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The effects of emotion and social consensus on moral decision-making

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ABSTRACT

This study investigated the influence of different emotions and social consensus on moral decision-making using a mixed 2 (emotion: positive, negative) × 2 (social consensus: high, low) experimental design. The results showed that the main effect of social consensus was significant: the moral decision-making level of participants under the condition of low social consensus was lower than that of participants under the condition of high social consensus, while no main effect of emotion emerged. Second, the results showed that emotion and social consensus have interactive effects on moral decision-making. When social consensus was high, there was no significant difference in moral decision-making between individuals with positive emotions and individuals with negative emotions. When social consensus was low, individuals with negative emotions were more likely to make immoral decisions than individuals with positive emotions. These results reveal that emotion and social consensus work together in affecting moral decision-making.

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Emotion; social consensus; moral decision-making; moral intensity; Issue-Contingent Model

INTRODUCTION

Recently, there has been heated debate in China concerning the issue of moral decline. From the Nanjing Peng Yu Incident to the Langfang Elevator Smoking Case, people are concerned about the decline in social morality, which makes it increasingly difficult for individuals to make moral decisions (Lei, 2015). Moral decision-making is not only an individual's own moral choice, but also an important factor affecting the development of social morality. Moral decision-making helps in developing a good social atmosphere, and in promoting the harmonious development of society (Tan, 2016). In contrast, unethical decision-making can not only cause substantial economic losses and reputational damage to individuals and organizations, but also damage the ecological environment (Schwartz, 2016; F. Wang et al., 2013). Therefore, there is significant social value and practical significance in exploring the influencing factors behind moral decision-making.

Moral decision-making refers to a process comprising all stages experienced by an individual, from the emergence of moral problems to the process of exhibiting a specific behavior (Morales-Sánchez & Cabello-Medina, 2013). The theory of moral decision-making is divided primarily into two elements. The first element is that moral decision-making is rational. Rest (1986), for example, believes that the moral decision-making process includes four stages: moral identification, moral judgment, moral intention and moral behavior (Li et al., 2008). The second element is that moral decision-making is irrational. Haidt (2001), for example, holds that people make moral judgments from intuition. Currently, many scholars believe that the moral decision-making process includes both rational and

irrational elements (Schwartz, 2016). For example, Greene et al. (2001) proposed the dual processing theory of moral decision-making (Greene et al., 2001). They suggested that the process of moral decision-making is determined by both a cognitive and an emotional process; when emotional processing exceeds cognitive processing, individuals show a deontological inclination; when cognitive processing exceeds emotional processing, individuals show a utilitarian inclination (Greene et al., 2004). A deontological inclination reflects the view that it is always wrong to hurt others, whereas a utilitarian inclination reflects the view that it is acceptable to hurt others, depending primarily on whether the final result can have a beneficial effect (Greene et al., 2008; Hunt & Vitell, 1986).

Although early studies on moral decision-making emphasized the role of rational cognition, recent studies have shown that irrational emotional response plays a key role in moral decision-making (Cecchetto et al., 2018; Greene & Haidt, 2002; Guzak, 2015; Higgs et al., 2019; Li & Zhu, 2015; Tao et al., 2020; P. Wang et al., 2011). In the 1980s, emotional psychologists defined the influence of emotion on other psychological processes as an “organizational function” (Sroufe, 1979), which includes both organization and destruction functions. Generally, positive emotions can coordinate the organizational function, while negative emotions can destroy, disintegrate or block it. Positive emotions even help people cope with troublesome events and reduce the occurrence of confrontational ones (Isen, 2000). Gaudine and Thorne (2001) found that in the same moral situation, different emotional states have different effects on the moral judgment of participants (Xiao, 2008). Individuals with positive emotions are more likely to recall happy things and make optimistic choices and judgments, whereas individuals with negative emotions are more likely to recall sad memories and make pessimistic choices and judgments (Gaudine & Thorne, 2001; George & Dane, 2016; Zhong et al., 2017). In light of this, we propose the following hypothesis:

H1: The moral decision-making level of research participants under positive emotion is higher than that of participants under negative emotion.

