How do we make moral judgments? —— Questioning Joshua Greene’s empirical investigation

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How do we make moral judgments?

—— Questioning Joshua Greene’s empirical investigation

Based on psychological experiments, Joshua Greene maintains that deontological judgments actually derive from the emotional processes, and consequentialist judgments are the results of the application of reason. Greene’s view is contrary to the traditional views of deontology and consequentialism. Greene observes that most people are liable to make consequentialist judgments in the trolley dilemma and deontological judgments in the footbridge dilemma, and he discovers that people’s moral judgments in the trolley dilemma and the footbridge dilemma are the products of two different kinds of psychological processes (reason and emotion). However, my own empirical study, conducted in China, does not verify Greene’s position. My results show that most people are liable to make deontological judgments in the trolley dilemma as well as the footbridge dilemma. Furthermore, Greene has seriously misunderstood Kant and his deontological ethics. According to Kant, a moral judgment that can be categorized as deontological judgment must satisfy three conditions: (1) It is derived from reason; (2) It must satisfy the moral requirements of moral duties; (3) It must be motivated by the reverence for moral laws. Greene’s understanding of Kantian ethics is only limited to (2), and he does not give any explanations for (1) and (3) at all. Therefore, Greene’s criticism of deontological ethics cannot be justified.

Introduction: A dramatic reversal of traditional views in Greene’s study

There are two important voices in the normative theory of morality: Consequentialism and Deontology. Consequentialism is the doctrine that regards the consequences of an action as the standard of moral judgments, and holds that the action itself has no intrinsic value. An action is morally right or permissible, if the action is better than alternative actions in producing greater benefits or less harm; or, in other words, when compared with other actions, the action will at least result in the same amount of benefits. Deontology is an ethical theory that is contrary to the doctrine of consequentialism. Deontologists regard action itself as having intrinsic value, and hence they do not care about its consequences. Whether an action is morally right does not depend on its consequences. The standard of moral rightness of an action is whether it can obey the limits of duty or complies with the moral code that is derived from reason. Some actions are simply morally right or wrong in themselves: Helping others and keeping promises are
Consequentialism emphasizes the consequences of an action and takes them as the purpose of the action, which implies that the action, thus conceived as a means to an end, can be qualified morally. In other words, it is the purpose of the action that determines its means in any moral situations. In contrast, deontologists argue that the purpose of the action has no privileges to provide a justification for the means. The moral rightness of an action conceived as a means is a function of the nature of the action itself. Kantian ethics is the most well-known representative of deontological ethics, and utilitarianism is the primary theoretical paradigm of consequentialism. The orthodox view insists that there is a close connection between Kantian ethics and reasoning because moral duty is actually derived from the basic presupposition for practical reason; Similarly, utilitarianism has a tight link with emotion, and sentimentalist philosophers such as David Hume, Adam Smith, and Francis Hutcheson constitute the theoretical source of utilitarianism.\(^1\)

Joshua Greene poses a challenge for the traditional views mentioned above; His core claim can be stated as follows: emotion plays a vital role in deontological judgments, it is emotion that leads us to make deontological judgments; conversely, consequentialist judgments are the result of the execution of reason, and they are based on rational reasoning rather than emotion. Greene’s claim, which he takes to be established by his well-known empirical study, poses a serious challenge for Kantian ethics and Consequentialism. Recently, Selim Berker reconstructed Greene’ study as follows, he distinguishes the normative dimension from the descriptive dimension in Greene’ study.\(^2\)

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\(^1\) There is controversy about the relation between consequentialism and human’s emotion. According to some philosophers, such as Derek Parfit, consequentialism can establish its theoretical hypothesis without any references to human emotion, especially moral sentiment, and human morality should be based on reason rather than emotion. cf., Derek Parfit, *On What Matters*, Oxford University Press, 2011; some other defenders of rule utilitarianism do not value emotion either. But as for classical utilitarianism, John Stuart Mill argue that if human’s morality is not based on emotion, it will erode all of human morality even implanting associations into people’s mind by virtue of education. See John Stuart Mill, *Utilitarianism*, The Floating Press, 2009, p57. As regards the relation between consequentialism and human’s emotion, see also Alasdair MacIntyre, *A short history of ethics*, Routledge and Kegan Paul, 1967, pp230-231; Henry Sidgwick, *Outlines of the history of ethics*, London: Macmillan,1902 (reprinted by Hackett Publish Company, 1988), pp.250-251. It is worth mentioning that Greene’s understanding of consequentialism mainly refers to classical utilitarianism; what he discusses in his research is not appropriate for rule utilitarianism and other variations of utilitarianism.

P1. The emotional processing that gives rise to deontological intuitions responds to factors that make a dilemma personal rather than impersonal.
P2. The factors that make a dilemma personal rather than impersonal are morally irrelevant.
C1. So, the emotional processing that gives rise to deontological intuitions responds to factors that are morally irrelevant.
C2. So, deontological intuitions, unlike consequentialist intuitions, do not have any genuine normative force.

As for Premise (1), it states an empirical fact. Greene believes that deontological judgments are based on emotional responses corresponding to specific situations rather than based on cognition. Premise (2) and conclusion (1) have a normative dimension, viz., that situational factors triggering deontological intuitions are independent of morality. Conclusion (2) then states that deontology cannot ultimately be justified. The following thesis will concentrate on Greene’s paper “The secret Joke of Kant's Soul” that appeared in 2008, and on his latest book Moral Tribes, that was published in 2013. That said, the latter text no longer insists on certain controversial ideas presented in the former, but we will focus on what remains consistent throughout both texts, and therefore will only identify such changes where necessary.

Chapter 1. Greene’s empirical study

1. The background of Greene’s study of moral judgments

It is a very controversial move that some philosophers or scientists (especially psychologists) place ancient philosophical propositions into modern empirical science in order to get answers to questions that have been puzzling humans for centuries. But when faced with increasingly powerful and uncompromising evidence, we have to ask if philosophers can effectively defend the validity of that to which they devote themselves whole-heartedly. I believe this question is not an extraordinarily tough one for philosophers. The keynote is what attitudes we hold when faced with empirical evidence that verifies or destroys incessantly the theoretical presuppositions that philosophers take as non-problems. A responsible philosopher should take new evidence born from empirical science seriously, which in turn should be regarded as a driving force for pushing philosophy forward.

Greene acknowledges that some empirical evidence inspired his study of moral judgments. For example, there is growing evidence that we do a lot of things in an unconscious way. Moreover, we do not exactly know what the reasons are behind actions. In an experiment conducted by Timothy Wilson, participants are instructed to choose a pair of pantyhose from a mass of pantyhose in front of them, and then they are asked to give reasons for their decisions. Participants give various reasonable answers: high-class knitting, transparent, high resilience, etc. But, their choices in fact have nothing to do with the traits mentioned above, because all the pantyhose exhibited in the experiment are exactly the same. The result of the experiment implies that the participants are just interested in the pantyhose that happened to be in their right hand side, or in other words, what encourages people to make choices are factors that have nothing to do with the qualities of the pantyhose. People are inclined to respond to factors unrelated to objects (such as the pantyhose), and then they try to make reasonable justifications by confabulating various reasons for such factors. However, they do not recognize the real motives behind their choices and detect the subsequent process of reasonable confabulation as well.

According to Greene’s statement, Jonathan Haidt and Jonathan Baron have ever profoundly influenced his study of moral judgments. In Haidt’s famous article

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5 The experimental result is also verified by Jonathan Haidt’s study of moral judgment, see Jonathan Haidt, The Happiness Hypothesis: Putting Ancient Wisdom and Philosophy to the Test of Modern, Arrow Books, 2007.
“The Emotional Dog and its Rational Tail: A Social Intuitionist Approach to Moral Judgment”, he posed a new competitive model of moral judgment.\(^6\) He proposed that most of moral reasoning in our daily life is actually post hoc, we decide what is morally right or wrong by virtue of intuitions that is motivated by emotions.\(^7\) We confabulate various reasons in order to explain and defend our moral judgments only when necessary. Admittedly, Haidt has never denied that people in fact could conduct moral thinking in rational way, but, obviously, he does not agree that rational reasoning in morality is a typical approach. Jonathan Baron, as distinct from Haidt, makes an important distinction between consequentialist judgments and non-consequentialist judgments. He argues that non-consequentialist judgments are based on heuristics and the rules of thumb related to simple decision-making. But, unlike Greene, he does not believe that emotion occupy a substantial position in heuristic moral judgments.\(^8\)

Greene borrowed ideas from both Haidt and Baron’s insights in philosophical psychology and defend his viewpoints as follows. Deontological judgments are liable to be driven by emotional responses; deontology, on the other hand, has far less to do with rational reasoning than it has to do with “an exercise in moral rationalization”. Consequentialist judgments, opposite to the former, are derived from a certain psychological process called “cognition”. Consequentialism and moral judgments sprung from it contain authentic moral reasoning, which happens to be cherished by Immanuel Kant.

Greene has great confidence in his empirical study and believes his research could experience any challenges bearing evidence contrary to his assertions. More importantly than all of that, he deems that his research is not limited to the dimension of description and believes it implies normative significance in the dimension of normativity:

These claims are strictly empirical, and I will defend them on the basis of the available evidence. Needless to say, my argument will be speculative and will not be conclusive. Beyond this, I will argue that if these empirical claims are true, they may have

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normative implications, casting doubt on deontology as a school of normative moral thought.⁹

2. Psychological “is” and moral “ought”

Duty is a core concept in Kantian ethics. Kant establishes duties on the basis of some fundamental principles. For deontologists, although they will never be bored with debating the question “what principles constitute the foundation of duties”, there is little disagreement on the following doctrine: the standard of moral rightness of an action is whether it can obey the limits of duty or comply with the moral code derived from reason. A deontological judgment is the judgment that is derived from admiring and revering principles such as the categorical imperative and the respect principle. If a deontological moral judgment stems from emotion rather than from reasoning, this judgment will therefore be out of value in morality. A moral judgment founded on the basis of emotional responses cannot be a deontological judgment, even if it appears to be the one at first glance.

