

## Research Article

# Contagion and Differentiation in Unethical Behavior

## The Effect of One Bad Apple on the Barrel

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**ABSTRACT**—*In a world where encounters with dishonesty are frequent, it is important to know if exposure to other people's unethical behavior can increase or decrease an individual's dishonesty. In Experiment 1, our confederate cheated ostentatiously by finishing a task impossibly quickly and leaving the room with the maximum reward. In line with social-norms theory, participants' level of unethical behavior increased when the confederate was an in-group member, but decreased when the confederate was an out-group member. In Experiment 2, our confederate instead asked a question about cheating, which merely strengthened the saliency of this possibility. This manipulation decreased the level of unethical behavior among the other group members. These results suggest that individuals' unethicality does not depend on the simple calculations of cost-benefit analysis, but rather depends on the social norms implied by the dishonesty of others and also on the saliency of dishonesty.*

It is almost impossible to open a newspaper or turn on a television without being exposed to a report of dishonest behavior of one type or another. Names such as Enron, Tyco, and Arthur Andersen provide extreme examples; other examples include cheating on taxes, insurance fraud, employee theft, academic dishonesty, athletes' use of illegal drugs, and of course illegal downloading of software and digital content.

Given so many first- and second-hand encounters with unethical behavior, one important question that comes to mind concerns the effect of such exposure on otherwise honest individuals. Do they tend to start engaging in unethical behavior? In the current work, we explored this very question by examining the conditions under which exposure to the unethical

behavior of another person increases or decreases individuals' dishonesty.

### OTHER INDIVIDUALS' UNETHICAL BEHAVIOR: THREE SOURCES OF INFLUENCE

The unethical behavior of other individuals can influence observers' behavior in (at least) three possible ways. First, when exposed to the dishonesty of others, individuals may change their estimate of the likelihood of being caught cheating (e.g., a student who sees a peer cheating on an exam and getting away with it may change his or her estimation of the probability of being caught in the act). Together with the amount to be gained from cheating and the expected punishment, the likelihood of being caught cheating is a central input in the rational crime theory (Allingham & Sandmo, 1972; Becker, 1968). In this rational framework, the individual engages in a cost-benefit calculation that leads to the ultimate decision about dishonesty (support for this perspective is evident in work by Hill & Kochendorfer, 1969; Leming, 1980; Michaels & Miethe, 1989; Steininger, Johnson, & Kirts, 1964; Tittle & Rowe, 1973; and Vitro & Schoer, 1972). As a consequence of such cost-benefit analysis, any change in the estimation of the likelihood of being caught cheating can influence the magnitude of dishonesty an individual chooses to engage in (e.g., the student who sees a peer cheating on an exam and getting away with it changes his or her estimation of the probability of being caught in the act and is thus more likely to cheat).

A second way in which observing others' behavior may change one's own dishonesty concerns the *saliency* of ethicality at the moment one is considering a particular behavior. Previous research has shown that when the categorization of a particular behavior is not clear-cut, people can, and in fact often do, categorize their own actions in positive terms, avoiding negative updating to their moral self-image (Baumeister, 1998; Schweitzer & Hsee, 2002). However, Mazar, Amir, and Ariely

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(2008) found that drawing people's attention to moral standards could reduce dishonest behaviors. For example, after being asked to recall the Ten Commandments, participants who were given the opportunity to cheat, and gain financially from this action, did not cheat at all; in contrast, participants who had the same opportunity to cheat but had not been given the moral reminder cheated substantially. These results suggest that when unethical behavior is made salient, people may pay greater attention to their own moral standards and categorize the ethicality of their own behavior more rigidly. Such momentary fluctuations in moral standards are also evident in a study by Vohs and Schooler (2008), who found that priming participants to believe in determinism (e.g., by making them read statements endorsing determinism) led to higher levels of dishonesty than inducing participants to believe in free will. The saliency hypothesis suggests that when people observe someone behaving dishonestly (e.g., when they read about a new corruption scheme), the saliency of this act increases, making them pay attention to honesty and to their own standards of honesty, and, as a consequence, decreasing their tendency to engage in dishonest acts.