In addition to emotions, moral decision-making also involves the evaluation of norms and values established within a social environment, i.e., social consensus (Bateman et al., 2013; Craft, 2013; Valentine & Godkin, 2019). Social consensus, which is defined as the degree of the consistency of moral status within a society, is one component of moral intensity (Reynolds & Ceranic, 2007). Jones (1991) proposed the Issue-Contingent Model, believing that the moral issue itself can affect moral decision-making. He introduced the concept of moral intensity, defined as the moral pressure or urgency caused by the issue itself in a given situation. Jones proposed that moral intensity consists of six parts: magnitude of consequences; probability of effect; temporal immediacy; concentration of effect; proximity and social consensus. All six of these parts can affect the four stages of moral decision making. When moral intensity is high, individuals are more likely to perceive problems as moral problems and make moral decisions (Singhapakdi et al., 1999). Since Jones proposed the Issue-Contingent Model, it has aroused the interest of many researchers (Dukerich et al., 2000; De Graaff et al., 2019; Simga-Mugan et al., 2005; Woolley, 2015). Research has been conducted on the effect of various dimensions of moral intensity on moral decision-making. For example, Chia and Lim (2000) found that the magnitude of consequences and social consensus had a significant predictive effect on moral recognition, while proximity and probability of effect had a marginally significant predictive effect on moral recognition. Furthermore, Barnett and Valentine (2004) found that the magnitude of consequences and social consensus had a significant predictive effect on moral decision-making. Davis et al. (1998) found only that social consensus had a significant impact on moral decision-making, and emphasized the importance of social consensus in determining the psychological resources required for moral decision-making. Although previous studies differ in some conclusions, they suggest that social consensus has a stable effect on moral decision-making.

The self-construal theory holds that, compared with an individualistic society, people in a collectivist society pay more attention to the evaluation and opinions of others (Markus & Kitayama, 1991; Yan et al., 2018; Yang et al., 2012). Given that China is considered a typical collectivist

society (Chen, 2000; Chen et al., 2014; Oyserman et al., 2002), social public opinion (social consensus) may play a more important role in the moral decision-making process. Jones (1991) proposed that when the social consensus on a certain issue is not high, there will be many inconsistent opinions about the moral judgment of behavior. Individuals may not even perceive any moral-related issues, leading to contradictory or uncertain feelings (Albert et al., 2015; Weber, 1990). In such situations, individuals may yield to immediate interests and make unethical decisions. Accordingly, we propose the following hypothesis:

H2: Individuals' moral decision-making level should be higher under the condition of high social consensus than under the condition of low social consensus.

Social consensus is one of the most important factors in moral intensity (Frey, 2000), and its influence on moral decision-making has been widely recognized. Previous studies have shown that under different social consensus conditions, cognitive factors have different effects on moral decision-making (Albert et al., 2015). The dual-process model emphasizes that both emotional and cognitive aspects have an impact on ethical decision-making, and that the final decision outcome depends on which process – emotional or cognitive – is dominant (Kahneman et al., 2011). In addition, Fishbein's (2009) Integrative Model of behavioral prediction holds that emotions and other cognitive factors, such as social norms, have an important impact on behavior. However, in contrast to our point of view, the Integrative Model proposes that emotions affect cognitive factors, and thus affect individual's behavior. In our opinion, emotions have a direct effect on individual behavior, which is consistent with the dual-process model. Therefore, we believe that emotional factors can have different effects on moral decision-making under different social consensus conditions. In line with the dual-process theory and Albert et al.'s (2015) study, we speculate that cognitive processes play a major role in high social-consensus situations, and that individuals will make decisions that meet social norms according to their own knowledge and experience. By contrast, in a low-consensus situation, individuals will make decisions based on their emotions, because there is no unified social standard for reference. In other words, the promotion and organizational function of positive emotions improves the moral level of individuals, while the disruptive function of negative emotions reduces it (Isen, 2000), leading individuals to make moral decisions following positive rather than negative emotions. Based on this previous research, we propose the following hypothesis:

H3: Emotion and social consensus will interact to predict ethical decision-making, such that, in low social-consensus situations, those who are positive will be more ethical, while the difference will disappear in high social-consensus situations (see Figure 1 for an overview of the associated conceptual model).

