Culpability and Penitence: The Intrinsic Morality of the Trolley Problem

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ABSTRACT

The trolley problem is uniquely illuminating in the world of moral philosophy, and it is relevant to all three schools of ethics: deontological ethics, virtue ethics, and consequentialist ethics. Numerous researchers have written at length about trolley problem variations and real-world applications of ethical dilemmas, but there is a paucity of research pertaining to the worldviews of teenagers in particular; most of the existing literature on trolleyology focuses on the inclinations of adults. The findings of this teenage-centered project suggest that, in a trolleyological context, teenagers are more strongly utilitarian than adults are. Further research can be done to broaden the scope of the topic and ascertain the unique factors that contribute to juvenile morality.

Introduction

The Problem

The trolley problem is a moral dilemma that, despite its improbability and absurdity, has applications in many real-world issues. It "is one of the most famous and influential thought experiments in deontological ethics" (Bruers and Braeckman). In the simplest terms possible, the trolley problem places the individual as a crucial decision-maker. A runaway trolley is barreling down the tracks, and the aforementioned individual is next to a lever that can divert the trolley's path. Not pulling the lever will cause the trolley to run over five people tied down to the main track, but pulling the lever will cause the trolley to run over one person who is on the other side. The individual must choose between action and inaction, between killing and letting die, and lastly, between saving the many versus saving the few. At least one person is guaranteed to die either way.

Circumstantial Nuances and Moral Reasonings

Adhering to the utilitarian approach, which hopes to offer the greatest amount of good to the greatest number of people, many people assert that they would kill one person to save five, but this answer quickly changes depending on the situation's circumstances. For instance, one notable variation of the trolley problem requires the decision-maker to push one person off of a bridge in order to save five; people can easily overlook pulling a lever to take a human being's life, but falter when it comes to physically pushing that human being to their untimely demise (Crockett). It can be concluded from this that detachment facilitates violence and that attachment or any sufficient degree of personalization does the exact opposite. Touching a lever with the intent to kill is worlds apart from touching a person with the intent to kill. Moreover, in one study, the researchers found that people "were less likely to sacrifice one life for five lives if the one hypothetical life was young, a genetic relative, or a current mate" (Bleske-Rechek et al.). This observation evinces that bonds play an important role in determining ethical decisions; thus, emotional closeness is

just as essential, if not more, than physical closeness when it comes down to determining whether or not a person will pull the lever.

Having considered the clashing of attachment and detachment as well as the conflict of the greater good versus personal principles, it is prudent to examine the reasons people may provide for their decisions regarding this thought experiment. In one experiment, subjects "were paradoxically less likely to choose an action that sacrifices one life to save others when they were asked to provide more reasons for doing so" (Rai and Holyoak 2010). Utilitarianism can thus be associated with a form of normative impulsivity: it is oftentimes the route that people choose initially, but after learning about the variations of the trolley problem and endeavoring to delineate their own justifications for killing one person, they switch sides. This suggests that, although utilitarianism has been aggressively normalized in the modern day, it is not as easily followable as it appears to be. Furthermore, justifying the act of murder will always bring with it an intrinsic difficulty.

Killing other people, whether directly or indirectly, is not the only solution to the trolley problem, however. Self-sacrifice is also an option, though a less frequently considered one. If possible, people generally prefer not to put their own lives at stake. "Altruistic self-sacrifice is rare, supererogatory, and not to be expected of any rational agent; but, the possibility of giving up one's life for the common good has played an important role in moral theorizing" (Huebner and Hauser). However, self-sacrifice still possesses a moral appeal that is arguably superior to those of killing one person to save five people or letting five people die to save one person; the individual is allowed to operate as a martyr rather than a murderer. In fact, "a surprisingly high proportion of people judge that they should give up their lives to save a small number of unknown strangers" (Huebner and Hauser). Because of the moral guidance it provides, religion may be a factor in this judgment as well (Bleich); this adds another layer to the already existing and intricate web of sociocultural norms that influences ethics.

