THE UNIVERSITY OF CHICAGO

Value of Different Human Lives:
A Systematic Review

By

Pavani Chopra

June 2022

A paper submitted in partial fulfillment of the requirements for
the Master of Arts degree in the
Master of Arts Program in the Social
Sciences

Faculty Advisor: Dr. Jean Decety
Preceptor: Dr. Resney Gugwor

Value of Different Human Lives: A Systematic Review

Abstract

Human decision making is a complex phenomenon which can be guided by various factors ranging from culture, situations, framings, and emotions. Especially when analyzing the value of human life in the trade-off decisions of life and death then making a choice becomes even more complicated. Humans use various parameters for decision-making like age, utilitarian choices, longevity of life, cultural preferences, and kinship selection. The paper examines decisions about human lives by reviewing empirical research in experimental settings from the lens of psychology and in real life social dilemmas. The systematic review will also analyze the examples of varied moral dilemmas, such as the ongoing social dilemmas faced by technology for prioritising different human lives and ethical dilemmas during natural disasters. Lastly, it will elucidate and unpack the policy guidelines given by international organizations which protect individuals during humanitarian crisis.

Introduction

The objective of the thesis is to conduct a qualitative review of the literature on how people value different human lives. The paper would help in analysing factors which contribute to making choices when faced with challenging circumstances. The literature would help in evaluating the value of different human lives and the varied factors people consider while making the trade-off between life, death, and investment decisions for humans. All humans are endowed with a certain set of fundamental rights and duties by the virtue of being human. The Universal Declaration of Human Rights, proclaimed by the United Nations General Assembly in Paris on 10 December 1948, states that "All human beings are born free and equal in dignity and rights". It indicates everyone is entitled to all the rights and freedoms set forth in this Declaration, without distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth, or other status. Furthermore, no distinction shall be made based on the political, jurisdictional, or international status of the country or territory to which a person belongs, whether it be independent, trust, non-self-governing or under any other limitation of sovereignty (Harris, 1988). However, people can be faced with challenging situations where they need to make choices on whom to save in unfortunate circumstances and how much to invest on a particular human life. These quests compel humans to think about which human life will yield more worth for the society. The answers to these questions can be complicated, relative, and contextual. Choices come with tradeoffs and involve opportunity costs whenever individuals make decisions. When resources are scarce then everyone in need cannot be aided. In these circumstances, beneficiaries need to be selected to distribute the available resources. Everyone in need cannot be helped and provided with required resources. These situational dilemmas, when only one person in need can be helped and not all, are termed as 'helping dilemmas' in psychology (Erlandsson, 2021).

When people make choices between trade-offs, choosing between two or more alternatives, they assign more weight to a particular prominent alternative and this effect is labeled as Prominence Effect. For example, choosing between two cars, instead of making decisions on multiple features, the person decides based on the most prominent feature like safety and attaches more importance to it. Dilemmas are present even when there are two equally attractive options as well; people also evaluate their options before making a choice and do not choose randomly. There can be different parameters which individuals consider like children (vs. adults), ingroup (vs. outgroup), present (vs. future), project helps male (vs. female). (Erlandsson, Lindkvist, Lundqvist, Andersson, Dickert, Slovic and Västfjäll, 2020).

People also compare based on quantity while saving lives. In these situations, people save more lives in sacrificial dilemmas. Utilitarian decision making involves cost-benefit reasoning based on the greatest good for the greatest number (Conway, Goldstein-Greenwood, Polacek, Greene, 2018). This cost benefit analysis compels people to make characteristically utilitarian decisions like killing one person with an out-of-control trolley to save five other lives.

Human decision making is complex, but the 21st century is an interesting age which demands individuals to choose between alternatives, either from a psychological lens or from the perspective of policy. The era demands for rational decision making for the benefit of the society from the lens of technology- this is the time where a shift of technology has been observed from self-driving cars to autonomous vehicles. This problem becomes even more crucial since, humans are even more connected to each other across the global due to technological advancements. While looking at the problem from the perspective of policy nothing prominent is mentioned on value of different human lives but children do get a special status for protection because they are seen as vulnerable. Additionally, difficult moral

dilemmas are faced in other fields as well that of medicine and humanitarian crisis, like war or the sinking of a ship, where a decision needs to be made on whom to aid when resources are limited. These are intense situations where humans make decisions dealing with the trade-offs between life and death.

Methodology

I have attempted to study the value of human life when difficult decision-making is involved in trade-off situations of life and death. I searched the data bases of PubMed, Google Scholar, Article Plus, PsycArticles and PsycInfo. Several permutations and combinations of key terms were used to find literature. Some of them are as follows – value of human life, moral dilemma, moral decisions, moral decision making, review, systematic review, discussion paper, cultural differences and moral dilemmas, statistical value of human life, monetary value of human life, social decision making, life insurance, trade-offs, trolley problem and helping dilemmas.

These data bases generated ample amount of literature and the university's library resources also supported access to these sources. The biggest challenge was the abundance of literature found by using the term value of human life combined with other key words. Google scholar generated 17,600 papers; Article Plus showed 724 results; PsycINFO displayed 965 papers; PsycArticles found 73 papers.

To filter out the papers a matrix was adopted. Firstly, research articles published in last 10 years were given priority when analysing the medical domain; for examining trade-off decisions on other parameters the year range was neglected to integrate some of the classical work on decision making and ethical dilemmas. Secondly, review papers were preferred and papers who had a greater number of citations. Thirdly, the first author of the paper was searched, recognized, and acknowledged before using the research. Lastly, an excel sheet of

all the selected papers was curated where a synopsis, conclusion and other important key terms were synthesized to keep a track of the literature found. Then the relevant literature to the research question was identified, read thoroughly and finally 21 papers were finalized. Lastly, these findings were weaved into a discussion paper. The steps are summarized in the diagram below for reference.

