

# Homo Moralis' giving tendencies: a multidisciplinary opinion review on altruistic behavior in the dictator game

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## Abstract

This article explores the interaction between the moral principle of protection/harm and fairness tendencies expressed by allocators in Dictator Games. Through a multidisciplinary perspective, the analysis evaluates how these intuitive moral evaluations influence altruistic and prosocial behaviors, challenging traditional economic models based on the Homo Economicus. The study aims to collect the scientific results of moral psychology to investigate a comprehensive experimental manipulation of harm in social economic games. We argue that this type of methodological correction can lead to the design of Evidence-Based Policies that, consistent with recent developments in economics and psychology research, may be effective, especially in policies from taxation to military intervention, fields in which aversion to harming others are significantly relevant.

**JEL Classification:** D01, D04, D91

## Keywords

moral intuitions — dictator game — evidence-based policies — altruistic behavior — moral decision-making — harm aversion

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## Introduction

*“Behind every act of altruism, heroism, and human decency you’ll find either selfishness or stupidity. That, at least, is the view long held by many social scientists who accepted the idea that Homo Sapiens is really Homo Economicus”.* (Haidt, 2021, p.163)

Homo Economicus, is rational, with fixed preferences and perfect foresight, always trying to maximize his benefits, motivated only by self-interest (Edwards, 1954). However, as widely demonstrated in the economic and psychological literature, individuals are incapable of collecting complete information, have cognitive limitations, have preferences that depend on the context and that change, and are generous to others (Simon, 1955; Kahneman & Tversky, 1979; 1982). Integrating such a vision is like saying that “utility alone cannot anymore be both the basis of predictions of economic behavior and the evaluation of the outcomes of this behavior” (Bowles, 2023, p.151) because people act to acquire economic goods and services only before having ensured that they are able to maintain a positive self-image of dignified, autonomous, and moral individuals. (Mazar et al., 2008; Bowles, 2008).

The investigations about moral decision-making processes (Greene, 2001; 2014; Greene et al., 2004) and the socially functional nature of moral thinking led to defining an “intu-

itive” nature of moral judgments (Haidt & Bjorklund, 2008) influenced by biases and expressed through heuristics that influence our automatic system of reasoning (Kahneman, 2011). This automatic system is sensitive to six principles of morality<sup>1</sup> that just like taste receptors, inevitably stimulate our virtuous minds, upon which human cultures construct their moral communities (Haidt, 2007; 2021). Clarifying the nature of cognitive processes underlying moral reasoning turns out to be crucial to elaborate evidence-based policies consistent with recent developments in both disciplines (economy and psychology) and that conceive individual well-being in ways that go beyond efficiency and self-interest (Bowles, 2008).

This review article aims to summarize the research that linked the principle of protection/harm to the principle of

<sup>1</sup>Haidt (2007; 2021) argues that our moral intuitive judgements rely on six principles: *Harm/Care* (it drives us to protect others from harm and to promote kindness and nurturing behaviors), *Fairness/Cheating* (based on principles of justice, equality, reciprocity and proportionality, this foundation supports cooperation and fair treatment. It relates to our aversion to cheating or exploitation), *Loyalty/Betrayal* (this foundation prioritizes group loyalty, allegiance, and solidarity while condemning betrayal), *Authority/Subversion* (focused on respect for tradition, leadership, and social hierarchy, this foundation values order and stability while opposing subversion of legitimate authority), *Sanctity/Degradation* (this foundation involves feelings of disgust and purity, often linked to religious or cultural practices and rejects what is seen as impure or profane), *Liberty/Oppression* (concerned with resistance to domination and advocacy for personal and collective freedom, this foundation values autonomy and condemns oppression).

fairness/cheating focusing on the evaluation of moral choices using a specific social economic game: the dictator game (Kahneman et al., 1986). In this game, an allocator chooses the amount he has to divide from a given monetary endowment with the second player, called the receiver, who takes no action and simply receives the money. This design, initially thought of as a variant of an ultimatum game (Kahneman et al., 1986; Forsythe et al., 1994), was elaborated and exploited to assess “the extent to which generous offers in ultimatum games occurred because proposers were fair-minded or because proposers feared having low offers rejected” (Camerer & Thaler, 1995, p.213). This discussion is divided into three parts: section 1 describes the psychological and evolutive motivations underlying the altruistic behavior expressed by subjects in a variety of dictator game experiments. Section 2 focuses on the principle of harm/care examined according to recent developments in social psychology and neuropsychology to assess the impact of manipulation of harm used in dictator games. The last section (Section 3) closes the critical review with methodological suggestions on the evocation of harm in dictator games and implications on policy-making.

