Cognitive and Emotional Factors in Moral Decision-Making

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Abstract. Moral decision-making happens in every individual's life on a daily basis. It is having people to decide which is the right action when people have spotted an ethical issue. A lot of studies have been conducted focusing on cognition, emotion and moral decision making. Numerous studies are carried out to explore how moral decision-making is affected. This paper will be looking at the role cognitive and emotional factors play in moral decision-making in several aspects. First, the paper will focus on the role of emotional factors and cognitive factors separately, so to investigate the relationship between emotional and cognitive traits and moral decision making. Finally, the paper will look at how moral choices are affected when cognitive and emotional factors begin to be manipulated. Some limitations of previous studies were also analyzed and discussed. Directions of future research were demonstrated as well. This paper can provide some suggestions for the design of prevention and intervention courses for moral decision-making.

Keywords: Cognition, emotion, moral decision-making.

1. Introduction

Instead of a state of feeling, emotion is more of a feeling about something. Specifically, it is a psychological state resulted from the goodness and badness of certain events based on a person's goal, standard, and attitude [1]. Cognitive control is the ability to coordinate one's own ideas and behaviors in order to achieve their goals. It involves a series of complex actions, such as overcoming local consideration, prioritizing goals and evaluating consequences [2]. Moral decision-making involves individuals to choose the self-perceived best action out of multiple alternatives, based on the consideration of the norms and values that guide human beings' behavior in society [3]. The reason why cognitive and emotional factors are considered in this study based on moral decision-making is because they are closely related. According to the Dual Process Theory, people have their special way of making judgements and decisions due to their different inputs of emotion and cognitive ability, and this difference may be related to the distinct thinking styles. This helps to explain a phenomenon in the community that people have different degrees of morality, which is caused by their own thinking styles. Subsequently, researchers will have to estimate the most extreme scenario, which is the consequences if everyone in society acts morally or immorally, and possible solutions. In a society where everyone consistently acts morally would likely have a more harmonious and positive social environment. Trust among individuals would be high, and cooperation would be the norm. With everyone adhering to moral standards, crime rates would be significantly lower, and communities would likely be more tightly knit, as people would be willing to help and support each other. On the other hand, a society where everyone keeps behaving immorally would likely descend into chaos. Trust among individuals would be virtually nonexistent, leading to widespread social unrest. As a result, crime rates would increase drastically, and prisons and the justice system would be overwhelmed. The economy would also suffer as firms and individuals tend to engage in unethical practices such as fraud, theft and corruption. Hence, a balanced and ethical society is needed. To achieve this, several approaches can be adopted. 1. Encouraging moral and ethical education from an early age can help instill values and principles that promote moral behavior, and providing ongoing training can raise awareness and help individuals make more moral decisions. 2. Implement and enforce laws and regulations that promote ethical behavior and protect the rights of individuals. 3. Invest in research into human behavior and psychology to better understand the factors that drive moral and immoral actions.

Cognitive processes are always deeply affected by individuals' moods and emotions [4]. Individuals are more likely to perceive consistent information and to draw from the brain what is already existing that matches their current state of mind, and they tend to access positive information when they are happy, and negative information when they are in a sad mood. Affective states influence is a strategy of information processing, which the typical manifestation is when individuals with positive mood are more likely to employ heuristic processing strategies, relying heavily on known information and paying less focus on the details around them, and individuals who are in a sad mood tend to accept a systematic processing strategy, less dependent on given information and more attention to the details around them [4]. Additionally, it is clear that the relationship between emotion and decision making is a two-way street, and the outcome of the decision has a great impact on the decision maker's feelings. After studying, two emotions have been put in the spotlight: regret and disappointment. These two emotions have received most attention, which is how the anticipation of regret and disappointment may influence people's choices [4]. Research has found that people generally avoid experiences of regret or disappointment and therefore make decisions in a way that minimizes the possibility of these emotions. When anticipating different courses of action, people take into account possible future emotions. Since people regret taking action more than they regret inaction, a more problematic consequence of anticipating regret is that people tend to act rather than not act [4]. Individuals can often distinguish what actions are unwise, and what are ethical. Then, they take actions that can influence not only themselves but also others. First, different people make unique moral judgments and decisions. The domain theory of social judgement suggests that people's decisions and acts are affected by their surrounding environments, such as whether the given situation is governed by moral values, social rules or personal preferences [5]. One model that has been widely accepted by people is the dual system theory. The moral indicates that controlled cognitive processes account for welfare-maximizing choices, and the automatic emotional processes account for choices that correspond to deontological rules. What's more, although the theories of moral dilemmas still remain controversial, it is still commonly agreed that people have more than one psychological process while making moral decisions and judgements. When two or more processes give different responds to the same situation, people face moral dilemmas. This enables moral flexibility, as it provides people with a series of potential possible approaches. Researchers indicate that consequentialists are especially susceptible to motivated moral reasoning, because when people are in the opposing camp to certain actions, they tend to focus on potential negative consequences than potential positive consequences of an action [5].

