Where do moral inclinations come from?

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Dr Dorottya Lantos, Dr Jess Rea

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Where do Moral Inclinations Come From? (Blog)

COVID-19 pandemic has posed unprecedented health crisis to our society. It has also led to moral dilemmas to government officials and to the public. In the face of COVID-19, many countries closed their borders to protect citizens, shut down business to reduce the spread of the virus, or implemented strict quarantine regulations that separated people from their family and friends… in the belief that they were avoiding more harm than they were causing.

However, if you were a citizen living abroad when COVID broke out, or if you weren't rich enough to stay unemployed, you might feel "sacrificed" for the common good. How would you respond if you were the lawmakers? What is right or wrong?

Philosophers have identified two dominant principles that guide our moral judgments: deontology (e.g., "harming others is always wrong, no matter what the consequences are"), and utilitarianism (e.g., "it is better to save five lives than one that is lost")[1,2]. Psychologists continued along their paths, trying to understand the origins of such moral inclinations. Years of research have distinguished moral intuitions, the automatic feelings about what *is* right or wrong, from moral reasoning, the slower and deliberate calculation of what *ought* to be right or wrong[3].

As you might imagine, moral intuition corresponds more with deontological inclinations and is primarily shaped by emotions, whereas moral reasoning tends to be utilitarian and puts more of a demand on cognitive abilities[4]. Psychologists have shown that babies and toddlers are naturally helpful at a very early stage and prefer to approach those who help over those who hinder[5,6]. Because they are too young to have developed the reasoning abilities necessary for thinking about morality, we can assume that they have some moral "intuitions" that we inherit

from human evolution. Intuitions have led our ancestors (and us!) to cooperate and once ensured our survival in a highly competitive environment. Even now we have an evolutionary preference for those who seem to cooperate more - those who adhere to social norms more closely (deontological people) are regarded as more moral and trustworthy, since they are more stable and less likely to harm others[7].

In contrast, moral reasoning is much more complex and almost exclusive to humans[8]. To achieve the greater good in moral dilemmas, we need to calculate who is involved, what action will likely bring good results, and how to act. In fact, scientists have found that when we make utilitarian decisions, there is a special system in our brains that gets activated[9]. In many cases, if we reflect more, we will become more utilitarian[10]. Calculating "what is good" also depends on the social context[11]. We interpret things like "harmed" and "good" differently based on our moral conventions.

In sum, the origins of our moral inclinations are both neural and social. Nature and nurture both play significant roles in the formation of our morality. The more automatic process of moral intuitions relies more on "feeling", and the more controlled process of moral reasoning relies more on "thinking".

Where do Moral Inclinations Come From? (Research Paper)

Moral principles, a sense of what is “right” or “wrong” in human life, are vital to the maintenance of social order, both in regulating one’s own behaviours and in evaluating those of others. Centuries of philosophical speculation have proposed two major principles that guide human moral judgments. Namely, the principle of *deontology* (Kant, 1785/1959), which highlights the consistency between action and social norms, and the principle of *utilitarianism* (Mill, 1861/1998), which underscores the overall consequences of an action. The two principles are reflective of individual inclinations in moral dilemmas.

Following philosophers, psychologists have empirically investigated the processing systems underlying moral judgments in the past half-century. Early theories of moral development emphasised the role of reasoning in the formation of moral sense (e.g., Kohlberg, 1969; Piaget, 1948), postulating that children’s understanding of morality undergoes progressive stages as their cognitive systems mature (for reviews, see Haidt, 2012; Killen & Smetana, 2013). Contemporary research began to shed light on moral intuitions, proposing that moral judgments mostly result from automatic emotional evaluations that are even beyond our consciousness (Damasio, 1994; Haidt, 2001). More recently, however, researchers have conceptualised dual-system frameworks that synthesise affective-cognitive contributions to moral judgments (Bartels, 2008; Cushman et al., 2006; Greene et al., 2001; Paxton et al., 2012). Generally, the automatic affective intuitions align well with deontological inclinations, whereas the controlled cognitive reasoning tends to reflect utilitarian inclinations (Cushman, 2013; Everett et al., 2016).

Therefore, to examine the origins of moral inclinations, it seems necessary to differentiate

between rudimentary moral intuitions from more sophisticated and abstract moral reasoning. Based on empirical evidence, this paper will examine whether and how deontological and utilitarian inclinations have disparate yet connected origins.