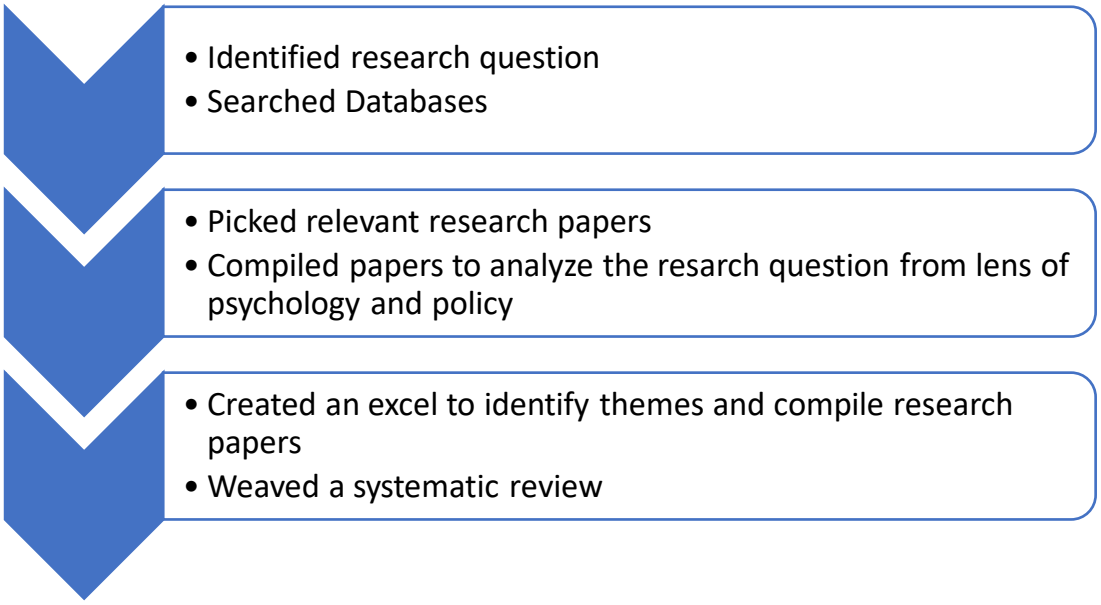

Figure 1. *Steps summarizing the synthesisation process*

Research Questions

1) How do humans make decisions in trade-offs situations of life and death in different situations?
2) Why does the worth of human life vary?

In the sections following below I would analyze the value of human life from the lens of psychology and policy guidelines in humanitarian crisis. It will cover hypothetical and real-life moral dilemmas and many examples from the realm of psychology are from the experimental settings.

The literature is divided into the headers as follows - moral dilemmas in technological and cultural clashes, fluctuating value of human life in sacrificial dilemmas, decision making in medicine, value of human life based on age, framings: a psychological perspective, and prioritisation during humanitarian crisis. There is one subsection which can be fitted in the umbrella of both psychology and policy that is moral dilemmas in technological and cultural clashes. The table below shows the distinction between the two adopted views which will be discussed in detail further.

Psychology	**Policy Guidelines**
Moral Dilemmas in Technological & Cultural Clashes	
Fluctuating Value of Human Life in Sacrificial Dilemmas	Decision-making in Medicine
Value of Human Life Based on Age	Prioritisation during Humanitarian Crisis
Framings: A Psychological Perspective	

Figure 2. *Table elucidating the different parameters used for analysis*

Moral Dilemmas in Technological and Cultural Clashes

Human beings are presented with real time challenges when facing moral questions regarding the prioritization of one life over the other. There can be different rationales for varied choices made by people. According to Harris (1988) "The equality principle covers young and old, present and future people, and may be taken as stating that people's lives and fundamental interests should be given equal weight regardless of race, creed, color, gender, and age, economic status and regardless of their generation" (Harris, 1988, p. 77). Although all human life should be treated equally, it has been observed that grieve less at the death of the elderly in comparison to younger lives and a higher value has been assigned to younger

lives because there are more “years left to live” rather than “years lived”. This gives an individual an opportunity for more “fair innings” (Goodwin and Landy, 2013). It has been observed that society and many cultures view the value of a younger person more and individuals feel less hesitant sacrificing the elderly (Kawai, Erato, Kub-Kawai, 2014). These conditions are relative and might differ culturally. The moral machine experiment brings out a good example for the varied choices individuals make based on where they come from. To understand these choices better, the case of autonomous vehicles will be discussed in which decisions for the value of human life changes from the cultural lens.

Scientific advancements are bringing in new technologies to make human life smoother and easier in terms of consumer use. Research around self-driven cars is at its peak and a lot of experimentation is in process to make it usable service for people. But a lot of moral dilemmas surface when future contingencies are considered like car accidents. In these unfortunate circumstances machines need to decide whose life is more valuable. Researchers have tried to analyse these choices on a larger scale through experimentations so that the results can be applied in real life situations. The infamous moral machine experiment is one of them. MIT researchers in the Media Lab designed the Moral Machine experiment to understand how people prioritize the value of human life when a self-driven car is in different situations of the trolley dilemma. People from 233 countries across the world participated. There are significant cultural variations in moral and ethical decision making. For example, countries with more collectivistic cultures are more likely to save the life of an elderly individuals rather than the younger one. In these close-knit societies, the emphasis is on respect for the elderly which makes their life highly valuable. The social status comparison also interferes with decision making and some participants also thought it was okay to spare the life of people from higher income brackets than those in from lower ones (Awad, Dsouza, Kim, Schulz, Henrich, Shariff, Bonnefon, and Rahwan, 2018).

These decisions can be complex, and a societal agreement is necessary before it becomes a policy. Any ethics which need to be integrated by artificial intelligence needs to be cognizant of the ideologies within public morality. Life-and-death trade-offs are unpleasant and unwanted, it is difficult to formalize ethically universal principles for autonomous vehicles to adopt as there will be counter arguments and criticisms for such a sensitive issue. The principle of utilitarian decision making which works on the ideology of maximizing the benefit quantitatively will not be a universally acceptable criterion either, even if autonomous vehicles are programmed to reduce harm on this ideology, they could end up killing their own passengers (Greene, 2016).

One of the major challenges faced is how autonomous vehicles can solve moral dilemmas. In the process of reaching a mutual consensus we need to factor in different countries and different individuals will differ in their ethical ideologies, the solution to these problems should also entail the philosophical view as well, rather than just making it a technical problem. Moral conflicts can arise when decisions are taken to formulate a universal consensus, hence, some human preferences will be discussed further which need to be considered while finding solutions.