### Fairness, Reciprocity, and the Psychology of Giving in the Dictator Game

Since Kahneman's first application of the dictator game (Kahneman et al., 1986), an increasing number of papers have attempted to interpret the motivations underlying the inequity aversion expressed by dictators (Engel, 2011; Umer et al., 2022). Agents do not ubiquitously choose the most selfish outcome. In fact, participants in the role of the dictator allocate about 28% of the given amount (Engel, 2011), raising the necessity to consider the reasons behind such choices. The principle of fairness/cheating has a social function, it is activated by values such as altruism, fairness, reciprocity, and deception, and is useful for establishing mutually beneficial partnerships, without being exploited (Haidt, 2021). Our cerebral cortex,<sup>2</sup> working as a natural repellent, automatically translates unfair or explicitly deceptive proposals into anger and disgust (Sanfey et al., 2003). This adaptive function of our brain is the reason behind the fact that the need to punish free riders overrides any utility maximization (Fehr & Gächter, 2000). Similarly, we feel pleasure, sympathy, and affection when others let us know that they can be trusted and will reciprocate (Haidt, 2021). From an evolutionary perspective, we know that one organism should only help another, even though this entails an immediate cost without a direct gain, only if that interaction can express reciprocity, not too far in the future. Therefore reciprocal altruism is a selective behavior conditioned by the ability of individuals to recognize

other individuals and remember past interactions, and is only possible in systems where individuals have opportunities to interact repeatedly (Trivers, 1971).

Trivers' theory of reciprocal altruism has found many parallels in the literature on dictator games (Ben-Ner et al., 2004; Keysar et al., 2008). Quantity and quality of information on recipients' characteristics provided to the dictator consistently mediate transfers of resources in dictator games. Anticipated communication from a potential recipient (Ellingsen & Johannesson, 2008; Xiao & Houser, 2009) or information about faces (Burnham, 2003), names (Charness & Gneezy, 2008) and income level of the individuals (Brañas-Garza, 2006) reduce the perceived social distance between dictator and receiver and generate more selfless dictators. Moreover, while exploring the differences between the characteristics of receivers, Umer et al. (2022) examined laboratory experiments involving recipients who were either students or charitable organizations. They observed that when the recipient was an anonymous student, participants transferred approximately 21% of their endowment. However, when the recipient was a charity institution, the amount transferred increased significantly to around 45%. Examining the same topic, Eckel and Grossman (1996) tested for differences in dictator transfers to a student versus a charity organization without providing details about the charity or its activities. Their findings reveal that participants transfer about 31% of their total earnings to the charity, compared to transfers ranging between 9.2% and 15% to the anonymous student. However, the principle of fairness/cheating is not expressed solely through concerns about equality. In the equation, proportionality must be included since it is perceived as the concern that everyone gets what they deserve even if this produces unfair outcomes<sup>3</sup> (Haidt, 2012). In the same meta-analysis, Umer et al. (2022) look at laboratory studies where the dictator had to earn their endowment or it was a given amount, showing that donations with unearned income are more generous (22% donation rate) than donations with earned income (15% donation rate). Investigating the impact of ownership over money is crucial in the moral assessment of proportionality because whether a person deserves his money or not stimulates our fairness receptors in many different ways (Frohlich, Oppenheimer & Kurki, 2004).

Details about the recipients are not the only variables that consistently influence the altruistic behavior of allocators. A great number of experiments on the dictator games focused on the role of egoistic motivations behind altruistic acts: extrinsic rewards such as recognition and social attractiveness can motivate giving behaviors. When the dictator decides under conditions of absolute anonymity, donations tend to be very low (about 10% of the endowment), and vice versa when the

<sup>2</sup>The specific section of the cortex that deals with this 'moral translation' is the anterior insula, a brain region located in the anterior part of the insular lobe. The 'moral functions' mentioned include the processing and integration of emotions in decision-making processes (especially negative emotions such as disgust, anger and anxiety) and the translation of bodily sensations into subjective emotions (Sanfey et al., 2003).