Moral intuitions and deontological inclinations

If humans are predisposed with some form of moral inclinations, individuals without much socialisation experience should behave similarly in a morally commendable manner as their elder counterparts. Indeed, there is clear evidence that young infants engage in prosocial behaviours and prefer agents who perform them. Studies have revealed that 14-to-18 month infants readily provide help to or cooperate with non-kin adults and peers in simple tasks (e.g., obtain out-of-reach objects) irrespective of reward and parental encouragement (Brownell et al., 2006; Warneken & Michael, 2006; Warneken & Tomasello, 2007, 2013). In these cases, material rewards are not necessary (Warneken & Michael, 2006), or may even undermine infants' tendencies to help (Warneken & Tomasello, 2008), suggesting an intrinsic motivation behind prosocial inclinations. In the meantime, most preverbal infants (Hamlin, 2013; Hamlin et al., 2007, 2010; Hamlin & Wynn, 2011) and toddlers (Scola et al., 2015) also tend to approach agents who help others and avoid those who hinder others across a wide range of social interactions. Since young infants and toddlers generally do not process much social experience, their altruistic and cooperative preferences can be arguably attributed to moral intuitions. However, some researchers (Salvadori et al., 2015; Scarf et al., 2012) have failed to replicate the results of Hamlin et al. (2007) and suggested that the infants' "moral" behaviours might result

from much simpler mechanisms such as simple association. As infants are not able to articulate the motivations for their actions, a thorough analysis into the origins of moral intuition requires the examination of data collected from more cognitively mature subjects.

Experiments with adults well buttress the inherited partner choice mechanisms and provide compelling evidence for the evolutionary preference towards deontological intuitions. Everett et al. (2016) reported that agents who expressed characteristically deontological inclinations (e.g., “Killing is wrong, even for good consequences”) were evaluated as more moral and trustworthy social partners than those who expressed utilitarian inclinations (e.g., “It is better to save five lives than one”). Presumably, deontological inclinations emphasise on the expression of deontological inclinations is indicative of stable cooperative behaviours regardless of contextual changes (Hoffman et al., 2015) and of prosocial emotional responses (e.g., aversion to harm) (Kahane et al., 2015). A particular strength of this study (Everett et al., 2016) was its use of process dissociation (Conway & Gawronski, 2013). A greater level of difficulty in arriving at “immoral” decisions was associated with less negativity towards utilitarian agents (Critcher et al., 2013), indicating that a core standard in judging moral inclinations was agents’ levels of commitment to cooperation.

Moral reasoning and utilitarian inclinations

In contrast to primitive situations where the agent may easily decide the outcomes of its own behaviours towards another individual (e.g., help or harm), lawmakers, political scientists and philosophers must confront everyday social dilemmas in which agents are confronted with

an existing threat and can only determine a possible means of threat deflection. These situations bring about moral concerns that depend less on direct interpersonal exchanges, but rather draw upon abstract concepts such as “the greater good” (Ellemers et al., 2019). As evidenced by observations with great apes (Tomasello & Vaish, 2013), the aforementioned moral-impersonal dilemmas almost exclusively exist in human societies, as they require abstract moral reasoning of “the greater good” that employs great cognitive efforts (Greene et al., 2004; Haidt, 2001).

In view of the close relationship between moral reasoning and cognitive processes and because this deliberate means of moral judgment usually aligns with utilitarian beliefs, it is expected that modulating cognitive processes would interfere with utilitarian inclinations. Early neuroimaging data provides evidence for correlations between brain regions related to cognitive control and utilitarian moral judgments (Greene et al., 2004). Further, causal relationships between controlled reasoning and utilitarian inclinations have been established by subsequent studies. Specifically, increasing cognitive load by imposing another control-demanding task significantly slowed the reaction times for utilitarian judgments (Greene et al., 2008), and provoking cognitive reflection prior to responding to moral dilemmas increased the proportion of utilitarian judgments (Paxton et al., 2012). In other words, active employment of cognitive resources vis-à-vis moral dilemmas may account for utilitarian inclinations.

Although utilitarian judgments are based on the good consequences, defining “what is good” depends on specific contexts and is shaped through interactions with social norms (Evans & Lee, 2013; Fok et al., 2016), which leads to cross-cultural variations in the application of moral values (Wines & Napier, 1992). In the case of dishonesty, if social norms are based on

information authenticity, lying necessarily entails negative moral values, thus should be avoided whenever possible as it leads to harm. However, if social conventions promote politeness, modest lies (versus immodest truth) may be viewed as prosocial behaviour, in which the interlocutor cares for others' feelings and avoids causing harm to them (Fu et al., 2010; Lee et al., 1997).

