquet but not to the vacation. Severe bribery occurred when participants extended the vacation request either abruptly (without extending the banquet request first) or gradually (by first extending the banquet request and then extending the vacation request). Within studies, means with differing subscripts in a column are significantly different ( $p < .01$ , based on Bonferroni-corrected pairwise comparisons).

which replicated the results of Study 1. The odds of severe bribery were 2.76 higher when participants could exercise this option immediately compared with when they first had to engage in milder forms of corruption (see Table 2). We found no significant difference in the likelihood of severe corruption when comparing the steep-cliff with the reverse-slippery-slope condition nor when comparing both slippery-slope conditions (all  $ps > .112$ ).

Participants' self-evaluations of their behavior were again influenced by the decisions made in the game, both for perceived corruptness,  $F(3, 224) = 54.21$ ,  $p < .001$ ,  $\eta_p^2 = .421$ , and perceived fairness,  $F(3, 224) = 35.59$ ,  $p < .001$ ,  $\eta_p^2 = .323$  (Table 3). Participants who refrained from bribery perceived their behavior as less corrupt ( $M = 1.55$ ,  $SD = 1.02$ ) and more fair ( $M = 4.86$ ,  $SD = 1.21$ ) than those who obtained full advantages in the game through bribery (corruptness:  $M = 4.25$ ,  $SD = 1.69$ ,  $p < .001$ ; fairness:  $M = 2.66$ ,  $SD = 1.72$ ,  $p < .001$ ). No other group differences were significant ( $ps > .210$ ). Again, the way in which full advantages were obtained did not affect the corruptness and fairness ratings, as the interaction between decision and condition was not significant ( $ps = .125-.860$ ).

## Discussion

Study 2 replicated the finding that severe corruption occurs more frequently when the opportunity to exercise it is presented abruptly rather than gradually. We found no difference between the steep-cliff and reverse-slippery-slope conditions, which might be because after committing the more severe form of bribery, the second act appears less problematic. However, participants' self-evaluations of corruptness and fairness were not influenced by the different slopes. Independently of condition, severe corruption was perceived as most corrupt and least fair.

## Study 3

To increase the stakes of the decisions in the game and to increase mundane realism, we introduced real monetary incentives for participants to make corrupt decisions in Study 3.

## Method

**Participants.** In total, 125 participants (age:  $M = 21.50$  years,  $SD = 5.18$ ; 76.8% female, 23.2% male) completed the third study. In this laboratory experiment, we again aimed for at least 40 participants per cell. We adopted the same experimental design as in Study 2, with the addition that participants received a monetary payoff at the end of the game. Specifically, they were paid between

€0.10 and €1.20 in proportion to how many game dollars they had earned at the end of the final round (see the Supplemental Material available online for the payoff scheme).

**Measures and procedure.** Procedures were the same as in Study 2, but to expand the scope of the moral evaluation of participants' behavior, we used the Multidimensional Scale for Evaluations of Business Ethics (MSEBE; Reidenbach & Robin, 1990; Reidenbach, Robin, & Dawson, 1991) instead of the self-evaluations of corruptions and fairness. Participants were instructed to rate their behavior in the game on eight 101-point slider scales, which formed the following three subscales. First, the moral-equity subscale assessed broad moral-equity concerns using four sets of opposing scale anchors (e.g., *just vs. unjust*; *morally right vs. not morally right*); this subscale showed high internal reliability ( $\alpha = .89$ ). Second, the relativism subscale measured relativistic moral evaluation using two sets of scale anchors (e.g., *culturally acceptable vs. culturally unacceptable*;  $\alpha = .75$ ). Third, the contractualism subscale measured deontological moral reasoning with two sets of scale anchors (e.g., *violates an unwritten contract vs. does not violate an unwritten contract*); this subscale had acceptable internal reliability ( $\alpha = .60$ ).