Greene argues that none of us have cast a doubt on the following assumption: consequentialism and deontology are first and foremost moral philosophy. This assumption implies that philosophers do know exactly what consequentialism and deontology stand for, because it is philosophers who define the two terms. Greene doubts that philosophers do not know the meaning of the terms “consequentialism” and “deontology”. Kantian ethics investigates moral code and instructs people to do what they ought to do, which is undoubtedly linked with “ought” in the normative sense. But there is an assumption underlying Kantian ethics: philosophers positively understand the meaning of the terms they are using. For this reason, Greene invented a different perspective to deal with the terms “consequentialism” and “deontology”. He proposes that “consequentialism” and “deontology” refer to “psychological natural kinds”:

I believe that consequentialist and deontological views of philosophy are not so much philosophical inventions as they are philosophical manifestations of two dissociable psychological patterns, two different ways of moral thinking, that have been part of the human repertoire for thousands of years.10

In order to defend his view, Greene gives an interesting and well-known example fulfilled with analogous significance, and it implies philosophical significance as well.11 Imagine an area located in the tropics where people use the symbol “●” to

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refer to water. In their authoritative dictionary, ♦ is a kind of clear and drinkable liquid. One day, an adventurous young man discovers a nearby mountain, where he becomes the first man to encounter ice in his tribe. Through a simple experiment, he finds out that ice is a physical form of water and shares his finding with the elder of the tribe. The next day, He leads the elder to the mountain, his finger pointing toward the ice, and says, "Look, it is ♦!" Irritably, the elder explains to the young man, ♦ is a kind of liquid, and what he is holding is definitely a stiff material that cannot therefore be ♦. Greene thinks that the elder is right in a sense, for the authoritative dictionary undoubtedly exerts a convincing power on local peoples. As the dictionary indicates, ♦ is a kind of clear and drinkable liquid, but the elder is perhaps missing the broader prospect that many things in this world bear an "underlying structure" that can be called essence. Due to underlying structure, it is possible to refer to something, and we can even name an object without understanding what it exactly mean. Through this example, Greene criticizes that, in a metaphorical way, philosophers do not know what consequentialism and deontology refer to. They just deal with the two terms in a way that treats authoritative dictionary as if the Holy Bible, and they do not truly understand the meaning of consequentialism and deontology. Kant——one of the most prestigious philosophers in history, however, ignored this important point in an imposing manner, and regarded philosophers’ confidence in grasping the terms as commitment and makes it to be the presupposition of his moral philosophy.

On the issue of psychological “is” and moral “ought”, Greene has a clear understanding of this problem. He proposes that the hypothesis of the psychological foundation of consequentialism and deontology is perhaps wrong, but that, whether it is right or wrong cannot be determined by armchair. The question is an empirical problem. Indeed, many philosophers have strenuously avoided disputes related to science. They often prepared rhetoric claiming that the details of science have nothing to do with the enterprise of philosophers, and that science is about what is, and moral philosophy is about what ought to be, there is no intersection between science and moral philosophy. But, obviously, Greene does not agree with this standpoint:

Contrary to this received moral wisdom, I believe that science does matter for ethics, not because one can derive moral truths from scientific truths, but because scientific information can challenge factual assumptions on which moral thinking implicitly depends. The key point of contact between moral philosophy and scientific moral psychology is moral intuition. Moral philosophers from Plato (1987) on down have relied on their intuitive sense of right and wrong to guide them in their attempts to make sense of morality. The relevance of science then is that it can tell us

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how our moral intuitions work and where they come from. Once we understand our intuitions a bit better we may view them rather differently. This goes not only for moralists who rely explicitly on moral intuitions, but also for moralists who are unaware of the extent to which their moral judgments are shaped by intuition.13

3. Scientific Evidence

3.1 Thought Experiment

Greene has a high degree of enthusiasm for psychological process behind moral judgments. In the experiments, Greene studies how people respond to prevailing moral dilemmas such as the trolley dilemma and footbridge dilemma first posed by Philippa Foot and Judith Jarvis Thomson respectively, both of them later have become paradigmatic models in moral philosophy and political philosophy.\(^\text{14}\)

A runaway trolley is headed for five people who will be killed if it proceeds on its present course. The only way to save these people is to hit a switch that will turn the trolley onto a sidetrack, where it will run over and kill one person instead of five. Is it okay to turn the trolley in order to save five people at the expense of one? The consensus among philosophers, as well as people who have been tested experimentally, is that it is morally acceptable to save five lives at the expense of one in this case.

As before, a runaway trolley threatens to kill five people, but this time you are standing next to a large stranger on a footbridge spanning the tracks, in between the oncoming trolley and the five people. The only way to save the five people is to push this stranger off the bridge and onto the tracks below. He will die as a result, but his body will stop the trolley from reaching the others. Is it okay to save the five people by pushing this stranger to his death? Here the consensus is that it is not okay to save five lives at the expense of one.\(^\text{15}\)

People are more likely to make consequentialist judgments in the trolley dilemma and deontological judgments in the footbridge dilemma. Why? The tremendous interest in this question encourages Greene to pose his own hypothesis of dual process model of moral judgment. Before revealing Greene’s hypothesis, it will be advantageous to first scrutinize normative solutions raised by certain prestigious philosophers with regard to this question. Faced with the question “why”, philosophers have generally presupposed that people’s responses


\(^{15}\text{Here I adopt Greene’s description for the trolley dilemma and footbridge dilemma in his article “The Secret Joke of Kant’s Soul”.}\)
to the trolley dilemma and footbridge dilemma are morally right, and they discover some principles that could justify people’s different responses as made relative to the trolley dilemmas and footbridge dilemma. As for Kant and Aquinas, it is wrong to treat someone as the means in order to help others. In the footbridge dilemma, the action of pushing the fat guy off the bridge undoubtedly treats the fat guy as the means that will stop the oncoming train. However, killing someone in the trolley dilemma is just a side effect of the action of diverting the train onto another track, because the action in itself does not intend to deal with the “victim” as the means for saving others. This explanation is usually defined as the Doctrine of Double Effect, or simply "DDE" for short.

DDE draws a distinction between intending harm and merely foreseeing harm. According to DDE, we are morally prohibited from intending harm, even when that harm would bring about a greater good; however, we are morally permitted to intend to employ neutral or good means to promote a greater good, even though we foresee the same harmful side effects, if (a) the good is proportionate to the harm, and (b) there is no better way to achieve this good.\(^\text{16}\)

Admittedly, though the philosophers’ explanation is not unreasonable, it is the one that usually cannot be justified by empirical investigation. Thomson has designed an ingenious experiment to challenge DDE.

A runaway trolley is headed toward five innocent people who are on the track and who will be killed unless something is done. Abigail can push a button, which will redirect the trolley onto a second track, where there is an innocent bystander. The runaway trolley would be stopped by hitting the innocent bystander, thereby saving the five but killing the innocent bystander. The second track loops back towards the five people. Hence, if it were not the case that the trolley would hit the innocent bystander and grind to a halt, the trolley would go around and kill the five people.\(^\text{17}\)


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It is morally permissible for Abigail to push the button to redirect the trolley onto the second track.

Figure 1. Loop Case Dilemma, quoted from S. Matthew Liao’s article “Putting The Trolley in Order”.

The thought experiment (the Loop Case dilemma) designed by Thomson is more complex and exquisite than the trolley dilemma and footbridge dilemma. “As Thomson explains, hitting the innocent bystander is causally required to stop the trolley and to save the five other innocent people. Also, Thomson argues that redirecting the trolley seems to involve intending to hit the innocent bystander in order to save the five other innocent people. If so, DDE would forbid our redirecting the trolley in loop case dilemma. Yet Thomson suggests that intuitively it seems permissible to redirect the trolley in Loop. “ The loop case dilemma therefore casts a deep doubt on DDE experimentally. As a result, DDE is not verified by the empirical result presented by the Loop case. People indeed deal with the innocent bystander as the means of stopping the train in order to save the five people, and the consequentialist moral judgments seems to be accepted by most people in the experiment.

Greene proposed that most normative solutions to the trolley problem are debatable, and that he can discover a descriptive solution to the problem. His study methods are typically scientific approaches, the first step is to put forward a hypothesis, and then to propose a corresponding prediction, and finally to verify the correctness of hypothesis in virtue of the empirical result. According to this

19 S. Matthew Liao, "Putting the trolley in order: Experimental philosophy and the loop case," philosophical psychology (2012), 25:5, p. 662
approach, Greene poses a hypothesis, and then makes two predictions corresponding to the hypothesis, and at last he allows the results of his experiment to verify both his predictions and hypothesis.
3.2 Evidence from Neuroimaging

In light of people’s responses to the trolley and footbridge dilemmas, Greene put forward a bold hypothesis: Emotion involved in the action of pushing the fat guy off the footbridge are more intense than emotion involved in other actions resulting in similar consequences (for example, diverting the oncoming train onto another track), the former is related to an “up close and personal” manner, and the latter is mainly associated with an “impersonal” manner. The difference in emotional responses could explain why people respond differently to the trolley dilemma and footbridge dilemma. In other words, people are likely to make consequentialist judgments in situations involving less emotional factors, and they are more likely to make deontological judgments in situations where emotion play a more important role. According to this fundamental hypothesis, Greene made two predictions, (a) when people consider “up close and personal” situations such as the footbridge dilemma, brain regions associated with emotional responses and social cognition will exhibit a pattern of enhanced neural activity; when people consider impersonal situations just like the trolley dilemma, brain regions associated with higher order cognition will show more active neural activity. (b) Where moral violation is perceived as morally permissible (for example, people believe that it is morally permissible to save five persons at the expense of pushing the fat guy off the bridge in the footbridge dilemma), one must overcome emotional responses, and the processes of “overcoming” will undoubtedly take more time. That is, when people encounter situations involving an “up close and personal” violation, there are two possible responses——either an affirmative judgment or a negative judgment. Greene proposes that the former takes more time than the latter to form. In the footbridge dilemma, the affirmative response denotes that people agree with the action of pushing the fat guy off a bridge in order to save five other people, and the negative response refers to the disapproval of the action of pushing the fat guy off the bridges. Accordingly, the judgment of approval certainly takes more time than the opposite judgment. Interestingly, there is no difference in response times when people are responding to impersonal moral situations.

Greene’s predictions once inspected under closer scrutiny, it is not difficult to discover that prediction (a) is related to what we could observe from our brains when people respond differently to “up close and personal” and impersonal situations; prediction (b) is related to response times. In fact, both predictions (a) and (b) have gained verification by an ingenious experiment.
According to Greene’s two articles published in 2001 and 2004,\textsuperscript{21} When people consider “up close and personal” moral dilemmas, there are three brain regions associated with emotion exhibiting enhanced neural activity: the posterior cingulate cortex, the ventromedial prefrontal cortex and the amygdala.\textsuperscript{22} Conversely, when people consider impersonal moral dilemmas, there are two brain regions associated with rational cognition become more active than their original state: the dorsolateral prefrontal cortex and the inferior parietal lobe.\textsuperscript{23} As such, prediction (a) has been verified. On the other hand, the validation of prediction (b) is a little more complex, requiring Greene to verify prediction (b) by virtue of another moral dilemma, the “crying baby” dilemma.

It is wartime, and you and some of your fellow villagers are hiding from enemy soldiers in a basement. Your baby starts to cry, and you cover your baby’s mouth to block the sound. If you remove your hand, your baby will cry loudly, the soldiers will hear, and they will find you and the others and kill everyone they find, including you and your baby. If you do not remove your hand, your baby will smother to

\begin{itemize}
\item \textsuperscript{22}In his latest book \textit{Moral Tribes}, Greene no longer make mention of posterior cingulate cortex in the relevant chapters.
\item \textsuperscript{23}In \textit{Moral Tribes}, Greene also no longer mention inferior parietal lobe.
\end{itemize}
death. Is it okay to smother your baby to death in order to save yourself and the other villagers?