A third possible influence of observing the unethicity of another person is that it simply changes one's understanding of the social norms related to dishonesty (Cialdini & Trost, 1998). Cialdini, Reno, and Kallgren (1990) defined two types of social norms: *descriptive norms*, which specify what most people do in a particular situation, and *injunctive norms*, which specify the particular behaviors that most people approve or disapprove of. According to norm-focus theory (Cialdini et al., 1990; Reno, Cialdini, & Kallgren, 1993), the social context determines which of these two types of norms people attend to at a particular time and how these norms will impinge on an individual's immediate behavior. For example, Cialdini et al. had a confederate litter in the environment in front of some participants or simply walk through the environment in front of others. Participants who saw the confederate litter subsequently littered more than those who did not see the confederate litter if the environment was clean, but this effect was reversed when the environment was dirty. This kind of social learning by observing other people's behavior was also demonstrated in Bandura's classic studies (Bandura, 1965; Bandura, Ross, & Ross, 1961, 1963), in which children exposed to an aggressive model reproduced considerably more aggressive behaviors toward a Bobo doll than did children who were not exposed to the aggressive model. Moreover, children reproduced more aggressive behaviors when an adult did not comment on the aggressive model's actions (or when an adult was not present in the room) than when the adult disapproved of those actions using negative comments (Hicks, 1968; Siegel & Kolin, 1959). Children might have interpreted the lack of evaluative comments on the model's aggressive behavior and the absence of an adult in the room as signs of permission, through social norms.

The social-norms account implies another important factor that might influence the degree to which people are affected by the unethical behavior of others around them: the degree to which they identify with those others. The idea is that when the identification is strong, the behaviors of others will have a larger influence on observers' social norms. Field evidence for this idea was obtained in a large-scale survey of Australian citizens (Wenzel, 2004), which found that the presence of social norms elicited consistent behavior (i.e., tax compliance), but only when respondents identified with the group to which the norms were attributed. These findings can be explained by social-identity theory (Tajfel, 1982; Tajfel & Turner, 1979, 1986), according to which group members tend to use their own group to maintain or enhance a positive social identity and self-esteem, and as a consequence are motivated to conform with norms that provide them with an in-group identity, rather than an out-group one (see also Rubin & Hewstone, 1998).

On the basis of social-identity theory, we hypothesized that the influence of the social norm triggered by observed unethical behavior will depend on whether the actor is an in-group or out-group member. When an in-group member is observed engaging in unethical behavior, other group members may make him or her the standard for the descriptive norm and, as a result, engage in increased unethical behavior themselves. In contrast, when an out-group member engages in unethical behavior, the injunctive norm is likely to be salient, and non-group members may want to distance themselves from this "bad apple" in order to maintain a distinctive and positive social identity (Brewer, 1993; Tajfel & Turner, 1986).

In summary, the three mechanisms we have described (i.e., a change in the estimated likelihood of being caught, saliency, and social norms) lead to different predictions about the influence of being exposed to other people's dishonesty. The estimated-likelihood-of-being-caught mechanism suggests that observing another person behaving dishonestly will increase one's propensity to act dishonestly. The saliency mechanism suggests that observing another person behaving dishonestly will decrease one's propensity to act dishonestly. Finally, the social-norms mechanism suggests that when the observed other is an out-group member, in-group members will show a reduced likelihood of engaging in dishonest behaviors, but when the observed other is an in-group member, the social norms will change and the other members of the group will be more likely to engage in dishonest behavior.

We conducted two laboratory experiments to investigate how cost-benefit analysis, saliency, and social norms interact to promote or inhibit unethical behavior. In these experiments, participants were asked to solve simple math problems in the presence of others. In some of the conditions, participants were given the opportunity to cheat by misreporting their performance and earning undeserved money; this manipulation allowed us to measure their level of dishonesty. Most important, in some of the conditions, participants were exposed to a confed-

erate who either exhibited dishonesty or merely asked a question about the possibility of cheating; this manipulation allowed us to test the three proposed mechanisms by which observing the behavior of others can influence levels of dishonesty.

### EXPERIMENT 1: EFFECTS OF THE CONFEDERATE'S IDENTITY

The first experiment consisted of four conditions. The control condition, which gave participants no opportunity to cheat, served as a baseline for performance on the task. The second condition—the shredder condition—served as a baseline for the magnitude of cheating when participants had the opportunity to cheat but were not exposed to someone's dishonesty. For the final two conditions (in-group-identity and out-group-identity), we hired a professional actor who served as a confederate and made it clear to the participants at the onset of the experiment that he was cheating to the greatest extent possible.