Gap in Research

Prior research has made useful, albeit sweeping generalizations about people's stances on ethics, and several studies center adult perspectives. It is due to this adult-centric approach that this research centers teenage opinions, thus helping ascertain whether or not age and generation make a difference in ethical prioritization, especially when compared to the results of previous studies. If they do make a difference, it is possible that the not-yet-matured brain of the adolescent handles morality in a unique way. It is also possible that the gradual changing of society over time has allowed the youth to acquire new priorities that their predecessors may disagree with. Either way, this research will broaden the scope of trolleyology and provide insight into the contemporary moral state of society.

Review of Literature

Trolleyological Applications

As one of the most well-known moral dilemmas of the modern day, the trolley problem has been studied extensively over the years. The problem has been adapted for different contexts, circumstances, and real-world issues. It is "a mainstay in the repertoire of law school hypotheticals" (Huang 659). Researchers such as Bert Huang and Stacy Carter have connected the trolley problem to law (676) and social norms (1) respectively; other researchers have emphasized how essential themes of trolleyology manifest in governments' responses to the climate crisis (Patashnik 1274), accident algorithms for self-driving cars (Nyholm and Smids 1275), warfare (Rodin 74), and artificial intelligence (Etzioni and Etzioni 403).

Trolleyological Structure

Firstly, to understand why the trolley problem has proven itself to be so useful time and time again, one must first understand the concepts at its core as well as its basic structure. There are three main schools of ethics: deontological ethics, which focuses on precepts and duties, virtue-based ethics, which focuses on personal integrity and self-betterment, and consequentialist ethics (including utilitarianism), which focuses on impacts and effects (Dobrin). The trolley problem challenges all three schools of ethics because it is fundamentally an either-or problem; it does not leave any room for compromise, mandating that people will die whether or not the lever is pulled. Thus, it forces people to reckon with their own moral beliefs. From that point—the moment of the fatal decision—onward, concepts such as the doctrine of double effect (Masek 567), which states that if doing a good deed has a bad side effect, it is still morally permissible as long as the side effect is unintentional, and the intention principle (Liao 703), which states that an act is considered impermissible, no matter how technically good, if done with a bad intention, come into play. Concepts such as these, which have been thoroughly analyzed by various moral philosophers, show that people will do everything in their power to justify and rationalize their actions.

Pertinent Ethical Factors

Although there are multitudinous real-world analogies for the trolley problem, it is ultimately far-fetched, even among thought experiments. The average person will never be put in such a highly specific, bizarre, and inescapable situation where six lives are at stake. It is precisely because of this sheer improbability that the aggressive extremity of the trolley problem provokes unique responses from the individuals exposed to it. According to Carter's research, ninety percent of people said that it was acceptable to throw the switch to kill one person and save five people, but only ten percent of people said that it was acceptable to push one person off a bridge to save five (1). This drastic change suggests that detachment makes it less difficult for a human being to engage in an act they perceive as murder, whereas a more personal and even physical element makes it more difficult for a human being to engage in an act they perceive as murder. Lawrence Masek quotes John Harris on this same topic; John Harris affirms that there is "a distinction between 'throwing a trolley at a person and throwing a person at a trolley'" (571). Masek goes on to note that this distinction is especially prominent when the "violent and messy" (574) natures of these deaths are taken into account. To build on this observation, in Huang's paper, a separate survey conducted on criminality, justifiability, and liability found that more subjects deemed pulling the switch to be "morally prohibited" when it was criminally liable to do so, showing that law has an significant influence on human morality (692). It is likely that personal benefits factor into this change in opinion, as criminal charges, especially those pertaining to murder, have severe consequences and are generally viewed as undesirable. Therefore, it is prudent to conclude that both surveys emphasize the individual's place in society; relationships or interpersonal dynamics affect the ease of inflicting lasting harm, and legal or personal implications affect what acts the individual believes are completely prohibited on moral grounds.

Other factors that people may consider or prioritize when choosing who to save are a person's goodness or lack thereof, a person's perceived usefulness to society, a person's age, the number of people that will be impacted by one's decision, certainty or the lack thereof, urgency or the lack thereof, and fatality or the lack thereof (Bleske-Rechek et al.). A certain combination of factors must warrant a certain kind of culpability; likewise, a certain combination of factors must warrant a certain kind of leniency. Thus, a criminal's intentions, a crime's circumstances, and a crime's impacts must all be taken into account as well as connected back to the three major schools of ethical thought (Dobrin). Masek writes this about the strict definition of intention: "As Marquis rightly emphasizes, the strict definition classifies *states of affairs*, not *actions*, as intended or unintended" (573). The intricacy of an individual's intentions and impacts is complicated further by a new slew of variations of the trolley problem.