The characteristic of the moral dilemma “crying-baby” lies in instantaneously revealing the acute tension between consequentialist judgments and deontological judgments. It is very difficult to make moral judgments immediately without any doubt. Like other thought experiments, people respond in two different ways to the “crying-baby” dilemma—they either make a consequentialist judgment or a deontological judgment. Greene discovers that the average response times required by consequentialist judgments is longer than that required by deontological judgments. More importantly, brain regions associated with rational cognition (the dorsolateral prefrontal cortex and the inferior parietal lobe) exhibit increased activity when people make characteristically consequentialist judgments. That is, parts of the brain will show more advanced cognitive activities when people make consequentialist judgments. As such, Greene has verified prediction (b).

3.3 Dual process model of moral judgment

Based on the above empirical study, Greene integrates his views into the dual process model of moral judgment, which is a new competitive model in psychology.

Moral judgment, according to his theory, engages two mental subsystems: System I is evolutionarily old, operates unconsciously, quickly, effortlessly, with emotional valence (“hot”) and without explicit deliberation. The other one (System II) is evolutionarily recent—indeed, it is often thought to be uniquely human. It draws on scarce cognitive resources and generally works far more slowly, effortfully, analytically, and in an emotionally cold way.²⁴

According to the two mental subsystems, Greene reconstructs his explanation for people’s different responses to moral dilemmas (i.e. the trolley and footbridge dilemmas). Needless to say, deontological judgments are based on System I and consequentialist judgments are based on System II.²⁵

By now, I think it is not difficult to find out why Greene argued that deontological judgments are based on emotion rather than rational reasoning: his

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claim has been justified by empirical study—or at least Greene himself thinks so. But, as I will intend to criticize later in my study, Greene’s research remains debatable from many aspects. Greene’s study of moral judgments can be reduced to two propositions: (1) deontological judgments are based on emotional processes; and (2) emotional processes pay attention to morally irrelevant factors in moral situations. For proposition 1, we have spent a large part of this article to discuss this issue, and now understand how Greene defends his case. In what follows, we will hereafter concentrate on proposition 2, viz. that emotion is inclined to react to morally irrelevant factors in moral situations.
Chapter 2. How should we treat with deontology?

Greene does not just limit his view that people’s moral judgments are actually based on two distinctive mental subsystems to the descriptive dimension. If moral judgments in fact are derived from emotion instead of reason, we seem to have abundant reasons to believe that deontological judgments do not grasp the objective features of the external world that is independent of our minds. Instead, deontological judgments rely on our internal emotion that is endowed by evolutionary mechanisms such as natural selection. Whether it is poverty relief in foreign countries or discussions of the legality of abortion, these are not cases our ancestors have ever encountered, and when we today are faced with such examples, deontological judgments are obviously invalidated. This is because we are simply not equipped with the emotional foundation corresponding with the aforementioned cases via evolutionary mechanisms. In the footbridge dilemma, people are not more likely to agree that pushing the fat guy off bridges in order to save five other people is morally right, because the case is likely to push our emotional buttons such that we are inclined to make a deontological judgment. Obviously, emotion displayed in the trolley dilemma is not the same as in the footbridge dilemma.

Deontology, then, is a kind of moral confabulation. We have strong feelings that tell us in clear and uncertain terms that some things simply cannot be done and that other things simply must be done. But it is not obvious how to make sense of these feelings, and so we, with the help of some especially creative philosophers, make up a rationally appealing story: There are these things called “rights” which people have, and when someone has a right you can’t do anything that would take it away. It doesn’t matter if the guy on the footbridge is toward the end of his natural life, or if there are seven people on the tracks below instead of five. If the man has a right, then the man has a right. As John Rawls famously said, “Each person possesses an inviolability founded on justice that even the welfare of society as a whole cannot override” and, “In a just society the rights secured by justice are not subject to political bargaining or to the calculus of social interests.”

The foregoing statement is dramatically different from prevailing philosophical investigation. For example, some studies indicate that versions of deontic logic

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that capture empirical facts about deontic reasoning are likely to be intuitively compelling, easy to understand, yet precise enough to clarify moral questions in a way that can promote ethical choices.\textsuperscript{27} But, Greene emphasizes, although the statement that “deontology is a natural cognitive expression of our deepest moral emotions” remains a hypothesis, which has yet to be verified by further evidences, it is not difficult for us to discover that deontological judgments are based on emotional responses. Its deep roots rest in emotion rather than in reason. Here, we cannot help but wonder where moral reasoning comes from. Greene has been arguing that numerous empirical evidence has been able to support that moral reasoning is a process of post hoc, or, to be more exact, it is probably a post hoc rationalization based on emotional responses.

The arguments above have made rationalists, including Kant, fall into trouble. They cannot, according to Greene, explain nor defend deontological intuitions driven by emotion. This is because intuitions are seem likely to be shaped by morally irrelevant factors that are provided by evolutionary mechanism fulfilled with various constraints. This trouble is not only faced by Kant, it pertains also to those who make philosophical justifications by virtue of intuitions.\textsuperscript{28}

Giving up the rescue of a drowning child is morally wrong, but one’s neglect from saving the sick and starving children of faraway lands is not condemned by our conscience. Why? Because rescuing the drowning child, instead of remediating faraway woes, pushes our emotional buttons. We can ask further: why does the former rather than the latter touch our emotional button? Is it because of evolutionary circumstance that makes us more liable to response intensively in emotion to rescuing the drowning child, whereas conversely, saving the sick and starving children of faraway lands lacks such privileges? Is it because of evolutionary mechanism that forces us to pay attention to some things rather than other things that normally should be equally emphasized? Is it because of morally irrelevant factors that dominate us to make deontological judgments that are conventionally regarded as the result of moral reasoning? Although we do not want to admit Greene’s assertion is right, when faced with empirical facts of science, we cannot confidently defend people’s intuitions. It is time for us to reflect on deontological judgments.

There is still one thing should concern us. According to Greene, we live in an affluent environment and ignore the desperate needs of the other side of the earth. It is because of old evolutionary mechanisms that our emotion remains insensitive to the miserable state of peoples from lands faraway. Help could have been offered


from our end relatively easily, but it was not, and indeed this neglect seems perfectly defended by the idea of evolutionary mechanisms. This, however, is a scenario that every conscientious philosopher refuses to encounter. If the origination of moral judgments posed by Greene is true, the scale constructed by deontology and consequentialism will begin to tilt. Consequentialism, instead of deontology is an exhilarating philosophical approach that should be accepted by people. Greene believes that we will deal with moral dilemmas more prudently if we understand the aforementioned views as psychological facts. For example, when people in faraway places suffer from wars, natural disasters and poverty, moral intuitions will no longer occupy the dominant position in the process of decision-making, and we will in turn overcome such factors consciously. Moral judgment should not be derived from sympathy—at lest not only from sympathy, it is also based on comprehensive considerations regarding the common interest of the whole of mankind, considerations in which what we rely on is rational cognition instead of emotional intuition. At this point, Greene and Kant seem to come together.
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Chapter 3. Conjectures and Refutations

There are three approaches to critique Greene’s study:

The first strategy emphasizes on the essential distinction between normative ethics bearing on the function of evaluating the moral value of objects and empirical study intending to describe what the reality is. The main proponent of this strategy is Selim Berker.  

Normative ethics strongly desires to supply a perfectly operable guidance for what should be valued and for what one ought to do. It has the ability to represent complex and ever-changing moral content by virtue of concise principles, which can, obviously, provide guidelines not only for moral judgments, but also for how to live an ethical life as well. Psychological study, however, focuses on what we can discover from people’s brains while they make various moral judgments, but this fails to answer the question of what normative intuitions should be valued and cherished by us. Even though it is hypothesized that Greene’s study is correct, and deontological moral judgments are mostly derived from emotion, it does not mean that people ought not to make moral judgment according to the principles outlined by deontological ethics. As Berker argues, “either attempts to derive normative implications from these neuroscientific results rely on a shoddy inference, or they appeal to substantive normative intuitions (usually about what sorts of features are or are not morally relevant) that render the neuroscientific results irrelevant to the overall argument.” Thus, the empirical study related to moral judgments has no bearing on the normative ethics; even if psychological study is correct, it does not indicate that deontology serving as the paradigm of normative ethics is wrong.

The second strategy criticizes Greene’s understanding of Kantian ethics is too parochial and oversimplified. The major proponents of this approach are Hanno Sauer, Victor Kumar and Zhu Jing. Greene simplistically compares Kantian ethics (or Deontology) with Utilitarianism. Some profound insights in Kantian ethics such as the views of "man is the end itself", "the humanity formula", and "respect for persons" etc. are easily expelled from the range of Greene’s discussion. If we have a well-rounded understanding of Kantian ethics, Greene’s psychological study about moral judgments will not pose substantial challenges to Kantian ethics. In other words, Kantian ethics has enough theoretical resource to deal with the accusation from psychological study.

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31 This is not to say that empirical study has nothing to do with normative ethics at all, and I think empirical study can give philosophers some amazing inspirations. As Berker says, neuroscience could play a more indirect role in sculpting our normative conclusions.
The third strategy is a little more moderate. The main proponent of this strategy is Mark Timmons. This approach grants that Greene’s study based on psychological experiment is valid, and admits that deontological judgments made by people in daily life are actually derived from emotion and consequentialist judgments are the result of rational reasoning. Obviously, The approach is inconsistent with Kantian ethics, which is the pillar of almost all of rationalist deontological philosophy. As such, supporters of this strategy also advocate that we can make necessary changes to Kantian ethics. They admit the status and role of emotion in making moral judgments, but as a result, the philosophical stance of pure rationalist deontology has been abandoned.

Corresponding to the above three strategies, there are, as for deontologists facing the challenges posed by Greene, three attitudes.

As I see it, there are at least three main options for the deontologist, ordered by how strongly they resist Greene’s antideontology case. (1) Bold denial: deny that empirical work of the sort cited by Greene bears relevantly on normative moral theory generally and thus deontology in particular. (2) Challenge: admit the philosophical relevance of empirical work, but challenge the empirical data brought forth by Greene by showing that there are flaws in the methodology, or that the results cannot be replicated, or something of this sort. (3) Acknowledgment: cautiously acknowledge the empirical data Greene presents, particularly his claim that commonsense deontological thinking is emotion laden, but explain how someone interested in developing a deontological moral theory can plausibly acknowledge the data in question.

