Following the crowd: The effects of descriptive norms and self-esteem on dishonest behavior

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Abstract

This research's major objective consisted of assessing the effect of a manipulation of peer descriptive norms on dishonest behavior. Specifically, we aimed at analyzing to what extent an interaction with an ingroup member would influence participants towards cheating in a task to obtain more money. A laboratory experiment with 198 participants in which a confederate interacted with the experimental group participants, telling them how to act to achieve the maximum reward in a task was performed. We found that the tip provided by the confederate led individuals toward being more dishonest in comparison with the control group. Besides, descriptive norms of daily dishonesty were significant predictors of the results obtained in the task, providing further evidence to the influence of other's dishonesty on participants' behavior. Also, a significant negative relationship between descriptive norms and self-esteem has been found, which indicates that individuals with low self-esteem are particularly more impressionable by such norms. These results suggest that making descriptive norms of honesty salient as well as working toward promoting enhancement of individuals' self-esteem may reduce engagement in dishonest behavior.

Keywords: dishonest behavior; social norms; social identity theory; group identity; self-esteem.

Individuals' moral judgement toward dishonesty is strongly influenced by their belief about dishonesty among people around them (Allcott, 2011; Bardsley & Sausgruber, 2005; Biccheiri, 2006; Bicchieri & Xiao, 2009; Carlsson, García, & Löfgren, 2010; Ferraro et al., 2011; Ferraro & Price, 2013; Fischer & Huddart, 2008; Frey & Meier, 2004; Goeree & Yariv, 2015; Goldstein et al., 2008; Innes & Mitra, 2013; Keizer et al., 2008; Krupka & Weber, 2008; Mitra & Shariar, 2020; Shang & Croson, 2009; Velez et al., 2009; Zafar, 2011). Other individuals' unethical behavior may have an impact on observers' behavior in three possible ways: (a) changing the estimated likelihood of being caught and therefore increasing one's propensity to act dishonestly; (2) decreasing one's propensity to act dishonestly by increasing saliency of dishonesty; and (3) engaging in less dishonesty when the observed other is an outgroup member (Gino et al., 2009). However, when the observed other is an ingroup member, other members of the group became more likely to engage in dishonest behavior (Gino et al., 2009).

Social norms consist of predominant behavioral patterns within a group which create a shared understanding of acceptable actions within that group (Nyborg et al., 2016). While injunctive norms consist of a general understanding of what is considered to be correct, descriptive ones involve actions that individuals actually perform — which sometimes may contradict what is considered to be right in some situations (Cialdini et al., 1991). Individuals comply with descriptive norms because they provide default solutions and enable coordinating with other group members whereas they adhere to injunctive norms due to moral emotions, such as shame at wrongdoing (Leung & Morris, 2014).

This study's main objective consists of assessing the effect of descriptive norms and group affiliation in dishonest behavior. Specifically, we aim at evaluating whether

(1) receiving a tip from a confederate will make participants more inclined to cheat (2) social norms of daily dishonesty are significant predictors of cheating. We also intend to conduct exploratory analyses to investigate the relationship between social norms and self-esteem.

Social norms and group identity

Dishonesty on the part of ordinary people diminishes trust, encourages negative social norms, and favors the spread of unethical behaviors (Kirchler et al., 2008; Welsh et al., 2015). Indeed, peer norms and dishonesty are highly correlated in the academic context (Donse & Groep, 2013; Jordan, 2001; McCabe & Trevino, 1997; Stephens et al., 2007) and are the strongest predictors of cheating in this midst (McCabe & Trevino, 1997). Notably, perceived peer disapproval (i.e. injunctive norms) of academic dishonesty negatively predicts self-reported cheating, and perceived engagement (i.e. descriptive norms) in cheating behavior significantly predicts more engagement in such behavior (McCabe & Trevino, 1997). Similarly, both injunctive and descriptive norms predict research misconduct and questionable research practices (Rajah-Kanagasabai & Roberts, 2015) as well as plagiarism (Curtis et al., 2018) among university students. Besides, perceived peer acceptability of cheating and peer cheating behavior were found to positively correlate with conventional and digital forms of academic dishonesty (Stephens et al., 2007). Indeed, students who cheated tended to report higher estimates of the percentage of students who they believe cheated at their school (Jordan, 2001), that is, their perception of descriptive norms of cheating was affected by their own cheating behavior.