Variations of the Trolley Problem

In a highly insightful article, Choi provides ten variations of the trolley problem in regards to examining climate inactivism. These variations include the temporal switch problem and the non-fatal switch problem, which offer neutral approaches to the problem, as well as four problems favoring inaction and four problems favoring action (Choi). The variations that have been chosen for further exploration in this project are the temporal switch problem, the asymmetric uncertainty problem (which favors inaction), the driver problem (which favors action), and the problem where the person responsible for the trolley dilemma in the first place is involved (which favors action). In the temporal switch problem, flipping the switch will kill one person in the present and doing nothing will kill five people in the future, since the main track leads through a time portal; this problem utilizes urgency and temporal distance to challenge ethical priorities by positing the question of short-term versus long-term consequences. In the asymmetric uncertainty problem, pulling the switch will kill one person for sure, but it is impossible to accurately determine whether or not five people will die if nothing is done; this problem, akin to a gamble but with real human lives at stake, challenges an individual's capacity to take risks. In the driver problem, the person being tested is now the driver of the trolley, and they must decide whether it is better to run over five people by letting the trolley continue on its course or to go out of their way to run over one person; this problem impedes the individual's attempts to become personally detached from the casualty or casualties that are bound to happen. In the problem where the person responsible for the trolley dilemma in the first place is involved, if the switch is pulled, said responsible person will die, but if the switch is not pulled, five people, including that person's child, will die; this problem juxtaposes conceptions of justice and conceptions of vengeance. All four of these problems (Choi) are bound to provide this project with a more nuanced view of the trolley problem and its "intellectual hegemony" (Fried 506) in the world of moral philosophy.

Methodology

Purpose

The purpose of this research study was to gather information on the opinions of teenagers (individuals between the ages of thirteen and nineteen) on the trolley problem in order to better understand whether or not age and social category influence self-perceived ethical alignments.

Research Design and Methods

The research design was quantitative, involving a thorough survey on trolleyology that would allow respondents to express their opinions chiefly through numerical values (though there were a few free-response questions as well). A survey was chosen because it would efficiently allow the questioning of large masses of people that could not reasonably be interviewed within a short period of time; it has innate advantages such as "the economy of the design and the rapid turnaround in data collection" (Creswell 203). Moreover, the structure of the survey helped boil the trolley problem and its variants down to their essence; as survey respondents tend to prefer surveys that will not take up overly large amounts of their time, the survey had to be as meaningfully concise as possible.

Here, research methods incorporated both open-ended and closed-ended questions, and statistical as well as textual analysis played key roles. Numbers, themes, and overarching patterns were observed. The methods were inextricably linked to the research design because the variety of questions, including both multiple-choice and free-response questions, allowed the gleaning of insights into the trolley problem and the understanding of how it reflected social norms.

This mixed-methods research with its ingrained theme of social science lent itself well to a pragmatic worldview, as both qualitative and quantitative assumptions were drawn from (Creswell 43). There was no commitment to any one system of philosophy; this prevented the subjects' opinions from being overshadowed.

Bert Huang's research (692) as well as Stacy Carter's research (1), both of which served as major influences in this process, incorporated surveys. For them, surveys distilled key ethical concepts into simple and powerful pieces of evidence. However, in this case, seeking trends in the ethical alignments of a social group simply could not be done with only a handful of people, despite the profundity that intense focus on a few individuals could offer. Truly seeking out trends in teenagers' inclinations required expansion in a limited space.

Population

As the gap in research discerned was the lack of a younger perspective on what was generally considered a mature, adult-oriented topic, the survey was directed at people between thirteen and nineteen years of age, with a focus on high school students in particular. This was done in the hopes of prioritizing the unique ethical outlooks of youths. Both the incompletely developed brains of adolescents and the latest social transformations handed down to them through education, community, and media had the potential to affect young people's understandings of ethics, and simply by acknowledging this potential, this study was distinguished from its predecessors.