It has been observed that the strongest preference has been to save humans over animals, sparing a greater number of lives and prioritizing young lives over old. In the German Ethics Commission on Automated and Connected Driving, Ethical Rule number 7 states in dilemma situations human life should be prioritized over animal life. There can be differences culturally in different countries as well. These considerations became pivotal for lawmakers when finalizing policies. For example – the sparing of younger lives is much more important in Southern countries like (Latin American countries of Central and South America) in comparison to Eastern Countries (like Japan and Taiwan) (Awad, Dsouza, Kim,

Schulz, Henrich, Shariff, Bonnefon, and Rahwan, 2018). There could be contextual reasons for these preferences like the mean of the Japanese population is higher than other countries. Japan's case is particularly interesting as it has a status of "super ageing society" and also holds a lot of importance on the respect for the elderly. In Japan, Confucianism is a widespread philosophy which stresses the cultural importance of elders. An example of this philosophy is present in the movie Ballard of Narayana, which portrays an instance in which the intensity of grief is lesser when an elderly person passes away (Kawai, Erato, Kub-Kawai, 2014).

Hence, the cultural context of the people becomes important when trying to examine whose life has more value. Hence, the value of elderly person's life also has a high value and young people are definitely wanted by the economy. These intricacies related to cultural context need to be kept in view when AI solves the problem of self-driving cars.

Lastly, bringing the pieces together from this puzzle the value of human life can differ significantly in cultural contexts because of various reasons like the ecosystem of the society in terms of average mean and differences in individual and collectivistic cultures. Finding a universal answer to these questions can be daunting and can raise different issues in different cultural contexts. Hence, the existence of a formalized general guideline is difficult to solve these cultural dilemmas; it needs to be tailored based on geography.

Fluctuating Value of Human Life in Sacrificial Dilemmas

Humans loath making decisions in trade-off circumstances which have a heavy impact on human life, especially when it comes with the cost of measuring one human life against another. In consequence, someone has to die to save the other. These sacred value measurements are called *tragic trade-offs* and refer especially to desperate times in which the question is about which human life should be prioritized and resources are scarce (Goodwin

& Landy, 2013). Moral choices reflect how morality and virtues are played out in the society and our daily lives which influence the decision making (Spälti, Brandt and Zeelenberg, 2019).

Unfortunately, the process of difficult decision making cannot be escaped when people are faced with situations which are out of their control like natural calamities or the outbreak of diseases as resources are limited and the solution involves an opportunity cost. In theory one might assume decision making should be a rational and linear process but one of the most crucial insights from neuroscience is that the brain is not a homogeneous processor, but rather involves different diverse specialized processes that are integrated and assimilated in different ways when the brain is faced with numerous challenges and problems (Loewenstein, Rick and Cohen, 2008).

In challenging situations where choices are to be made regarding prioritizing one human life over another, research states some people rely on cost benefit analysis while facing sacrificial moral dilemmas. This process of decision making also entails the approach of Axiom of Monotonicity coined by (Fishburn, 1970) which states that a greater number of lives have a higher value than fewer lives. Hence, this approach is commonly viewed as "characteristically utilitarian" action. The concept of *Axiom of Monotonicity* is only valid when one life is being compared to the same type but different quantities. For example, six workmen v/s one workman (Dale J. Cohen, Amanda R. Cromley, Katelyn E. Freda, and Madeline White, 2021).

Utilitarian decisions are the ones which activate a network of brain enabling controlled, attentive processing by representing factual content (Cushman, 2013). The utilitarian principle focuses on impartially maximizing the overall welfare of the society as it is for the greater good of the society. The utilitarian decision emphasis quantity, for example

sacrificing 1 life to save 5 lives (Caviola, Schubert & Mogensen, 2020). From an economics standpoint, the assumption is that humans would do rational decision making and quantity would be the central component, but human decision making can be a bit more complex, involving a heavy emotional component as well. Loewenstein & Small (2007) have proposed a dual-process model of decision making in which a sympathetic but highly immature emotional system interacts with a more mature but uncaring deliberative system giving rise to helping behavior making human choices complex to understand. Hence, people do not prefer stating it as a rule in the policy decisions instead, they are more flexible in bending rules in respect to individual case-by-case basis, rather than a formal guideline (Caviola, Schubert & Mogensen, 2020). Another, common dilemma has been analyzed is in context of prioritizing decisions based on the societal contribution an individual makes to the society: for example, a choice between a doctor specializing in a form of a life-saving heart surgery, which very few people in the world can perform v/s a person who has been unemployed for a long time and is unlikely, to find work in foreseeable future. The results proved that many people were willing to prioritize more beneficial people to the society but do not want to state it as a formal rule (Caviola, Schubert & Mogensen, 2020). Herein, it's not about utilitarian decision making but who adds more value to the society as an individual and still are hesitant to make it a policy because it will violate the egalitarian principle that all human lives are equal.

A classic example of utilitarian decision making is in the crying baby dilemma, where a mother suffocates her baby to save the townspeople from being killed by the army. During war time when soldiers are looking to kill the mother and her fellow villagers to kill, and the baby starts crying. What will the mother choose to do? The life of an infant is seen as precious but when weighed against the life of several other people, it might have to be sacrificed to save more lives. Although the mother would not like to conform to this option and will emotionally disturb her, but it might be the most utilitarian decision to save more

lives. The mother might have to smother the baby to death to stop him from crying. Killing or harming children or brutalizing innocent people might seem like a controversial thing to do but desperate times force the people to take steps against their will. Although the mother loves and values the life of her baby more than other people, but she chooses to make this choice by simply implying the utilitarian principle. This approach in the situation of dilemma can only be applied based on the fact - all human lives are valued equally. This is applicable on the condition of *Axiom of Equal Lives* when the individual differences in the group are not accounted, irrespective of differences in characteristics of humans (e.g., sex, religion, ethnicity, social status, and demography) (Chen, Cromley, Freda and White, 2021). Sometimes the worth of human lives cannot be measured in sacrificial moral dilemmas as the observers' response, who needs to make the decision can be unpredictable. In experimentation setting referenced above, Greene and his colleagues (2008) tried to find out the responses on individuals in the crying baby dilemma task while performing a cognitively demanding secondary task. It was revealed that they these participants took a longer time to take decisions and did not produce a utilitarian response. The non-utilitarian judgements were an outcome of intuitive emotional response. The experiment results stated that these actions are individualistic and is intertwined to an individual thinking style as well. Individuals who rely more on controlled cognition and less on intuition are more likely to produce more utilitarian decisions and responses (Cushman and Greene, 2011). Hence, it can be concluded although younger lives are seen intuitively more important, but some choices are complex and guided by moral dilemmas and situational factors.