Moreover, changes in the perception of a descriptive norm of lying have counteracted the opposing impact of changes in the pecuniary benefit from lying (Mitra & Shariar, 2020). Exposure to increased peer cheating promotes major rule violations

while the presence of explicit or subtle rule reminders — designed to work as injunctive norms — marginally reduces minor rule violations despite not having an impact on major rule violations (Lois & Wessa, 2020). Also, descriptive norms of petty dishonesty — such as jumping a waiting line — have been found to be significant predictors of corruption intentions (Farias & Pilati, 2020). Thus, it seems like descriptive norms of dishonesty have a stronger influence on dishonest behavior than injunctive ones do.

Individuals are especially inclined to engage in cheating behavior when the social norm indicates that such behavior is acceptable and that other group members engage in it (Daumiller & Janke, 2019). According with the Theory of Planned Behavior (TPB; Ajzen, 1991), the intention to cheat depends on individual motivational factors that are relevant for individual attitudes towards cheating as well as on subjective norms (Simkin & McLeod, 2010). Although TPB also comprises perceived behavioral control and attitudes as predictors of behavioral intent (Ajzen, 1991), we solely focus on the impact of social norms and the presence of others on cheating behavior in this study.

In the academic context, students often explain their cheating behavior by comparing themselves with others (Haines et al., 1986; McCabe et al., 2001), remarking the importance of perceived social norms for the justification of cheating behaviors. Gino et al. (2009) demonstrated that group membership status significantly affected unethical behavior in that when a confederate who cheated was seen as an ingroup member, other students — who were actual participants — cheated became more prone to cheat as well. This finding has been supported by another research (Daumiller & Janke, 2019) that found an increase in cheating when the social norm made explicit by a cheating confederate suggested that cheating behavior was an acceptable way to increase performance. Besides, exposing passengers to watching eye cues along with a

descriptive social norm messaging campaign has been found to be an effective intervention to hinder fare evasion (Ayal et al., 2019).

At the individual level, one factor that may influence engagement in dishonest behavior is self-esteem. Self-esteem consists of a subjective evaluation that a person makes about oneself (Zhang, 2009). The utility of self-esteem may stem from affiliation with a valuable group to being respected as an important member (Shamir et al., 1993). People are prone to defend, maintain, and increase favorable views about themselves (Baumeister, 2010; Crocker & Park, 2004; Mazar & Ariely, 2008). There is an exchange between money and self-esteem which may follow three principles: (1) a high payoff may consist of an indicator of a person's competence, (2) money and self-esteem can compensate for one another, and (3) there are factors that shape people's choices between money and self-esteem such as needing the money to survive or a when there is a large amount at stake (Zhang, 2009).

In fact, female students who had their self-esteem temporarily decreased through a false feedback tended to cheat more in a game of cards under circumstances that made it appear impossible to be detected (Aronson & Mettee, 1968). In another experiment, children with high self-esteem and high need for approval as well as children with low self-esteem cheated significantly more than children with high self-esteem and low need for approval (Lobel & Levanon, 1988), indicating the significant effect of both self-esteem and need for approval in cheating behavior. High levels of self-esteem lead to a low level of materialism, which in turn decreases corrupt intention (Liang et al., 2016). In fact, research has shown that that money can boost self-esteem and helps to buffer existential anxiety (Zaleskiewicz et al., 2013).

This research seeks to provide further evidence to support the claim that dishonesty is contagious. It also intends to assess whether descriptive norms of

dishonesty may lead individuals to lean toward more dishonesty and to advance the literature in dishonest behavior by investigating its link with self-esteem. By performing an experiment, we expect that the manipulation of participants' descriptive norms makes cheating salient and influence their behavior toward cheating. Therefore, we suppose that this saliency will have an impact on engagement in dishonest behavior in a subsequent task. We expect that (1) Participants who receive a tip from a confederate will cheat more in a subsequent task aimed at measuring dishonest behavior and (2) social norms of daily dishonesty will positively predict participants' more cheating in this task. We also expect to find a negative between the results of the dots game task and self-esteem.

