

The Refugees' Dilemma: not all deontological moral choices are of the same kind

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Abstract

The focus of the present work concerns the nature of deontological decisions. We test the hypothesis that it is possible to specify deontological moral choices based on an unemotional rule, norm or principle and that such moral choices can be distinguished from emotion-driven ones. Using a novel paradigm for moral choice that we call The Refugees' Dilemma, we provide evidence for such a rule-based route to moral choice. We show that participants with high scores in a Cognitive Reflection Test (CRT) were more likely to adopt utilitarian or rule-based responses, as opposed to emotional ones. We also found that rule-based respondents reported the highest average psychological distance, more so than even utilitarian respondents. These findings show how emotional and rule-based influences can be separated with the appropriate scenario and challenges the approach of assuming both influences can be combined into a single deontological route in dual-process models.

Keywords: Dual-Process Models; Deontological Ethics; Moral Judgment; Moral Psychology.

Introduction

Moral decision-making is at the heart of modern democracies. Therefore, understanding the principles underpinning moral judgment is fundamentally important. Consider the recent refugee crisis. The number of forcibly displaced people worldwide reached 59.5 million at the end of 2014, the highest level since World War II. Of these 59.5 million, 19.5 million were refugees, and 1.8 million were asylum-seekers. How do individuals in destination countries form opinions regarding refugees and asylum seekers? At the very least, understanding the influences shaping moral choice should provide individuals with better insight (and possibly control) into their ultimate determinations.

The established theory is that moral decisions are driven by two complementary influences (Singer, 1991; Chaiken & Trope, 1999). Such so-called dual-process theories contrast utilitarian responses, resulting from controlled cognitive processes, with non-utilitarian (considered deontological) responses, assumed to be driven by automatic/intuitive emotional processes (Greene et al., 2001; Greene & Haidt, 2002; Greene et al., 2004; Koenigs et al., 2007). Utilitarian/consequentialist judgments are aimed at maximizing benefits and minimizing costs across affected individuals (Mill, 1861/1998), while the deontological perspective (Kant, 1785/1959) emphasizes rights and duties.

We focus on deontological decisions. It seems there is a fundamental inconsistency in current understanding of such

decisions. On the one hand, they are meant to be based on some rule, principle or norm. On the other hand, the deontological route is meant to be automatic and rely on the emotional content of the situation. However, evaluating a decision in terms of consistency to a rule (such as a moral norm) should be an analytic process (Posner & Snyder, 1975; Sloman, 1996; Kahneman, 2003). There is a corresponding debate, with some researchers arguing that deontological decisions are a confabulation of moral emotions (Greene, 2007; Haidt, 2001) and others rejecting this assumption (Kahane & Shackel, 2010; Kahane, 2012; Mihailov, 2016). We propose progress this debate, using a novel lab-based moral dilemma, that we call The Refugees' Dilemma. We explore whether it is possible to discriminate between moral decisions based on the emotional content of a situation (emotional decisions) and decisions driven by a prerogative of consistency with a rule (rule-based decisions).

Moral decision-making has been dominated by the Trolley dilemma (Thomson, 1985). However, the footbridge version of this dilemma is ill-suited for the present purposes, because the deontological option (not to push the fat man) is confounded with the emotional choice. The novel Refugees' Dilemma addresses this problem. The Refugees' Dilemma is an adaptation of the Trolley dilemma, but involving three choices: Utilitarian (driven by consequences/outcomes) vs. Emotional (driven by emotions) vs. Rule-based (driven by an unemotional rule).

We employ three tools which may reveal differences between the three postulated routes to moral decision-making. First, we measured psychological distance. We assume that participants making rule-based or utilitarian decisions will evaluate a situation with greater psychological distance and conversely regarding emotional decisions. Psychological distance weakens the intensity of people's affective reactions, such as feelings of empathy (Williams et al., 2014). Furthermore, increasing psychological distance leads individuals to construe situations in more abstract terms, which sometimes aligns with more utilitarian decision-making (Trope & Liberman, 2010) and, we hypothesize, with more rule-driven decisions too.