METHODS

Participants

Two hundred and twenty undergraduate business students were recruited from a Chinese university using the simple random sampling method. Through systematic classroom learning, they were very familiar with the scenarios adopted in this study, and all of them participated in the enterprise internship organized by the school. Twenty-five participants who did not finish the experimental task or did not meet the requirements of this experiment were excluded. Ultimately, there were 195 valid participants, including 43 males and 152 females, with an average age of 20.20 years ($SD = 1.07$). None of the participants had ever participated in similar experiments. Based on the strength of the effect reported in the relevant study, and on the expected efficacy value (0.95), the required sample size

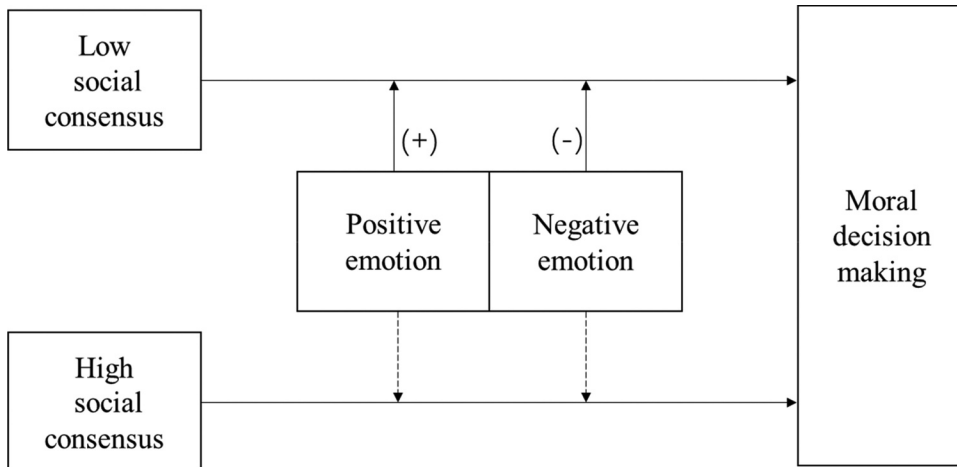


Figure 1. Conceptual model of the current research. Emotion and social consensus interact to predict ethical decision-making. In the high social-consensus situation, the levels of individuals' moral decision-making are higher and emotion does not affect individuals' moral decision-making. In the low social-consensus situation, emotion affects moral decision-making and individuals under negative emotion find it easier to make unethical decisions than those under positive emotion.

(calculated using G*Power 3.1.9) was 158. Thus, the sample selection was in line with the requirements of this experiment.

All procedures followed the ethical standards of the Academic Board of Shandong Normal University. The study was reviewed and approved by the Ethics Committee of Shandong Normal University.

Design

A 2 (emotion: positive, negative) \times 2 (social consensus: high, low) mixed design was used. Emotion was the inter-subject variable, social consensus was the internal variable of the subject, and the moral decision preference score was the dependent variable. Individuals' moral decision score was obtained by summing the scores of the items following reverse scoring, to obtain an average score. The scenarios used in the study were all unethical. The higher the moral decision scores of the participants, the lower their moral level.

Materials

Initial morality level questionnaire

Using the self-edited initial ethics level questionnaire, according to the ethical and unethical events in the interview, a total of 34 items were compiled to form the ethics questionnaire. Validity and reliability analysis of the pretest results was carried out. The structural validity of the questionnaire was tested. Among the items, 23 with a factor load value above 0.45 and 19 with a factor load value above 0.6 were selected using factor analysis. Finally, 20 items were selected and the content validity was tested (e.g. "Stealing a few dollars is nothing compared to robbing"). The sum-related validity analysis showed that the scores of each item and the total score of the items were significantly correlated at the 0.01 level, indicating good content validity. Cronbach's alpha was 0.896, indicating that the internal consistency of the questionnaire was good. (The questionnaire is presented in the [Appendix](#))

Measurement questionnaire for moral decision-making

The moral situation questionnaire we used was adapted from the scale developed by Singhapakdi et al. (1996). The content of the scenarios consisted of moral issues that enterprise managers might face in

their work life. We used different statement sentences to differentiate social consensus. In the high social consensus condition, we presented sentences like “Most people think this behavior is unethical”. In contrast, the low social consensus condition featured sentences such as “Many employees in the company have different opinions on this behavior”.