Method

Participants

Participants were obtained through convenience sampling. To define the sample size, a sensitivity power analysis was conducted using GPower (Faul et al., 2020). We assumed a two-tailed alpha significance criterion of .05 and a standard power criterion of .80, and a medium effect size (.20). The minimum sample size computed by GPower was 200. Due to time and resource limitations, we were only able to achieve 198 participants. . They were divided into two groups — one in which participants received a tip from a confederate and one in which they did not —, and each group has been assigned to have 99 participants. The sample was composed of 111 women, 84 men, and three people declared not to fit in either gender. The mean age was 21.38 years (SD= 4.55), ranging from 18 to 49 years old. The most mentioned income brackets were “up to one minimal wage” and “between two and four minimal wages” (that is, up to 998 Brazilian Reais and between 998.01 and 3,992 Brazilian Reais). The sample comprised undergraduate and graduate students at University of Brasília (UnB).

Measures and materials

An adapted version of the dots game (Mazar et al., 2008) and measures of injunctive and descriptive norms as well as a measure of self-esteem were applied. Demographic measures about gender, age, income, political ideology, and educational level have also been applied.

Dots game. It consists of a task performed on a computer in which participants see a series of 20 boxes divided into two parts by a vertical line with 20 dots inside of it. Upon each judgement, the dots are presented for four seconds and disappear right after this count. When the answer is given, a new square is shown on the screen. Even though the task requires participants to indicate the half where there are more dots, the payment is assigned in such a way that individuals feel tempted to state that there are more dots on the right side of the box. Every time participants choose the right side of the box, they receive R\$.10 and, when they choose the left side, they receive nothing. This task has been proposed by Mazar and Ariely (2008) and modified to fit the purpose of this study.

In ten of the 20 trials, the correct answer is the left side and, in the other ten, the answer is the right side. Either way, the purpose of this task is to assess whether participants have cheated, for there is an intentional conflict between giving the wright answer or getting the highest reward. If participants do not cheat and answer the task correctly, they receive R\$ 1. The researcher explains to participants how the task works in a pretest. During the pretest, three squares are shown. Its purpose consists of making sure participants properly understand how the task functions.

Injunctive and descriptive norms measure. This questionnaire collects information about descriptive and injunctive norms. An example of an item is as follows “If I jumped a waiting line, people in general would disapprove of it”.

Participants ought to answer the measure in a scale ranging from (1) disagree strongly to (5) agree strongly. This measure contained questions about three types of behaviors (see appendix A for more details). Cronbach's alpha of the dimension injunctive norms is .87 and the one of the dimension descriptive norms is .91.

Self-esteem. An adaptation of Rosenberg Self-esteem Scale (RSES; Rosenberg, 1965) to a Likert-type format (Santos & Maia, 2003) has been applied. It has an adequate internal consistency — with a Cronbach's α value of .86 — and good temporal stability — given that with an interval of two weeks between evaluations, Pearson's correlation coefficient was equal to .90 (Santos & Maia, 2003). In this research, we obtained a Cronbach's α value of .80.

Procedure

The research has a between-subject design and was carried out individually on a computer by using the software Inquisit. Data collection took place at University of Brasília and participants were led to a laboratory room. It was necessary to tell a cover story. Participants were told that the study involved an assessment of attention and cognitive skills. However, the task performed was the dots game, which is aimed at evaluating participants' honesty in face of an opportunity to cheat. Participants were randomly assigned to perform the task either with or without a confederate, depending on the condition they were allocated.

In the confederate condition, the confederate — who pretended to be another participant who had just completed the task — interacted with one participant at a time. As soon as the participant and the experimenter arrived in the reception area of the laboratory, the confederate approached the experimenter to let him/her know that she had finished the task. The confederate informed that had earned the maximum reward (R\$ 2) and was paid in front of the participant. She also informed that she would need a

proof of participation in the research in order to claim course credit for a class she was taking. Then the experimenter asked the confederate and the participant to wait in a waiting room whereas he/she issued the participation certificate. This interaction took about two minutes and in the meantime the confederate told the participant that the easiest way to obtain money is to always tell that highest quantity of dots is on the right side. Afterwards, the experimenter arrived to handle the certificate and the confederate left the room. In the non-confederate condition, there was no such interaction.

The study reported in the manuscript strictly followed the Ethical Principles in the Conduct of Research with Human Participants proposed by the American Psychological Association. Participants were informed about the research purposes, the risks involved in taking part of the research, as well as the confidentiality and anonymity of the participation. The research protocol was not submitted to an approving institutional review board because the committee's rules and regulations in Brazil only evaluate projects in the realm of medical and pharmacological research. Considering this situation regarding the current national regulations, it is not required to obtain approval from an institutional review board to conduct studies with human subjects in social and behavioral sciences. All measures, manipulations, and exclusions in the study are disclosed as well as the method of determining the final sample size. Data collection was not continued after data analysis.