Cognitive and emotional factors are central to the process of moral decision making, as they enable people to reason, analyze, and evaluate morally relevant information. These cognitive processes interact with emotional and situational factors to shape an individual's moral judgements and choices, which is the moral decisions people make. In the first paragraph, it is mentioned that one of the approaches to achieve an ethical society is to invest in research into cognition, emotion and moral decision-making related areas. Although there are numerous profound insights by psychologist in these aspects respectively, there is still a research gap if the three topics are combined. This paper is going to provide some clues by reviewing recent several founding. The paper will discuss cognitive and emotional factors relating moral decision making in the following aspects: separately examining the relationship between emotional and cognitive traits and moral decision making, and how the manipulating cognitive and emotional factors influence the moral choices of individuals.

2. The Relationship between Emotional and Cognitive Traits and Moral Decision Making

2.1. The Role of Emotional Factors

Empathy allows people to sense and emotionally comprehend the sentiments of others, which they have had since birth. Empathy refers to feelings people get in response to individuals' emotions and empathy that points to perspective-taking. The study examined whether personality disorder can

estimate an inverted model of moral decision-making in trolley problems instead of the effects of psychotic traits in a group of participants with no prior mental or neurological disorders records, hired without any financial compensation. In this study, Basic Empathy Scale is used to assess two empathy components. The research measured several concepts that are involved in the inquiries. The first one is the two types of empathy: the one refers to the ability to perceive feelings of others, and the one that points to the ability to understand other individuals' emotions [6]. Then, the BDL traits, which stands for borderline personality disorder. In this particular case, the subclinical borderline traits are focused. Following that, moral decision-making is evaluated, such as how different views are interacted. Overall, the results demonstrate that the people's point of view has a fundamental influence when they make judgments in circumstances that cause injury and difficulty. This conclusion shows the considerable impact it has on moral impasses and emphasizes the need to include this default value in further study on trolley issues. The trolley issues and variations contribute to evaluate the scenario when people may put themselves, the community, or the minority first by involving the three views on social dilemmas.

The Researchers indicate that decisions made by people to reject causing harm comes from feelings of aversion towards harm, and choices to adopt harmful behaviors arise from cognitive evaluation of the benefits of outcomes. The affective reactions are divided into two types. The first one is the unpleasant feelings associated with witnessing harm. Plus, being involved in the direct cause of harm is the second type. It is debated that self-focused aversion to causing harm mainly drives harm rejection, whereas dilemma judgements cannot reflect aversion to witnessing harm. Moral dilemmas require people to decide whether to take harmful actions that profit the most or not. According to the moral actions that count on people's intrinsic nature, causing harm can be said as violate deontological ethnics. Thus, harm-rejection judgements can be defined as a deontological choice whereas a utilitarian choice indicates the acceptance towards harm [7]. The first study investigated whether it is the action aversion or outcome aversion that predicts decreased acceptance towards harm in moral judgement. In their following study, participants' levels of agitation were assessed. The action aversion item shows reluctance to undertake a harmless activity that would typically cause damage. The result aversion component shows the dislike of seeing someone experience damage, regardless of the reason. The control project is defined as an aversion to unfavorable events that have an impact on oneself [7]. The findings revealed that individuals prefer to cause harm rather than see it, and that in moral quandaries, they prefer to reject harm rather than accept it in order to optimize outcomes. Furthermore, it appears that moral dilemma assessments reflect more than simply worry about bad action, because emotional concern for undesirable consequences also contributes to moral condemnation of immoral activity.

There is an ongoing debate regarding whether emotions indicate sociomoral concerns and prioritize certain actions in dilemmas involving conflict between two moral standards, thereby serving as both an "alarm-bell" and a "currency-like" function [8]. It has been proposed that humans acquired an emotional aversion to hurting others. However, in some situations, injuring another individual violates societal benefit. In the "harm to save" (H2S) moral quandary, one must choose whether to murder someone in order to save other lives. It comes up with two possible courses of action: Deontological and normative consistent decisions, which is refusing to harm others no matter what the consequence is, and or H2S's decision that is to save as many people as possible, even it requires to hurt one. Study 1 investigated the range of emotions people may experience during moral dilemmas, including "other-condemning" emotions, "self-conscious" emotions, "other-suffering" emotions and "other-praising" emotions. Study 2 examined the influence of personal differences on the habitual use of different emotion regulation strategies for moral choice, and whether such effects were mediated by emotions arousal. The research revealed that fear and sadness seemed to be predominant emotions in the moral dilemma. In addition, emotional arousal in moral dilemma and deontological choice has a positive correlation [8].