Each scenario had four questions that measured the four stages of the moral decision-making process (moral identification, moral judgment, moral intention, moral behavior). Question 1-3 was forward scoring and used the 7-point Likert-type scale (e.g. 1 = Totally unacceptable, 7 = Completely acceptable, and so on). Question 4 was reverse scoring and used the 5-point Likert-type scale (e.g. 1 = Imitate, 2 = Not comment, 3 = Refuse to cooperate, 4 = Advise, 5 = Prosecute). (The questionnaire is presented in the [Appendix](#))

Mood rating scale

The emotional state of the induced emotional state was measured using the Chinese version of the emotional self-rating scale PANAS compiled by Watson et al. (1988). The scale is mainly based on the two-factor model of emotion – positive affection (PA) and negative emotion (NA). It includes two subscales, PA and NA, which are measured using 10 emotion descriptors. Participants were required to evaluate the intensity of each emotion experienced at a certain time using a 5-point rating (from 1 = very slight or none, to 5 = extremely strong). Zhang et al. (2004) conducted a cross-cultural study on the dimensional structure of the scale and found that the two-dimensional structure of the PA and NA subscales has cross-cultural consistency. In particular, the Cronbach’s alpha of the PANAS scale in the Chinese version reached 0.88; using PANAS to measure positive and negative emotions thus had high reliability and validity, and met psychometric requirements.

Emotionally induced materials

In the past, text induction has usually been used to induce emotions. Although text induction is convenient, its effect is difficult to guarantee. Therefore, in this experiment, we adopted the induction of multi-sensory channels such as words, imagination and music to ensure the effect of emotion induction. For example, for the positive emotions condition, we asked participants to imagine the happiest thing they had experienced in the last 10 years and to describe it in approximately 300 words, while they listened to relaxing and cheerful music. The emotional manipulation test questionnaire was used for the post-test.

Procedure

Participants were randomly divided into two groups, a positive emotion group and a negative emotion group, with 110 participants in each group. All participants began by completing the initial morality questionnaire together, and then completed the positive emotional initiation materials or the negative emotion initiation materials. In the positive emotion group, participants were instructed to imagine the happiest thing they had experienced in the last 10 years and describe it in approximately 300 words, while listening to easy and cheerful music. In the negative emotion group, participants were instructed to imagine the saddest thing they had experienced in the last 10 years and describe it in approximately 300 words, while listening to sad and melancholy music.

We first performed three minutes of emotional evocation on both groups, after which all participants completed the PANAS emotional rating scale. Subsequently, participants were asked to take the ethical decision-making situation test; half of the participants in each group completed the low social-consensus situation part followed by the high social-consensus situation part, while the other half completed these in reverse order.

Table 1. Moral decision-making score under low/high social consensus ($M \pm SD$).

	N	Low social consensus	High social consensus
Positive group	111	1.99 \pm .64	1.62 \pm .36
Negative group	84	2.23 \pm .43	1.57 \pm .36
Total	195	2.10 \pm .57	1.60 \pm .36

RESULTS

Descriptive statistics and independent sample t-tests were performed on the initial levels of ethical decision-making in the positive and negative emotion groups. The results showed no significant difference in the initial moral decision-making level between the two groups, $t(193) = 1.22$, $p = .225$, Cohen's $d = 0.175$, 95%CI = [-0.19, 0.04]. The negative emotion group ($M_{negative\ group} = 3.14$) had a lower level of moral decision-making than the positive emotion group ($M_{positive\ group} = 3.21$).

(1) Descriptive statistics and paired sample t-tests were performed on the PANAS scores of the positive and negative emotion groups. Among them, the positive and negative scores of the two emotional groups were both significantly different. For the positive emotion group, $t(110) = 14.75$, $p = .000$, Cohen's $d = 2.059$, 95%CI = [0.72, 1.08], the positive score ($M_{positive\ score} = 3.26$) was significantly higher than the negative score ($M_{negative\ score} = 1.91$); for the negative emotional group, $t(83) = 4.31$, $p = .038$, Cohen's $d = 0.378$, 95%CI = [0.02, 0.60], the negative score ($M_{negative\ score} = 2.67$) was higher than the positive score ($M_{positive\ score} = 2.36$). This meant that emotion, to some extent, was successfully primed.

(2) We used a 2 (social consensus: high vs low) \times 2 (emotion: positive vs negative) repeated-measures ANOVA to examine moral decision-making. The descriptive statistics for moral decision scores are shown in Table 1, using emotional valence and social consensus as the independent variables. All ANOVA results are presented in Table 2.