Second, we tested participants on the Cognitive Reflection Test (CRT) (Frederic, 2005), which distinguishes two modes of cognitive processing, one that is more reflective and slow versus one that is more immediate with little conscious deliberation. Differences in the CRT should align with a propensity to adopt utilitarian vs. rule-based vs. emotional decision making, whereby we assume that

utilitarian and rule-based decisions require greater reflection (since a person needs evaluate how the well-being of one group of individuals is balanced with that of another or consider the applicability of a rule and the consequences of violating it) than emotional ones.

Third, we implemented a time-manipulation, whereby participants would either be told they had unlimited time or that they should respond as quickly as possible (but even in the time pressure condition participants had ample time to respond). Finally, we included measures with a mindset for practical application. Is responding in The Refugees' Dilemma sensitive to religious or political characteristics?

Method

Participants

A total of 1508 participants, all of whom were US residents, were recruited on-line and received \$0.80 for doing the task (706 women, 801 men; *M* age = 34.6 years, *SD* = 11.17). As this is the first study with The Refugees' Dilemma, no prior power analyses were conducted and instead we decided a priori to limit recruitment to 1500 participants. The City, University of London Psychology Department Research Ethics Committee granted approval for this project (reference PSYETH (S/L) 15/16 238).

Materials and Procedure

The study was designed in Qualtrics, run on Amazon Mechanical Turk and lasted 10 minutes approximately. We used frequency of Type of Judgment (Utilitarian vs. Emotional vs. Rule-based) as the dependent measure. Time (No Time vs. Unlimited Time vs. Time Pressure) was manipulated between participants and we used the scores from the CRT (Frederic, 2005) to measure thoughtful (high CRT scores) vs. unreflective (low CRT scores) cognitive processes.

After a few preliminary screens (consent form; some basic demographic information), all participants were presented with The Refugees' Dilemma (full text in [Online Supplementary Material](#)). They were instructed to read it carefully and had to spend at least 60 seconds reading it before the experiment advanced. The Refugees' Dilemma asks a participant to imagine himself/herself as a security guard in a border control of a hypothetical country, which neighbors three other countries. Participants are told they have to make one last decision before borders close (until further notice) and that there are instructions that entry into their country will be allowed from just one country.

Then, participants were presented with a reinforcement-learning task to ensure that they had been paying attention during the previous screen. Three basic multiple-choice questions regarding The Refugees' Dilemma were presented (e.g., "As a security guard, what is the name of your country?). Feedback was provided and participants had to keep responding until no mistakes were made.

Subsequently, the three moral scenarios were presented (Utilitarian: where ten refugees from another country need help; Emotional: where a refugee orphan child from another country needs medical attention immediately; and Rule-based: where a traveller from your own country wants to go back home and the law from your country specifies that travellers who are citizens from your own country have to take priority when returning). The text for each scenario was supplemented with an illustration (Figure 1). The moral choice was then presented to participants: "Who do you allow to your country? Remember, you can only allow traveller(s) from one neighbouring country". Participants had to choose between Choice 1 (Utilitarian; "The 10 refugees from Beta"), Choice 2 (Emotional; "The refugee orphan child from Gamma"), or Choice 3 (Rule-based; "The traveller who is an Alpha citizen coming from Delta").

Regarding the time manipulation, one third of participants was not provided with any indication of time for making their judgment (No Time). Participants in the Unlimited Time condition were instructed as follows: "You will have unlimited time to answer the question in the next page. Think carefully about your judgment before responding". Participants in the Time Pressure condition were presented with the following instructions: "The question in the next page should be answered as fast as possible. Use your first impression/ gut feeling in order to respond"; these participants had to make their moral choice while a timer (at the top of their screen) kept track of elapsed time.