By comparing these four conditions, we were able to test the influence of the three mechanisms for dishonesty: According to the cost-benefit (rational) perspective, the confederate's behavior, whether in the in-group-identity or the out-group-identity condition, should have made it clear that participants could get away with cheating, and hence should have increased the tendency to cheat; thus, this perspective predicted that cheating would be lowest in the control condition, at an intermediate level in the shredder condition, and highest in the in-group-identity and out-group-identity conditions. According to the saliency mechanism, cheating after exposure to the confederate's unethical behavior would be expected to be lower than the cheating baseline (i.e., in the shredder condition), regardless of the confederate's identity; thus, this perspective predicted that cheating would be lowest in the control condition, intermediate in the in-group-identity and out-group-identity conditions, and highest in the shredder condition. Finally, according to the social-norms account, cheating would be highest when the confederate was a member of the in-group, and much lower when he was a member of the out-group and participants wanted to distance themselves from him; thus, this perspective predicted that cheating would be lowest in the control condition, higher in the out-group-identity condition, still higher in the shredder condition, and highest in the in-group-identity condition.

### Method

#### *Participants*

One hundred forty-one Carnegie Mellon University students (79 male, 62 female) participated in the study for a maximum payment of \$10. Participants were randomly assigned to one of four conditions: control, shredder, shredder with in-group confederate, and shredder with out-group confederate. The average age of participants was 22 years ( $SD = 4.57$ ).

#### *Design and Procedure*

Twelve sessions, each lasting about 15 min, were conducted. We randomly assigned conditions to sessions. Between 8 and 14 participants were included in each session (average = 12). Each participant received a brown envelope that contained \$10 (eight \$1 bills and four half-dollar coins) and an empty white envelope. Participants also received two sheets of paper: The first was a worksheet with 20 matrices, each containing 12 numbers consisting of an integer and two decimals (e.g., 6.39), and the second was a collection slip on which participants were supposed to report their performance and answer questions about their gender and age. Once the experiment started, participants had 5 min to find two numbers per matrix that added up to 10. The allotted time was not sufficient for anyone to solve all 20 matrices. For each pair of numbers correctly identified, participants were allowed to keep \$0.50 from their supply of money, and at the end of the allotted time, they were asked to transfer the unearned amount to the white envelope.

There were two boxes in the room: a blue recycling box for the questionnaires and a cardboard box for the white envelopes containing unearned money. In the control condition, the two boxes were located on the experimenter's desk. After the 5 min had passed, participants were asked to line up near the desk and hand the test to the experimenter. The experimenter checked how many matrices each participant had solved correctly, wrote down that score on the collection slip, and deposited both sheets in the blue recycling box. Next, the experimenter made sure the participant left the correct amount of unearned money in the white envelope (based on the participant's performance) and deposited the white envelope into the cardboard box.

In the shredder condition, the boxes were located in two different corners of the classroom, with the recycling box standing next to an electronic paper shredder. After the 5 min had passed, participants were asked to count the number of matrices they had solved correctly, write this number down on the collection slip, walk to the electronic shredder, and shred their worksheet. Next, participants transferred their unearned money from the brown envelope into the white envelope, and placed the white envelope and the collection slip in the cardboard box. During this procedure, the experimenter remained at her desk and did not engage in any process to check that the participants followed her instructions.

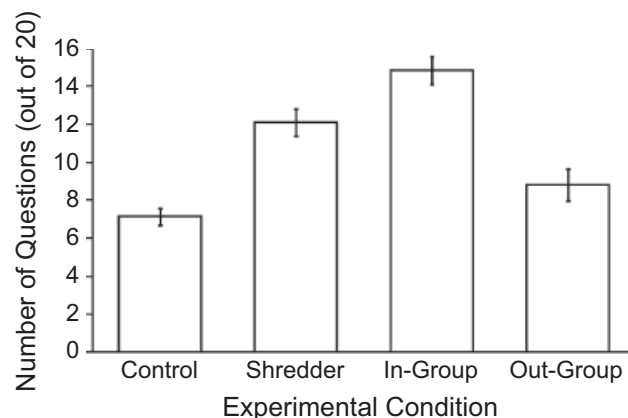
Finally, in the two identity conditions (the in-group-identity and the out-group-identity conditions), we hired a professional actor to be our confederate. These conditions followed the same general procedure used in the shredder condition, with one difference: About 60 s after the experiment started (such a short time that it would have been clear to the participants that the person was lying or cheating), the confederate stood up and said loudly: "I've solved everything. What should I do?" The experimenter reminded him about the procedure (shred, transfer money, deposit the white envelope and collection sheet). When the actor finished with the shredding, he said: "I solved every-

thing. My envelope for the unearned money is empty. What should I do with it?" The experimenter replied: "If you don't have money to return, you have finished and are free to go." The actor then said, "I want to thank you. I wish all of you a wonderful day." He left the room smiling, without going to the returned-money box. The only difference between the in-group-identity and the out-group-identity conditions was the T-shirt that the confederate was wearing. Because the study was conducted at Carnegie Mellon University, the confederate wore a plain T-shirt in the in-group-identity condition and a University of Pittsburgh T-shirt in the out-group-identity condition (see Levine, Prosser, Evans, & Reicher, 2005, for a similar manipulation of in-group and out-group membership in a laboratory setting).