## Results

Replicating the results of Studies 1 and 2, Study 3 showed that the chances of severe corruption differed significantly between the steep-cliff and the slippery-slope conditions,  $b = 1.65$ , Wald = 10.22,  $p = .001$ ,  $\exp(b) = 5.25$ . The odds of severe bribery were 5.25 times higher when participants could exercise this option immediately than when they first had to engage in milder forms of corruption (see Table 2). In addition, we found a significant difference between the steep-cliff condition and the reverse-slippery-slope condition,  $b = 1.32$ , Wald = 6.50,  $p = .011$ ,  $\exp(b) = 3.75$ ; specifically, the odds of severe bribery were 3.75 times higher in the steep-cliff condition than in the reverse-slippery-slope condition. The difference between the slippery-slope and the reverse-slippery-slope conditions was not significant ( $p > .250$ ).

Participants' self-evaluations of their moral behavior differed significantly on two of the three moral dimensions assessed by the MSEBE. We found significant differences in moral equity,  $F(3, 120) = 5.46$ ,  $p = .002$ ,  $\eta_p^2 = .12$ , and relativism,  $F(3, 129) = 3.70$ ,  $p = .014$ ,  $\eta_p^2 = .01$ , depending on whether or not participants bribed the official (see Table 4). Bonferroni-corrected comparisons indicated that participants who refrained from bribery perceived their behavior as less equity violating ( $M = 30.31$ ,  $SD = 26.62$ ) and more culturally acceptable ( $M = 48.54$ ,  $SD = 26.85$ ) than those who engaged in severe

**Table 4.** Self-Evaluations of Moral Equity, Relativism, and Contractualism in Studies 3 and 4

Study and outcome	Moral equity		Relativism		Contractualism	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Study 3						
No bribery	30.31 <sub>a</sub>	26.62	29.94 <sub>a</sub>	24.12	60.77 <sub>a</sub>	30.17
Mild bribery	44.50 <sub>ab</sub>	16.75	41.77 <sub>ab</sub>	18.28	54.77 <sub>ab</sub>	17.69
Severe bribery	52.35 <sub>b</sub>	25.67	48.54 <sub>b</sub>	26.85	53.38 <sub>a</sub>	25.19
Study 4						
No bribery	33.38 <sub>a</sub>	23.69	36.94 <sub>a</sub>	52.43	65.69 <sub>a</sub>	25.03
Mild bribery	49.96 <sub>ab</sub>	17.78	48.24 <sub>ab</sub>	18.60	53.68 <sub>ab</sub>	19.68
Severe bribery	57.91 <sub>b</sub>	28.35	50.64 <sub>b</sub>	27.01	48.68 <sub>b</sub>	28.64

Note: Mild bribery occurred when participants extended the invitation to the banquet but not to the vacation. Severe bribery occurred when participants extended the vacation request either abruptly (without extending the banquet request first) or gradually (by first extending the banquet request and then extending the vacation request). Within studies, means with differing subscripts in a column were significantly different ( $p < .01$ , based on Bonferroni-corrected pairwise comparisons).

bribery (moral equity:  $M = 52.35$ ,  $SD = 25.67$ ; relativism:  $M = 29.94$ ,  $SD = 24.41$ ; all  $ps \leq .001$ ). No other differences between bribery decisions were significant ( $ps > .250$ ). Entering deontological moral reasoning as a dependent variable yielded no significant difference between the different bribery decisions ( $p > .250$ ).

## Discussion

Study 3, in which real monetary incentives were used, replicated the steep-cliff effect: Severe corruption occurred more frequently as a result of a single opportunity than as the result of a gradual process. Independently of whether the slope of severity increased or decreased, there was a general reluctance to repeatedly engage in corruption. The moral evaluations of the behavior in the game indicated that bribing was perceived as unethical. More specifically, in this study, bribery was perceived rather as a violation of moral equity ("it creates injustice") and social norm ("it is culturally unacceptable") than as a violation of an unspoken rule.

## Study 4

The previous three studies did not include a real victim of the corrupt behavior. We therefore conducted a fourth study in which all roles in the game were taken by participants, which meant that bribery would incur monetary costs to another existing participant. Also, in this study, we quadrupled the incentives given to participants who engaged in corruption.