Participants were next asked to complete a 4-items questionnaire (see [Online Supplementary Material](#)), which was intended as a measure of the basis of participants' judgments (e.g., "How much would you say that doing the greater good for the greatest number of people/ emotion/ a principle, norm or rule was the basis for your decision?"). The order of these three questions was presented randomly and participants had to respond moving a slider that went from 0 (not at all) to 7 (for the above question, completely based in doing the greater good for the greatest number of people/ emotion/ a principle, norm or rule). The fourth item of the questionnaire, following the same format, was a measure of psychological distance (Trope & Liberman, 2010) (e.g., "How distant do you feel yourself from the scenario when making your decision?").

Participants were next presented with three "catch questions", to control for attention and basic comprehension during the task (e.g., "How many refugees there were in the group from Beta?").

Then, participants had to complete a CRT (Frederic, 2005) as a measure of two modes of cognitive processing, quick with little conscious deliberation versus slower and more reflective. The test consisted of three multiple-choice questions (e.g., "If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets?").

Finally, participants were asked to complete demographic questions regarding their levels of Religiosity (using a 7-

point Likert scale) and Political Views (Liberal, Moderate, Conservative or Something else).

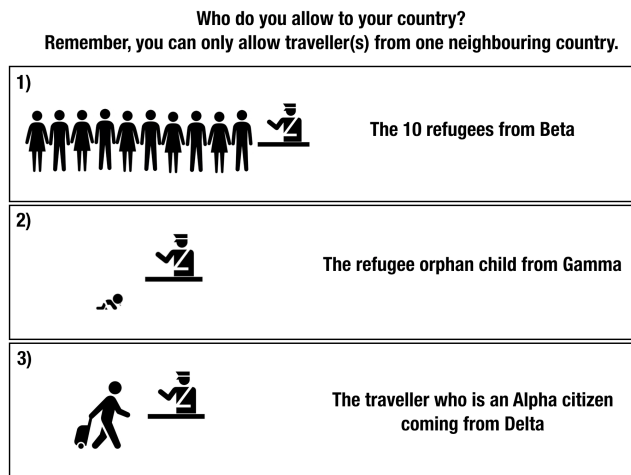


Figure 1: Illustrations and choices used in The Refugees' Dilemma: (1) Utilitarian (judgment driven by consequences/outcomes) vs. (2) Emotional (judgment driven by emotions) vs. (3) Rule-based (judgment driven by a rule, principle or norm).

Results

Validation of the Experimental Paradigm

We excluded those participants who did not answer the catch questions correctly (92/1508). No other sample trimming was conducted.

We first discuss results which aim to validate the assumptions in the design of The Refugees' Dilemma. We tested if the three different choices presented in the dilemma (Choice 1, Utilitarian, "The 10 refugees from Beta"; Choice 2, Emotional, "The refugee orphan child from Gamma"; and Choice 3, Rule-based, "The traveller who is an Alpha citizen coming from Delta") were indeed aligned with doing the greater good for the greatest number of people, with emotion or with a rule, as assumed (see Figure 2). As expected, participants making the utilitarian choice reported that their decision was mainly based on doing the greater good for the greatest number of people ($M = 6$, $SD = 1.3$). Participants making the emotional choice reported that their decision was mainly based on emotions ($M = 5.7$, $SD = 1.4$). Finally, participants making the rule-based choice reported that their decision was mainly based indeed on a rule, principle or norm ($M = 6$, $SD = 1.5$). One-way ANOVAs for each group of participants were all significant: $F(2,308) = 56.93$, $p < .001$, $w^2 = .27$ for the utilitarian respondents; $F(2,1226) = 337.787$, $p < .001$, $w^2 = .35$ for the emotional respondents; $F(2,2708) = 2511.996$, $p < .001$, $w^2 = .65$ for the rule-based respondents. A Tukey post-hoc test for each group revealed significant differences in the expected directions ($p < .001$). These results are all

consistent with expectation regarding the assumptions motivating the three options in The Refugees' Dilemma.