For the moral decision-making preference, no main effect of emotion emerged, $F(1, 193) = 2.85$, $p = .093$, $\eta_p^2 = 0.015$. This shows that there was no significant difference in the moral decisions of participants under different emotions. The main effect of social consensus was significant ($F(1, 193) = 164.31$, $p = .000$, $\eta_p^2 = 0.460$). Compared with the low social-consensus condition, participants in the high social-consensus condition had a lower average scale score of moral decision-making, in other words, a higher moral level. Emotional and social consensus had a significant interaction on ethical decision-making ($F(1, 193) = 12.69$, $p = .000$, $\eta_p^2 = 0.062$), as shown in Figure 2. In the context of high social consensus, there was no significant difference in the moral decision-making scale scores between the positive emotion group and the negative emotion group, whereas in the context of low social consensus, a significant difference emerged. Specifically, the moral decision-making scale scores of participants in the negative emotion group ($M_{negative\ group} = 2.23$) were significantly higher than those for the positive emotion group ($M_{positive\ group} = 1.99$).

Further simple effect analysis indicated that in the positive emotion group, participants' moral decision scale scores in different social consensus situations showed significant differences, $F(1, 109) = 49.72$, $p = .000$. The decision scale scores under the condition of high social-consensus ($M_{high\ social\ consensus} = 1.62$) was significantly lower than those under the condition of low social-consensus ($M_{low\ social\ consensus} = 1.99$). In the negative emotion group, there were also significant differences in the moral decision scale scores of research participants in different social consensus situations, $F(1, 83) = 117.85$, $p = .000$. The moral decision scale scores of participants in high social-consensus situations ($M_{high\ social\ consensus} = 1.57$) were significantly lower than those of participants in low social-consensus situations ($M_{low\ social\ consensus} = 2.23$).

Table 2. ANOVA results for moral decision-making.

Variables	Moral decision-making		
	F	p	η_p^2
Emotion	2.85	.093	0.015
Social consensus	164.31	.000	0.460
Emotion \times Social consensus	12.69	.000	0.062

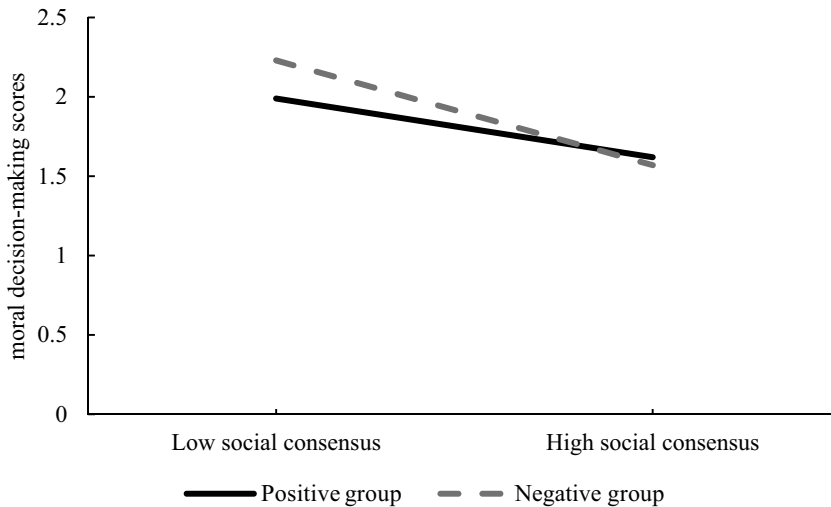


Figure 2. The interaction between emotion and social consensus on moral decision-making.

DISCUSSION

In recent years, there has been a consensus that emotions can influence moral decision-making (George & Dane, 2016; Higgs et al., 2019; Vitell et al., 2013). Nevertheless, few people have explored the role of emotions in moral decision-making using moral intensity models (Li et al., 2007). This research, which is based on Jones' Issue-Contingent Model, has explored the influence of emotion and social consensus on moral decision-making, and expands previous research on factors affecting moral decision-making.

In this study, the level of individual moral decision-making in the context of high social consensus was significantly higher than the level of individual moral decision-making in the context of low social consensus. This is consistent with previous research results (Bateman et al., 2013; Jones, 1991). Social consensus reflects the strength of public opinion. When the social consensus on unethical behavior is not high, there are many conflicting views of the moral judgment of behavior (Jones, 1991). Indeed, when the social consensus on immoral behavior is relatively low, individuals will not even notice any moral-related behaviors (Reynolds, 2006), and may experience contradictions or uncertainties. Under the same conditions, lower social consensus will bring increased moral ambiguity, making it more difficult for an individual to resist the temptation of short-term benefits, and easier to succumb to the temptation of immoral behavior (De Ridder et al., 2012 2018; Yam et al., 2014).