<sup>3</sup>Haidt argues that a factor that influence this difference in the perception of the fairness principle lies on the bipolarized political values that characterize the American political system. Liberals found the fairness/cheating principle primarily on issues of equality and social justice; conservatives, on the other hand, possess fairness receptors that are more sensitive to proportionality (Haidt, 2021).

anonymity is not ensured they tend to respond more fairly for fear of social repercussions (Hoffman et al., 1996). Contexts in which reputation is observable and linked to the possibility of future social benefits lead individuals to contribute more to the common good (Milinski et al., 2002). Manipulating the social image of dictators, Andreoni and Bernheim (2009) verified how individuals tend to follow norms of fairness when their choices are observable, and how, in anonymity, respect for fairness decreases. Reputation thus turns out to be one of the 'moral compasses' of altruism as it allows men to select the group that provides them the most effective 'strategic cooperation', both in terms of quantitative gains and moral consistency (Baumard, André and Sperber, 2013).

Nevertheless, charitable giving persists even when social pressures are minimal and when outcomes of giving are uncertain or non-existent. Crumpler and Grossman (2008) used a dictator game framework to investigate how dictators receive utility not from the benefit that recipients will enjoy, but from the act of giving itself. In the experiment, the dictators can choose their recipient from a pool of 10 charitable organizations and are informed that regardless of their donations the chosen recipient will always receive \$10. The experimental results show that 56.9% of the subjects made a donation and that the average donation made by all participants was 21% of the endowment. It is also worth noting that 4% of the subjects decided to donate practically the whole amount. These results are in contrast with pure altruism theory, where individuals care solely about the welfare of others; under perfect altruism, only the amount of funding would be relevant to decisions of giving money, but in the experiment of Crumpler and Grossman subjects were informed about the uselessness of their donations. People derive intrinsic pleasure or self-gratification from the act of giving itself, rather than purely from the outcomes or benefits their generosity provides to others; this effect is called "warm glow" (Andreoni, 1990; Andreoni et al., 2017; Cartwright & Thompson, 2023). This phenomenon explains why individuals might donate to charity, volunteer, or share resources even when the act provides little to no direct material benefit. It highlights a psychological reward that motivates altruistic behavior, separate from social pressures or purely utilitarian considerations.

### Moral Intuitions of Harm: Insights from Psychology and Behavioral Economics

The considerations of Haidt (2007) on the distinguished psychological foundations of moral intuition made the harm/care principle lose its primacy, nevertheless, the majority of people trying to explain morality, describe it as being about how people should treat one another in terms of harm, protection, fairness and justice. The harm/care principle is an evolutionary mechanism that makes us sensitive to signs of suffering and need, and prompts us to despise cruelty and want to care for those who suffer. Moreover, along with cultural integration between nations and technological advances, our concern

about cooperation, fairness, and non-violence expands beyond our in-groups<sup>4</sup> (Pinker, 2011). A functional approach to the moral psychology of harm suggests that harmful actions can be inhibited both by an assessment of consequences toward the victim, integrating both empathy and role-taking skills of the decision maker (Batson & Ahmad, 2009), and by a "selfish" assessment of consequences fueled by the negative impact that the violent action may represent on the decision maker's long-term reputation (Greene et al., 2009; Pinker, 2011). Refraining from perpetrating harm to others, however, is a learned evolutionary benefit that does not necessarily concern the evaluation of consequences, whether physical or emotional. Observing a violent action triggers an aversive response evolved to maintain social order, inhibiting aggression that is counterproductive to community development (Greene et al., 2004). It is also not essential to perform a harmful action to elicit distress: the mere simulation of physically harmful behavior results in negative emotional reactions. Sensory-motor representations concerning violent actions such as punching or stabbing another individual become aversive because they trigger implicit representations of harmful outcomes, generating through associative learning mechanisms a learned physiological response called harm aversion (Cushman et al., 2012). These motivations are, however, far from being the result of a thoughtful and perfectly "rational" decision process. According to Greene's dual process theory (2013), two distinct systems related to different modes of information processing are involved in moral decision-making. The former is characterized by automatic and intuitive mental processes, more influenced by emotions; the latter, deputed to cost-benefit calculations, operates in a slower and more controlled manner. Despite the natural tendency of human beings to evaluate themselves as rational decision-makers convinced of the reasons behind their moral choices, actually it is the automatic system that possesses primacy over moral judgment. "Moral judgment is much like aesthetic judgment: we see an action or hear a story and we have an instant feeling of approval or disapproval" (Greene e Haidt, 2002, p. 517). Greene, in his studies about the neural basis of moral decision processes (Greene et al., 2001; 2004; Greene, 2014), identified two factors that affect people's intuitive judgments: whether the victim is harmed through the direct application of personal force and whether the victim is harmed as means (harm intended as an intentional step to achieve a goal) versus side effect (harm occurs as a foreseen but unintended consequence of pursuing a goal). The distinction between harm as a means and harm as a side effect alone does not justify our moral intuitive judgments, nor the distinction between physically causing harm to someone through direct bodily interaction or causing it indirectly does. Our moral brains are sensitive to these distinctions but it is the combination of these two factors