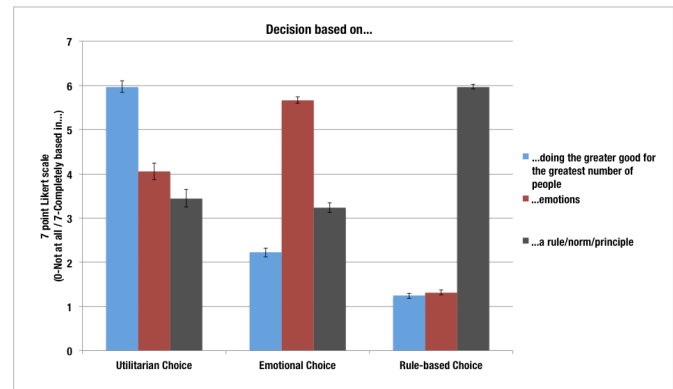


Figure 2: Mean scores for the basis of judgments, for participants making the utilitarian, emotional, or rule-based choice. Error bars represent standard errors.

As a manipulation check regarding time, we examined the amount of time that participants took to make their judgments. Participants spent more time responding in the Unlimited Time condition (18.74s) than in the No Time condition (14.47s) and than in the Time Pressure condition (8.11s). A one-way between subjects ANOVA for these means was significant ($F(2, 1414) = 25.017$, $p < .001$, $w^2 = .03$). A Tukey post-hoc test revealed that all pairwise comparisons between groups were significant ($p = .013$).

High vs. Low Cognitive Resources, Psychological Distance and Time

We first considered whether results from the CRT influence moral choice (entire sample; Figure 3). We selected participants who reported High vs. Low CRT scores (i.e. 3/3 points and 0/3 points in the CRT, respectively). As expected, high CRT participants were more likely to opt for the utilitarian response (59.38%) than low CRT ones (40.63%). Likewise, emotional answers were more likely for low CRT participants (55.7%) than otherwise (44.31%). Importantly, the rule-based response was also more likely for high CRT participants (60.73% vs. 39.27%), indicating the rule-based moral choices require a similar route as utilitarian ones. A 3x2 chi-square test on response counts, with the variables Type of Response (Utilitarian vs. Emotional vs. Rule-based) and CRT score (High vs. Low) was significant, $\chi^2(2, N=897) = 19.66$, $p < .001$.

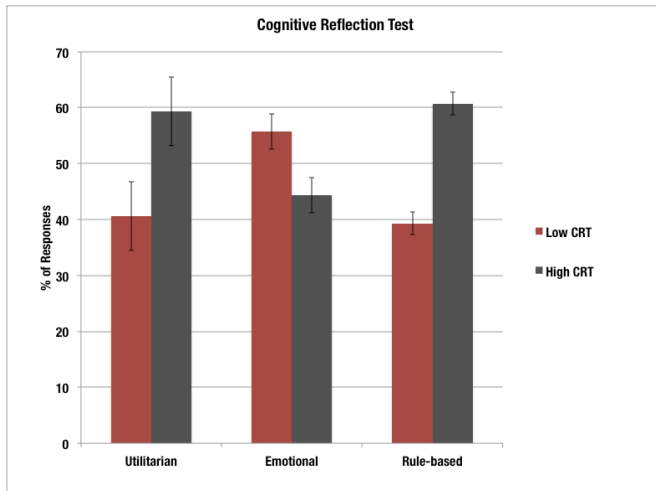


Figure 3: Percentage of Utilitarian, Emotional and Rule-based responses for participants who followed a slow and more reflective cognitive process (High CRT) or a quicker with little conscious deliberation one (Low CRT). Error bars represent standard errors.

We next examined whether different moral changes reflected the expected differences regarding Psychological Distance (see Figure 4). Participants opting for the rule-based option reported the highest distance ($M = 3.77$, $SD = 2.1$), followed by participants making the utilitarian selection ($M = 3.18$, $SD = 2.1$), and finally the ones selecting the emotional answer ($M = 2.71$, $SD = 1.93$). It is interesting that participants making the rule-based choice reported the highest distance, perhaps because the application of a rule to the dilemma requires a degree of detachment from the specifics of the situation more so than even for utilitarian respondents. A one-way between subjects ANOVA for these means was significant ($F(2, 1414) = 38.233$, $p < .001$, $\eta^2 = .05$). A Tukey post-hoc test revealed that psychological distance was significantly different between participants making the utilitarian and the rule-based selection ($p = .018$) and between participants making the emotional and rule-based selection ($p < .001$). There were no statistically significant differences between the utilitarian and emotional groups ($p = .089$).

