

Coronavirus Pandemic

Moral judgment is important in COVID-19 pandemic

Turki Abualait¹, Shahid Bashir²

¹ Department of Physcial Therapy, College of Applied Medical Sciences, Imam Abdulrahman Bin Faisal University, Dammam, Saudi Arabia

² Neuroscience Center, King Fahad Specialist Hospital, Dammam, Saudi Arabia

Abstract

The nature of moral judgment is not only of longstanding philosophical interest, but also it is a matter of immediate practical concern. Currently, when the information, the advice, even the science and the sequela of the pandemic COVID-19 are all consistently and rapidly changing, it creates inconsistency in our decision making. Nevertheless, we lack of a detailed scientific understanding of how people make moral decisions. The letter is an effort aimed at understanding moral decision-making during the present pandemic of COVID-19.

Key words: Pandemic; COVID-19; moral decision; infections.

J Infect Dev Ctries 2021; 15(5):615-617. doi:10.3855/jidc.13915

(Received 15 September 2020 – Accepted 18 January 2021)

Copyright © 2021 Abualait *et al.* This is an open-access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

The causal evidence concerning the roles played by intuitive emotional responses and controlled cognitive processes in moral decisions involves a tension between utilitarian principles (cost-benefit reasoning aimed at promoting the greater good) and deontological principles (concerning rights and obligations of individuals) [1]. The general hypothesis is that utilitarian judgments are supported by brain regions associated with reasoning and cognitive control in the dorsolateral prefrontal cortex (DLPFC) and corresponding brain regions in the parietal lobes [2], while deontological judgments are supported by brain regions associated with emotion and social cognition in the medial prefrontal cortex, medial parietal cortex, and superior temporal sulcus/temporoparietal junction [3].

This hypothesis is supported by previous functional magnetic resonance imaging (fMRI) studies [3,4], which are correlational, as well as lesion studies [5,6]. The aforementioned lesion studies have provided causal evidence for the role of emotional processes based in the medial prefrontal cortex in supporting deontological judgments.

A central question in moral psychology concerns the respective roles played by intuitive emotional responses and controlled cognitive responses. Traditional theories of moral development emphasize the role of controlled cognition in mature moral judgment [7], while a more recent trend emphasizes intuitive and emotional processes [8].

With such pandemic and stressful times, there is an overwhelming emotional content that influences people’s behaviors and attitudes [8]. It can be clearly seen, for example, in fear-driven buying; when people buy more stuff and stock up on groceries, foodstuff, medication, cleaning supplies, and others. This “panic buying” can be considered as a psychological mechanism that takes place to deal with the uncertain situation; as people feel out of control and want to feel secured. Such behavior arises from the intuitive emotional responses in moral decisions which involve promoting actions that maximize an individual’s benefits, happiness and well-being [9].

In contrast, based on deontologism, panic buying behavior is identified to be illogical and out of the norm. Deontologists argue that each individual is valuable and should have an equal chance of buying stuff [1]. People who buy more stuff or groceries than their needs might deprive others who need that stuff more. Therefore, actions are morally obligatory regardless of their consequences for an individual’s benefits and welfare [9,10]. This moral dilemma associated with the coronavirus pandemic has a significant impact on people’s attitudes and practice behaviors. With a dramatic increase in the number of pandemic COVID-19 diagnosed cases worldwide, medical professionals and medical community may be constrained to make a tough decision about whom to be hospitalized to be medically treated and managed if hospitals become

overburdened [11,12]. The question is, can the young and otherwise healthy patients take precedence over the elderly patients who have less chance to survive [13]? The decision to select such patients with good health can be viewed in the context of dual-process theories of decision-making [14]. From a utilitarian point of view, an argument starts with that morality is shaped by the outcomes, so the most ethical choice is the one that creates the most significant benefits for the greatest number of individuals [10]. If the scarce medical interventions and treatments (such as mechanical ventilators and other supplies) were given to those patients who do not stand to benefit or have a less chance to survive, then not only might they die, but those who are highly likely to survive and recover quickly might also die.

In opposed to utilitarianism, deontologist might argue that each patient is valuable and should have an equal chance to be treated medically regardless of the consequences of this action [10]. However, this deontologist approach to treat everyone equally, as all lives are equally valuable, falls down due to lack of enough medical equipment and supplies to treat every patient. Therefore, the decision to be made is how to distribute scarce medical resources when the need is highly beyond the existing capabilities. The rationale isn't that those young and otherwise healthy patients more valuable and worthy; it is that they can get benefit from the medical treatment and recover fast enough to vacate the medical beds in hospitals which allow for treating the next patients.

Greene *et al.* demonstrated that “personal” moral dilemmas, as compared to similar “impersonal” moral dilemmas, elicit increased activity in brain regions associated with emotion and social cognition [3]. These include the medial prefrontal cortex (mPFC), posterior cingulate cortex (PCC), and posterior superior temporal sulcus (pSTS)/temporoparietal junction (TPJ). They also demonstrated that “impersonal” moral dilemmas, relative to “personal” ones, elicit increased activity in brain regions associated with working memory and reasoning in the dorsolateral prefrontal cortex (DLPFC) and corresponding regions in the inferior parietal lobe.