Alexithymia is a multidimensional personality, which makes it difficult to identify oneself's feelings and distinguish them from body sensations in order to verbalize one's feelings as well as

thinking with an external focus. They make up nearly 10 percent of the population and are mostly related with more stern psychopathological symptoms, including anxiety, depression, psychopathy and autism spectrum disorder. In addition, it is found that alexithymia individuals are also affected by primary impairment which may be part of the Affective Representation System where they cannot consciously identify their own emotional state. Consequently, they have no opportunity for linking their emotional state with perceivable cues to those states in others. The connection between functional judgments and alexithymia in moral impasses is examined in study 1. The first study asked a group of volunteers to complete an electronic questionnaire for the purposes of examining whether participants with advanced alexithymia were more likely than those who did not have this disease to prefer proactive responses over deontology. Consequently, people with inability to recognize one's emotion showed a preference for responses what are useful and practical [9]. They also investigated sensitivity to moral standards and a general tendency of no actions in all outcomes and norms. The following study further quantifies the factors that influence moral dilemma judgements. The findings suggested that, regardless of moral standards and repercussions, the influence of alexithymia on moral choice suggests that the utilitarian choice and general behavioral outcome are comparable under this circumstance [9]. The change is in the deontological choice.

2.2. The Role of Cognitive Factors

According to Patil, persons making utilitarian moral decisions regarding emotionally painful moral dilemmas in which the agent has to sacrifice the victim in a personal manner are motivated by deflated empathetic care for the victim and/or a weakened aversion to doing harmful activities [10]. Researchers investigated whether psychopathy has decreased action aversion and, if so, what is the connection between action aversion and psychopathy's heightened affinity for utilitarian moral assessments. During the research, participants are asked to complete two surveys that measure variables of interest and solve two moral impasses. This study measures two forms of aversion: aversion to unpleasant outcomes and aversion to harmful activities. Recent categorical research has demonstrated that psychopathy is a dimensional structure rather than a qualitatively unique personality category and, as such, may be examined as a characteristic. Furthermore, participants will be involved in various moral quandaries that will be recounted in first person. Their similarity scale will be measured, with higher appropriateness scores representing a more utilitarian bent. Finally, it is indicated that a person's way of thinking, in fact, affects their choices. Furthermore, people making moral judgements might be impacted by the protagonist's perceived warmth and skill in a situation. Importantly, the researchers suggest that stereotypes impact individuals' moral decision-making based on the particular way of thinking [10]. People who usually think logically are influenced by both ability and cordiality, whereas people who rely on their experiences are influenced solely by warmth.

3. The Effects of Manipulating Cognitive and Emotional Factors on Moral Choice

Recent research indicates that manipulations of processing methods and settings, as well as variations in information processing between individuals, impact moral decision-making. Researchers studied why some people prefer moral obligation decisions while others prefer practical decisions. People with aversive personality qualities would prioritize their own well-being over the well-being of bigger communities. Sacrificial dilemmas would require people to judge morally according to the belief: harming others is unacceptable and harming an individual to save a group of people is acceptable. Researchers investigated how people's emotions influence their moral decision-making, according to the dual-process theory. Second, considering of individual variability in moral decision-making, researchers hope to investigate the association between a person's character and ethical problem types in order to determine which attributes are associated with more utilitarian decisions. Finally, they use a moral decision-making exercise to determine if emotions interact with

various personality features in distinct moral problems. Participants' personality characteristics and real-time mood based on various moods and emotions were measured [11]. According to the findings, most people make useful judgements, instead of attractive decisions, in the tolly dilemma rather than the problem asking whether to push a person down the bridge or not, which can be supported with the dual-process hypothesis. Furthermore, people react adversely to the personal impasse since the behavior produces a largely declining emotional reaction, leading to more ethical conclusions. In objective dilemmas, the option can cause indirect pain, prompting less emotional reactions than in personal problems and leading to more utilitarian conclusions. Furthermore, while making a utilitarian decision, the instinctive negative reaction should be ignored. This is due to the fact that the logicalness of functional conclusions in objective problems with positive emotion is linked to increased activation of deliberative centers targeted at cognitive control. Furthermore, introverted people made more utilitarian choices, whereas extroverted ones made more deontological choices.