## Method

**Participants.** We commissioned the Qualtrics Panels Team (see <https://www.qualtrics.com/online-sample/>) to

recruit a stratified sample of 400 participants (100 per cell) from a research panel that is nationally representative of the U.S. population. These individuals (age:  $M = 44.81$  years,  $SD = 16.16$ ; 51.2% female, 48.8% male) took part in an online experiment.

**Measures and procedure.** We used the same paradigm as in the previous studies, with the following modifications. First, all roles in the game were taken by actual participants, which resulted in four conditions ( $n = 100$  each) to which participants were randomly assigned. As in the previous studies, two groups of potentially corrupt players faced the decision to engage in bribery either abruptly (steep-cliff condition) or gradually (slippery-slope condition)—we did not include a reverse-slippery-slope condition so as to facilitate the matching procedure (see next paragraph). In addition, a third group of participants adopted the role of the player who had no opportunity to bribe—the potential victim. The fourth group played the role of the public official.

To keep the decisional structure for the potentially corrupt players as similar as possible, we limited the action space of the player assigned the role of the public official so that he or she always accepted bribes and acted accordingly. We used the strategy method (Brandts & Charness, 2011) to match the decisions of the potentially corrupt players to the decisions of the players in the other two groups to determine the final payoffs. This was done so that participants' decisions would actually affect other participants. Second, we increased the potential monetary gain of corruption so that it would yield up to \$6 in Amazon gift vouchers (see the Supplemental Material for an overview of the payoff scheme).

We combined the postgame measures used in the previous studies. Hence, we assessed perceived corruptness with the item used in Studies 1 and 2 (perceived fairness

was not assessed), while perceived morality was measured with the MSEBE—which consisted of the subscales moral equity ( $\alpha = .93$ ), relativism ( $\alpha = .85$ ), and contractualism ( $\alpha = .86$ ). All answers were given on a 100-point slider scale.

## Results

In line with Studies 1 through 3, the results of Study 4 revealed that the odds of severe bribery were 1.71 times higher when participants could exercise this option immediately than when they had to do so gradually—a marginally significant difference,  $b = 0.53$ , Wald = 2.88,  $p = .090$ ,  $\exp(b) = 1.71$  (see Table 2). An ANOVA on participants' self-evaluations of their behavior showed significant differences in perceived corruptness,  $F(3, 197) = 24.10$ ,  $p < .001$ ,  $\eta_p^2 = .197$ , between those who refrained from bribery and those who engaged in either mild or severe bribery ( $ps < .002$ ; see Table 3). We also found significant group differences for each of the subscales of the MSEBE—moral equity,  $F(3, 197) = 13.71$ ,  $p < .001$ ,  $\eta_p^2 = .12$ ; relativism,  $F(3, 197) = 4.46$ ,  $p = .013$ ,  $\eta_p^2 = .043$ ; and contractualism,  $F(3, 197) = 6.29$ ,  $p = .002$ ,  $\eta_p^2 = .06$ . Participants who refrained from bribery rated their behavior as more moral on all three subscales than did those who engaged in severe bribery (all  $ps < .010$ ; see Table 4)—which again indicates that participants who engaged in severe bribery perceived their behavior as less moral and more corrupt than those who refrained from it. For all measures, we found neither significant differences between mild and severe corruption ( $ps > .74$ ) nor an interaction between condition and decision (all  $ps > .22$ ).