My criticism of Greene’s study mainly adopts strategy (1) and (2) whilst opposing strategy (3). Strategy (3) is the approach most naturalists are likely to adopt. Naturalism believes that moral statements and value judgments have the ability to define “good” reductively in terms of natural properties; moral judgment (or moral propositions) can be true or false; moral propositions (or ethical conclusions) can be drawn from natural facts. As regards naturalists then, how one makes moral judgment in actual life is understood as how one ought to make moral judgment. The latter “ought”, undoubtedly, can be drawn from the former. This is the basic position of naturalism. In fact, Greene’s study is based on such naturalist ethics. He claims that the evidence collected from psychological experiment fully indicates how people make moral judgments, which in turn leads him to assert that different moral judgments have different value and status——consequentialist judgments take precedence over deontological judgments. Admitting strategy (3)
then is equivalent to accepting Greene’s view, and it will therefore not be possible
to criticize Greene effectively. Conversely, the key in adopting strategy (1) rests in
intentionally delineating the gap between factual judgments and value
judgments, between that which is normative and that which is descriptive. Ethical
theory has its own essential questions, which can be defended independently
from empirical justification, or rather psychological facts can “play no justificatory
role” in normative theorizing.35 On the other hand, the key in adopting strategy (2)
is to argue that Greene’s understanding of Kantian ethics is wrong, and the image
of Kant shaped by Greene is too simplistic. Kant, who appears vividly in Greene’s
work, is not the world-renowned German philosopher who lived during the 18th
century, but rather a straw man who appears in Greene’s mind; Regardless of how
exquisite and convincing his study seems to be, none of Greene’s argument
should concern Kant and his deontological ethics.

pp293-329.
3.1 Refutation based on empirical investigation

Greene’s study is largely dependent on the experimental result of people’s moral judgments in the trolley dilemma and footbridge dilemma. It is generally accepted that most people are likely to make consequentialist judgments when faced with the trolley dilemma, and conversely deontological judgments when faced with the footbridge dilemma. This is an assertion which is not only accepted firmly by Greene, but is often verified by many other philosophers and psychologists. Greene goes on then to interpret the trolley dilemma as an impersonal moral situation, and attributes the footbridge dilemma to a kind of “up close and personal” moral situation. Through the distinction between personal situation and impersonal situation, one becomes able to specify why people respond differently to the trolley dilemma and footbridge dilemma. It can be said, with some justifications, that people’s moral judgments in the trolley dilemma and footbridge dilemma are construed as a logical starting point for Greene’s entire program. But my empirical study does not verify this point. In fact, I discovered that most people are still liable to make deontological judgments when faced with the trolley dilemma. As regards the footbridge dilemma, my study is identical with Greene’s view that most people believe that pushing the fat guy off the bridge for the sake of saving five people is not morally permissible. The experiment was designed as follows:
Trolley Dilemma

A runaway trolley is headed toward five innocent people who are on the track and who will be killed unless something is done. Suppose that the only way to save the five people is redirect the trolley onto a second track, saving the five people. However, on this second track is an innocent bystander, who will be killed if the trolley is turned onto this track. Do you agree that it is morally permissible to push the button to redirect the trolley onto the second track?


Footbridge Dilemma

A runaway trolley is headed toward five innocent people who are on the track and who will be killed unless something is done. There is a button, which will activate a moveable platform that will move an innocent bystander in front of the trolley. The runaway trolley would be stopped by hitting the innocent bystander, thereby saving the five but killing the innocent bystander. Do you agree that it is morally permissible to push the button to activate the moveable platform that will move the innocent bystander in front of the trolley?


Loop Case Dilemma

A runaway trolley is headed toward five innocent people who are on the track and who will be killed unless something is done. There is a button, which will redirect the trolley onto a second track, where there is an innocent bystander. The runaway trolley would be stopped by hitting the innocent bystander, thereby saving the five but killing the innocent bystander. The second track loops back towards the five people. Hence, if it were not the case that the trolley would hit the innocent bystander and grind to a halt, the trolley would go around and kill the five people. Do you agree it is morally permissible to push the button to redirect the trolley onto the second track?

Subjects. My study invited almost 600 undergraduate and graduate students to participate in this experiment, all of whom volunteered for the study. The age of the participants range between 17 and 30 years old, the majority of them were female, and the factor if participants have been familiar with the moral dilemmas illustrated in the process of experiment is out of control. All of participants were randomly chosen to participate in the questionnaire survey. The entire process of experimentation was conducted in China.

Experiment design and procedure. The experiment adopts selective cases such as the trolley problem in the fields of moral dilemmas: the trolley dilemma, the footbridge dilemma and the loop case dilemma. In order to avoid interference of irrelevant factors such as the framing effect in psychology, not only in descriptions and figures our study is consistent with former study, but also we have tried to adhere to the original figures of the aforementioned moral dilemmas. 36 There are three moral dilemmas presented to participants in the process of the experiment. Each moral dilemma denotes a single moral dilemma such as trolley dilemma, footbridge dilemma or loop case dilemma, and they are illustrated (or presented) by both descriptions and figures shown above. In each moral dilemma, there are six options ranging from “1”(strongly disagree) to “6”(strongly agree) labeled to manifest the degree to which participants agree or disagree with the proposed action in the question at the end of the text. Participants are instructed to mark a choice when they finish reading each scenario and they have only one opportunity to decide on their choices, which cannot be modified again. The choice below “3” denotes that participants do not agree with the proposed action in each moral dilemma, and the choice above “4” denotes that participants generally agree with the proposed action in each moral dilemma. If the average value of participants’ moral judgments is below 3 in each moral dilemma, it implies that most participants are more likely to make deontological judgments; if the average value of participants’ moral judgments is above 4 in each moral dilemma, it implies that most participants are more likely to make consequentialist judgments. 37 In the experiment, we have set four different sort orders for moral dilemmas: Condition 1, Condition 2, Condition 3 and Condition 4. The sequence of appearance of moral dilemmas in Condition 1: I, trolley dilemma; II, footbridge dilemma; III, loop case dilemma. The sequence of appearance of moral dilemmas in Condition 2: I, footbridge dilemma; II, trolley dilemma; III, loop case dilemma. Condition 3 only has trolley dilemma. Condition 4 only has footbridge dilemma. The experiment adopts hard copy questionnaire, which is conducted at crowded places such as library and teaching building.

36 For that reason, we cite S. Matthew Liao et al.'s descriptions (or narrative) and figures from their famous article “Putting the trolley in order: Experimental philosophy and the loop case”, which demonstrated that our intuition is not reliable and that people's judgment regarding the loop case remains an open question. See S. Matthew Liao, “Putting the trolley in order: Experimental philosophy and the loop case,” philosophical psychology (2012) , 25: 5, 661-667.
37 The calculation of the average value of participants’ moral judgments in each moral dilemma adopts the basic method that adds up every sample's value and then divides it by the total number of samples.
Table 1. People's moral judgments of moral dilemmas in different conditions.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Scenario</th>
<th>Positive judgments</th>
<th>Negative judgments</th>
<th>Total sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condition1</td>
<td>Trolley dilemma</td>
<td>34.2%</td>
<td>65.7%</td>
<td>187</td>
</tr>
<tr>
<td>Condition2</td>
<td>Footbridge dilemma</td>
<td>10.3%</td>
<td>90.6%</td>
<td>172</td>
</tr>
<tr>
<td>Condition3</td>
<td>Trolley dilemma</td>
<td>45.4%</td>
<td>54.5%</td>
<td>99</td>
</tr>
<tr>
<td>Condition4</td>
<td>Footbridge dilemma</td>
<td>9%</td>
<td>90.9%</td>
<td>99</td>
</tr>
<tr>
<td>Condition1</td>
<td>Loop case dilemma</td>
<td>19.8%</td>
<td>80.1%</td>
<td>187</td>
</tr>
</tbody>
</table>

Note: Positive judgments refer to the judgments above 4 (consequentialist judgments), and negative judgments refer to the judgments below 3 (deontological judgments).

According to Table 1, it is not difficult to discover that most people (almost 65.7%) make negative moral judgments (deontological judgments) for trolley dilemma. That is, most people believe that it is not morally permissible to redirect the train in order to save the five people at the expense of one person's death. Undoubtedly, the result is contrary to Greene's study and other psychologists' study. Interestingly, we also find that the result of people's response to footbridge dilemma in my experiment is highly consistent with Greene's study, that is, both of us all discover most people believe that it is not morally permissible to push the fatter guy off the platform in order to save the five people. Based on the data we collected in China, no matter it is the trolley dilemma or footbridge dilemma, most people are liable to make deontological judgments. This is the most important conclusion in my study. At this point, we feel it is necessary and proper to compare my study with others in their similarities and differences.
The Figure 3 is quoted from Marc D. Hauser et al.’s article “Reviving Rawls’s Linguistic Analogy”.38 The first three cases in the Figure 3 corresponding to the trolley dilemma, the footbridge dilemma and the loop case dilemma respectively are Denise, Frank and Ned. All of them are consistent with my study in descriptions as well as in figures. The authors conducted this research in 2003-2004, almost more than 30000 subjects from 120 countries logged on to their elaborate and ingenious web site. From their web site, the authors collected their initial data set from 5000 subjects, most of whom came from English-speaking countries. The result of their experiment showed that almost 89% people believe that it is morally permissible for Denise to redirect the train onto another track in order to save five people; almost 11% people believe that it is morally permissible for Frank to push the fat guy off the bridge in order to save five people; and almost 55% people believe that it is morally permissible for Ned to redirect the train onto the loop-around track in order to save five people. More clearly, we can now compare Hauser et al.’s study with my study in similarities and differences.

Table 2. A simple comparison between Hauser’s study and my study.

<table>
<thead>
<tr>
<th></th>
<th>Trolley dilemma</th>
<th>Footbridge dilemma</th>
<th>Loop case</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percentage of positive judgments</td>
<td>Percentage of positive judgments</td>
<td>Percentage of positive judgments</td>
</tr>
<tr>
<td>Hauser’s study</td>
<td>89%</td>
<td>11%</td>
<td>55%</td>
</tr>
<tr>
<td>My study</td>
<td>45.4%</td>
<td>9%</td>
<td>19.8%</td>
</tr>
</tbody>
</table>

Note: Positive judgments refer to the judgments above 4 (consequentialist judgments), and negative judgments refer to the judgments below 3 (deontological judgments).