Overview of Data Collection

In the survey, questions were presented such as: "On a scale from 1-10, with 1 being 'it is most ethical to spare one person and let five people die by doing nothing' and 10 being 'it is most ethical to pull the switch and kill one person so the five can live,' what do you believe is the best course of action regarding the trolley problem?" Other questions were asked as follows: "Do these statistics make sense to you? Why or why not?" The former line of inquiry quickly gave a bird's-eye view of the opinions of the general population being surveyed (as a scale, it was also more effective than a simple yes-no question, as it accounted for a wider spectrum of opinions), whereas the latter line of inquiry allowed deeper probing into the respondents' variegated reasonings behind why they chose what they chose. In total, it took about two weeks for a sufficiently illuminating amount of information to be collected.

This work evinced that surveys were predominantly reliable instruments of data collection. Considering that the trolley problem was a comparatively dark topic, the anonymous nature of the written questionnaire allowed respondents to respond with honesty, as they would not be pressured into revealing personal details (Leedy and Omrod 154). As the survey was planned quite meticulously, some of the main drawbacks of written questionnaires were sidestepped.

The procedure was simple, and voluntary response sampling was used. First, it was ensured that people would be able to access this survey through a school-approved mass email as well as other digital forms of outreach, such as social media. Second, time was allotted for responses to the survey to roll in. Third, the survey data was consolidated. Fourth, data was interpreted in the context of previous writings on the topic. All IRB procedures were followed and no personal identifying information was collected.

Analysis

Here, the unit of analysis was the statistical alignment of opinion on the ethics of the trolley problem; in other words, it was the distinction between whether a respondent believed it was more ethical to save one person at five people's expense or save five people at one person's expense, as well as the intensity of that aforementioned belief. Varying degrees of harm and personalization factored into this. In order to maximize the survey's candidness, it was noted in the Google Form that respondents were advised not to go back and change their answers to previous questions after

being given new information; ideally, this would allow people to have confidence in the research's solidity. Moreover, the wording was kept as clear as possible; confused respondents would certainly be more likely to give inaccurate information than respondents who clearly comprehended the topic at hand. Generally speaking, there were no major confounding variables.

Limitations

The method's limitations lay in the fact that a moderately short survey would not be able to account for all the nuance of such a convoluted topic. The free-response questions posed in the survey were intended for short responses, not long essays from respondents detailing everything they had ever learned about the trolley problem. Nevertheless, the survey was still highly efficient and effective because it allowed the pinpointing of fascinating patterns in the opinions of youths. The survey being a snapshot in time (Leedy and Omrod 153) could actually work in its favor: by only aiming to capture an ephemerally teenaged perspective on trolleyology, it could shed light on the research gap by showing precisely how differences in age group and distinctions in generation could affect people's moral priorities.

Results

Introduction

Of the 179 total survey respondents, 52% considered themselves the most philosophically aligned with consequentialist ethics, including utilitarianism. 36.9% considered themselves the most aligned with virtue-based ethics, and 11.2% considered themselves the most aligned with deontological ethics. For every variation of the trolley problem presented, a 1-10 scale was provided alongside it, with 1 indicating the strongest preference for saving one person over five people and 10 indicating the strongest preference for saving five people over one person.

Data

Table 1.1. Responses to the classic trolley problem (n = 179). Here, the plurality of respondents (29.1%) voted 10 on the alignment scale, indicating that they felt strongly about pulling the lever to save five people at the cost of one person's life.

Ethical Alignment	Vote Numbers	Vote Percentages
1	6	3.4%
2	4	2.2%
3	7	3.9%
4	6	3.4%
5	2	1.1%
6	5	2.8%
7	23	12.8%
8	42	23.5%
9	32	17.9%
10	52	29.1%

Table 1.2. Responses to the bridge-based trolley problem (n = 179). Here, only 30 people voted 10, whereas in the previous problem, 52 people voted 10, suggesting that respondents found it more difficult to push someone off a bridge than to pull a lever to cause their death. However, the number of people who voted 1 did not see a drastic increase, going from 6 to only 13.