Next, because Studies 1 through 4 differed in a number of respects (e.g., procedure, sample size), we conducted a meta-analysis to address the generality of findings across the four studies. We computed  $\chi^2$  values from the logistic regression analyses for each study and first tested whether the overall odds of severe corruption differed between the slippery-slope and the steep-cliff conditions. This random-effects analysis drew on all four studies ( $N = 514$ ) and revealed a significant difference (point estimate = 0.38, 95% confidence interval, or CI = [0.22, 0.61],  $z = -3.87$ ,  $p < .0001$ ). Participants across all studies were significantly more likely to engage in severe corruption in the steep-cliff condition than in the slippery-slope condition. Moreover, comparing the steep-cliff condition with the reverse-slippery-slope condition (Studies 2 and 3, overall sample size = 234), we also found a significant difference (point estimate = 0.50, 95% CI = [0.27, 0.93],  $z = -2.15$ ,  $p = .003$ ). Finally, it is noteworthy that the slippery-slope condition did not significantly differ from the reverse-slippery-slope condition in Studies 2 and 3 combined (point estimate =  $-0.22$ , 95% CI =

[ $-0.49, 0.03$ ],  $z = -1.71$ ,  $p = .08$ ). Taken together, these findings show that the odds of severe corruption are significantly higher in the steep-cliff condition than in the reverse-slippery-slope condition and the slippery-slope condition.

## Discussion

In Study 4, we again found support (albeit marginal) for the steep-cliff effect: Participants were more likely to engage in abrupt than in gradual bribery. Across four independent studies, evidence suggests that under the circumstances of our role-playing game, corruption is more strongly rooted in a single tempting opportunity than in a two-step process.

## General Discussion

Contrary to the widespread belief that people gradually slide into corruption down a slippery slope, the present studies provide novel evidence that people may instead jump into severe corruption over a steep cliff. Across four studies, people were more likely to engage in severe corruption when this option was presented abruptly rather than gradually, even though they did acknowledge the unethicity of severe corruption. In fact, moral self-evaluations of severe corruption as well as the (combined) economic costs and benefits did not differ significantly across the different conditions.

Given that most scientists and laymen alike believe in the slippery-slope analogy, it is important to ask the obvious: How can one account for evidence favoring the steep-cliff metaphor rather than the slippery-slope metaphor? One line of reasoning is that the intuitively compelling notion that repeated transgressions lower moral thresholds may not always be true. Rather than following a process of habituation and moral disengagement, it is possible that people seek to avoid repetition of corruption because it is expected to be psychologically taxing—especially when the opportunities for corruption occur in short succession (Mazar, Amir, & Ariely, 2008b). It poses another threat to one's self-image and therefore even a second, more minor form of corruption can be undesirable (Study 3).

When deciding whether to engage in unethical behavior, people take both the external and the internal psychological cost and benefits of the respective act into account (Messick & Bazerman, 1996). Unlike in previous studies (Welsh et al., 2014), the economic costs and benefits were kept constant across the different conditions in the present studies. Thus, our findings point toward a new psychological factor—the sequence of decisions. A single severe act, directly presented to participants, might



be easier to justify than a two-step process and thus could cause less tension between being a moral person, on the one hand, and enjoying the benefits of dishonesty, on the other hand (Batson, 2016).

A complementary argument is that a single act requires less intentionality and planning than repeated behaviors (Batson & Powell, 2003). Large benefits might reinforce a selective focus on self-interest rather than on a positive self-image. In contrast to previous work (Welsh et al., 2014), the present studies looked at bribery, a form of unethical behavior that requires a collaboration between multiple corrupt agents (Köbis, van Prooijen, Righetti, & Van Lange, 2016; Weisel & Shalvi, 2015). The resulting local social utility ("My actions are also helping the other person"; Ayal & Gino, 2011) might further facilitate these self-serving justifications.

Clearly, future research is needed to examine the underlying mechanisms and boundary conditions of the steep-cliff effect of corruption. For example, how severe corruption emerges under varying punishment regimes is still unclear. Yet given the ubiquity of the belief in the slippery-slope analogy, we conclude with two lessons from the present research. One is that people may be more willing to engage in severe, single (and perhaps unexpected) instances of corruption than is widely believed—even if they recognize the immorality of these behaviors. Another lesson is that repeated forms of unethical behavior may be more psychologically taxing than is generally believed, especially if the second occasion brings about smaller benefits for the self than a single occasion does. These findings thus shed light on an unexplored area of sequential corrupt decision making. Overall, our findings suggest that individuals who are willing to engage in bribery seek to obtain the biggest advantage for the lowest moral price. Instead of repeatedly engaging in corruption (sliding down a slippery slope), they seize a one-time opportunity (jumping off a steep cliff).