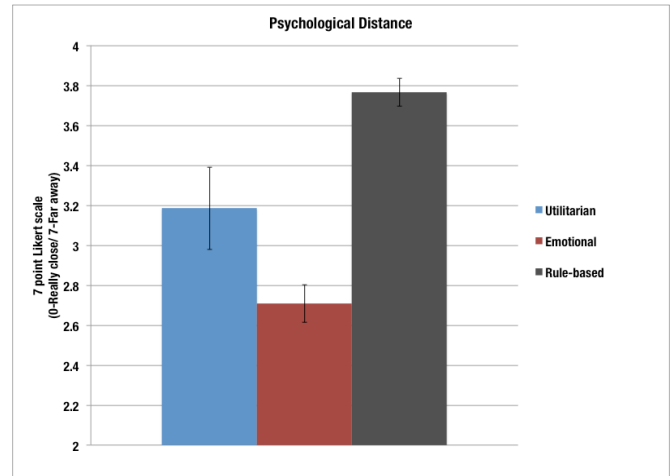


Figure 4: Mean scores for psychological distance between the different moral choices presented in The Refugees' Dilemma. Error bars represent standard errors.

Finally, we considered differences in Type of Response (Utilitarian vs. Emotional vs. Rule-based) depending on both the Time manipulation (No Time vs. Unlimited Time vs. Time Pressure) and the CRT score (High vs. Low). The three-way loglinear analysis produced a final model that retained the Type of Response x CRT score interaction, but not the three-way interaction. The likelihood ratio of this model was $\chi^2(12) = 11.647$, $p = .475$. The Type of Response x CRT score interaction was significant, $\chi^2(2) = 20.225$, $p < .001$. This interaction indicates that the relative frequencies of utilitarian, emotional and rule-based responses were different across high, low CRT scores. Of interest, the frequency of rule-based responses increased more dramatically between low, high CRT scores (225 to 351), than for utilitarian responses (25 to 38). As expected, the frequency of emotional responses followed the opposite direction (142-113 ratio of low to high CRT scores). Therefore, the analysis reveals a fundamental difference between the cognitive resources used to reach a specific type of judgment (as also concluded with the other analyses above), but these effects were not influenced by the time manipulation.

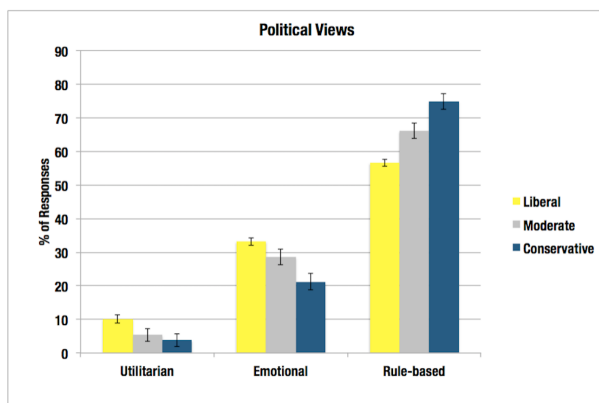
Political Views and Religiosity

We first explored the differences in moral choice, depending on participants' stated Political Views (Figure 5a). Liberals were more likely to opt for the utilitarian response (10.11%) compared to Moderates (5.3%) and Conservatives (3.9%). Liberals were also more likely to opt for the emotional answer (33.23%) compared to Moderates (28.53%) and Conservatives (21.19%). Interestingly, Conservatives were more likely to opt for the rule-driven judgment (74.93%) compared to Liberals (56.67%) and Moderates (66.13%). A corresponding 3x3 chi-square test of independence was highly significant, $\chi^2(4, N=1363) = 37.62$, $p < .001$. Individual 3x2 chi-square tests for each category of

respondents (utilitarian, emotional, rule-based) were also significant (χ^2 (2, N=1363) = 15.61, $p < .001$; χ^2 (2, N=1363) = 15.64, $p < .001$; χ^2 (2, N=1363) = 33.23, $p < .001$; respectively).