From table 2, there are significant differences between Hauser et al.’s experimental result and my experimental result. We find that only 45.4% people believe Denise’s action is morally permissible (Condition 3), and even only 19.8% people believe Ned’s action is morally permissible (Condition1), which is obviously contrary to Hauser et al.’s data. Surprisingly, the results of people’s responses to the footbridge dilemma are the same for both of us (Condition2 and Condition 4). Although we do not know the exact reason why my experimental result is different from others, I believe it at least shows that the empirical studies on the trolley problem face greater uncertainty, which is also verified by other philosophers and psychologists’ study. Alex Wiegmann et al.’s study discovers that, eliminating the differences between different versions of trolley problem and changing the order of appearance of moral dilemmas, people would probably make a totally different moral judgment.39 People’s moral intuition is considerably unreliable. To verify the order’s impact on people’s moral judgments, Alex Wiegmann et al. conducted an experiment at the University of Gottingen. They first invited 100 students to establish and determine a baseline of people’s moral judgments in each moral dilemma such as trolley dilemma, footbridge dilemma and loop case dilemma.40 The 100 students are then divided into five groups, and each of them contains 20 students. They would see only one moral dilemma (there are a total of five dilemmas: push, trap, redirect, run over, standard), which avoid the interference of other scenarios. The results of test were therefore considered as the baseline of people’s moral judgments uninfluenced by the order of presentation of moral dilemmas. Wiegmann et al.’s experimental result as follows:

40 The baseline refer to that, without the interference of the sequence of moral dilemmas, how many students agree with the proposed action, and in what degree students agree with the proposed action in each scenario.
Table 3. The baseline of people’s moral judgments in the five scenarios.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Push (SD)</th>
<th>Trap (SD)</th>
<th>Redirect (SD)</th>
<th>Run Over (SD)</th>
<th>Standard (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Rating</td>
<td>1.95 (1.76)</td>
<td>3.4 (1.76)</td>
<td>4.15 (1.42)</td>
<td>4.4 (1.14)</td>
<td>4.45 (1.15)</td>
</tr>
<tr>
<td>% Disagreement</td>
<td>80</td>
<td>40</td>
<td>30</td>
<td>10</td>
<td>15</td>
</tr>
</tbody>
</table>

Note: % Disagreement is the percentage of subjects who gave a rating ≤ 3 on a scale ranging from 1 to 6.

Wiegmann et al.’s description and figure for presenting the moral dilemmas (push, trap, redirect, run over, standard) is consistent with my study.

Figure 4. Wiegmann et al.’s different versions of trolley dilemma.
In Figure 4, the scenario Push is identical with the footbridge dilemma, and the scenario Standard is identical with the trolley dilemma. The scenarios Trap, Redirect and Run Over cannot find equivalents in my study. If we scrutinize people’s moral judgments uninfluenced by order of presentation, it is obvious that most people are more likely to make deontological judgments in the footbridge dilemma and consequentialist judgments in the trolley dilemma. Although my study does not verify that most people are more likely to make consequentialist judgments in trolley dilemma, there is convergence between both of us. Wiegmann et al. discover that, especially for the footbridge dilemmas, people probably make a totally different moral judgment and even an adverse judgment when the order of presentation of moral dilemmas is changed. Wiegmann et al.’s experimental result is as follows:

Table 4. People’s moral judgments are affected by the order of presentation of moral dilemmas

<table>
<thead>
<tr>
<th>Order Condition</th>
<th>Push</th>
<th>Trap</th>
<th>Redirect</th>
<th>Run Over</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAF (n = 25)</td>
<td>2.16 (1.21)</td>
<td>3.24 (1.69)</td>
<td>3.84 (1.52)</td>
<td>3.84 (1.57)</td>
<td>4.08 (1.53)</td>
</tr>
<tr>
<td>LAF (n = 25)</td>
<td>2.16 (1.31)</td>
<td>2.12 (1.33)</td>
<td>2.52 (1.42)</td>
<td>2.52 (1.36)</td>
<td>2.68 (1.41)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>% Disagreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAF (n = 25)</td>
</tr>
<tr>
<td>LAF (n = 25)</td>
</tr>
</tbody>
</table>

Notes: % Disagreement is the percentage of subjects who gave a rating ≤ 3 on a scale ranging from 1 to 6. MAF = Most Agreeable First. LAF = Least Agreeable First.

Wiegmann et al. set two models to arrange the order of presentation of moral dilemmas. One is MAF (Most Agreeable First), the sequence is standard→run over→redirect→trap→push; the other is LAF (Least Agreeable First), the sequence is push→trap→redirect→run over→standard. The result shows that when in the condition of MAF, people are more likely to make consequentialist judgments in the trolley dilemma, and conversely, when in the condition of LAF, people are more likely to make deontological judgments in the trolley dilemma. It also indicates that no matter it is the MAF or LAF, people’s responses to footbridge dilemma are not affected by the order of presentation. At this point, Wiegmann et al.’s study is also verified by my experimental result:
Table 5. People’s moral judgments in different conditions

<table>
<thead>
<tr>
<th>Condition</th>
<th>The first scenario</th>
<th>The second scenario</th>
<th>The third scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Condition 1</strong></td>
<td>Trolley dilemma (total sample 187)</td>
<td>Footbridge dilemma (total sample 187)</td>
<td>Loop case (total sample 187)</td>
</tr>
<tr>
<td></td>
<td>2.83</td>
<td>1.65</td>
<td>2.31</td>
</tr>
<tr>
<td><strong>Condition 2</strong></td>
<td>Footbridge dilemma (total sample 172)</td>
<td>Trolley dilemma (total sample 172)</td>
<td>Loop case (total sample 171)</td>
</tr>
<tr>
<td></td>
<td>1.74</td>
<td>2.2</td>
<td>2.09</td>
</tr>
<tr>
<td><strong>Condition 3</strong></td>
<td>Trolley dilemma (total sample 99)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.14</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Condition 4</strong></td>
<td>Footbridge dilemma (total sample 99)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.73</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: the average value of moral judgments above 4 refers to the consequentialist judgments, and the average value of moral judgments below 3 refers to the deontological judgments.

According to Table 5, if the trolley problem appears immediately before the footbridge dilemma, the average value of people’s moral judgments in the trolley dilemma is 2.83; if the trolley problem appears immediately behind the footbridge dilemma, the average value of people’s moral judgments in the trolley dilemma shrinks down to 2.2 at once. Contrary to the trolley dilemma, people’s response to the footbridge dilemma are not affected by the order of presentation. Compared with the trolley dilemma, the average value of people’s moral judgments in the footbridge dilemma only varies from 1.65 to 1.74, the fluctuation is very small. In short, people’s moral judgments in the trolley dilemma, distinct from the footbridge dilemma, are susceptible to the order of presentation. Another point worth highlighting is that Wiegmann et al. discover that when the trolley dilemma is presented to the participants alone (Condition 3), the average value of people’s moral judgments in trolley dilemma is 4.45, However, when the trolley dilemma occupy the first position in the order of presentation (Condition 1), the average value of people’s moral judgments in the trolley dilemma is down to 4.08. The phenomenon can be also found in my study. In condition 3, the average value of people’s moral judgments in the trolley dilemma is 3.14; while in condition 1, the average value of people’s moral judgments in the trolley dilemma is down to 2.83.\(^{41}\) Although the change in average value of people’s moral judgments in the trolley dilemma has not been satisfactorily explained in my study and neither in Wiegmann et al.’s study, the results at least show that people’s moral judgments in the trolley dilemma is very unreliable.

\(^{41}\) Both in Wiegmann et al.’s study and in my study, all participants are informed that they cannot modify the answer given in the previous moral dilemma.
In conclusion, Greene’s approach of putting forward his ideas on the basis of the psychological experiment of the trolley problem is extremely dangerous. If we do not have abundant evidence to demonstrate that people’s moral judgment is consistent and reliable, the trolley problem remains an open question. It would do us well to draw support from more empirical study to investigate the trolley problem rather than making a reference without a closer inspection.
3.2 The Doctrine of Double Effect is an open question

One key point of Greene's attack on Kantian ethics is that the Doctrine of Double Effect (DDE) cannot explain the loop case dilemma effectively. If DDE is correct, it must have the ability to explain consistently that why most people are more likely to make deontologist judgments in the footbridge dilemma and consequentialist judgments in the loop case dilemma. But, Greene argues that Kantian ethics cannot explain people's moral judgments and moral intuitions consistently. It is my view, however, that Thomson's study of loop case is in itself questionable.

Kant made an important distinction between perfect obligations and imperfect obligations. Perfect obligations are negative responsibilities that specify which behaviors are forbidden to do for us. For example, Thou shalt not kill. Conversely, imperfect obligations are positive responsibilities that require us to take measures positively in order to help others. For example, we should try to remove the unnecessary pains suffered by others. In Kantian ethics, positive responsibilities are alternative, that is, I can willfully decide whom I want to help and when I offer my help. Obviously, I, as an individual, do not have the ability to help all of those who are in need of help. It is usually believed that there is a clear-cut distinction between perfect obligations and imperfect obligations, perfect obligations are absolutely privileged or preferred over imperfect obligations. There is also a clear distinction between killing someone and let someone die without offering help. The former seems to evoke more condemnations than the latter. Allowing someone to die can usually be defended in daily life, even though it is not always correct. Those who are in trouble could rely on us for help to get rid of plight, but we are not the cause that gives rise to the distressful situation in which such victims find themselves. For this reason, we can excuse ourselves. If we kill, however, someone by our own hand, our behaviors will be, undoubtedly, be denounced in the strongest possible terms. At this point, we can make a distinction between killing someone and let someone die:

A lets B die if, and only if,
(1) There is a condition c which is sufficient to cause B's death unless A or some other agent does something s which will prevent B's death from c, and A is aware that this is the case,
(2) A did not bring about c,
(3) A refrains from doing s, and
(4) B dies from c.

A kills B without refraining from preventing B's death if, and only if,
(1) There is a condition which is sufficient to cause B's death,
Juxtaposed against this “A lets B die” scenario, we can find resembling characteristics in the trolley problem, presented as follows:

1. The only way to save five ensnared persons is to divert the train onto another track, which will kill the innocent person who so happens to stand on the track. Unless I do nothing at the moment, the innocent bystander will not survive, I am aware that this is the case.
2. It is not me who made the innocent person on the track, and I do not mean to divert the train onto another track.
3. I do not intend to do nothing at the moment.
4. The innocent died from diverting the track onto another track.

Juxtaposed against the “A kills B” scenario, the footbridge dilemma can also be interpreted as follows:

1. The only way to save the five ensnared persons is to push the fat guy off the bridge.
2. It is me who brought about such disaster to the stranger.
3. The stranger died from this act.

The dispute in the analysis of the trolley dilemma above is premise (2), some philosophers perhaps argue that I do intend to divert the train; otherwise, the five people will not survive. The point, however, is how to understand the term “intend to do something”. What distinguishes the trolley dilemma from the footbridge dilemma, or letting someone die from killing someone is premise (2): if a person intended to give cause to the death of another person. In the footbridge dilemma, I intend to push the fat guy off the bridge, it is me who kills the stranger, and I am the direct reason behind his death in the trolley dilemma. I can choose to take an action that prevents the innocent person’s death (for example, in not taking any measures to save the five ensnared persons), but I do not decide upon such action, for my purpose is effectively to save the five persons. The doctrine known as DDE can be used to defend one’s actions when faced with the trolley dilemma. DDE makes an important distinction between someone’s intention to do something and someone who foresees what would happen. DDE also imposes limits and constraints on actions, and those who can qualify the following two conditions will be morally permissible actions. (a) The good is proportionate to the harm, and (b) there is no better way to achieve this good.

