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Abstract German

Diese Masterarbeit untersucht die ethische Entscheidungsfindung in multinationalen Unternehmen (MNU) mit Fokus auf den Einfluss von Sprache, Berufserfahrung und Führungsposition. Die Motivation für diese Forschung ergibt sich aus der zunehmenden Globalisierung, bei der Geschäftsleute Entscheidungen in Nicht-Muttersprachen treffen, welche durch ethische Entscheidungen beeinflusst sind. Erstens soll mithilfe des Moral Foreign Language Effect (MFLE) festgestellt werden, ob utilitaristische Antworten zunehmen, wenn Dilemmas in einer Fremdsprache präsentiert werden. Zweitens wird untersucht, wie Berufserfahrung und Führungspositionen das ethische Verhalten beeinflussen, wobei angenommen wird, dass Teilnehmer mit mehr als 10 Jahren Berufserfahrung oder in Führungspositionen eher utilitaristische Urteile fällen. Eine quantitative Methodik wird angewandt, wobei eine Online-Umfrage mit unpersönlichen ethischen Dilemmas verwendet wird. Die Ergebnisse tragen zum Verständnis bei, wie Sprache, Berufserfahrung und Führungsrollen moralische Entscheidungen in MNU beeinflussen.

Abstract English

This master thesis examines ethical decision-making within multinational corporations (MNCs), focusing on the influence of language, work experience, and managerial position. The motivation for this research arises from the increasing globalization, where businesspeople make decisions in non-native languages, which impact ethical choices. First, using the Moral Foreign Language Effect (MFLE) framework, this study aims to determine whether utilitarian responses would increase when dilemmas are presented in a foreign language. Second, this research investigates how work experience and managerial positions influence ethical behavior, assuming that participants with over 10 years of work experience or in managerial positions will demonstrate more utilitarian judgments. A quantitative methodology is employed, using an online survey with impersonal ethical dilemmas. The findings contribute to understanding how language, work experience, and managerial roles shape moral decisions in MNCs.

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1. Introduction

Imagine being appointed as the CEO in El Salvador by the board of directors of a multinational corporation (MNC) to extend its global footprint and enhance the company's profitability. The MNC produces beverages and therefore consume large quantities of water. Consequently, the use of large quantities of water has a negative impact on the environment, wildlife, and human health, including the well-being of local villages.

Would you, as the executive, continue to maximize profits for the MNC by dehydrating communities causing negative impact on farmers and death of flora and fauna?

Essentially, this question involves causing a certain degree of harm to achieve a greater outcome, in this dilemma financial profit. Philosophers have dedicated numerous years arguing how individuals should behave from a moral standpoint (Kagan, 1998). Immanuel Kant (1724—1804) has stated that the morality of an action, whether it is right or wrong, should be judged on consistency with universal norms emphasizing rights and duties, regardless of the outcome (Kant & Ellington, 1993). This ethical perspective is called *deontology* and derives from Greek words 'δέον' – what is right and 'λόγος' – knowledge (Bentham & Bowring, 1834). According to deontological view, causing any harm is the morally wrong action. Therefore, a business professional might insist on discontinuing the production of a product that causes harm to humans or animals, because taking someone's life is ethically wrong (Ferrell, Fraedrich & Ferrell, 2011).

In contrast, John Stuart Mill (1806–1873) has argued, that the morality of an action is judged as right if it is based on utility (well-being) and happiness (pleasure), and wrong if it causes unhappiness (pain) (Mill & Crisp, 1999) and thus, depends on the consequences. This ethical perspective is called *utilitarianism*, which requires to act in a manner that maximizes the overall utility for all parties involved (Kagan, 1998). The above-described dilemma was experienced by Coca-Cola in some Latina American countries and Indian states where the leadership team acted according to utilitarian ethical view and decided to continue the extraction of water. Acting this way, one of the most widely recognized

companies has been heavily criticized (War on Want, 2006). Many village communities had to suffer from a lack of water, since pumping water action was approved by the government, acting according to utilitarian perspectives too. Is it morally right to tolerate such ethical behavior even if the business operates in a place actively seeking the presence of a big corporation to provide jobs and taxes?

Beside ethical behavior, managers must make many ethical decisions every day, considering organization's guidelines, ethical rules, and principles. Researchers (Treviño & Youngblood, 1990) have claimed that ethics is learned by an individual from a family, school, religious institution. Therefore, businesses expect an employee to already understand moral distinctions and be capable of making ethical decisions – a choice that aligns with both legal and moral standards in a broader community (Jones, 1991). From this standpoint, the process of ethical decision-making initiates with a stage of moral awareness, wherein individuals identify a problem associated with an ethical dilemma. At the next stage a decision-maker judges the dilemma and determines what is ethically right (Jones, 1991). A judgmental decision occurs when individuals with common goals and working under similar conditions would arrive at different decisions due to different understanding of the given situation, resulting from disparities in information access or different interpretations thereof (Casson, 2003). What are the key components of ethical decision-making?