Ambiguities in moral inclinations

Although there seems to be an affective-cognitive dissociation in moral judgments, moral inclinations are subject to nuanced contextual information. Individuals are likely to hold different inclinations towards moral dilemmas that share similar traits. For instance, one may be inclined to save five lives by diverting the trolley and thus sacrifice one person (the trolley dilemma; Foot, 1967), yet refuse to produce similar results by pushing a stranger off the bridge to hinder the train (the footbridge dilemma; Thomson, 1976). Likewise, it is morally acceptable not to donate to save the impoverished but reprehensible to ignore a severely bleeding stranger by the roadside (Baron & Miller, 2000; Greene, 2003); even though, in both cases, inaction would likely result in others' deaths. In this regard, neurological studies have provided insights into the underlying mechanisms of moral judgment. In comparison to moral-impersonal scenarios, typical moral-personal scenarios such as the footbridge dilemma and a bleeding passerby significantly activate emotion-related brain regions (e.g., the medial frontal gyri, posterior cingulate gyri, the angular gyri) in individuals (Greene, 2003; Greene et al., 2001), suggesting a higher degree of emotional engagement may contribute to deontological inclinations.

According to Darwinian logic, the differential inclinations in moral-personal and moral-impersonal dilemmas may be traced back to the early phases of human evolution (Richerson et al., 2021). Human morality is likely to result from natural selection of altruistic and cooperative instincts that permit survival of social groups in an environment of intense competition (Sober & Wilson, 1998), and thus naturally reflects the environment in which humans evolved (Richerson et al., 2021). Our ancestors, however, evolved in an environment where only individuals standing face-to-face were common stakeholders and potential savers for each other. In other words, we have evolved altruistic moral intuitions that predispose us to help others and avoid harm even in passive forms, but mostly when the one in need is "up-close-and-personal" to us.

This essay reviews evidence from developmental psychology and neurological studies to argue that both biological and social origins are crucial to regulating moral inclinations. Specifically, human beings are predisposed to moral intuitions and accumulate cognitive resources for moral reasoning as they mature. Importantly, moral inclinations can vary greatly in dilemmas with similar setting due to different levels of emotional engagement. However, moral inclinations, especially intentions reported in hypothetical scenarios, may not truly reflect decisions or behaviours in realistic moral dilemmas (FeldmanHall et al., 2012). Future studies will need to develop more reliable methods to measure individual moral inclinations.

References

Baron, J., & Miller, J. G. (2000). Limiting the Scope of Moral Obligations to Help: A Cross-Cultural Investigation. *Journal of Cross-Cultural Psychology*, *31*(6), 703–725. https://doi.org/10.1177/0022022100031006003

Bartels, D. (2008). Principled moral sentiment and the flexibility of moral judgment and decision making. *Cognition*, *108*, 381–417. https://doi.org/10.1016/j.cognition.2008.03.001

Brownell, C. A., Ramani, G. B., & Zerwas, S. (2006). Becoming a social partner with peers: Cooperation and social understanding in one- and two-year-olds. *Child Development*, *77*(4), 803–821. https://doi.org/10.1111/j.1467-8624.2006.00904.x

Conway, P., & Gawronski, B. (2013). *Deontological and utilitarian inclinations in moral decision making: A process dissociation approach.* https://doi.org/10.1037/a0031021

Critcher, C. R., Inbar, Y., & Pizarro, D. A. (2013). How Quick Decisions Illuminate Moral Character. *Social Psychological and Personality Science*, *4*(3), 308–315. https://doi.org/10.1177/1948550612457688

Cushman, F. (2013). Action, Outcome, and Value. *Personality and Social Psychology Review*, *17*, 273–292. https://doi.org/10.1177/1088868313495594

4) Cushman, F., Young, L., & Hauser, M. (2006). The Role of Conscious Reasoning and Intuition in Moral Judgment. *Psychological Science*, *17*, 1082–1089. https://doi.org/10.1111/j.1467-9280.2006.01834.x

Damasio, A. R. (1994). *Descartes' Error: Emotion, Reason, and the Human Brain*. Putnam.