To find a solution to this differential decision-making process, measure the quantity and individual differences on valuation of human life the Psychological Value Theory (Chen et al., 2021) was created to study these decisions more systematically. These judgements are based on the Psychological Value of human beings which is a *perception* of the worth of

different lives according to the individual, not a conception or a sensation. Psychological Value is the perception of the importance, worth, or usefulness of an item to the observer. It helps in predicting choice from values (Chen, Cromley, Freda and White, 2021). The case of different values in human choices will be discussed when other variable elements of self-gain is integrated.

Until now, we have discussed sacrificial dilemmas in a hypothetical scenario wherein, the experiments were conducted by psychologists. Now we will look at the case of Hurricane Katrina which struck New Orleans in 2005, August 29. It created an upheaval, knocked all the power sources, and raised the temperature over 100 degrees inside the memorial and the water was gushing from the sewer grates. They had realized that they are going to lose all the backup power and the hospital was not prepared for the disaster (Fink, 2009).

Consequently, making the hospital overloaded with patients creating a challenging situation for doctors and nurses. They were forced to make choices which made them experience ethical conundrums as it was not always logistically possible to abide by the guidelines mentioned in the medical literature. In response to the dangerous situation, a memorial administrator typed ‘help’ and e-mailed colleagues at other Tenet hospitals outside New Orleans, warning that memorial would have to evacuate more than 180 patients who were in the hospital. Around the same time, hospital head met with many of the two dozen doctors at Memorial and to discuss the plan of action ahead. The hospital administration had to map out the plan of action to evacuate the hospital. The doctors quickly commanded those babies in the neonatal intensive-care unit, pregnant mothers, and critically ill adult I.C.U. patients would be at highest risk from the generated heat and should get the priority. Then the authorities decided that patients with no resuscitate order should go last. As they started executing the plan, 52 patients at the LifeCare unit were bedbound or required electric

ventilators to breathe, and clearly, they would be at significant risk if the hospital lost power in its elevators. These logistical issues forced the authorities to come up with a more practical plan given the time frame and the quick action required on their end. Although the medical ethics state that the sickest and the neediest patients should be prioritized, during the crises the medical staff took decisions keeping in view the execution ease as well. Surging of the water towards the hospital they followed the original protocol to save the needy initially but later they thought differently, and they ended up saving the fittest people on priority. They changed their plan because patients who were on lower floors as it was easier to evacuate them. Another major reason for this decision was the logistics too as doctors struggled with the mobility of patients who were at a higher floor and weighed more than 300 pounds would slow down the evacuation line (Fink, 2009). Their decisions abide by the utilitarian principle of saving the maximum number of people for greater good of the society. These decisions were based on the rationale that they had "least to lose" and not by the medical guidelines of prioritizing the needy.

After the power went off at the hospital, the doctors had to go around the room to look at their patients and make ethical choices again which was not about saving lives but hastening death of human lives. They decided in some cases hastening death would be the right choice. Dr Ewing Cook, who was one of the doctors and had to make choices on how to treat the patients, he revealed although he was uncomfortable and dealt with moral dilemma but in the situation, he could not look for a better solution. There was a patient with advanced cancer whose survival was difficult and with a heavy heart, he had to increase the morphine dosage to hasten the patient's demise. Pulmonologist John Thiele apparently injected several category-three patients with morphine. He knew he will be evacuated next and could not leave his patients alone neither evacuate them as they were critically ill, and resources were

limited to help everyone. He had to make this tragic choice and leave his patients to die by just hanging a morphine drip (Fink 2009).

Birchley (2021) mentions the key component in policy making is the 'best interests' principle in respect to people in medical field. Medical practitioners do abide by formal set of rules but in situations of moral dilemmas they make decisions which might not always appear right like injecting their critically ill patients with morphine for hastening their demise because resources were limited to save everyone. It is supported by research that decision making in real world dilemmas can yield different results when hypothetical dilemmas become reality as people are much willing to break rules and go against their moral taboos (Bostyn, Sevenhant and Roets, 2018). Another research found similar results stating that the real-world dilemmas are more concrete constructs making people break off the moral taboos under one-off decision situations (Eyal & Liberman, 2012; FeldmanHall et al., 2012; Trope & Liberman, 2010). This proves experimental results and real-life spontaneous decisions could be different and people would even break rules which might seem against moral taboos of the society. Hence to compare these instances this section elucidated on hypothetical situations like of crying baby dilemma and the other one in the real-life tragedy of Hurricane Katrina was elaborated. Dire circumstances of limited resources force people to make ethical decisions in unavoidable circumstances.

Decision-making in Medicine

The year of 2020 had created a turmoil for the entire world because of the outbreak of a pandemic, in consequence several lives were lost. Resources were limited and fair allocation was demanded on behalf of medical practitioners in life and death situations. This section will try to explore the considerations medical literature highlights in the process of decision making to distribute supplies. It will try to elaborate on the protocols of the doctors if they

follow any set of rules before deciding during a situation of crisis. Situations of limited resources can rise when everyone in need cannot be helped, and beneficiaries are to be picked up, these situations are called helping dilemmas (Erlandsson, 2021).

Hospitals were overwhelmed with unprecedented rise in the demand for emergency care during the global COVID-19 pandemic in addition to the regularly occurring health emergencies. Example, the number of patients in need were greater than the available resources. Consequently, it resulted in difficult decisions whose life should be given priority first. Especially in developing countries due to limited infrastructure and staff. A choice had to be made with regard to which patient would be assigned to ventilators or other lifesaving equipment. The 4 main principles of medical literature are – 1) Treating patients equally 2) Maximizing social benefit 3) Prioritizing the worth-off 4) Maximizing individual benefits. Since hospitals functioned beyond capacity, an ethical set of considerations were needed for the fair allocation of resources for the medical treatment of COVID-19. In these morally challenging situations, medical literature predominantly favors younger patients. The general publics also dominantly chose younger patients over the elderly. This choice can be a due to the influence of decision-makers or socio-demographic variables leading to conforming affect among the masses (Huseynov, Palma & Nayga Jr, 2020).