Results

We evaluated the assumptions of multivariate normality and linearity by using SPSS 22. Through the observation of box plots and the calculation of the Mahalanobis distance, we have spotted no multivariate outliers. When it comes to the dots game, a one-way ANOVA revealed that there was a significant difference between the group that received a tip from the confederate and the group that did not receive the tip, F

(198) = 7.94, $p=.005$, $\eta^2=.04$. The former group tended to score higher values ($M=1.07$, $SE=.03$, $CI\ 95\% \ 1.02, 1.12$) in the task when compared to the latter ($M=.97$, $SE=.03$, $CI\ 95\% \ .91, 1.02$).

Correlation and regression analyses have also been performed (see Table 1). A two-step multiple regression has been performed to assess the effects of the confederate as well as injunctive and descriptive norms on cheating in the dots game while controlling for the effects of age, gender, and self-esteem. We inserted the sociodemographic variables in the first step and the antecedent variables in the second step. By doing so, we have observed that the coefficient of determination (R^2) has improved significantly, rising from .02 to .08. This analysis indicated that descriptive norms were the only significant predictor of the dots game result.

Table 1. Summary of a multiple regression analysis and bivariate correlations using the result of the dots game as a criterion variable and injunctive norms, descriptive norms, self-esteem, condition, age, gender, and political position as antecedent variables.

Variables	Dot	Age	Gen	Sel	Con	IN	DN	Est	SE	LL	UL	p
Dot	-							-	-	-		
Age	.13	-						.02	.03	-.001	.01	
Gen	.05	.08	-					.007	.004	-.04	.09	.49
Sel	.003	-.09	-.06	-				.015	.02	-.03	.06	.48
Con	.20*	-.01	-.04	-.06	-			.11	.04	.04	.18	.003
IN	.02	.09	-.05	-.08	-.06	-		.007	.02	-.03	.04	.69
DN	.14*	-.08	.04	-.14*	-.02	-.02	-	.04	.02	-.001	.08	.06
R^2	.08											
Adj R^2	.05											
F	2.70											

* $p < .05$, $N = 198$

Dot = Result in the dots game, IN = injunctive norms, DN = descriptive norms, Con = consciousness, Sel = Self-esteem, Est = estimates.

Besides, some significant correlations found among the variables consisted the negative association between descriptive norms and self-esteem as well as the positive link between descriptive norms of dishonesty and higher results in the dots game. Interaction with a confederate was also positively associated with a better performance in the dots game.

Discussion

As expected, receiving a tip on how to cheat in a game has influenced participants' subsequent behavior, suggesting that descriptive norms made salient by an ingroup member may cause individuals to lean toward behaving dishonestly. This result provides further evidence to the claim that dishonest actions performed by ordinary people may cause others to commit more acts of dishonesty (Allcott, 2011; Bardsley & Sausgruber, 2005; Bicchieri, 2006; Bicchieri & Xiao, 2009; Carlsson et al., 2010; Egebark & Ekström, 2011; Ferraro et al., 2011; Ferraro & Price, 2013; Fischer & Huddart, 2008; Frey & Meier, 2004; Goeree & Yariv, 2015; Goldstein et al., 2008; Innes & Mitra, 2013; Keizer et al., 2008; Kirchler et al., 2008; Krupka & Weber, 2008; Mitra & Shariar, 2020; Shang & Croson, 2009; Velez et al., 2009; Zafar, 2011; Welsh et al., 2015). This finding is also in line with the reports that watching peers violating rules fosters more engagement in such types of behavior (Lois & Wessa, 2020) and that descriptive norms significantly predict unethical behavior — be it engaging in plagiarism, cheating, research misconduct or petty dishonesty (Curtis et al., 2020; Farias & Pilati, 2020; McCabe & Trevino, 1997; Rajah-Kanagasabai & Roberts, 2015). Therefore, we may indeed say that dishonesty is contagious (Robert & Arnab, 2013).

Participants who received the tip on how to have a better performance in the dots game completed the task in a way that resulted in receiving a higher financial reward if compared to the ones who did not receive the tip. This result provides evidence that

descriptive norms may indeed enable coordinating with other group members (Morris et al., 2015). It also suggests that the interaction with the ingroup member (the confederate) significantly promoted participants' cheating in the task, which supports the statement that there is a tendency for individuals engage in cheating when they perceive that other group members do so (Daumiller & Janke, 2019).