<sup>4</sup>Pinker (2011) argues that humanity has become less violent over time identifying several key factors for this decline, including the rise of centralized states (which enforce laws), commerce (fostering cooperation for mutual benefit), literacy and education (expanding empathy and moral reasoning).

that significantly influence our intuitions (Greene, 2013).

In social economic games like dictator games harm can be evoked by initially designating the money to the recipient, changing the distribution action from giving to taking. Thus, there is no agreement about the greater generosity of one context over another in literacy (Suvoy, 2003; Keysar et al., 2008; Dreber et al., 2013; Krupka & Weber, 2013; Kettner & Ceccato, 2014; Grossman & Eckel, 2015). Suvoy (2003) surveyed high school classes by explicitly asking them about the amount to “keep” and the amount to “give” in the case where the initial owner of the money is the allocator, and the amount to “leave” and the amount to “take” in the opposite case. Thus the results are not statistically significant, average donations in the ‘give’ context are higher than donations in the ‘take’ context and it should also be considered that out of 206 treatments, only 3 subjects (1 in the give framing, 2 in the take framing) behaved according to the principle of utility maximization. With the same aim, Dreber et al. (2013) analyzed a sample of 400 subjects, interviewing them in the dictator game with the two frames. In agreement with the conclusions of Suvoy (2003) donations in the ‘give’ context (about 23.5%) are higher than donations in the take context (about 21%); nevertheless, even these results are not statistically significant. Specifically studying reciprocity conditioned by harm, Keysar et al. (2008) developed an experimental design based on the ‘give’ and ‘take’ frame that included a double shift, allowing for role reversal between allocator and receiver.<sup>5</sup> The comparative results between the five experiments cited in the paper show a significant greater reciprocity in the ‘give’ context than in the ‘take’ context. However, it should be considered that as shifts increased, subjects’ selfishness increased too. Krupka and Weber (2013) instead, performed a series of experiments to assess how social norms impact economic choices, assuming that the utility of decision makers is not based solely on the money they get but also on the degree to which their actions conform to social norms. In the first experiment, they compared a standard version of the dictator game and a “bully” version, in which the allocator and the recipient were each given \$5, and the dictator could choose the amount to take from the recipient. Players in this experiment were not asked to participate in the dictator game, but only to evaluate it morally, judging the proposed alternatives as socially appropriate or not; in addition, subjects were given an additional monetary incentive if their response matched the modal response. The results show that the most socially appropriate choice is the fair split, while the most inappropriate choice is the “all and nothing” split. They also observe how actions involving taking are rated as more inappropriate than the same in the ‘give’ context. After having evaluated the moral norms the authors performed a second experiment, with subjects who had not been informed about what happened in the first one, in which the participants played the dictator game in the variants previously described. The results show that the average amount awarded to the recipient was

\$2.46 in the standard game and \$3.11 in the “bully” treatment, explaining the social norms’ influence on altruistic behavior.