Ethical Alignment	Total Number of Votes	Total Percentage of Votes
1	13	7.3%
2	15	8.4%
3	21	11.7%
4	22	12.3%
5	11	6.1%
6	20	11.2%
7	19	10.6%
8	22	12.3%
9	6	3.4%
10	30	16.8%

Table 1.3. Responses to the time portal trolley problem (n = 179). The number of people who voted 10 only dropped by 1 from the previous problem, going from 30 to 29, and the number of people who voted 1 only increased by 2, going from 13 to 15. Therefore, no drastic changes in ethical alignments can be observed from this data.

Ethical Alignment	Number of Votes	Percentage of Votes
1	15	8.4%
2	11	6.1%
3	23	12.8%
4	14	7.8%
5	13	7.3%
6	14	7.8%
7	13	7.3%
8	27	15.1%
9	20	11.2%
10	29	16.2%

Table 1.4. Responses to the asymmetric uncertainty trolley problem (n = 179). Here, the percentage of people who voted 10 finally plummeted, going from 16.2% in the previous problem to a mere 6.1%. The percentage of people who voted 1 nearly doubled, going from 8.4% to 16.2%.

Ethical Alignment	Number of Votes	Percentage of Votes
1	29	16.2%
2	14	7.8%
3	26	14.5%
4	35	19.6%
5	9	5%
6	16	8.9%
7	23	12.8%
8	9	5%
9	7	3.9%
10	11	6.1%

Table 1.5. Responses to the driver's trolley problem (n = 179). Here, voters exhibited a distinctly stronger preference for saving five people than they did previously, as 34.6% of respondents voted 10 and only 2.8% of respondents voted 1.

Ethical Alignment	Number of Votes	Percentage of Votes
1	5	2.8%
2	1	0.6%
3	3	1.7%
4	4	2.2%
5	2	1.1%
6	15	8.4%
7	17	9.5%
8	35	19.6%
9	35	19.6%
10	62	34.6%

Table 1.6. Responses to the "person responsible, with remote and child" problem (n = 179). This problem is the only variation where more than half of respondents (specifically 54.2%) voted 10. Correspondingly, incredibly minuscule votes were gathered for alignments below 5, indicating that respondents approached this issue with high utilitarianism and low neutrality.

Ethical Alignment	Number of Votes	Percentage of Votes
1	4	2.2%
2	1	0.6%
3	1	0.6%
4	1	0.6%
5	1	0.6%
6	2	1.1%
7	10	5.6%
8	23	12.8%
9	39	21.8%
10	97	54.2%

Table 2. Potential correlations across chosen versions of the trolley problem (n = 179). The average ethical alignments of respondents changed drastically from problem to problem, as shown by the wide range of medians and means. Version 4 of the trolley problem, also known as the asymmetric uncertainty problem, had the lowest median and mean of all at 4 and 4.59218 respectively. Subsequently, it was the only problem to have a mean and median below 5. Everywhere else, consequentialism emerged victorious, though its strength varied from a mean of 5.76536 (Version 2) to a mean of 8.96648 (Version 6).

Problem	$\bar{x}$	s_x	Min	Median	Max
Version 1	7.84358	2.37023	1	8	10
Version 2	5.76536	2.87946	1	6	10
Version 3	6.07821	2.98123	1	6	10
Version 4	4.59218	2.66912	1	4	10
Version 5	8.18994	2.10286	1	9	10
Version 6	8.96648	1.76844	1	10	10

Conclusion

When asked in a free-response question which version of the trolley problem was the most difficult to answer, roughly 53 respondents cited the asymmetric uncertainty problem. Roughly 33 respondents cited the time portal problem. 9 respondents cited the driver's trolley problem, and still others provided a variety of rationales for choosing the other three problems as the ones they thought hardest.

Here, both answers to multiple-choice questions and answers to free-response questions evinced that the general populace tended to prefer utilitarianism as an ethical approach. However, certain factors in different versions of the trolley problem distinctly caused respondents to falter and change their minds, vacillating between consequentialism and virtue ethics or deontological ethics.