Nevertheless, injunctive norms neither predicted the results of the dots game task or have been found to be associated with such results. This finding does not support the reports by Curtis et al. (2020), Rajah-Kanagasabai and Roberts (2015), and Stephens et al. (2007), which indicated that injunctive norms predict plagiarism and research misconduct and are positively related to conventional and digital forms of academic dishonesty. However, it is worth noticing that Lois and Wessa (2020) reported that injunctive norms have only marginally reduced minor rule violations and did not have an impact on major rule violations. Thus, descriptive norms seem to account for a much stronger effect on individuals (un)ethical behaviors than injunctive norms do.

A significant positive correlation between the dots game results and descriptive norms has been found. That is, the stronger the descriptive norms of petty dishonesty, the better the performance in the dots game task and supposedly the more cheating. This result is aligned with the report that there is a strong correlation between peer norms and dishonesty (Donse & Groep, 2013; Jordan, 2001; McCabe & Trevino, 1997; Stephens et al., 2007), specifically when it comes to peer cheating behavior (Stephens et al., 2007). Furthermore, a significant negative correlation between descriptive norms and self-esteem has been found, indicating that the lower the self-esteem, the stronger the impact of descriptive norms on people's behavior. This result supports the relationship between low self-esteem and more cheating behavior and may also be explained by need for approval (Lobel & Levanon, 1988), which consists of an individual difference variable

that has not been measured in this research. It also supports the finding that individuals with low self-esteem may be more prone to commit immoral acts when the immoral act is instrumental in producing immediate material gain (Aronson & Mettee, 1968).

The present study has some limitations such as the fact that no data has been collected on to what extent participants identify themselves with the University of Brasília students' group and whether participants consider themselves as prototypical and/or peripheral members of this group. This consists of relevant data, for previous empirical papers have found a consistent relationship between social identification and conformity to the salient in-group norms (Falomir-Pichastor et al., 2009; Verkooijen, de Vries, & Nielsen, 2007; White et al., 2002). This relation holds even stronger for peripheral members, who are hoping to stay in the group and become more similar to other ingroup members (Masson & Fritsche, 2019). Future research should also explore the effect of need for approval on the relationship between descriptive norms and engagement in dishonest behavior.

The present study has proposed some relevant contributions. It has found evidence that it is possible to manipulate descriptive norms through a short interaction with an ingroup member, influencing subsequent behavior. Therefore, this research has provided further evidence to support the claim that dishonesty is contagious and that descriptive norms of dishonesty may cause individuals leaning toward more dishonesty. It has also advanced the literature in dishonest behavior by indicating that there is a negative link between self-esteem and descriptive norms which may be affected by individuals' need for approval. Based on our findings, we expect that honesty may also be contagious. Considering that social norming campaigns may be employed to correct misperceptions about the prevalence and severity of dishonesty (Simola, 2017), we hope that the insights that this study provides on the effect of peer perceived dishonesty be

considered when planning interventions aimed at changing people's behavior toward more honest practices.

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Conflicts of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Ethical statement

The study reported in the manuscript strictly followed the Ethical Principles in the Conduct of Research with Human Participants (2010) proposed by the American Psychological Association. Participants were informed about the research purposes, the risks involved in taking part of the research, as well as the confidentiality and anonymity of the participation. The research protocol was not submitted to an approving institutional review board because the committee's rules and regulations in Brazil only evaluate projects in the realm of medical and pharmacological research. Considering this situation regarding the current national regulations, it is not required to obtain approval from an institutional review board to conduct studies with human subjects in social and behavioral sciences.

Availability of data and material

The dataset for this study is stored in the OSF platform on this link <https://osf.io/53snh/>. Once the manuscript is published, the files will be made public. These data will be made public once the article is published.

Consent to participate

Participants explicitly informed their consent in taking part in the research by checking a box and were free to quit participation at any moment. No personal information was collected to preserve participants' anonymity.

Consent for publication

All data collected were unidentified and analyzed in a grouped manner so that each participant who answered the research is anonymous. Informed consent on the academic purpose data collection was obtained from all individual participants.

Code availability

Not applicable.

Authors' contributions

The first and second authors contributed to the conception and design of the study. Both authors collected the raw data, and the first author organized the database. The first author performed statistical analyses and wrote the first draft of the manuscript. The second author revised it critically for important intellectual content.

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