Ellemers, N., van der Toorn, J., Paunov, Y., & van Leeuwen, T. (2019). The Psychology of

Morality: A Review and Analysis of Empirical Studies Published From 1940 Through 2017. *Personality and Social Psychology Review*, *23*(4), 332–366. https://doi.org/10.1177/1088868318811759

Evans, A., & Lee, K. (2013). Lying, Morality, and Development. In *Handbook of Moral Development*. Routledge. https://doi.org/10.4324/9780203581957.ch17

7) Everett, J., Pizarro, D. A., & Crockett, M. (2016). Inference of trustworthiness from intuitive moral judgments. *Journal of Experimental Psychology. General*, *145 6*, 772–787. https://doi.org/10.1037/xge0000165

FeldmanHall, O., Mobbs, D., Evans, D., Hiscox, L., Navrady, L., & Dalgleish, T. (2012). What we say and what we do: The relationship between real and hypothetical moral choices. *Cognition*, *123*(3), 434–441. https://doi.org/10.1016/j.cognition.2012.02.001

Fok, L. Y., Payne, D. M., & Corey, C. M. (2016). Cultural Values, Utilitarian Orientation, and Ethical Decision Making: A Comparison of U.S. and Puerto Rican Professionals. *Journal of Business Ethics*, *134*(2), 263–279.

Foot, P. (1967). The Problem of Abortion and the Doctrine of the Double Effect. *Oxford Review*, *5*, 5–15.

11) Fu, G., Brunet, M. K., Lv, Y., Ding, X., Heyman, G. D., Cameron, C. A., & Lee, K. (2010). Chinese Children's Moral Evaluation of Lies and Truths-Roles of Context and Parental Individualism-Collectivism Tendencies. *Infant and Child Development*, *19*(5), 498–515. PubMed. https://doi.org/10.1002/icd.680

Greene, J. D. (2003). From neural 'is' to moral 'ought': What are the moral implications of

neuroscientific moral psychology? *Nature Reviews Neuroscience*, *4*(10), 846–850. https://doi.org/10.1038/nrn1224

Greene, J. D., Morelli, S. A., Lowenberg, K., Nystrom, L., & Cohen, J. D. (2008). Cognitive load selectively interferes with utilitarian moral judgment. *Cognition*, *107*, 1144–1154. https://doi.org/10.1016/j.cognition.2007.11.004

9) Greene, J. D., Nystrom, L., Engell, A. D., Darley, J., & Cohen, J. D. (2004). The Neural Bases of Cognitive Conflict and Control in Moral Judgment. *Neuron*, *44*, 389–400. https://doi.org/10.1016/j.neuron.2004.09.027

3) Greene, J. D., Sommerville, R., Nystrom, L., Darley, J., & Cohen, J. D. (2001). An fMRI Investigation of Emotional Engagement in Moral Judgment. *Science*, *293*(5537), 2105–2108. https://doi.org/10.1126/science.1062872

Haidt, J. (2001). The emotional dog and its rational tail: A social intuitionist approach to moral judgment. *Psychological Review*, *108*(4), 814–834. https://doi.org/10.1037/0033-295X.108.4.814

Haidt, J. (2012). *The righteous mind: Why good people are divided by politics and religion*. Vintage.

Hamlin, J. K. (2013). Moral Judgment and Action in Preverbal Infants and Toddlers: Evidence for an Innate Moral Core. *Current Directions in Psychological Science*, *22*(3), 186–193. https://doi.org/10.1177/0963721412470687

Hamlin, J. K., & Wynn, K. (2011). Young infants prefer prosocial to antisocial others. *Cognitive Development*, *26*(1), 30–39. https://doi.org/10.1016/j.cogdev.2010.09.001

5) Hamlin, J. K., Wynn, K., & Bloom, P. (2007). Social evaluation by preverbal infants. *Nature*, *450*(7169), 557–559. https://doi.org/10.1038/nature06288

Hamlin, J. K., Wynn, K., & Bloom, P. (2010). Three-month-olds show a negativity bias in their social evaluations. *Developmental Science*, *13*(6), 923–929. https://doi.org/10.1111/j.1467-7687.2010.00951.x

Hoffman, M., Yoeli, E., & Nowak, M. A. (2015). Cooperate without looking: Why we care what people think and not just what they do. *Proceedings of the National Academy of Sciences*, *112*(6), 1727–1732. https://doi.org/10.1073/pnas.1417904112

Kahane, G., Everett, J., Earp, B., Farias, M., & Savulescu, J. (2015). 'Utilitarian' judgments in sacrificial moral dilemmas do not reflect impartial concern for the greater good. *Cognition*, *134*, 193–209. https://doi.org/10.1016/j.cognition.2014.10.005

1) Kant, I. (1785/1959). *Foundation of the metaphysics of morals* (L. W. Beck, Trans.). Indianapolis: Bobbs-Merrill.