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42 O.H. Green, “Killing and Letting Die”, American philosophical quarterly 17 (3): 195-204
Greene challenges the doctrine of DDE by means of a precise thought experiment designed by Thomson, that is the loop case that we mentioned earlier, as shown again in the following figure:

![Figure 1. Loop Case Dilemma, quoted from S. Matthew Liao’s article "Putting The Trolley in Order"](image)

A runaway trolley is headed toward five innocent people who are on the track and who will be killed unless something is done. Abigail can push a button, which will redirect the trolley onto a second track, where there is an innocent bystander. The runaway trolley would be stopped by hitting the innocent bystander, thereby saving the five but killing the innocent bystander. The second track loops back towards the five people. Hence, if it were not the case that the trolley would hit the innocent bystander and grind to a halt, the trolley would go around and kill the five people.

It is morally permissible for Abigail to push the button to redirect the trolley onto the second track.

The result of Thomson’s thought experiment indicates that most people believe that diverting the train to run over the innocent person in order to save the five persons is morally permissible. Obviously, the result of the experiment is not compatible to DDE. Empirical evidence provided by the loop case poses a challenge to DDE. In the experiment, people do regard the innocent person as the means of stopping the train, and the consequentialist judgment that saving five persons at the expense of one person’s death is generally acceptable. But, the result of my experiment indicates that the data of Thomson’s experiment cannot be reproduced. It shows that most people believe that sacrificing one person for the benefit of five is not morally right in loop case dilemma. In the 187 valid samples collected in China, only about 19.89% people believe that it is morally permissible to save the five persons at the expense of sacrificing one. My study is partly verified by S. M. Liao’s research.
S. M. Liao designed an ingenious experiment which adopted a well-rounded perspective scrutinizing the different versions of the trolley problem. He discovered that when the order of presentation of different scenarios such as the standard version (the trolley dilemma), the push version (the footbridge dilemma) and the loop version (the loop case dilemma) is varied, people’s moral judgments becomes visibly influenced by such variations. As shown in the figure 5, when framed in the order of condition 1, where the order of presentation is that where the footbridge dilemma occupies the first position, the loop case dilemma occupies the second, and the trolley dilemma occupies the last, people are liable to make negative moral judgments in the loop case dilemma. That is, most people do not agree that killing one person in order to save five is morally permissible. When framed in the order of condition 2, where the order of presentation is simply reversed, most people are liable to make positive moral judgments in the loop case dilemma. That is, most people agree that killing one person in order to save five is morally permissible. By virtue of this experiment, S. M. Liao therefore tries to highlight that people’s intuition for the loop case is extremely unreliable, and that the intuition is likely to be affected by morally irrelevant factors. S. M. Liao still insists, however, that when framed in the order of condition 3 in which the loop case dilemma is presented alone, that is, the order of appearance of moral dilemmas is no longer exists, most people still believe that killing one person in order to save five is morally permissible. But the result of my experiment, as distinct from S. M. Liao’s, shows that most people are more likely to make negative moral judgments in the loop case dilemma. That is, most people believe that it is not morally permissible to kill one person in order to save the five.

Greene argues that Kantian ethics (or DDE) is not compatible to Thomson’s study of the loop case dilemma, especially since it cannot explain why most people make consequentialist judgments in the loop case dilemma, which undoubtedly perceives the innocent person as the means of stopping the train. However, as the empirical studies above indicate, Thomson’s study of the loop case dilemma is still an open question. There are many questions waiting to be

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**Figure 2. Mean Responses for Scenarios.**

**Figure 5. The result of S. M. Liao’s experiment**

<table>
<thead>
<tr>
<th>First Scenario</th>
<th>Second Scenario</th>
<th>Third Scenario</th>
<th>Fourth Scenario</th>
<th>Fifth Scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condition 1</td>
<td>Push 3.23</td>
<td>Loop 3.10</td>
<td>Standard 3.37</td>
<td>Clearly Permissible</td>
</tr>
<tr>
<td>Condition 2</td>
<td>Standard 4.34</td>
<td>Loop 3.82</td>
<td>Push 3.32</td>
<td>Clearly Permissible</td>
</tr>
<tr>
<td>Condition 3</td>
<td>Loop 4.19</td>
<td>Clearly Permissible</td>
<td>Clearly Permissible</td>
<td></td>
</tr>
</tbody>
</table>
investigated by further studies. According to the result of my experiment, most people are still liable to make deontological judgments in the loop case dilemma. The conclusion is plainly contrary to Greene’s view.\textsuperscript{45}

3.3 Viewing moral dilemmas from the distinction between event causation and agent causation

Whether one is confronted by the trolley dilemma or footbridge dilemma, both pertain to the relation between “ends” and “means”. In order to save five ensnared persons, diverting the train or pushing a fat guy off the bridge are all represented as the means, while the saving of five persons is the ends. At some point, the relation between ends and means is a certain type of causality. Causality is the relation between events in space-time, and it is extensional. Supposing that we can achieve ends A through doing P, and A can be described as B, so we achieve B through doing P. One’s understanding of causality is thus event causation. We can also, however, have an entirely different understanding of the relation between ends and means, according to which ends and means become intensional. For example, Oedipus wants to marry the most beautiful woman in town, and his mother is just that most beautiful woman in town, Oedipus, however, does not know the truth, so at this point we cannot say that Oedipus wants to marry his mother. Agent causation is dependent on how the agent describes and interprets the things when he or she thinks about it. The two different understanding of causality are mutually exclusive. In one sense, the relation between ends and means can be understood as causality among events in space-time, and thus it is extensional. In another sense, when we transfer our perspective from the external world to the human mind, we observe and interpret objects from a first-person perspective and our understanding of causality thereafter seems to be changed subtly, viz. the agent’s understanding of ends and means is dependent on her or his mind state instead of jigsawing external events mechanically. One’s understanding of causality is thus intensional.

According to the distinction between event causation and agent causation, we can then reconstruct the trolley dilemma and the footbridge dilemma as follows:

In the trolley dilemma, people’s moral judgments can be interpreted as:
(1) In order to save the five persons, we have to divert the train onto another track.
(2) Diverting the train is the only valid way to save the five persons; as a result, the innocent person will die.
(3) It is not me who made the innocent person stand on the track.
(4) DDE does not forbid that when we do not intend to do harm to someone, we can adopt an action to help others in order to promote greater good, even though we foresee something bad would happen.
(5) One person’s death is pretty bad, but, I do not intend to kill the person, and I do not have the purpose of letting anyone die as well; the survival of the five persons is better than one person’s death.
(6) So, according to DDE, we ought to divert the train in order to save the five persons.

In the footbridge dilemma, people’s moral judgments can be interpreted as:
(1) In order to save the five persons, we have to push the fat guy off the bridge, which will stop the train that is out of control.
(2) Pushing the fat guy off the bridge is the only valid way to save the five persons; as a result, the fat guy will die.
(3) The fat guy’s death is the means of the survival of the five persons.
(4) DDE forbids that we intend to adopt a bad action used as the means in order to promote better results.
(5) The fat guy’s death is pretty bad.
(6) So, DDE forbids that we do harm to the fat guy, it is not morally permissible to push the fat guy off bridge in order to save the five persons.

From the analysis of the trolley dilemma and the footbridge dilemma, we can see that both of them make use of the doctrine of DDE. The key point of the above two processes of inference is (2) (3) (4), which largely reflect how people understand the terms of “ends” and “means” when they make moral judgment. In the trolley dilemma, I do not mean to divert the train to kill the innocent person, what encourages me to make such a moral judgment is that I just want to save the five persons. Supposing that there exist no five ensnared persons in front of the train, anyone in their right mind would not divert the train to kill the innocent person. In the trolley dilemma, my intention is nothing but to save five persons, and I do not regard killing the innocent person as the means to save the five. Someone may perhaps argue that saving the five persons is identical with killing the innocent person from the perspective of extension, but I actually do not take the trolley dilemma as the dilemma related with extensionality. What really moves people in the trolley dilemma is my first-person observation——I do not believe “saving the five persons” is identical to “killing the innocent people”, and my understanding of causality here is agent causation rather than event causation. In the footbridge dilemma, the situation is dramatically different for us. My understanding of causality in the footbridge dilemma is event causation rather than agent causation. The reason why I push the fat guy off bridge is that I want to save the five persons, which is dependent on deal the fat guy as the means to save the five persons. Only if the fat guy is pushed off the bridge to stop the train, could the other five persons survive. I hold a clear intention that treats the fat guy as the means to save the five persons, and the fat guy is therefore a necessary element in my whole rescue plan. Without such means, I am unable to save the five persons successfully. In the trolley dilemma, however, diverting the train onto another track to kill an innocent person is not a part of my rescue plan. Because of bad luck or other factors, the innocent person just so happens to stand on the track. It is by fate that the innocent person who happens to stand on the track dies. If the innocent person is not on the track at that time, the tragedy can be easily avoided.
In other words, the innocent person's death is a pure accident, and it is just a by-product of saving people. On the contrary, I obviously treat the fat guy as the means, and I hold the clear intention to push him off the bridge. So, according to DDE, the behavior of pushing the fat guy off the bridge cannot be justified.

The reasoning I adopt in the footbridge dilemma complies with event causation rather than agent causation. That is to say, I observe and consider the footbridge dilemma from the perspective of extensionality: Supposing that we can achieve ends A through doing P, and A can be described as B, so we achieve B through doing P. In light of above approach, the footbridge dilemma can be reduced to the following scenario: Supposing that I could save the five persons (A) through pushing the fat guy off the bridge (P), and saving the five persons (A) can be described as killing the fat guy (B) from the view of extensionality, I therefore achieve the goal of killing the fat guy (B) through pushing the fat guy off the bridge (P). According to DDE (or other moral principles), killing the fat guy is not morally right, it could explain why most people refuse to save the five persons through pushing the fat guy off the bridge. In brief, I adopt two entirely different perspectives in the trolley dilemma and footbridge dilemma: agent causation and event causation. Based on the understanding of agent causation, most people are more liable to making consequentialist judgments in the trolley dilemma, but the understanding of causality is varied in the footbridge dilemma, where most people are more likely to make deontological judgments.

Greene’s error lies in a kind of simplistic reduction. He interpreted the trolley dilemma as an impersonal moral situation, in which people are liable to make consequentialist judgments. At the same time, he discovered that brain regions associated with advanced cognition displayed heightened activity. This led him to conclude that consequentialist judgments are derived from reasoning. Likewise, he interpreted the footbridge dilemma as an up close and personal situation, in which people are more likely to make deontological judgments. At the same time, he discovered that brain regions associated with emotion displayed heightened activity. This led him to conclude that deontological judgments are derived from emotion.