### Action Editor

Ralph Adolphs served as action editor for this article.

### Author Contributions

N. C. Köbis developed the study concept. All authors contributed to the study design. Testing and data collection were performed by N. C. Köbis, who analyzed and interpreted the data under the supervision of J.-W. van Prooijen, F. Righetti, and P. A. M. Van Lange. N. C. Köbis drafted the manuscript, and J.-W. van Prooijen, F. Righetti, and P. A. M. Van Lange provided critical revisions. All authors approved the final version of the manuscript for submission.

### 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.

### Funding

N. C. Köbis is supported financially by a Research Talent Grant from the Netherlands Organisation for Scientific Research (Grant No. 406-12-003; <http://www.nwo.nl/en/funding/our-funding-instruments/magw/research-talent/research-talent.html>). The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

### Supplemental Material

Additional supporting information can be found at <http://journals.sagepub.com/doi/suppl/10.1177/0956797616682026>

### Open Practices



All data and materials have been made publicly available via Figshare and can be accessed at [https://figshare.com/articles/The\\_Road\\_to\\_Bribery\\_and\\_Corruption/3849237](https://figshare.com/articles/The_Road_to_Bribery_and_Corruption/3849237). The complete Open Practices Disclosure for this article can be found at <http://journals.sagepub.com/doi/suppl/10.1177/0956797616682026>. This article has received badges for Open Data and Open Materials. More information about the Open Practices badges can be found at <http://www.psychologicalscience.org/publications/badges>.

### Notes

1. The ethical review board of Vrije Universiteit Amsterdam approved all the studies reported in this manuscript.
2. Half of these participants received a time-pressure prompt, which had no effect on any of the reported results (all  $ps > .125$ ).
3. In all studies reported in this manuscript, the significant main effects of condition on the likelihood of severe corruption and the main effects of perceived corruptness and perceived fairness remained significant when we controlled for gender, age, and education (all  $ps < .002$ ).

### References

- Ariely, D. (2012). *The (honest) truth about dishonesty: How we lie to everyone—especially ourselves*. London, England: HarperCollins.
- Ashforth, B. E., & Anand, V. (2003). The normalization of corruption in organization. *Research in Organizational Behavior*, 25, 1–52.
- Ayal, S., & Gino, F. (2011). Honest rationales for dishonest behavior. In M. Mikulincer & P. R. Shaver (Eds.), *The social psychology of morality: Exploring the causes of good and evil* (pp. 149–166). Washington, DC: American Psychological Association. doi:10.1037/13091-008
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- Bandura, A. (1999). Moral disengagement in the perpetration of inhumanities. *Personality and Social Psychology Review*, 3, 193–209. doi:10.1207/s15327957pspr0303\_3
- Batson, C. D. (2016). Moral motivation: A closer look. In J.-W. van Prooijen & P. A. M. Van Lange (Eds.), *Cheating, corruption, and concealment: The roots of dishonesty* (pp. 15–32). Cambridge, England: Cambridge University Press.