Researchers have identified two emotion-regulation strategies. The first one is expressive suppression. After the initial emotional response has occurred, suppression is used to conceal a person’s emotions. Cognitive reappraisal, on the other hand instead, cognitive reappraisal modifies a person's views about certain situations in order to moderate the original emotional response [12]. This study looked at the emotion-regulation mechanisms that occur before moral decisions are made, as well as the method through which repressing emotional responses might lead to more utilitarian decisions. The association between suppression technique and utilitarian decision-making is studied. Researchers seek to know if using the suppression technique is connected with greater utilitarian decision-making, which may be explained by lower deontological tendencies [12]. Furthermore, the association between reappraisal approach and utilitarian decision making [12]. Four research were undertaken, and the results show that because emotions play a significant part in deciding whether or not people would take a moral action, emotion management has the power to forecast the decisions people make in moral quandaries.

4. Conclusion

In conclusion, it is found out that in situations that cause harm and inconvenience, participants' perspectives have a causal effect on moral choices. Individuals also tend to choose witnessing harm than doing harm. Also, they are more likely to reject harm when facing moral dilemmas. Furthermore, the moral dilemma seems to go beyond judgement regarding wrong behaviors, and emotional concern for negative outcomes can make impact on condemning the harm morally as well. Additionally, fear and sadness are defined as the most common emotions to appear in moral dilemmas. Moreover, alexithymia reflects a shift in deontological tendencies, instead of the difference between utilitarian tendencies and general behavioral tendencies. In addition, thinking style is a significant factor to individuals’ moral decision-making. For example, people’s choices can be affected by perceived warmth and their own capability in the situation. Apart from that, most individuals tend to make utilitarian choices in the trolly problem rather than in the footbridge dilemma. Also, people react negatively to personal dilemmas because this behavior leads to more deontological decisions. In non-personal dilemmas, choices may involve collateral harm, elicit weaker emotional responses than in personal dilemmas, leading to more utilitarian decisions. Finally, it is also found out that people would highly depend on their emotions when they are making moral decisions. Therefore, regulation of emotion is able to predict people’s choices in moral dilemmas. However, there are some serious limitations. As different countries and regions have different social norms and religions, their way of thinking might be significantly differentiated from each other. Some countries tend to have higher moral standards due to the cultural differences. For instance, countries like Saudi Arabia, Pakistan and Iran are following religious traditions and rituals. This might have a deep influence on their mind when making moral decisions. Thus, the current research is not comprehensive enough, because it does not take into account all the circumstances being discussed above. In conclusion, cognitive and

emotional factors play an extremely vital role in moral decision-making. People can rarely make fully rational choices.

References

[1] Clore G. L., Wyer R. S., Dienes B., Gasper K., Gohm, C., Isbell L. Affective feelings as feedback: Some cognitive consequences. Theories of mood and cognition, 2013, 27-62.

[2] Miller E. K., Wallis J. D. Executive Function and Higher-Order Cognition: Definition and Neural Substrates. Encyclopedia of Neuroscience, 2009, 4: 99-104.

[3] Liang F., Tan Q., Zhan Y., Wu X., Li J. Selfish or altruistic? The influence of thinking styles and stereotypes on moral decision-making. Personality and Individual Differences, 2021, 171: 110465.

[4] Schwarz, N. Emotion, cognition, and decision making. Psychology Press, 2000, 14 (4): 433-440.

[5] Bartels D. M., Bauman C. W. Cushman F., Pizarro D. A., McGraw A. P. Moral judgment and decision making, 2014.

[6] Nasello J. A., Dardenne B., Hansenne M., Blavier A., Triffaux J. M. Moral decision-making in trolley problems and variants: How do participants' perspectives, borderline personality traits, and empathy predict choices? The Journal of Psychology, 2023, 157(5): 318–338.

[7] Reynolds C. J., Conway P. Not just bad actions: Affective concern for bad outcomes contributes to moral condemnation of harm in moral dilemmas. Emotion, 2018, 18(7): 1009.

[8] Szekely R. D., Miu A. C. Incidental emotions in moral dilemmas: The influence of emotion regulation. Cognition and Emotion, 2015, 29(1): 64–75.

[9] Chen X., Wu Z., Zhan B., Ding D., Zhang X. Effects of Alexithymia on Moral Decision-Making in Sacrificial Dilemmas: High Alexithymia is Associated with Weaker Sensitivity to Moral Norms. Psychology Research and Behavior Management, 2023, 2315-2325.

[10] Patil I. Trait psychopathy and utilitarian moral judgement: The mediating role of action aversion. Journal of Cognitive Psychology, 2015, 27(3): 349–366.

[11] Tao Y., Cai Y., Rana C., Zhong Y. The impact of the Extraversion-Introversion personality traits and emotions in a moral decision-making task. Personality and Individual Differences, 2020, 158: 109840.

[12] Lee J. J., Gino F. Poker-faced morality: Concealing emotions leads to utilitarian decision making. Organizational Behavior and Human Decision Processes, 2015, 126: 49–64.