In this study, we did not find a significant difference in moral decision-making between positive and negative emotions. This finding is inconsistent with research by Isen et al., who proposed that the level of moral decision-making under positive emotions is higher than that under negative emotions (Connelly et al., 2004; Isen, 2000; Li et al., 2007). However, we found differences in the level of moral decision-making under positive and negative emotions in the low social consensus condition. The effect of emotions on moral decisions making might be regulated by social consensus.

The interaction of emotion and social consensus was significant. In the case of high social consensus, there was no significant difference in the moral decisions made by individuals with positive emotions and individuals with negative emotions. We speculate that, under this condition, individuals' cognitive processing plays a major role. Individuals do not need to rely on their own moral judgment and emotional participation, but accept widely accepted social norms (social consensus) (Albert et al., 2015). In the case of low social consensus, the moral level of individuals experiencing positive emotions was significantly higher than that of individuals experiencing negative emotions. Low social consensus indicates that it is difficult for the problem to be judged in terms of good and evil, leading to a potential moral dilemma (Jones, 1991). Studies have shown that positive emotions can play a role in promoting moral decision-making under the condition

of low social consensus. However, negative emotions will play a role of disintegration and destruction (Isen, 2000), which is not conducive to moral decision-making under the condition of low social consensus. A study on the behavior of audit firms by Curtis also showed that under negative emotions, individuals were more reluctant to report unethical behaviors within the organization to their leaders (Craft, 2013; Curtis, 2006). This again implies that the moral level of individuals under positive emotions is higher than that under negative emotions. In our study, people with positive emotions behaved more morally under the condition of low social consensus.

Emotional fluctuations in daily life often affect our will and behavior. A judgment made after prolonged reflection is often regarded as a rational decision. This study has highlighted the influence of emotion on moral decision-making through an experiment, revealing an action mode that varies under different social consensus conditions. Positive emotions can improve the level of moral decision-making, while negative emotions can lower the level of moral decision-making. Emotions are not only the antonym of rationality, but in some cases can also improve the quality of decision-making. Social consensus, as a dimension of moral intensity, can be an important predictor of moral decision-making.

Implications for research

From a theoretical point of view, this research contributes towards behavioral ethics research. First of all, the results of this study are consistent with the expectations of the Issue-Contingent Model and the dual processing theory model, namely that emotions and social consensus affect moral decision-making. According to the Issue-Contingent Model, issues involving high moral intensity are more easily identified, increasing the incidence of moral decisions. This research examined the role of emotions based on the Issue-Contingent Model, further highlighting its influence on moral decision-making under emotional conditions, and also verifying the influence of emotion on moral decision-making in the dual-process model.

Secondly, this research highlighted a moderating role of social consensus in how emotion influences moral decision-making, as well as exploring the boundary conditions of emotional influence on moral decision-making. The current study provides a direction for future research on the effect of emotion on moral decision-making.

Finally, most of the previous research based on the Issue-Contingent Model focused on the effect of moral intensity and organizational factors on moral decision-making, while ignoring the influence of individual factors (emotions). This research has enriched the Issue-Contingent Model theory by incorporating individual factors.

Implications for practice

This research has examined the effect of emotions and social consensus on moral decision-making in organizational contexts, which is of practical significance for encouraging individuals in an organization to make moral decisions. First of all, the results of this study have shown that individuals' moral decision-making is very susceptible to the social consensus of their environment, a finding which may explain the prevalence of unethical incidents within some organizations. For example, employees in some offices often bring home office supplies. People think that everyone else is doing it, and hence that there is no problem in doing the same themselves.

Secondly, this research is of particular significance to the fostering of positive organizational culture. Our study found that the social consensus of individuals' environment can effectively promote them to make moral decisions without being affected by their own emotions. The formation of an ethical social consensus within an organization can improve employees' moral decision-making. Every employee within an organization can appreciate good ethical behavior, which has practical value for promoting the development of organizational culture and shaping a good organizational image.

Finally, the results of this research showed that for issues without a social consensus, positive emotions play an important role in shaping individuals' moral decision-making. Elevating employees'

positive emotions may promote their moral behavior within an organization. For example, the employee assistance plan (EAP), a form of mental health welfare provided to employees by their organization, can help employees and their families deal with practical problems encountered during their work and personal life, enhance their positive emotions, and promote their ethical decision-making.