There are more parameters which need to be considered before making a choice in the hour of emergency and a situation like pandemic. Dr. Emanuel (2020) is the chairman for the department of Medical Ethics and Health Policy at the University of Pennsylvania. He focuses on keeping the utilitarian principles which favour the best prospects of longest remaining life at the centre while making decisions as a healthcare practitioner. Hence, the value of maximizing benefits becomes a crucial parameter. The priority of the treatment should be to save maximum number of lives and the restoration of quality of life post medical treatment. Saving more lives with a greater number of lives is an important criterion for

medical practitioners while choosing to provide treatment when the resources are scarce. It is in synchronisation with utilitarian and non-utilitarian perspectives. The ethical utilitarian perspectives focus on population outcomes and non-utilitarian perspective emphasize on the value of each human life. Utilitarian principles aim to improve overall health benefits and the maximum benefit a person can reap even after receiving treatment. This would lead to appropriate benefit maximization. Treating those individuals who are sick, but they can improve and survive with medical interventions with decent life expectancy (Emanuel, Persad, Upshur, Thome, Parker, Glickman, Zhang, Boyle, Smith, Philips, 2020).

Dr. Christopher McCabe, executive director and C.E.O of the Institute of Health Economics in Canada had said on record that there's no perfect way to choose who should get priority for life saving treatment because it can be burdensome and translates from society to government and lastly to clinicians (Frakt, 2020). Formulating a standard rule is not the best solution because there is no perfect way. In summary, there aren't any policy guidelines in the field of medicine on whose life should be given more priority. But medical literature states certain hypothetical parameters, like maximizing individual benefits, saving maximum number of people possible and different medical practitioners have different outlook on the problem.

At the end, medical decision making can also be complex although certain parameters are laid out after research in this field but there is no straightforward answer to this question. Decisions can be situational by keeping in view the patient's condition and principles like utilitarian decisions in view.

Value of Human Life Based on Age

The Universal Declaration of Human Rights state all human lives are valued equally. The UNHCR also provides guidance for saving human lives during crisis, they clearly state that

the principal motive should be to save lives and alleviate suffering. The saving of human lives should be impartial and neutral, free from any bias. The only mandate UN peace states is to protect civilians. Looking at the current world crisis in Ukraine, the UNICEF released special guidelines for protection of children and civilians. The document released by UNICEF does make a special mention for everyone any other protected/vulnerable group but children which clearly hints a special status for them because of age (UN Peace and Security, 2022). This philosophy of valuing the younger life over the older individuals has also been demonstrated through media too, in a film called The Ballad of Narayama, 1983 which is based on a Japanese folktale Obasute and was an award-winning Cannes film (Kawai & Kubo-Kawai, 2014).

Now, let's analyse the reasons behind why the value of life for younger people has been given more priority than older individuals. One of the reasons for this ideology has been that the younger individuals have a greater number of years left to live. They also have a greater number of valuable life years in terms of quality of life. This criterion has also been pivotal in decision making in the field of medicine. Hence, younger lives are prioritized more to maximize outcomes (Goodwin and Landy, 2013). Another reason is the intensity of grief people experience on passing of a younger individual than an older person. The loss of a younger child could be too overpowering for individuals aggravating their grief based on the idea of expected life expectancy, whereas the death of the older people is seen as more acceptable following the natural discourse of life based on the implicit evaluation of the average life expectancy. In light of the weaker negative emotions usually the families chose to abandon the elderly relatives more easily which is termed as the "granny dumping" (Kawai & Kubo-Kawai, 2014). Granny dumping suggests that people accept the loss of older people more easily compared to children making them grieve with a greater intensity.

Secondly, the question about "competence" rises which means the labour ability of a person. It is viewed that younger people are more capable to perform than older people. The moral dilemma in sacrificing the elderly and disabled is viewed as the same because both the groups are put into the category of "pitied" (Fiske et al., 2002). People extremely valued the targets certain forms of physical and mental competence when stuck in a moral dilemma (Cikara et al., 2010). But the results of the study would make the value of a child questionable if competence is the main criteria for evaluation. Then, children, elderly and disabled people are put in the same category and should be the sacrificial target. Interestingly, if the dilemmas were evaluated based on intuition, then the children were the first one to be saved because the life expectancy of children will be the greatest and lowest for elderly (Kawai & Kubo-Kawai, 2014).

Interesting perspectives have also been devised about the value of life of children which is crucial to understand when analyzing competence. Intricately evaluating the value of life in younger population also has various distinctions created. According to Dworkin (1993) stated, older children had more resources invested in their life (both psychological and material). More resources are invested on a meta scale in an older child by the society. This is referred to as *increasing value* prediction. Older children also have more numerous and deeper societal attachments. Thus, the death of an older child had been seen as a much greater investment in comparison to the younger child. This idea had also been compared to the idea of sunk costs in consumer decision making from an economical perspective. Another popular aspect is that the older children are closer to the age of fertility, hence, their life is seen as more valuable. They will possess reproductive power in the near future. Moreover, younger children have a greater probability to die in the trajectory of everyday life (Goodwin and Landy, 2013). If fertility is also such an important criterion while making choices, then a tussle between the life women and men also comes into the picture. A woman's reproductive

life window is shorter and drops drastically over the lifespan in comparison to men (Kawai & Kubo-Kawai, 2014). The distinctions for value of based on gender keeping in view the fertility window is definitely unclear. The studies (Goodwin & Landy, 2013) infer the highest value should be placed on that of "juvenile" rather than younger children or older adults. Additionally, the value of life for people below 20 varies depending on the investments made on them by their parents and on factors like social development.

If we compare this with the real time crisis situations different protocols are established and younger lives are given priority. Hence, it can be concluded although younger lives are seen intuitively more important, but individual choices during decision making of life and death situations might differ due to varied factors. These choices are guided by moral dilemmas and situational factors.