Killen, M., & Smetana, J. G. (Eds.). (2013). *Handbook of Moral Development*. Routledge. https://doi.org/10.4324/9780203581957

Kohlberg, L. (1969). Stage and Sequence: The Cognitive Developmental Approach to Socialization. In D. Goslin, (Ed.), *Handbook of Socialization Theory and Research* (pp. 347-480). Chicago, IL: Rand McNally.

Lee, K., Cameron, C. A., Xu, F., And, G. F., & Board, J. (1997). Chinese and Canadian Children's Evaluations of Lying and Truth Telling: Similarities and Dfferences in the Context of pro-and Antisocial Behaviors. *Child Development*, *68*(5), 924–934.

https://doi.org/10.1111/j.1467-8624.1997.tb01971.x

2) Mill, J. S. (1861/1998). *Utilitarianism* (ed. Crisp, R.) (Oxford Univ. Press, New York.

10) Paxton, J. M., Ungar, L., & Greene, J. D. (2012). Reflection and Reasoning in Moral Judgment. *Cognitive Science*, *36 1*, 163–177. https://doi.org/10.1111/j.1551-6709.2011.01210.x

Piaget, J. (1948). *The moral judgment of the child.* (pp. ix, 418). Free Press.

Richerson, P. J., Gavrilets, S., & de Waal, F. B. M. (2021). Modern theories of human evolution foreshadowed by Darwin's Descent of Man. *Science*, *372*(6544), eaba3776. https://doi.org/10.1126/science.aba3776

Salvadori, E., Blazsekova, T., Volein, A., Karap, Z., Tatone, D., Mascaro, O., & Csibra, G. (2015). Probing the Strength of Infants' Preference for Helpers over Hinderers: Two Replication Attempts of Hamlin and Wynn (2011). *PLOS ONE*, *10*(11), e0140570. https://doi.org/10.1371/journal.pone.0140570

Scarf, D., Imuta, K., Colombo, M., & Hayne, H. (2012). Social Evaluation or Simple Association? Simple Associations May Explain Moral Reasoning in Infants. *PLOS ONE*, *7*(8), e42698. https://doi.org/10.1371/journal.pone.0042698

Scola, C., Holvoet, C., Arciszewski, T., & Picard, D. (2015). Further Evidence for Infants' Preference for Prosocial Over Antisocial Behaviors. *Infancy*, *20*(6), 684–692. https://doi.org/10.1111/infa.12095

Sober, E., & Wilson, D. S. (1998). Unto others: The evolution and psychology of unselfish behavior. *Unto Others: The Evolution and Psychology of Unselfish Behavior.*, 394–394.

Thomson, J. J. (1976). Killing, Letting Die, and The Trolley Problem. *The Monist*, *59*(2), 204–217. https://doi.org/10.5840/monist197659224

8) Tomasello, M., & Vaish, A. (2013). Origins of Human Cooperation and Morality. *Annual Review of Psychology*, *64*(1), 231–255. https://doi.org/10.1146/annurev-psych-113011-143812

6) Warneken, F., & Michael, T. (2006). Altruistic Helping in Human Infants and Young Chimpanzees. *Science*, *311*(5765), 1301–1303. https://doi.org/10.1126/science.1121448

Warneken, F., & Tomasello, M. (2007). Helping and Cooperation at 14 Months of Age. *Infancy*, *11*(3), 271–294. https://doi.org/10.1111/j.1532-7078.2007.tb00227.x

Warneken, F., & Tomasello, M. (2008). Extrinsic rewards undermine altruistic tendencies in 20-month-olds. *Developmental Psychology*, *44*(6), 1785–1788. https://doi.org/10.1037/a0013860

Warneken, F., & Tomasello, M. (2013). Parental Presence and Encouragement Do Not Influence Helping in Young Children. *Infancy*, *18*(3), 345–368. https://doi.org/10.1111/j.1532-7078.2012.00120.x

Wines, W. A., & Napier, N. K. (1992). Toward an understanding of cross-cultural ethics: A tentative model. *Journal of Business Ethics*, *11*(11), 831–841. https://doi.org/10.1007/BF00872361