These results support a dual-process theory of moral judgment that explains why people respond differently to the switch and footbridge dilemmas [9,10]. In response to both the switch and footbridge dilemmas, people engage in utilitarian reasoning favoring the five-for-one trade-off. However, only the action in the footbridge dilemma triggers a negative emotional response, which is necessarily preceded by an appraisal process that distinguishes between the

actions in the switch and footbridge cases [9]. This negative emotional response tends to dominate the decision, explaining why most people disapprove of the action in the footbridge dilemma. In contrast, most people approve of the action in the switch dilemma because, here, their utilitarian reasoning faces little or no emotional resistance. In response to the footbridge dilemma, utilitarian reasoning conflicts with emotional intuition. The anterior cingulate cortex (ACC) detects this conflict, as it does in other contexts, and signals the need for cognitive control, which, in the present context, appears to be implemented by more anterior regions of the DLPFC [15]. In order for utilitarian reasoning to prevail in this context, it must compete successfully against a countervailing emotional response, thus requiring additional cognitive control. Consistent with this theory, Greene *et al.* found that utilitarian moral judgments in such cases are preceded by increased activity in the DLPFC [4].

Three more recent studies support the present dual-process theory by demonstrating a causal relationship between emotional responses and non-utilitarian moral judgments. Mendez *et al.* found that patients with frontotemporal dementia, who are known for their “emotional blunting,” were highly likely to accept the action in the footbridge dilemma [5]. Koenigs *et al.* observed similar results in patients with emotional deficits due to ventromedial PFC lesions [6]. Finally, Valdesolo and DeSteno found that healthy individuals were more likely to accept or agree with the action in the footbridge dilemma after a positive emotion induction aimed at counteracting negative emotional responses [16].

In conclusion, the pandemic of COVID-19 has a significant impact in healthcare, economic, and social aspects. Regardless of the utilitarian or deontological principles, there is a need for clear policies and strategies for decision-making in public health emergency-responses that should provide equal opportunities for medical treatment and protections to all residents and citizens, despite their age, medical status or any other related situations [14]. This COVID-19 pandemic continues to influence and modulate moral judgment and decision-making in healthcare. It's noteworthy that moral-related issue, is not unique to COVID-19 pandemic situation, given the fact that practical responses of the society, to any disaster situation, is emotional and a survival instinct. Thus, any explanations or advice will not alter human instinct easily.

References

1. Beauchamp TL (2004) Does ethical theory have a future in bioethics? *J Law Med Ethics* 32: 209-217.
2. Greene JD (2007) Why are VMPFC patients more utilitarian? A dual-process theory of moral judgment explains. *Trends Cogn Sci* 11: 322-323.
3. Greene JD, Sommerville, RB, Nystrom LE, Darley JM, Cohen JD (2001) An fMRI investigation of emotional engagement in moral judgment. *Science* 293: 2105-2108.
4. Greene, JD, Nystrom, LE, Engell, AD, Darley JM, Cohen JD (2004) The neural bases of cognitive conflict and control in moral judgment. *Neuron* 44: 389-400.
5. Mendez MF, Anderson E, Shapira JS (2005) An investigation of moral judgement in frontotemporal dementia. *Cogn Behav Neurol* 18: 193-197.
6. Koenigs M, Young L, Adolphs R, Tranel D, Cushman F, Hauser M, Damasio A (2007). Damage to the prefrontal cortex increases utilitarian moral judgements. *Nature* 446: 908-911.
7. Kohlberg L (1969) Stage and sequence. The cognitive-developmental approach to socialization. In Goslin DA editors, *Handbook of socialization theory and research*. Chicago: Rand McNally press. 347-480.
8. Haidt J (2001) The emotional dog and its rational tail: a social intuitionist approach to moral judgment. *Psychol Rev* 108: 814-834.
9. Thomson JJ (1986) *Rights, restitution, and risk: essays in moral theory*. Cambridge, MA: Harvard University Press 282 p.
10. Foot P (1967) The Problem of abortion and the doctrine of the double effect. *Oxford Review* 5: 5–15.
11. Mannelli C (2020) Whose life to save? scarce resources allocation in the COVID-19 outbreak. *J Med Ethic* 46: 364-366.
12. White DB, Lo B (2020) A framework for rationing ventilators and critical care beds during the COVID-19 pandemic. *Jama* 323: 1773-1774.
13. Curtis JR, Kross EK, Stapleton RD (2020). The importance of addressing advance care planning and decisions about do-not-resuscitate orders during novel coronavirus 2019 (COVID-19). *Jama* 323: 1771-1772.
14. Savulescu J, Cameron J, Wilkinson D (2020) Equality or utility? Ethics and law of rationing ventilators. *Br J Anaesth* 125: 10-15.
15. Botvinick MM, Braver TS, Barch DM, Carter CS, Cohen JD (2001) Conflict monitoring and cognitive control. *Psychol Rev* 108: 624-652.
16. Valdesolo P, DeSteno D (2006) Manipulations of emotional context shape moral judgment. *Psychol Sci*, 17: 476-477.

Corresponding author

Shahid Bashir PhD
 Neuroscience Center, King Fahad Specialist Hospital Dammam,
 P.O. Box 15215, Dammam 31444, Saudi Arabia
 Phone: +966 13 8442222 (Ext. 2423)
 Fax: +966 013 8043333
 Email: shahidbpk13@gmail.com

Conflict of interests: No conflict of interests is declared.