The distinction of personal and impersonal is vitally important for Greene's study. He combined deontological judgments with notion of the personal, and also combined consequentialist judgments with notion of the impersonal. If one is facing a personal moral situation (or a personal moral dilemma), he or she is more likely to make deontological judgments; if one is facing an impersonal moral situation (or an impersonal moral dilemma), he or she is more likely to make consequentialist judgments. This kind of correspondence is not difficult to find in Greene’s claims. Greene’s mistake is that he fails to see the distinction between agent causation and event causation. He attributes deontological judgments to up close and personal moral situations, and conversely attributes consequentialist judgments to impersonal moral situations. It seems to me that this kind of simplistic reduction and attribution cannot be defended. There exists no correspondence between deontological judgments and personal moral situations.
Likewise, there exists no correspondence between consequentialist judgments and impersonal moral situations. Furthermore, Greene neither notices the relation between deontological judgments and event causality in the footbridge dilemma, nor the relation between consequentialist judgments and agent causality in the trolley dilemma. In the trolley dilemma, the reason why most people are likely to make consequentialist judgments is that people are inclined to interpret the trolley dilemma as an agent causation-involved scenario. On the other hand, when facing the footbridge dilemma, the reason why most people are likely to make deontological judgments is that people are inclined to interpret the footbridge dilemma as an event causation-involved scenario. Based on different understandings of causality then, people make different judgments when confronted with moral dilemmas. Greene argues, however, that the reason why people’s moral judgments are varied between the trolley and footbridge dilemma is due to the alternatives between impersonal scenarios and personal scenarios.

I insist that Greene’s approach of using the distinction between personal and impersonal to explain why people respond differently to the trolley dilemma and footbridge dilemma cannot be defended. The reason is in large part due to the fact that the dichotomy between personal and impersonal does not correspond respectively to deontological judgments and consequentialist judgments. Zhu Jing’s study has confirmed this point:

Supposing that you are a technical supervisor of a large bank. You have been charged with heading the development work on the computer control system of the bank, and no one else is more knowledgeable than you in the details of this computer control system. One day you are informed from the local media that a little girl from a poor family has leukemia and that she is in urgent need of money for a bone marrow transplant. If you take off 10 cents from the interest of 300,000 rich accounts this month, a total of 30,000 dollars could be transferred into a donation account and the little girl could thereby receive enough money to undergo a bone marrow transplant. For these depositors, it is very hard to find in their account balance the loss of 10 cents. Furthermore, even if they discovered the truth, they are unlikely to be angry about it because the loss of 10 cents will not have a substantial effect on their rich life. Meanwhile, the chance of detecting your illegal operation on the computer control system of the bank is very low. Is it permissible that you take off 10 cents from 300,000 rich accounts in order to help the little girl? 46

The example is a typical impersonal moral dilemma. In Zhu Jing’s study, he finds that most people believe that it is not morally permissible for the technical supervisor to conduct such a violation in order to save the little girl, and the moral judgments in this dilemma can be regarded as a deontological judgment. Zhu Jing argues that we can imagine various other similar moral situations. They are impersonal and emotional factors do not play a vital role. But, we are still likely to make deontological judgments instead of consequentialist judgments in these moral situations. Green neglects and does not consider moral situations like this one, so his reasoning in research commits the logical error of only seeing the tree and not the forest. Zhu Jing’s argument can be reconstructed as follows:

(1) According to Greene’s study, consequentialist judgments are derived from people’s reason, and impersonal situations tend to encourage and inspire people's rational cognition.
(2) Once people encounter an impersonal situation, they are inclined to make consequentialist judgments.
(3) An impersonal situation is sufficient for most people to make consequentialist judgments.
(4) But, we can imagine many impersonal situations in which most people are not inclined to make consequentialist judgments. This can also be verified by empirical study.
(5) There is no direct correlation between impersonal situations and consequentialist judgment, and impersonal situations in fact can also lead to deontological judgments.
(6) Greene’s argument against Kantian ethics is flawed.

Zhu Jing’s refutation of Greene’s reasoning is valid. We can imagine many impersonal moral dilemmas in which people are inclined to make deontological judgments rather than consequentialist judgments. I think Zhu Jing’s argument supports my views from two aspects. Firstly, Greene combined impersonal moral situations with consequentialist judgments and combined personal moral situations with deontological judgments. Supposing a person is facing a personal situation, he or she is likely to make a deontological judgment, and if said person is facing an impersonal situation, he or she is in turn likely to make a consequentialist judgment. Zhu Jing’s rigorous refutation challenges the correlation between impersonal moral situations and consequentialist judgments. The correlation between personal moral situations or impersonal moral situations and moral judgment remains an open question. Secondly, based on the distinction between agent causation and event causation, we can also explain people’s moral judgments in Zhu Jing’s example as well as provide a complete interpretation for the trolley dilemma and footbridge dilemma, both of which Greene cannot give a satisfactory answer. In Zhu Jing’s example, most people believe it is not morally right to take off 10 cents from 300,000 rich accounts. They are inclined to observe this situation from the view of event causality, which encourages them to treat the act of taking off money from bank depositors as the direct means to saving the little girl. According to DDE, it is morally wrong to treat other people merely as the means. So, most people believe that it is wrong to take off money from depositors in order to save the little girl in Zhu Jing’s example.
In Greene’s opinion, impersonal moral situations tend to motivate people’s rational moral reasoning instead of emotion, thereby encouraging people to make consequentialist judgments. But, the above argument indicates that Greene cannot reasonably establish the correlation between impersonal situations and consequentialist judgments. Furthermore, similarly, Greene also cannot verify the correlation between personal situations and deontological judgments. There are some counterexamples in which people are positively motivated by emotion and still liable to make non-deontological judgments. In other words, even when confronted with personal moral situations, most people are not likely to make deontological judgments. 47

The last required a bit of explanation that event causation does not logically lead to deontological judgments and agent causation does not logically lead to consequentialist judgments as well. People’s understanding of causality is dependent on their intentional states and eternal situations.

47 See also Mikhail’s study for moral judgment, John Mikhail, “Moral Cognition and Computational Theory”, edited in Moral Psychology(Volume3, by Walter Sinnott-Armstrong), MIT Press, 2008, pp82-83
3.4 What is the authentic Kantian ethics?

Greene is not afraid to assert that deontological judgment is actually the product of human’s emotion. It is emotions that are often inconsistent, unstable, as showcased in daily life, and therefore unreliable in encouraging us to make reasonable judgments pertaining to moral dilemmas. Compared with saving the helpless or homeless children in Africa, people are more willing to take part in volunteer activities such as inspiring campaigns launched by animal protection organizations, even though saving African children in need produces more benefits and utility than animal protection (obviously, this point is debatable, some contemporary defenders of animal rights would beg to differ). Greene perhaps believes that some things are less important than others, and that all these can be sorted in accordance to a certain welfare theory. People ought to do those that could produce the greatest benefits and utility, rather than directly follow the simple order born out of emotion. This is because what emotion tells us is usually shaped by the constraints of evolutionary factors. If humans are really the only moral beings in this planet, they cannot be driven solely by emotion, they ought to act in accordance to consequentialism’s doctrine—— the well being of all mankind. Greene’s empirical study and his normative conclusion appears to be right to many, but when we closely inspect Kantian ethics, it is not hard to find that Greene has misunderstood Kant and his normative theory.

Are deontological judgments seen under Greene’s interpretation identical with Kant’s deontological judgment? In what sense can we recognize a moral judgment as a deontological judgment? I think it is a big question for Greene, and for us as well. In order to solve this problem, we should first understand the model of moral judgment in Kantian ethics.

Supposing that a young man who is inspired by good will decides to help an old man cross the street. Unfortunately, an oncoming car, recklessly driven, knocks down both men, resulting in the old man’s death and seriously injuring the young man. According to Kantian ethics, although the young man’s action led to disastrous consequences, it is because of his good will itself that his action remains praiseworthy and laudable. This means that an action that is inspired by good will is always good. Additionally, an action that derives from good will inevitably satisfies the requirements of morality. Good will always has the ability to grasp the requirements posed by Categorical Imperatives, and it, out of reverence for moral laws, always performs moral duties without any hesitation. There is no doubt that the logical starting point of Kantian ethics is the rational being (or the human as a rational being), and the sole source for moral principles from which moral duties are drawn cannot be stemmed from sense experience and emotion. Kant wants to establish a pure moral philosophy that is independent of man’s experiences and emotions. The concept of Categorical Imperatives is a key concept in his ethics, which excludes all the experiences and emotions. According to Kantian ethics, Categorical Imperatives have an expression: "Act only according to that maxim
whereby you can, at the same time, will that it should become a universal law." It provides us with a certain decision-making process when making moral judgment, and we can therefore justify what kinds of actions are morally right or wrong by virtue of the concept of universalizability. Supposing that a maxim (or an action) can be universalized, there is unlikely to be a disagreement in what I ought to do in relevant situations. If an action (i.e. to not lie) indeed passes the test of the principle of universalizability, it is applicable to all rational beings, including every person in this world. Moral principles in Kantian ethics are of universal inevitability. From above discussion, we can now draw the outline of the general model of moral judgment in Kantian ethics.

![Figure 6. The model of moral judgment in Kantian ethics (SMJ Model)](image)

I refer to the model of moral judgment in Kantian ethics as SMJ model (Figure 6), and I think it is necessary to briefly analyze it here. The logical starting point of SMJ is the rational human being S1. This is the most fundamental presupposition of Kantian ethics as a whole. The primary purpose of this presupposition is to liberate the human being from external necessities (for example, natural impulses), and it is the ground for understanding the external world and human actions. On this foundation, the principle of universalizability can be justified, and the Categorical Imperatives and moral duties can be established as well. Therefore, Kant’s understanding of the human being in itself is that which is independent of the experiences and emotions. As regards M2, what gives an action its moral value? I think the answer to this question must satisfy two conditions. (1) An action must be consistent with the requirements of moral duties derived from Categorical

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Imperatives. (2) A moral agent who can decide what ought to do must have reverence for moral laws. If an action is supposed to result in a better outcome but reveals itself as contrary to the requirements of Categorical Imperatives (or moral laws), it is undoubtedly morally wrong. On the other hand, if an action satisfies the requirements of Categorical Imperatives (or moral laws) but is not enacted out of reverence for moral laws but driven by the simple sympathy towards others, it is still not an action with moral value. (Of course, the action may have value in other aspects) When S1 and M2 encounter with specific moral situations, we will automatically obtain what we ought to do—— J3.

From the model SMJ, it is easy to discover the general characteristics of moral judgment in Kantian ethics: (1) Human is a rational being. (2) Action must satisfy the requirements of moral duties (or Categorical Imperatives). (3) The moral agent must have reverence for moral laws. From this, a moral judgment can be categorized as within the domains of deontology, if and only if, (1) The moral judgment is derived from reason. (2) It satisfies the requirements of Categorical Imperatives (or moral laws). (3) It must be formed from the reverence for moral laws. I think the above three requirements are the minimum conditions for recognizing a moral judgment as a deontological judgment. As we will discuss later, Greene’s deontological judgment at best satisfy condition (2), whereas conditions (1) and (3) remain unsatisfied. As such, Greene’s deontological judgments are not identical with true deontological judgments.