Regarding religiosity, we selected only participants who reported Low vs. High levels of religiosity (i.e. 1/7 points and 3/7 or more points in the 7 point Likert scale, respectively; Figure 5b). Low-Religious participants were more likely to opt for the utilitarian response (8.1%) compared to High-Religious ones (6.32%). High-Religious participants were more likely to opt for the emotional answer (31.04%) compared to Low-Religious ones (25.6%). Finally, Low-Religious participants were more likely to opt for the rule-driven judgment (66.35%) compared to High-Religious ones (62.64%). A 3x2 chi-square test of independence on Type of Judgment (Utilitarian vs. Emotional vs. Rule-based) against participants' levels of Religiosity (Low vs. High) was significant χ^2 (2, N=994) = 15.36, $p < .001$.

a)



b)

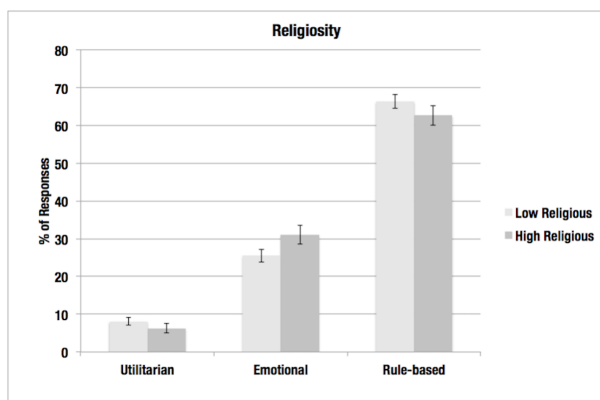


Figure 5: Percentage of Utilitarian, Emotional and Rule-based responses for (a) participants' Political Views (Liberal vs. Moderate vs. Conservative) and (b) participants' levels of Religiosity (Low vs. High). Error bars represent standard errors.

Discussion

Established theory assumes that deontological moral choices involve a fast, gut-feeling process, driven by the emotional content of the situation (Greene, 2009). There is no doubt that this is sometimes the case, e.g., in cases of moral norms of high emotional content (Valdesolo & DeSteno, 2006). However, it seems counterintuitive that all deontological moral choices are of this kind. We supported the hypothesis that there are deontological moral choices based on an unemotional rule, which can be distinguished from emotion-driven ones. We provided evidence for a route to moral choice, distinct from the emotional and utilitarian routes, and rather based on a prerogative to adhere by a given rule.

The characteristics of the rule-based influence in moral choice were explored with three manipulations. First, according to Construal Level Theory (CLT), greater psychological distance would go hand-in-hand with lower emotional involvement. We found that rule-based respondents reported the highest average distance, more so than even utilitarian respondents. Such a result is consistent with the nature of the rule provided in The Refugees' Dilemma, since application of the rule forces ignoring most characteristics of the different options. Second, high CRT participants were more likely to adopt utilitarian or rule-based responses, as opposed to emotional ones. This shows how emotional and rule-based influences can be separated and challenges the approach of assuming both can be combined into a single deontological route. Note, other work supports a view of utilitarian judgments as reflecting a greater "need for cognition" (Bartels, 2008), "cognitive reflection" (Hardman, 2008), and working memory capacity (Moore et al., 2008). Third, a time manipulation produced a complex interaction with CRT level. Future work should examine whether perhaps just tracking time might result in reduced cognitive resources for moral decisions, regardless of condition.

We developed a new paradigm for moral choice, The Refugees' Dilemma, which is based on a situation relevant for millions of citizens, especially in Europe and North America. We hope that future work will further explore moral decision situations informed by relevant current affairs or near-future social dilemmas (e.g., Bonnefon et al., 2016). With a mind to such applications, we reported some interesting correspondences between moral choice in The Refugees' Dilemma and participants' political affiliations and religious convictions.