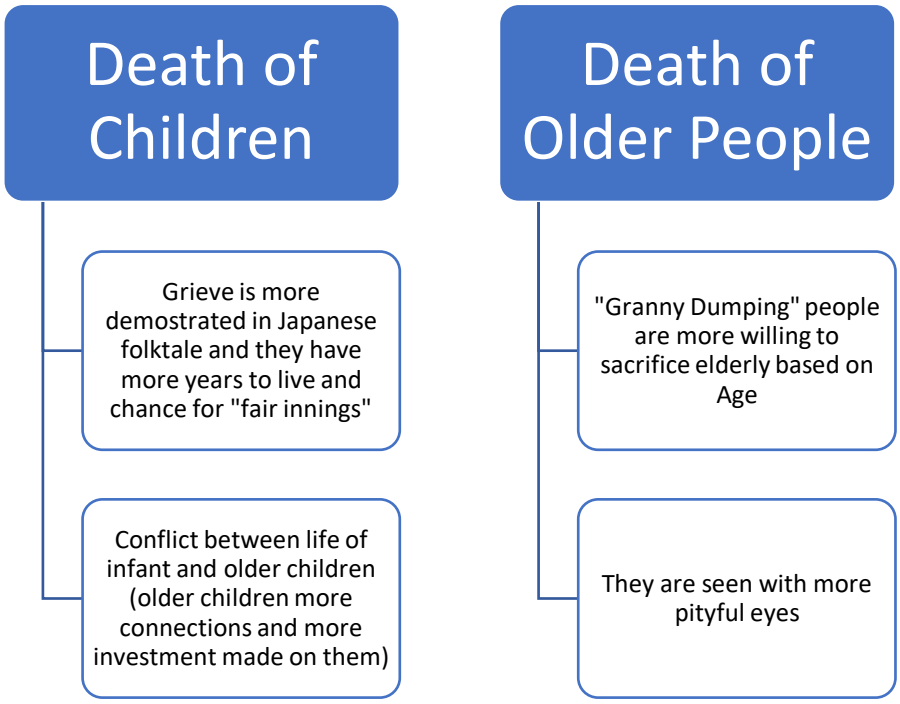

Figure 3. *Difference in perception of human life based on age*

Framings: A Psychological Perspective

Human decision making is highly influenced by framings, situations, and emotions as well. The origins of the effects of framings dates to 1981. The response of people to differently framed situations was tested by psychologists Daniel Kahneman and Amos Tversky in 1981. They studied how various ways of framings in life and death situations influence decisions. They conducted an experiment where participants were asked to choose between two options for the treatment of 600 people who were affected with a fatal disease.

The first option had probability which could result in the death of 400 people. While, if they chose the second option it had a 66% chance that could result in death of everyone and 33% possibility that nobody would die. These results were presented to the participants in the study with two different framings – positive framing (describing how many people would live) or a negative framing (elaborating how many people would die).

The results of the study proved 72% people chose positive framing, which was saving the life of 200 people. On the contrary, only 22% people chose the same option when it was framed negatively, that was death of 400 people. Therefore, the results of the experiment clearly indicated that the decision people made were not just influenced by the information but by the framing of the same information in a positive or a negative fashion (Kahneman and Tversky, 1981). Further this section will elucidate on some examples of framings, situations and emotions can directly correlate with an individual's choice. Some situations which will be discussed are – the classic switch and push case in trolley dilemma, change of decisions in personal moral dilemmas and self-gain situations, prioritization decisions based on the more useful person in the society, the situational factors like the internal and external factors affecting decisions and the kinship selection.

The trolley dilemma is a classic example for observing changes in human responses in different framings leading to same situational outcome. The trolley problem also has two

versions to it, the “switch” case dilemma and the “push” case dilemma (Foot, 1967; Thomson, 1985). In both the cases of trolley dilemma one person should be thrown in front of the trolley to stop it and slow it down in order to save four others. This a popular dilemma which researchers work with, but there is a difference in the situational framing. The difference is that in the “switch” case by flipping a switch the trolley can be redirected onto the side track where one person dies. The “push” case is also similar where five people are threatened but one of them needs to be thrown in front of the trolley to slow it down and the person acts as stopper, but it saves the others. Research shows that people find hitting the switch more acceptable than the push case (Greene et al., 2001; Kurzban et al., 2012). The opposition to the moral choice in the push case is a result of the dual-system theory (Greene, 2007; 2001) as it contrasts on cognitive and emotional processing theory. He elaborates that doing harm in an up-close and personal manner is a result of emotional aversion as both are emotional and cognitive systems are involved while making this decision. Whereas, only our cognitive system is involved in the switch case, the choice not to push is seen as a ‘deontological’ choice while the choice to push is viewed as a ‘utilitarian’ decision (Cushman, 2013). When people refuse to do harm to others for the sake of greater good to the society, even if it’s the more utilitarian choice, then they exhibit ‘deontological aversion’ which violates the egalitarian principle that all human lives are equal (Caviola, Schubert, Mogensen, 2021).

There are certain scenarios when people can change their decisions based on certain contexts. Humans are socially and morally trained to not to harm other individuals. The moral scenarios do not motivate people for any substantial incentives or do provide contextual or motivational cues. People adhere to moral and socially acceptable decisions such as not harming other individuals. This hypothesis shows a different outcome when humans were tested in different situations when pain was inflicted for self-gain. Specially the monetary

benefits gained by human beings interfere with their hypothetical and real-life choices making them seek a different moral decision. In hypothetical situations people refused to harm others or inflict pain to themselves. But once these moral choices were made real in certain contextual situations individuals also changed their responses. Presence of external factors, such as 'money on the table', may create an overriding influence on the decision. Moral decision making also changes when other compelling motivational forces are integrated like self-gain (FeldmanHall, Mobbs, Evans, Hiscox, Navrady, Dalgleish, 2012). Another example where the concept of utilitarian decision-making yields opposite results than expected is when emotions are involved in decision making. Supporting the notion that emotions play a causal role in personal moral dilemmas, Greene et al. (2001; & Greene et al. 2004) found that participants in the study took significantly longer to make utilitarian judgments than those that went against the emotional response in their personal moral dilemmas. This finding was also supported by brain imaging which found out brain regions such as medial frontal and posterior paracingulate cortex were affected, which are associated with emotional processing. These regions were active when participants were considering their personal moral dilemmas in comparison to situations of impersonal and non-moral dilemmas. Hence, concluding emotions play a causal role in decision making of personal moral dilemmas. These results clearly point out that personal moral dilemmas have a different effect on human brain and brings out a strong pre-potent emotional response that affects the cognitive processing abilities and may not yield a rational or predictable response (Loewenstein, Rick and Cohen, 2007).