Limitations and future directions

While the context of moral decision-making examined in this study is mainly corporate, the research participants were all college students. Although undergraduate business students have some experience related to enterprise, they may differ in some respects from genuine employees, hence impacting the ecological validity of the experiment. In future, researchers might aim to further expand participant samples across various employment contexts and conduct cross-cultural research, thus enriching the present research and leading to more generalizable findings.

Although the current study has established, via a behavioral experiment, that emotion can affect moral decision-making differently under varying social consensus conditions, the mechanism of this effect is still unclear. Future studies might avail of event-related potentials (ERP) and neuroimaging techniques (e.g., functional magnetic resonance imaging, fMRI) to delve further into this phenomenon, by analyzing differences in electroencephalography (EEG) components and the activation of brain regions while participants are engaged in moral decision-making under different social consensus conditions.

This study has focused on two main types of emotions, namely happiness and sadness. While these two represent the quintessential positive and negative emotions, the complexity of other emotions makes it difficult to extend the results of this study to cover them. In examining decision-making in relation to specific emotions, future studies must seek to further integrate these alternative emotions.

Moral decline studies show that people usually begin by engaging in low social-consensus immoral behaviors (e.g., college cheating) and then gradually engage in more serious (high social consensus) immoral behaviors (e.g., embezzlement of public funds) (Bazerman & Tenbrunsel, 2011; Tenbrunsel & Messick, 2004). Because our study relied on experiments featuring a cross-sectional design to test hypotheses, it could not examine the temporal perspective of moral decision making. While individuals may be more likely to engage in unethical behavior for low social consensus situations in the short term, they may gradually progress to engage in unethical behavior for situations involving high social consensus. Future research should examine the temporality of moral decline, and social consensus research should aim to provide a more comprehensive understanding of individuals' moral decision-making processes.

Conclusion

The current study yielded the following findings. First, research participants in the context of low social consensus had lower levels of moral decision-making than those in the context of high social consensus, with no significant difference in the levels of moral decision-making between the individuals with positive and negative emotions. Second, when social consensus was low, individuals with negative emotions were more likely to make unethical decisions than individuals with positive emotions. These findings imply that emotion and social consensus work together to influence moral decision-making.

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Appendix. Measurement questionnaire for moral decision-making

The moral situation questionnaire we used was adapted from the scale developed by Singhapakdi et al. (1996). The content of the scenarios focused on moral issues that enterprise managers might face in their work life. We used different statement sentences to differentiate social consensus. For high social consensus, we presented sentences like “Most people think this behavior is unethical”. For low social consensus, we used sentences like “Many employees in the company have different opinions on this behavior”.

Each scenario had four questions that measured the four stages of the moral decision-making process (moral identification, moral judgment, moral intention, moral behavior). Question 1-3 was forward scoring and used the 7-point Likert-type scale (e.g. 1 = Totally unacceptable, 7 = Completely acceptable, and so on). Question 4 was reverse scoring and used the 5-point Likert-type scale (e.g. 1 = Imitate, 2 = Not comment, 3 = Refuse to cooperate, 4 = Advise, 5 = Prosecute).

Each scenario was followed by 4 questions. The questions in all ten scenarios were the same, except for the name of the person. We only describe Scenario 1 in detail.

Directions: Please read the following scenario, and form a corresponding situation picture in your mind. According to the behavior in each situation, answer the following questions, and mark “√” on the corresponding number.

Scenario 1: In order to protect the environment, the local government has banned the operating qualifications of some chemical companies, including those operated by Liu. For the benefit of his own company, Liu still insists on secret production. Most local enterprises have different opinions on this behavior.

Question 1: Do you think Liu's behavior is acceptable? (1 = Totally unacceptable, 7 = Completely acceptable, and so on)

1 2 3 4 5 6 7

Question 2: Do you think Liu's behavior is moral? (1 = Very immoral, 7 = Very moral, and so on)

1 2 3 4 5 6 7

Question 3: If you are Liu, how likely are you to do so? (1 = Not at all likely, 7 = Very likely, and so on)

1 2 3 4 5 6 7

Question 4: How would you treat the above behavior? (1 = Imitate, 2 = Not comment, 3 = Refuse to cooperate, 4 = Advise, 5 = Prosecute)

1 2 3 4 5

Scenario 2: Zhang is a journalist of a news agency. In order to obtain relevant internal information and garner more exclusive reports, so as to enhance profits, Zhang adopts news eavesdropping. Most peers have different opinions on this behavior.

