INF20028: Professional Capabilities for a Digital World

**Assignment 1.2:**

**Ethical Dilemmas Analysis**

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**Presentation Transcript**

**Introduction**

Hello, I’m Nhat Minh and welcome to my presentation on ethical dilemma analysis.

Within this presentation, I will attempt to use the critical analysis framework to justify and analyze one of the most pending issues within today’s world. Ethical Dilemmas.

**Definition of Moral Dilemmas**

As defined by Crowder & Turvey, 2013 an ethical dilemma occurs when available choices in a situation prevent achieving an ethical outcome, necessitating a decision where all options violate ethical principles. To understand we shall move on to one of the most notable examples of this is the classic Trolley problem.

**Example**

**Trolley Problem**

The Trolley Problem, introduced in 1967 by Philia Foot in defense for the Doctrine of Double Effect, presents a scenario when a trolley is hurling towards a group of 5 people, should the trolley continue on its current path, it will inevitably strike and kill all five individuals. However, there exist a lever that, if pulled, would divert the trolley onto an alternate track, sparing the five individuals, but resulting in the death of a single person who happens to be on that track.

More than 90% of people that was presented with this problem in the 2011 test by the Michigan State University would choose to kill the one person in favor of five as can be seen in the table here:

A close-up of a survey

Description automatically generated

\*the action condition is to pull the lever, letting 1 person die.

\*the omission condition is a scenario where the number of people in the trolley problem are switched, and by not pulling the lever, 1 person would die.

This moral conundrum forces individuals to grapple with questions of consequentialism, moral responsibility, and the ethical implications of acting versus inaction in the face of impending harm.

**Autonomous Vehicle**

In the modern era where technologies and automation are on the rise, the trolley problem has evolved into a question of ethical decision-making in automated systems and artificial intelligence. This leads to situations where self-driving cars must navigate complex scenarios where harm to humans is unavoidable.

An example of this is a scenario is first brought up by Bonnefon, et al in 2016 where an autonomous car faces a situation where it must choose between two unavoidable accidents, each resulting in harm to different parties (e.g., passengers, pedestrians, or other drivers). The car's programming must decide which course of action to take, raising questions about how to prioritize the safety of different individuals and how to assign value to human life in such situations.

A screenshot of a video game

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**Critical Analysis**

**Situation, stakeholder**

So far, based on the critical analysis framework we have defined the situation – autonomous vehicle problem, stakeholders – people in and outside the car, and the ethical dilemma action – to drive into the wall or steer the wheel and crashing into the pedestrian.

**Legal consideration**

To further explore this analysis, it's crucial to consider the legal ramifications of such scenarios and determine where liability resides. Takeyoshi Imai raised this question in 2019, pondering whether liability falls on the driver, manufacturers, or even the AI system within the vehicle and stated that the laws provided have yet to resolve issues above. Jessica suggested in 2016, our current legal framework does not account for autonomous vehicles and Chen, et al. in 2017, reasoned that there are still a lot of improvement that must be made within the current laws we have to improve autonomous vehicle’s independence.

So it is safe to assume that the question of whether to judge or base liability of autonomous vehicle on any stakeholders is a question that have yet to have an answer, hence, we need to give it more time for the law to cover it and provide an legal answer for this argument.

**Guidelines**

The protagonist in our auto car problem is a car, or a non-thinking machine, hence it would be rather difficult to put yourself in its shoe and figuring out what would be “moral” according to the the car’s brain.

This situation raises an intriguing question about integrating moral principles and policies into the algorithms of self-driving cars, as they lack the capability to determine the most ethical course of action on their own. Policymakers, ethicists, and car manufacturers can play a crucial role in teaching these systems to make morally sound decisions. Bonnefon (2016) supports this notion, emphasizing the urgent need for the development of such systems of algorithmic morality. Her team's research suggests that the majority of people would prioritize minimizing the death toll as the morally preferable choice.

However, JafariNaimi (2017) argues that Bonnefon and her colleagues' argument is overly broad. She propose that instead of solely relying on utilitarian principles, we should consider the entirety of reality and other factors that make up the situation to refine how these ethical dilemmas are addressed and how should future autonomous cars be better prepared for hard decisions. This approach advocates for a more nuanced understanding rather than rushing headlong into a purely utilitarian approach.

**Ethical principles**

In my view, it's essential to prevent disasters before they occur, and I support the idea of altruism where the car and its passengers are willing to endure some potential harm for the greater good. This concept is backed by research conducted by Toghi, Behrad, et al. in 2022, which suggests that autonomous cars with altruistic tendencies could benefit both humans and other autonomous vehicles.

I believe that the responsibility lies with policymakers and car manufacturers to take action, although users have the right to voice their opinions on the car's design. I draw inspiration from the findings of Chen, et al. in 2017 to support this notion.

The involvement of policymakers and manufacturers is crucial because legislation is needed to mandate the inclusion of advanced emergency brake features (that activate upon sensing imminent, unavoidable danger) in autonomous cars. This proactive approach could save lives, even if it leads to injuries among occupants. This inspiration is taken from a recently proposed technology by Alsuwian, Turki, et al. in 2022 regarding the braking system.

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