## Results and Discussion

A hierarchical linear model with session as a factor nested under condition revealed significant differences in the number of matrices that were reported to have been solved correctly across the four conditions,  $F(3, 129) = 26.01, p < .001$ . The effect of session was not significant. As Figure 1 shows, participants in the control condition reported the lowest number of correctly solved matrices, and the level of cheating in the shredder condition was elevated by more than 50%. Most important, the level of cheating was dramatically influenced by the confederate, such that cheating increased further in the in-group-identity condition and decreased in the out-group-identity condition.

Simple planned contrasts demonstrated that the number of matrices reported to be solved correctly increased from the control to the shredder condition ( $p < .001$ ). In addition, this number increased significantly from the shredder condition to the in-group-identity condition ( $p < .001$ ) and decreased significantly from the shredder condition to the out-group-identity condition ( $p < .01$ ). Finally, the difference between the out-group-identity condition and the control condition was also significant ( $p < .05$ ), suggesting that although the out-group manipulation reduced the level of cheating, it did not eliminate



**Fig. 1.** Number of problems reported to have been solved correctly in Experiment 1 as a function of experimental condition. Error bars represent standard errors.

cheating. Overall, the pattern of results supports the social-norms hypothesis, as cheating was lowest in the control condition, higher in the out-group-identity condition, still higher in the shredder condition, and highest in the in-group-identity condition. The results do not support the cost-benefit perspective (according to which the level of cheating would be highest and approximately the same in the two identity conditions) or the saliency hypothesis (according to which the level of cheating would be intermediate and approximately the same in the two identity conditions).

The social-norms hypothesis was also supported by the percentage of participants who imitated the confederate's behavior and reported solving all 20 matrices (none of them claimed to have solved all the problems before the end of the 5-min period). This percentage was significantly higher in the in-group-identity condition (24.3%, 9 out of 37) than in the out-group-identity condition (3.6%, 1 out of 28),  $\chi^2(1, N = 65) = 5.27, p < .05$ .

## EXPERIMENT 2: EFFECTS OF SALIENCY

The results of Experiment 1 made it clear that social norms—and, in particular, exposure to a dishonest act by an in-group versus an out-group member—have a large effect on dishonesty. In addition, given that the probability of being caught was the same in the two identity conditions, Experiment 1 also made it clear that cost-benefit trade-offs cannot be a main cause for dishonesty (at least in our setting). However, because the identity manipulation used in Experiment 1 involved both identity and saliency, it was premature to dismiss the saliency account, as saliency and social norms may have worked in concert. In Experiment 2, we tested the independent effect of saliency. This experiment consisted of three conditions: the control condition, which gave participants no opportunity to cheat; the shredder condition, which provided participants an opportunity to cheat; and the saliency condition, in which participants had an opportunity to cheat and a confederate strengthened the saliency of cheating behavior without changing the group's norms. If the saliency hypothesis is correct, participants will cheat when they have the opportunity to do so, but will cheat to a smaller extent when the saliency of honesty increases.

## Method

### Participants

Ninety-two students (49 male, 43 female) participated in this experiment for extra class credit in their introductory business courses. In addition, participants received a monetary payment based on their self-reported performance on the task. Participants' average age was 20 years ( $SD = 1.16$ ). The participants were randomly assigned to one of the three conditions.