However, this type of framing takes into account neither the impact of the personal force in moral judgments, nor a context in which the harm may be perceived as a side effect. Indeed, only by including in the framing harm as a side effect, different results were found. In their study Perera and his colleagues (2016) to differentiate between harm caused as a means to an end and harm caused as a side effect, adapted the distribution action in the standard dictator game, framing it in two distinct ways: taking and splitting. In the ‘take’ condition the recipient initially received money, and the participant chose how much to take away, directly inflicting harm as a means to achieve their goal. In the ‘split’ condition ownership of the money was neutral at the start, so any decision not to donate to the recipient resulted in harm as an unintended side effect of the distribution choice. Additionally, they set up two conditions with two different recipients: in the first condition the recipient was designated as an orphan needing charitable help; in the second one participants allocated money between the orphan and a charity.<sup>6</sup> The results that emerged from this study are in agreement with the conclusions of dual-process moral theory: people were more averse to causing harm as a means to an end (taking) than as a side effect (splitting) but the impulse to avoid harm could be overridden by concern for the greater good (giving to charity).

## Conclusive Remarks

The assumption in economics that individuals act to maximize their benefits suggests that, in the dictator game, participants would choose not to give anything, aligning with utility-maximizing behavior in traditional economic models. In this analysis, we summarize the research articles that tried to underline the motivation behind the inequity aversion expressed by subjects in dictator games. People not only behave fairly because they want to be perceived as dignified and moral individuals (Mazar et al., 2008; Bowles, 2008), or because they are gratified by the positive sensations they feel during and after prosocial behavior (Andreoni, 1990; Andreoni et al., 2017; Crumpler & Grossman, 2008; Cartwright & Thompson, 2023); human harm aversion is a learned evolutionary benefit that strategically operates for the proliferation of our species (Greene, 2013). Despite the aforementioned moral psychology literature, the analyzed dictator games experiments have led several times to non-significant results (Suvoy, 2003; Dreber et al., 2013; Kettner & Ceccato, 2014; Grossman & Eckel, 2015).

While aware of the criticism on the generalizability of the data collected in the artificial context of experimental labs (Al-Ubaydli & List, 2015) we argue that it is necessary to

<sup>5</sup>All subjects were previously informed that there would be a role reversal between dictator and receiver during the repetitions of the game.

<sup>6</sup>In the experiment it was specifically told to the dictators that donations to the charity would have helped more orphans compared to equivalent donations directed to an individual orphan. This preserved the tension typical of moral dilemmas, balancing an aversive action (taking from an orphan) against a greater good (supporting the charity).

manipulate the harm/care principle (Haidt, 2007) in a way that is consistent with research developments on moral decision-making processes. The dictator game by definition involves decisions that can be seen as indirect harm: the dictator's choice not to share money harms the recipient (by denying them a potential benefit), but this harm is not physically or directly inflicted (e.g. the physical act of taking money from the recipient's "hands" would involve direct personal force and likely elicit stronger emotional resistance). Furthermore, a big part of dictator games literacy focused on evaluating moral choices has used a type of harm framing (take/give) that does not include a relevant factor that influences human intuitive moral judgments, that is the distinction between harm caused as a means and harm caused as a side effect.

Moral dilemmas arise when we contemplate pitting consequential considerations for a greater good against our non-consequentialist intuition to avoid harm, each generated by a distinct psychological system within the mind (Greene, 2014). Integrating all the significant variables called in during moral decision-making processes is useful to redefine the design of dictator games experiments, with the aim of returning more generalizable results on prosocial behavior.

An adequate normative economics is one that is consistent with recent developments in both economic and psychology research and that resonates with widely held moral intuitions (Bowles, 2008). By blending empirical evidence with moral intuitions, policymakers can design interventions that not only optimize outcomes but also align with social values, thereby enhancing public acceptance and efficacy. An example of this integration came from Capraro et al. (2019) which tried to measure the impact of 'moral nudges' on prosocial and cooperative behavior that are structured as a priming technique<sup>7</sup> to trigger participants' moral intuitions. Creating psychological barriers to self-serving behavior and emphasizing prosocial values may be effective especially in policies from taxation to military intervention in which the aversion to harm is placed in opposition to the desire to do good.

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<sup>7</sup>In their experiment Capraro et al. (2019) asked participants to answer some simple questions right before they have to make a decision: "what do you personally think is the morally right thing to do in this situation?" or "what do you think your society considers to be the morally right thing to do in this situation?".

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