It was also observed that people were willing to change their decisions based on the individual's contribution to the society as well in cases of prioritization decisions that required saving one individual over another, for example, like saving a doctor who specializes in a life-saving heart surgery which very few people can perform v/s an

unemployed person for a long time and is unlikely to find a job in near future. Responding to the dilemmas in a survey it was found that 87% of Australians strongly disagreed (McKie and Richardson, 2011). The American population also demonstrated a similar opinion where they felt contribution to the community should not be criteria for saving individuals and is inappropriate (Nord, Richardson, Street, Kuhse, and Singer, 2015). However, when this hypothesis was tested (Caviola et al., 2021) it demonstrated different results as people had to decide for one-off situations rather than their opinion for making it a formalized government policy for preference of more socially beneficial people. This aversion towards a standardized government policy is due to people's perception of the situation because making it an authorized government policy gives rise to an 'empathetic aversion' in some people (Caviola, Schubert, Mogensen, 2021).

Bernheim and Rangel (2004) model the brains as operating in either a "cold" mode or "hot" mode which means the decisions are triggered and depends on situational factors as well. The situational factors can be internal (like hunger) or external (like threat). According to Greene (2010) he states that moral decision making, "involves a whole lot of systems in the brain that are not specifically devoted" to that task alone; the result from his study explains that even when humans are given hypothetical moral dilemmas, they still rely on some kind of emotions for guidance. Hence, the process of decision making is clearly influenced by several other factors which makes the framing and situations pivotal for human actions.

Another popular perspective through the lens of evolutionary theory is kinship selection. This theory suggests that there is more probability of people valuing the life of individuals who have a higher degree of genetic relatedness or similarity to the self in comparison to others who have a lesser degree (Smith, 1964). Decision making in the brain

also relies on habituality to some extent which is acquired by training over a period of time. This training entails various characteristics like assigning values based on previous experiences, trial and error and lastly generalization which is when they assign values based on the expected outcome. These characteristics built up a habitual system in humans which helps their brain to make decisions and is not strongly influenced by morality (Rangel, Camerer & Montague, 2008). Hence, these findings examine that decision making is not always based on a set of morals but is also a blend of emotions and biologically bent towards kinship selection and some habit systems which had been acquired overtime which directly affects the process of brain decision making.

Prioritisation during Humanitarian Crisis

In recent years there has been a surge in natural disasters, and ethical problems are commonplace where disasters have become a prominent part of everyday life. Like war, natural disasters create emergency situations where strategic planning is needed to protect people. This section would analyze the guidelines in the policy for humanitarian action by US AID, UNICEF and the crisis situation during the sinking of titanic. Broadly the documents do not discriminate against or favor anyone and are based on the pillars of equality, transparency, impartiality, and independence. But it has been observed that all these documents do have a special mention exclusively for children in times of humanitarian crisis, for protecting them from harm and abuse.

The policy guidelines stated by US AID for humanitarian action work on the principles of the Office of Foreign Disaster Assistance (OFDA). The document of UNICEF does mention assistance-based needs to the vulnerable population during disasters because of their age, gender, or any other factors. The belief behind this ideology is that a disaster-struck population is not homogenous, and some groups are affected more and extremely vulnerable,

and OFDA does examine and integrate these diverse needs. Certain parameters within which they analyze these needs are - gender, children, elderly people, persons with disabilities, LGBT community, and IDPs. They deliver humanitarian assistance considering accessibility and appropriateness for the affected population (UNICEF, 2020).

Protection from Sexual Protection and Exploitation (PSEA) has been given a lot of weightage in the UNICEF document and the organization doesn't tolerate any misconduct as well. In this section there is a special mention for children and vulnerable populations. The document states "UNICEF requires clear safeguards when processing personal data, particularly when children or vulnerable people are concerned, to safeguard their best interests. All personal data processing by UNICEF is governed by internal and interagency rules" (UNICEF, 2020).

The century old story of the sinking of the titanic ship put people in a difficult situation regarding whose life to save first. It's a popular saying that women and children should come first. When titanic struck the iceberg, it was widely accepted that women and children were given priority access to lifeboats. Although, the ideology of prioritization of the life of women and children can be traced to Hollywood, and societal conventions and not to any of the policy documents (Curtis, 2012). According to Robert Ashdown, technical, environment and operations director for the European council, there are no policy rules to evacuate women and children first and it's more of an unwritten convention. He elaborated that the people who have better access to lifeboats are encouraged to get into them during maritime disasters. Ed Galea, who is a specialist in evacuation modeling procedures at the University of Greenwich analyses this problem and said in his interview that, "women and children first is a Hollywood notion and there are no international regulations who would be evacuated first." Lastly, Richard Pellew, a chief surveyor in the southeast region at the

Maritime and Coastguard Agency also had similar thoughts that the notion of WCF first is a hangover from the Victorian era and has nothing to do with policy. The standardized protocol is passengers first and crew last (Curtis, 2012). Putting together the evidence from US AID, UNICEF and interviews from specialists from maritime operations, it can be inferred that policies do not favor prioritizing different human lives. But the UNICEF and US AID documents do attribute a special status to children because they are considered vulnerable.

Discussion

The value of human life is a broad question which can be looked at through numerous perspectives and I have tried to examine it from both psychological and policy perspectives. Intricately this paper has tried to look at human decision-making in life and death situations and the reasons behind it. The trade-off situations of life and death can surge moral and ethical dilemmas in the life of humans. Although humans hate making decisions in tragic situations of life and death, sometimes it is inevitable because resources are scarce (Goodwin and Landy, 2013). This paper has tried to divide and list down different distinctions in situations or parameters where the worth of human life can differ. This paper has even tried to capture different situational setups where the human decisions were demonstrated from experimental settings in the field of psychology to real world dilemmas to scrounging any policy guidelines for the same. It has been found that various factors influence decision making in trade-off situations and sensitive circumstances of life and death.

Principles like utilitarian and deontological decisions seem straightforward, weaving a picture that making a choice might be a straightforward answer but is opposite in reality and quite complex. The brain is not a homogeneous processor, but rather involves different diverse specialized processes that are integrated and assimilated in different ways when it is faced with numerous challenges and problems (Loewenstein, Rick and Cohen, 2008).