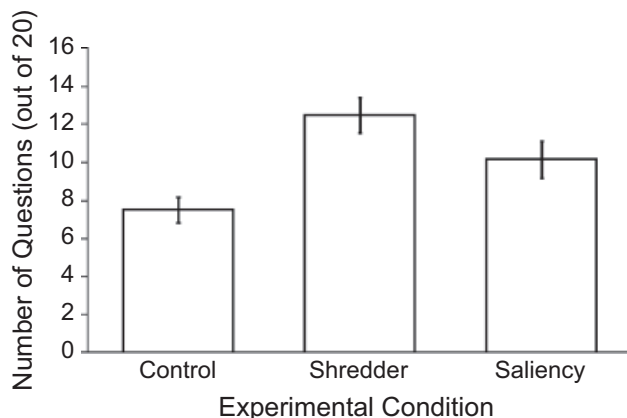


### Design and Procedure

Six sessions, each lasting about 15 min, were conducted. We randomly assigned conditions to sessions. Between 15 and 17 participants were included in each session (average = 15). The control and the shredder conditions matched the corresponding conditions in Experiment 1 exactly, but the saliency condition was novel. The saliency condition followed the same general procedure used in the shredder condition, with one difference: When the experimenter gave instructions explaining the procedure for the study, the actor, posing as a participant, asked aloud, “So, is it OK to cheat?” The experimenter answered, “You can do whatever you want.” Aside from this planned interruption, the confederate behaved in the same way as all the participants throughout the session. The logic for this manipulation was that it increased the saliency of cheating, but did not create any social norm because the confederate did not leave the room before any of the other participants, so that his actions were not observed. Note that from the rational cost-benefit perspective, the response of the experimenter (“You can do whatever you want”) should have increased cheating because this statement made it clear that there were no negative consequences to such behavior.

### Results and Discussion

A hierarchical linear model with session as a factor nested under condition revealed significant differences in the number of matrices that were reported to have been solved correctly across the four conditions,  $F(2, 86) = 8.47, p < .001$ . The effect of session was not significant. Participants in the control condition, who did not have the opportunity to cheat, reported the lowest number of matrices solved; participants in the shredder condition reported the highest number of matrices solved; and participants in the saliency condition reported an intermediate number of matrices solved (see Fig. 2). Simple planned contrasts demonstrated that differences across the three conditions were all significant at the .05 level.



**Fig. 2.** Number of problems reported to have been solved correctly in Experiment 2 as a function of experimental condition. Error bars represent standard errors.

These results confirm previous findings by Mazar et al. (2008) showing that study participants cheated when given the opportunity to do so, although not to a large degree. More important, the addition of the confederate's question to the shredder manipulation (the saliency condition) decreased the level of cheating. This effect of the saliency condition casts further doubt on the applicability of the cost-benefit perspective on dishonesty, because, if anything, the noncommittal answer of the experimenter should have decreased the perceived cost of acting dishonestly and increased cheating. At the same time, this condition supports the role of saliency in reducing dishonesty, suggesting that both social norms and saliency contribute to the exhibited level of (dis)honesty in society.

Finally, it is possible that the results observed in Experiment 1 were due to the combined influence of social norms and saliency. If so, and if saliency reduced the extent of cheating in Experiment 1 in the same way that it operated in Experiment 2, one could hypothesize that the influence of social norms (as seen in our in-group-identity condition) could result in even higher levels of dishonesty if the saliency of these acts were reduced. This is indeed a worrisome speculation.

### GENERAL DISCUSSION

The results of the two experiments show that people react to the unethical behavior of others, and that their reaction depends on the social norms implied by the observed dishonesty and also on the saliency of dishonesty. Our results also show that reaction to the dishonesty of others does not seem to depend on changes in the calculations of cost-benefit analysis. In Experiment 1, observing an in-group peer engaging in unethical behavior increased participants' likelihood of acting unethically themselves. However, observing an out-group peer engaging in unethical behavior reduced participants' likelihood of acting unethically themselves. In Experiment 2, we tested the independent effect of saliency and found support for the idea that when the saliency of dishonesty increases (at least when social norms are not implied), cheating decreases.

Taken together, the findings suggest that peer influence is an important factor in unethical behavior. Prior research has shown that ethical climate and ethical culture are important predictors of the frequency of unethical acts within groups and organizational settings (for a review, see Loe, Ferrell, & Mansfield, 2000, or Ford & Richardson, 1994). Although we recognize the importance of such macrocomponents, we believe that microelements, such as the behavior of one particular individual in a group, can also have large consequences.

The question of whether unethical behaviors, such as cheating, stealing, and dishonesty, are contagious is fundamental to both organizations and society. Healthy work and social environments depend on the ability of individuals (e.g., leaders and other role models) to spread ethical norms and values, while reducing the attractiveness of unethical misconduct, either

through appropriate sanctioning rules or through an ethical culture. Our findings suggest that relatively minor acts of dishonesty by in-group members can have a large influence on the extent of dishonesty, and that techniques that help to stigmatize the bad apples as out-group members and strengthen the saliency of their behavior could be useful tools to fight dishonesty. As Anthony Eden stated, "Corruption never has been compulsory" (quoted by wikiquote.org, 2007). But, as our results show, under certain conditions, dishonest behavior can be contagious.

**Acknowledgments**—The authors gratefully acknowledge comments from David Harrison and Maurice Schweitzer and also thank two anonymous reviewers for their useful suggestions and guidance during the revision process. The authors greatly appreciate the support and facilities of the Center for Behavioral Decision Research at Carnegie Mellon University, where the experiments were conducted.

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(RECEIVED 7/14/08; REVISION ACCEPTED 9/12/08)