Discussion

Introduction

The free-response questions suggested that teenagers' ethical attitudes and rationales did not differ too greatly from those of adults. Survey respondents cited many of the same thought processes, feelings, and concerns that adults from other research studies did, and ultimately there was a unifying thread of humanitarianism throughout the study. However, it is possible that uniquely teenage circumstances and mindsets could have intensified the strength of respondents' opinions, as shown by various distinctions in the data. Unfortunately, the limited scope of the survey did not reveal what those circumstances and mindsets could be.

Interpreting Problem Responses

As expected, most people approached the classic trolley problem with utilitarian attitudes. The median ethical alignment for that problem was 8, as shown in Table 2. This reinforced Huang's research (692), as many people expressed that they considered their own benefits while making vital decisions and were concerned about the potential criminal liabilities of their actions or lack thereof.

The 90:10 ratio between the classic trolley problem and the bridge-based one that was found by Carter (1) was not replicated in the data from this survey. As shown in Table 2, the mean ethical alignment of the first problem was 7.84358, and the mean ethical alignment of the second problem was 5.76536. The disparity between the percentages of people who thought consequentialism was preferable in both problems was much smaller here, and ultimately consequentialist opinions dominated the second problem. In regards to the trolley problem with the bridge, a respondent stated, "I understand why people feel that [pushing someone off a bridge is far worse than pulling a lever to kill them], but I don't think it's logical. I come at this problem from the perspective of wanting to preserve as many lives as possible, so I think you have to ensure that five people live over one, even if that means you compromise your emotional safety by physically pushing someone off a bridge." Many other respondents echoed this thought process, affirming their comprehension of the difficulty of making physical contact with a person in order to kill them without unraveling their steadfast dedication to utilitarianism rather than deontology.

Another respondent analyzed the time portal problem this way: "Everyone inevitably dies, and causing five people to die some time in the future is more merciful than killing one person instantly." Some other respondents disagreed, arguing that five people's lives would still take precedence over one person's life because the numbers were unchanged, and a respondent pointed out that it is never mentioned in the temporal switch problem how far in the future those five people were slated to die. If those five people were destined to die by the trolley only after outliving the respondent and having reached old age, saving one person through inaction might not have made much

of a difference. However, if they were destined to die in only a month or two, then killing one person to save them would be more viable.

The majority of people wanted to save one person in asymmetric uncertainty. This is most likely because the design of the problem easily throws a wrench into consequentialist ideology—it is difficult to make decisions based on final impacts if the final impacts cannot be known for sure. A respondent explained their rationale this way: "The asymmetric uncertainty [is hardest] because you always run the risk of all five people dying, but pulling the lever to kill one person means you'll never know if you could've saved everyone." This unknown variable was so salient that it caused voters to vacillate between saving one person and saving five people; none of them knew the odds of their own success.

Many people indicated that they found the driver's trolley problem difficult because of how personal the dilemma felt when they were sitting at the wheel and propelling the trolley forward instead of simply being a spectator on the side. This was a fascinating outcome, as the driver's trolley problem has the same exact consequences as the classic trolley problem, unlike the asymmetric uncertainty problem and the temporal switch problem; in that case, why would consequentialists find themselves disturbed by their new and significantly more active position? According to Choi, whether or not the trolley problem variation is designed to favor action, inaction, or neither plays into individuals' choices, and the results of this survey corroborate that observation. The driver's problem is evidently one that favors action, and "the difference between action and inaction boils down to a tough but necessary choice between a greater and a lesser bad" (Choi). This efficient numerical simplification may have encouraged the mean and median of this problem to be slightly higher than the ones associated with the initial problem, as shown in Table 2. However, it should be acknowledged that the order in which the questions were posed could affect whether people leaned toward 1 or 10; people's opinions may have begun to solidify the more questions they answered, thus contributing to the way ethical alignments in the later problems became more extreme.

As shown in Table 1.6, the "person responsible, with remote and child" was the only problem where more than half of respondents voted 10 on the alignment scale. In other words, 54.2% of the respondents deemed it highly necessary to kill the person they thought responsible for this situation in order to save five supposedly innocent people, indicating that a desire for vengeance factored into their assertions (though, assuming the perpetrator is attached to their child, killing their child would be a compelling revenge as well, albeit far crueler and less socially tolerable). The targeted person's own guilt was a means of alleviating the respondent's guilt. However, it should be acknowledged that the existence of a remote control in this problem was originally intended to eliminate the need for a spectator, though the problem was framed differently in this survey for the sake of perspective-based consistency. If the problem were framed as it was originally intended to be, and the respondents were asked to think of themselves as the person responsible, they would then have to choose between altruistic suicide and letting five people, including their own hypothetical child, die. In that case, the results would be very dissimilar.