- Batson, C. D., & Powell, A. A. (2003). Altruism and prosocial behavior. In T. Millon & M. J. Lerner (Eds.), *Handbook of psychology, Vol. 5: Personality and social psychology* (pp. 463–484). Hoboken, NJ: Wiley.
- Brandts, J., & Charness, G. (2011). The strategy versus the direct-response method: A first survey of experimental comparisons. *Experimental Economics*, 14, 375–398. doi:10.1007/s10683-011-9272-x
- Darley, J. M. (2005). The cognitive and social psychology of contagious organizational corruption. *Brooklyn Law Review*, 70, 1177–1194.
- Demidenko, E. (2007). Sample size determination for logistic regression revisited. *Statistics in Medicine*, 26, 3385–3397.
- Festinger, L., & Carlsmith, J. (1959). Cognitive consequences of forced compliance. *The Journal of Abnormal and Social Psychology*, 58, 203–210. doi:10.1037/h0041593
- Gino, F., & Bazerman, M. H. (2009). When misconduct goes unnoticed: The acceptability of gradual erosion in others' unethical behavior. *Journal of Experimental Social Psychology*, 45, 708–719. doi:10.1016/j.jesp.2009.03.013
- Kipnis, D., Castell, P. J., Gergen, M., & Mauch, D. (1976). Metamorphic effects of power. *Journal of Applied Psychology*, 61, 127–135. doi:10.1037/0021-9010.61.2.127
- Köbis, N. C., van Prooijen, J.-W., Righetti, F., & Van Lange, P. A. M. (2015). "Who doesn't?"—The impact of descriptive norms on corruption. *PLoS ONE*, 10(6), Article e0131830. doi:10.1371/journal.pone.0131830
- Köbis, N. C., van Prooijen, J.-W., Righetti, F., & Van Lange, P. A. M. (2016). Prospection in individual and interpersonal corruption dilemmas. *Review of General Psychology*, 20, 71–85.
- Mazar, N., Amir, O., & Ariely, D. (2008a). The dishonesty of honest people: A theory of self-concept maintenance. *Journal of Marketing Research*, 45, 633–644. doi:10.1509/jmkr.45.6.633
- Mazar, N., Amir, O., & Ariely, D. (2008b). More ways to cheat: Expanding the scope of dishonesty. *Journal of Marketing Research*, 45, 651–653.
- Mazar, N., & Ariely, D. (2006). Dishonesty in everyday life and its policy implications. *Journal of Public Policy Marketing*, 25, 117–126. doi:10.1509/jppm.25.1.117
- Messick, D. M., & Bazerman, M. H. (1996). Ethical leadership and the psychology of decision making. *Sloan Management Review*, 37(2), 9–22.
- Nash, J. F., Jr. (1950). Equilibrium points in n-person games. *Proceedings of the National Academy of Sciences, USA*, 36, 48–49. Retrieved from <http://www.jstor.org/stable/88031>
- Reidenbach, R. E., & Robin, D. P. (1990). Toward the development of a multidimensional scale for improving evaluations of business ethics. *Journal of Business Ethics*, 9, 639–653.
- Reidenbach, R. E., Robin, D. P., & Dawson, L. (1991). An application and extension of a multidimensional ethics scale to selected marketing practices and marketing groups. *Journal of the Academy of Marketing Science*, 19, 83–92. doi:10.1007/BF02726000
- Serra, D., & Wantchekon, L. (2012). Experimental research on corruption: Introduction and overview. In D. Serra & L. Wantchekon (Eds.), *New advances in experimental research on corruption* (pp. 1–11). Bingley, England: Emerald Group Publishing Limited. doi:10.1108/S0193-2306(2012)0000015003
- Tenbrunsel, A. E., & Messick, D. M. (2004). Ethical fading: The role of self-deception in unethical behavior. *Social Justice Research*, 17, 223–236. doi:10.1023/B:SORE.0000027411.35832.53
- Transparency International. (2010). *Corruption Perceptions Index 2010*. Retrieved from [http://www.transparency.org/whoweare/organisation/faqs\\_on\\_corruption](http://www.transparency.org/whoweare/organisation/faqs_on_corruption)
- Weisel, O., & Shalvi, S. (2015). The collaborative roots of corruption. *Proceedings of the National Academy of Sciences, USA*, 112, 10651–10656. doi:10.1073/pnas.1423035112
- Welsh, D. T., Ordóñez, L. D., Snyder, D. G., & Christian, M. S. (2014). The slippery slope: How small ethical transgressions pave the way for larger future transgressions. *Journal of Applied Psychology*, 99, 114–127. doi:10.1037/a0036950