Acknowledgements

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References

Singer, P. (1991). *A companion to ethics*. Oxford, England: Blackwell Reference.

- Chaiken, S.; Trope, Y. (1999). *Dual-Process Theories in Social Psychology*. New York: Guilford Press.
- Greene, J. D., Sommerville, R., Nystrom, L., Darley, J., & Cohen, J. (2001). An fMRI investigation of emotional engagement in moral judgment. *Science*, 293, 2105–2108.
- Greene J, Haidt J. (2002). How (and where) does moral judgment work? *Trends Cognitive Science* 6: 517–523. doi:10.1016/S1364-6613(02)02011-9.
- 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.
- Koenigs, M., Young, L., Adolphs, R., Tranel, D., Cushman, F. (2007) Damage to the prefrontal cortex increases utilitarian moral judgements. *Nature* 446: 908–911. doi:10.1038/nature05631.
- Mill, JS. *Utilitarianism*. Crisp, R., editor. New York: Oxford University Press; 1861/1998.
- Kant, I. *Foundation of the metaphysics of morals*. Beck, LW., translator. Indianapolis: Bobbs-Merrill; 1785/1959.
- Posner, MI., Snyder, CRR. (1975). *Attention and cognitive control*. In: Solso, RL., editor. *Information processing and cognition*. Hillsdale, NJ: Erlbaum, p. 55–85.
- Sloman, S. (1996). The empirical case for two systems of reasoning. *Psychological Bulletin*, 11, 3–22.
- Kahneman, D. (2003). A perspective on judgment and choice: Mapping bounded rationality. *Am. Psychol.* 58, 697–720.
- J.D. Greene (2007). *Moral Psychology, Vol. 3: The Neuroscience of Morality: Emotion, Disease, and Development* (ed. W. Sinnott-Armstrong). MIT Press, Cambridge, MA.
- Haidt J. (2001) The emotional dog and its rational tail: A social intuitionist approach to moral judgment. *Psychological Review*. 108:814–834. [PubMed: 11699120]
- Kahane G., and N. Shackel. (2010). Methodological issues in the neuroscience of moral judgement. *Mind & Language* 25(5): 561–582.
- Kahane G. (2012). On the wrong track: process and content in moral psychology. *Mind & Language* 27(5): 519–545.
- Mihailov, E. (2016). Is Deontology a Moral Confabulation? *Neuroethics*, 9, 1–13. doi: 10.1007/s12152-015-9244-5.
- Thomson, J. (1985). *The trolley problem*. *Yale Law*, 94: 1395–1415. doi:10.2307/796133.
- Williams, Lawrence E. Stein, R., Galguera, L. (2014), The Distinct Affective Consequences of Psychological Distance and Construal Level. *Journal of Consumer Research*, 40, 1123–1138.
- Trope, Y., & Liberman, N. (2010). Construal Level Theory of Psychological Distance, *Psychological Review*, 117 (April), 440–63.
- Frederick, S. (2005). Cognitive reflection and decision making. *Journal of Economic Perspectives*, 19(4), 25–42. doi: 10.1257/089533005775196732
- Greene, J. D. (2009). Dual-process morality and the personal/impersonal distinction: A reply to McGuire, Langdon, Coltheart, and Mackenzie. *Journal of Experimental Social Psychology*, 45, 581–584.
- Valdesolo, P. & DeSteno, D. (2006). Manipulations of Emotional Context Shape Moral Judgment. *Psychological Science*, 17, 476–477.
- Bartels, D. M. (2008). Principled moral sentiment and the flexibility of moral judgment and decision making. *Cognition*, 108(2), 381–417.
- Hardman, D. (2008). Moral dilemmas: Who makes utilitarian choices? Unpublished manuscript.
- Moore, A., Clark, B., & Kane, M. (2008). Who shalt not kill?: Individual differences in working memory capacity, executive control, and moral judgment. *Psychological Science*, 19(6), 549–557.
- Bonnefon, J. F., Shariff, A., Rahwan, I. (2016). The Social Dilemma of Autonomous Vehicles. *Science*. 352(6293):1573–1576.