Summary

Overall, the responses to all the problems were highly enlightening as to what the surveyed teenagers did or did not believe, thus conveying those teenagers exhibited both moral congruities (when it came to reasoning) and incongruities (when it came to adherence to an ethical school) with their adult counterparts. The unique designs of each problem warranted unique answers, corroborating the proposition that each school of ethics has its own invaluable use depending on the circumstances.

Conclusion

The results of this survey evince that teenagers may be more deeply entrenched in their mostly utilitarian moral outlooks than adults are. Their unique generational circumstances, mental youthfulness, and modern educational background may be behind this distinction, though they still cite the same considerations that adults do when explaining why they chose to save one person or five people or anything in between. It is easy to write off the ease with which teenagers cling to utilitarianism as juvenile impulsivity, but the variety of individual ideas reflected in the free-response questions of this survey demonstrate that there are more intricate factors at play.

Limitations

As the surveyed population of this study was exceedingly small, no sweeping generalizations can be made about the moral outlooks and trolleyological opinions of teenagers worldwide, although interesting insights can still be gathered from this data. It would be prudent for future surveys to increase in scope and cover more high schools from different countries (with that in mind, it should be noted that culture can impact morality as well, so that variable should be accounted for alongside generation and age). Moreover, while plenty of adult-centered research already exists, this survey would perhaps be more insightful if adults were surveyed alongside teenagers—that way, they would be answering the same exact questions in the same exact order and format, and it would be easier to look for an overarching dichotomy.

Regrettably, not every intriguing variant of the trolley problem could be included in this survey, as keeping the survey succinct would encourage greater participation. Future researchers may wish to expand beyond the six variants included in this study in order to explore the variegated parameters of morality.

Further Research

Nothing can be stated with complete certainty considering the heavy limitations of this research, but nevertheless it implies that an already convoluted topic may be even more convoluted than previously thought. Ideally, this project will encourage other researchers to branch out from their usual chosen samples and reach out to people belonging to social groups that are often considered less influential on the world stage. After all, if teenagers do have moral bents that differ majorly from those of adults, they may carry those dissimilarities into their own adulthoods, and society as we know it will change accordingly. Conversely, they may outgrow their comparatively extreme ideals with age and experience, the latter which may be accrued through everyday situations, college educations, or careers. Neither ethics nor society can exist without their intrinsically human cores; therein lies the prominence of this research.

As mentioned previously, culture—both folk and popular—can impact morality, especially when certain customs are practiced daily or certain media is consumed frequently. This would be a variable with great potential to be scrutinized in the future. Is it possible that collectivist cultures may prioritize utilitarianism in a way that individualist cultures do not? How much of an impact on ethics can religion or the lack thereof have? As globalization progresses and national borders blur, this variable may change rapidly.

Education can overlap with culture and religion, but it is such a complex topic that it should be considered its own variable. Do the teachings of educational institutions have heavy influences on morality and social norms? Do different classes at different difficulty levels or grade levels normalize different philosophies? Can these inculcations simply depend on the biases of individual teachers? Regardless of our findings, we should explore how to optimize curricula to better raise compassionate and righteous members of society.

The evolutionary and biological sides of ethics deserve attention as well. Is it possible that collectivist consequentialism is almost always preferred because prioritizing the greatest amount of good for the greatest number of

people is better for the survival of a species than prioritizing other responsibilities and rules? The answer to this question will have many implications for the trolley dilemmas and humanity as a whole.

The three variables mentioned above have all been touched on by various studies that were conducted before this one, but they still have the capacity to be explored in novel ways. For instance, there are a variety of dilemmas other than the trolley problem, and many of them are more realistic. How might teenagers or people of other age groups respond when placed in realistic simulations of a moral dilemma? Will their reactions be more authentic in such a simulation than in a survey? As old opinions on social norms and morals are reimagined to fit the modern day, possibilities abound.

Acknowledgements

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