Decision making in trade-off situations is influenced by emotions, framings and the situations in a particular time and space. It was observed culturally in the innovation of autonomous vehicles that societies might have different expectations. For example, sparing the younger lives in Southern countries (like Latin America) was common in comparison to Eastern countries (like Taiwan) where elderly are seen as pivotal in the cultural ecosystem (Awad, Dsouza, Kim, Schulz, Henrich, Shariff, Bonnefon, and Rahwan, 2018). Secondly, emotions might also play a crucial role in choice while adopting the lens of evolutionary psychology where kinship selection is given importance.

Another important criterion which studies bring up is preference for a human life based on age, where younger lives are seen as more important than older lives because of several reasons like life expectancy. These reasonings have also given rise to "granny dumping" where individuals find it more acceptable to sacrifice the elderly rather than younger children (Kawai & Kubo-Kawai, 2014). It has also been observed even while evaluating younger lives there can be preference for older children while comparing it with the lives of infants because they have been in the world longer and have deeper connections and they understand the meaning of death (Goodwin and Landy, 2013). Although the broader guidelines given by international organizations like UNICEF or US AID during humanitarian crisis state there should be equality, neutrality and transparency while looking at human lives, they do state special guidelines for children. Their protection becomes necessary because they are seen as more vulnerable. When looking at real life dilemmas such as the current one in Ukraine and Russia, the state said that civilians and children should be evacuated first. The statement gives a special mention to children which clearly states that life of children has been valued differently.

Lastly, framings do affect human choice which can be observed in the switch and push case situations of trolley dilemma (Foot, 1967; Thomson, 1985). Humans do not want to harm

other people directly in the push case but if the situation is unexpected and forces them to make a choice, individuals prefer the switch case. The utilitarian impact of the situation would be the same but framing of the scenario creates an impact on human decision making of life and death.

In conclusion, there isn't any preference for a particular human life based on gender, age, or status. But special guidelines are created for children in humanitarian crisis maybe because they are seen as vulnerable. Looking back at the history of titanic or hurricane Katrina there weren't any set rules or formal guidelines which were followed. During the Titanic disaster, while evacuating, the captain did say women and children first, but it was captains call and experts refuse to believe in such rules and refute it by stating it as a conventional or a Hollywood phenomenon. Hence, it cannot be concluded that human lives are preferred on the basis of gender or social status.

References

Birchley, G. (2021). The theorisation of 'best interests' in bioethical accounts of decision-making. *BMC medical ethics*, *22*(1), 1-18.

Caviola, L., Schubert, S., & Mogensen, A. (2021). Should you save the more useful? The effect of generality on moral judgments about rescue and indirect effects. *Cognition*, *206*, 104501.

Cohen, D. J., Cromley, A. R., Freda, K. E., & White, M. (2021). Psychological value theory: The psychological value of human lives and economic goods. *Journal of Experimental Psychology: Learning, Memory, and Cognition*.

Conway, P., Goldstein-Greenwood, J., Polacek, D., & Greene, J. D. (2018). Sacrificial utilitarian judgments do reflect concern for the greater good: Clarification via process dissociation and the judgments of philosophers. *Cognition*, *179*, 241-265.

Cushman, F. (2013). Action, outcome, and value: A dual-system framework for morality. *Personality and social psychology review*, *17*(3), 273-292.

Curtis,P. 2012, January 16. Costa Concordia: are women still prioritised over men in evacuation procedures?. The Guardian. Retrieved from https://www.theguardian.com/politics/reality-check-with-polly-curtis/2012/jan/16/costa-concordia-women

Cushman, F., Murray, D., Gordon-McKeon, S., Wharton, S., & Greene, J. D. (2012). Judgment before principle: engagement of the frontoparietal control network in condemning harms of omission. *Social cognitive and affective neuroscience*, *7*(8), 888-895.

Emanuel, E. J., Persad, G., Upshur, R., Thome, B., Parker, M., Glickman, A., ... & Phillips, J. P. (2020). Fair allocation of scarce medical resources in the time of Covid-19. *New England Journal of Medicine*, *382*(21), 2049-2055.

Erlandsson, A. (2021). Helping dilemmas: Decision-making when one cannot help everyone in need.

Erlandsson, A., Lindkvist, A., Lundqvist, K., Andersson, P. A., Dickert, S., Slovic, P., & Vastfjall, D. (2020). Moral preferences in helping dilemmas expressed by matching and forced choice. *Judgment and decision making*.

Goodwin, G. P., & Landy, J. F. (2014). Valuing different human lives. *Journal of Experimental Psychology: General*, *143*(2), 778.

Greene, J. D. (2016). Our driverless dilemma. *Science*, *352*(6293), 1514-1515.

Huseynov, S., Palma, M. A., & Nayga Jr, R. M. (2020). General public preferences for allocating scarce medical resources during COVID-19. *Frontiers in public health*, 928.

Kahneman, D., & Tversky, A. (1981). *The simulation heuristic*. Stanford Univ CA Dept of Psychology.

Kawai, N., Kubo, K., & Kubo-Kawai, N. (2014). "Granny dumping": Acceptability of sacrificing the elderly in a simulated moral dilemma. *Japanese Psychological Research*, *56*(3), 254-262.

Loewenstein, G., Rick, S., & Cohen, J. D. (2008). Neuroeconomics. *Annu. Rev. Psychol.*, *59*, 647-672.

Spälti, A. K., Brandt, M., & Zeelenberg, M. (2019). The Effects of Decision Time on Perceptions of Decisions and Decision Makers in (Moral) Trade-Off Scenarios.

Rangel, A., Camerer, C., & Montague, P. R. (2008). A framework for studying the neurobiology of value-based decision making. *Nature reviews neuroscience*, *9*(7), 545-556.

United Nations. 2022, February 24. Ukraine Crisis: Protecting civilians 'Priority Number One'; Guterres releases $20M for humanitarian support. UN News. Retrieved from https://news.un.org/en/story/2022/02/1112662

UNICEF. (2020). Core Commitments For Children in Humanitarian Action. UNICEF. Retrieved from

US AID. (2015). Office of U.S. Foreign Disaster Assistance Policy for Humanitarian Action.