Scenario 3: Cai runs a food company. It is learned that the food materials sent by the supplier did not meet the food safety standards. If these foods are destroyed, there will be economic losses, and Cai decides to continue selling these spoiled foods. Many food companies have different opinions on this behavior.

Scenario 4: Wang runs a garment manufacturing factory. In order to obtain more benefits, Wang enacted a series of measures that did not meet labor standards. For example, employees are required to work an average of 10 hours per day and work overtime more than 4 times per month. Many factories have different opinions on this behavior.

Scenario 5: Li works in a media company and is responsible for negotiating with the media on the purchase price of TV hours and implementing the purchase. The company's regulations prohibit the acceptance of gifts. Today, Li received a gift from a public relations officer in the media. Li did not tell the boss about the gift and accepted the gift. Many employees in the company have different opinions on this behavior.

Scenario 6: At the trade fair, Zhao passed a competitor's booth. At this time, no one was present at the booth. Zhao took the remaining 4 samples of the products distributed at the booth and threw them away. When competitors returned to their booth, they found that the samples had been removed, and it was impossible to distribute them to other potential buyers. Many attendees at the trade fair thought it was unethical.

Scenario 7: Guo is a salesperson of a company. If the sales exceed the plan for the month, he can get a higher commission. At the end of the month, a customer came to place an order, hoping goods would be delivered within 2 days. Although Guo knew that the delivery period would be more than 2 days, considering the commission, he told the customer that it would be delivered within 2 days and he got the order. Many other sales people in the company consider this unethical.

Scenario 8: Han works in a large iron and steel enterprise, and workers uses raw materials to refine sections of steel, which are stacked in the factory building. Whenever he is working night shifts, Han will secretly carry a piece of steel in the factory home to reduce the economic pressure on his family. Many colleagues think this is unethical.

Scenario 9: He is responsible for recruiting staff for a new project by a chemical waste management company. The new employees will be frequently exposed to a toxic chemical. Installing some of the latest equipment can reduce the risk of poisoning. He knows his company is using outdated equipment, but he decides not to tell the candidates about the danger. Many companies consider this unethical.

Scenario 10: Lin is publishing advertisements for properties developed by their company. The property was built in a low-lying area that once was flooded. The company has recently taken some measures to reduce the risk of buildings flooding, but in fact it has not been completely resolved. Lin clearly stated in the advertisement that the company has completely solved the problem of flooded buildings. Most people think this behavior is unethical.

Initial morality level questionnaire

Please read the following statements carefully, answer according to your own real thoughts, and put $\sqrt{\quad}$ on the number that best suits you. 1 = completely agree, 2 = agree, 3 = disagree, 4 = totally disagree.

- (1) Stealing a few dollars is nothing compared to robbing.
- (2) Cheating in order to pass an exam is understandable.
- (3) The cash machine malfunctioned and gave me several hundred yuan more than the actual withdrawal amount, so I don't need to pay back the money.
- (4) Copying a small part of someone else's paper when writing is just a reference.
- (5) There is no trash can so it is acceptable to throw trash on the ground.
- (6) Even if you step on the lawn occasionally, the grass will not be trampled to death.
- (7) Most of the students in the class cheat, so you can cheat.
- (8) If my superiors ask me to cheat, I will do so.
- (9) You can lie as long as you don't hurt others.
- (10) The scenic area has already been graffitied so it doesn't matter if you add a little more.
- (11) When I checked out, I found that the merchant had given additional change. I don't have to pay it back.
- (12) Peeking at a roommate's diary can help you get to know others better.
- (13) There are a lot of people jumping to the front of the queue, so you can cut in.
- (14) The appearance of beggars in prosperous areas will affect the appearance of the city.
- (15) If you see an old man fall, you'd better stay away.
- (16) In case of emergency, you can borrow other people's things temporarily without permission.
- (17) If a friend forces you to do something bad, it has nothing to do with yourself.

- (18) Tramps are dirty and should be forbidden from eating in restaurants.
- (19) Sleeping in class is better than skipping class.
- (20) It's better to be late than not to go.