Greene insists that deontological judgments are founded on the basis of emotional processes. This assertion is seemingly confirmed by his experiment. In the footbridge dilemma, most people believe that it is not morally right to push the fat guy off the bridge in order to save five ensnared persons. At the same time, Greene discovers that brain regions associated with advanced cognition show heightened activity when participants make moral judgments. Based on this discovery, Greene asserts that deontological judgments are derived from emotion processes, and his view is absolutely contrary to Kantian ethics. Greene’s argument can be reconstructed as follows:

(1) When facing a personal moral situation, people are likely to make deontological judgments.
(2) An FMRI apparatus is introduced to scan the participants’ brains when they make moral judgments concerning the footbridge dilemma, and evidence from the FMRI shows that three regions of the brain show heightened activity.
(3) Based on reliable psychological evidence, a high correlation has been found between the three regions of the brain and emotion.
(4) Deontological judgments are therefore derived from people’s emotion.
Adopting a similar strategy, Greene also provides an argument for consequentialist judgment. He asserts that consequentialist judgment is actually derived from reasoning instead of emotional concerns for other people. Finally, inspired by the above discovery, Greene proposes that people’s moral judgment can be divided into two paths (or two parts), one path is related with emotion, and the other is related with reasoning.

![Model 3: Diagram of Greene’s Dual Process Model of Moral Judgment](image)

**Figure 7. Greene’s Dual Process Model of Moral Judgment**

According to Greene’s explanation, people’s brain will have an analysis on relevant situations in order to determine which path it will adopt when perceiving eternal events (Figure 7). When the emotional path is adopted, people are likely to make deontological judgments when facing moral dilemmas. And conversely when the reasoning path is adopted, people are likely to make consequentialist judgments. This point has been verified by Greene’s study. But one should not lay too much emphasis on Greene’s empirical study and its alleged evidence, for what matters in this part is, in what sense we can recognize a moral judgment as a deontological judgment. Greene mocks armchair philosophers that they do not actually know what deontological judgments and consequentialist judgments mean. He claims that philosophers only know conceptual analysis and logical analysis, and that they are indifferent to how people make moral judgment in reality at all. He tries therefore to persuade armchair philosophers, just like peeling an onion to exhibit in public its core, to realize, by virtue of empirical studies, what deontological judgment and consequentialist judgment is likely to be in actuality. I believe every conscientious philosopher will be touched by Greene’s study when they encounter more and more challenges posed by psychology or other empirical domains, and we cannot escape from the hot seat because Greene’s reversal and refutation indeed “hits home”. But, when philosophers are willing to engage in conversation with Greene on equal standing, it is with deep regret that we find that Greene had gravely misunderstood Kant.

Firstly, in the dual process model of moral judgment, Greene does not presuppose anything for the human being, the lack of which undoubtedly renders vacuous and punctures the foundation of Kantian ethics. The logical starting point of Kantian ethics is surreptitiously removed. We cannot help but ask how it is possible for Kant, and other prestigious philosophers during the 18th Century, to construct ethical theories without the substantial hypothesis of a fundamental understanding of the human being. This point is so clear for Kant, and also for Hume and Kierkegaard. In Alasdair MacIntyre’s book *After Virtue*, he discusses
modern moral philosophy with a similar idea. The appearance of the Enlightenment compels secular society to haul down the glory of God from the stairway to heaven, and modern science together with philosophy expels Aristotle’s science that is tangled with metaphysics. As a result of that, the notion of man-as-he-could-be-if-he-realized-his-essential-nature no longer exists. When the concept of the ends that enables us to make sense of the moral code is expelled, the justification for moral codes in itself becomes an external question. Without any previous complicity, Kant and Hume tried each in their own right to construct ethical theories beginning with an understanding of human nature. In Kant’s view, the human being is hypothesized as a rational being. In Hume’s view, as distinct from Kant, the human being is hypothesized as an emotional being. Greene’s error lies in his ignorance of Kant’s basic understanding of the human being. Whereas both Greene and MacIntyre are critics of Kantian ethics, MacIntyre’s insights on moral philosophy are obviously more profound than Greene’s.

Secondly, Greene treats moral judgments that are motivated by emotion as deontological judgments, which reveals his biggest misunderstanding of Kantian ethics. The concept of duty contains the reverence for moral laws. The reason why we ought to do A rather than B is that doing A is the requirements of Categorical Imperatives, which is the law that every rational being lays down for themselves. The reverence is derived from ideas that every rational being as an end is the member of the hypothetical Kingdom of Ends, and that every rational being obey the moral laws laid down by themselves. As such, “reverence for moral laws” is also a fundamental proposition in Kantian ethics. However, it is with great regret that this important insight is inexplicably removed in Greene’s study. According to Greene, that a moral judgment appears to be a deontological judgment is therefore sufficient for us to understand true deontological judgments. Greene, obviously then, does not make the distinction between genuine deontological judgment and moral judgment that merely appears to be deontological. A moral judgment that appears to be deontological judgment is probably derived from emotion, which cannot be categorized within the domains of deontology.

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49 See Alasdair MacIntyre, After Virtue, University of Notre Dame Press, 1984, p.55
Conclusion

Greene insists that deontological judgments are derived from emotion. It is a kind of instinctive responses instead of an execution of reasoning. By virtue of cognitive science and psychological study, Greene proposes an alternative explanation of deontology: (1) Deontology is a philosophical attempt to rationalize a range of intuitive moral reactions, especially those that share characteristics common to the traditional conception of deontology. (2) The true essence of deontology is a certain pattern of psychological, intuitive (non-consequentialist) responses to real and imagined cases calling for moral judgment. As regards explanation (1), I think every serious philosopher will not flatly refuse Greene’s understanding on deontology at this point. If we can revive Kant from the underground, it is plausible that Kant himself may agree that his ethical theory aims to provide a complete justification for moral judgment made by common people during their everyday life. Ethical theory is not independent of the human being’s moral life, this idea is not difficult to discover in Kant’s Groundwork of the Metaphysics of Morals. What I attempted to do in this article is therefore to attack explanation (2). I insist that there exists an unbridgeable gulf between philosophical investigation and psychological study, thereby asserting that they essentially belong to entirely different categories. If we closely examine Greene’s work, we discover that both he and John Stuart Mill share the same theoretical framework. Mill claimed that all explanations, no matter what it is, scientific or philosophical explanation, have the same logical structure. “There can be no fundamental logical difference between the principles according to which we explain natural changes and those according to which we explain social changes. It is a necessary consequence of this that the methodological issues concerning the moral sciences should be seen as empirical: an attitude involving a wait-and-see attitude to the question of what can be achieved by the social sciences and, incidentally, ruling the philosopher out of the picture.” Greene’s great ambition rests not only in his aim to manifest how deontological judgments are actually driven by emotion and that furthermore armchair philosophers have heretofore simply misunderstood what genuine deontology actually entails, but also rests in his intention to wrestle away discursive authority from contemporary moral philosophers. This is what Greene effectively tries to do, and his study of moral issues essentially depends on an understanding of human nature seen explicitly through the lens of empirical sciences. I believe, however, that Greene’s effort was in vain. Whether his argument depends on a psychological dimension or a philosophical dimension, Greene is incompetent in providing sufficient and convincing evidence in order to defend his views.

As for psychological study, there are at least two problems in Greene’s study. (1) Relying on psychological study, Greene and other psychologists discover that people are liable to make consequentialist judgments when faced with impersonal moral situations such as the trolley dilemma, and that people are more likely to make deontological judgments when faced with personal situations such as the footbridge dilemma. My psychological study partially verified Greene’s study: In the footbridge dilemma, most people are more likely to make deontological judgments. My study is highly consistent with Greene’s. The result of my study, however, also shows that most people are still liable to make deontological judgments in the trolley dilemma. Furthermore, My study has also verified that Greene’s study cannot be reproduced adequately. It is perfectly possible that most people are liable to make deontological judgments in impersonal moral situations. This point is contrary to Greene’s study. (2) Relying on the study of the Loop Case dilemma, Greene argues that Kantian ethics cannot explain people’s responses in the Loop Case dilemma. Greene therefore proposes a new model of moral judgment——the dual process model of moral judgment——in order to explain why people are liable to make consequentialist judgments when faced with the Loop Case dilemma. But if the Loop Case dilemma remains an open question, Greene’s study must therefore be discounted. As other psychologists and philosophers cast doubt on traditional view on Loop Case dilemma, my study do not verify Greene’s view on Loop Case dilemma at all.

As for the dimension of philosophical study, Greene does not properly understand Kantian ethics. He tries to introduce scientific terms into the understanding and explanation of Kantian ethics. By virtue of empirical study, he attempts to persuade armchair philosophers to believe what deontological judgment actually entails. However, Kantian ethics and Psychological study for moral issues belong to fundamentally distinct domains. As Peter Winch claims, the thesis of moral science is not empirical at all; it is conceptual. The question with which social science concerns itself is not the question of “what empirical research may show to be the case” but the question of “what philosophical analysis reveals about what it makes sense to say”. The conceptual scheme associated with social science is logically distinct from the conceptual scheme associated with natural sciences. Greene’s mistake can therefore be fundamentally reduced to the confusion between different types of conceptual schemes, and he is absorbed in using the conceptual scheme of natural sciences to interpret and replace the conceptual scheme of moral philosophy. The two different types of conceptual schemes occupy an entirely different position in the genealogy of morals. In fact, we can draw the differences between Kantian ethics and Greene’s conception through the following genealogy of morals:

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From this genealogy of morals designed originally by Derek Parfit, it is not difficult to see the different positions that Kantian ethics and Greene’s conception occupy. Kantian ethics can be understood as non-naturalist cognitivism, and Greene’s view belongs to naturalism in the broadest sense. Faced with the question “Are normative truths irreducibly normative?” they pose different answers, and the disagreement between them seems to be inevitable, even though both of them agree that there are normative truths. Kantian ethics located in this genealogy of morals has its own special themes to deal with (i.e. how the human being as an ends in itself lays down the moral laws), the system of Kantian moral philosophy is constructed in a special way (i.e. human as rational being is the logical starting point of Kantian ethics), and the reverence for moral laws is a typical characteristic of Kantian ethics. It is sheer irony that Greene had made sense of deontological judgment without the most basic understanding of Kantian ethics. A moral judgment that appears superficially to be a deontological judgment, by virtue of a seemingly inescapable derivation from emotion, cannot however, and by this very derivation itself, be categorized as within the domains of genuine deontology. In Kant’s view, a moral judgment that can be categorized
as deontological must satisfy three conditions: (1) Moral judgment is derived from reason. (2) Moral judgment must satisfy the requirements of moral duties. (3) The moral judgment must be born from reverence for moral laws. Greene's understanding of Kantian ethics is only limited to (2), and he does not give any explanations for (1) and (3). As such, certain basic presuppositions and typical characteristics of Kantian ethics have been carelessly abandoned, even though it were precisely such propositions that made Kant enjoy such a prestigious position in the history of philosophy. Greene's understanding of deontological judgments thus stretches far beyond the theoretical framework of Kantian ethics. And this, in fact, reveals that Greene has been talking about a completely different sort of moral judgment. Whatever this may be, one thing we can be sure of is that it has nothing to do with Kantian ethics.
References