The *dual-process model* of moral judgment assume that ethical decisions are influenced by two separate cognitive information processing system: *System 1*, which operates quickly and intuitively, and *System 2*, which functions more slowly and analytically (Kahneman, 2003, Stanovich & West, 2000). Thus, System 1 promptly suggests intuitive responses to judgmental issues as they emerge, while System 2 evaluates the quality of these suggestions, potentially endorsing, rectifying, or overriding them (Kahneman & Frederick, 2002). System 1 is defined as automatic, fast, and is mostly an unconscious process, whereas in contrast System 2 is characterized as a controlled, deliberate, and conscious in nature (Stanovich & West, 2000).

1.1. Research Gap and Research Question

Decision-making is at the heart of international business activities and is a fundamental task in managerial positions. Globalization has led to a shift in workplace dynamics, with millions of individuals using foreign language apart of their work routines. When companies enlarge their footprint into new markets, they face numerous challenges and barriers (e.g., language, culture, and ethical standards). CEOs engage with international markets where the language is not their native tongue. Making decisions in the language spoken in the target market can enhance communication, understanding, and encourage better relationships with employees, local partners, and stakeholders. Hence, language constitutes a key aspect of MNC operations.

The language (native vs. foreign) that is used in ethical dilemmas plays an important role in moral decision-making process. Dealing with a moral issue in a non-native language may enhance analytical processes and/or diminish the impact of intuition. This influence is called the Foreign Language Effect (FLE), which is associated with a decreased dependence on processing of System 1 as well as/or an enhanced dependence on processing of System 2. Specifically, the FLE would encourage more choices, that prioritize the greater good over emotional responses, thus utilitarian decision-making (Kahneman, 2011). Moreover, recent studies have been shown that a foreign language has a significant impact on moral judgment outcome (Bereby-Meyer, Hayakawa, Shalvia, Corey, Costa, & Keysar, 2018; Ciolletti, McFarlane, & Weissglass, 2016; Costa, Foucart, Hayakawa, Aparici, Apesteguia, Heafner, & Keysar, 2014b; Geipel, Hadjichristidis, & Surian, 2015; Hadjichristidis, Geipel, & Surian, 2017; Vives, Aparici, & Costa, 2018).

Moral decision-making often involves navigating complex dilemmas where harm may be either personal (immediate) or impersonal (more distant). According to Greene and colleagues a *personal* dilemma involves contact with an individual who is going to be harmed, conversely, in *impersonal* dilemmas, individuals who are going to be harmed are faraway (Greene, Sommerville, Nystrom, Darley & Cohen, 2001). The Moral Foreign Language Effect (MFLE) – an effect particularly in moral dilemmas – has

been mainly shown in personal violations, but not in impersonal dilemmas (Costa et al., 2014). Other researchers were excluding impersonal dilemmas in their studies with different language pairs. In line with the dual-process theory, engaging in personal dilemmas results in high emotional involvement, subsequently increasing sensitivity to deontological tendency in their decision-making process, while sensitivity to consequences remains unaffected. Geipel and colleagues reported opposite results in their study, showing the greater MFLE for impersonal dilemma, but not for personal moral choice dilemma (Geipel et al., 2015). However, only one impersonal moral dilemma was included for testing in their experiment. Research on work experience's and managerial position's influence on ethical judgments has been limited until now. Therefore, my research question is as follows.

Does asking impersonal ethical dilemmas in both native and foreign language make participants in DACH-region decide differently and how the answers correlate with responder's work experience and managerial status?

The goal of this thesis is to gain insight on the relevance between language and the decision-making process in business ethics and how ethical decisions are made in organizations. The study shows the complexity of ethical decision-making in MNCs, where language, work experience, and managerial roles cross with moral frameworks. The research should also enhance the understanding of how these factors interact, when managers and employees face moral dilemmas that have consequences for the organization.

1.2. Hypotheses

Some researchers suggested that the MFLE might reduce activation of social and moral rules, therefore reduces the responsiveness to deontological norms (Geipel et al., 2015). Others stated that thinking in foreign language and performing task-related information simultaneously depletes working memory resources, through System 2 is under high cognitive load and functions ineffectively (Volk et al., 2014, Vives et al., 2018). This can lead to increased biases where participants are more likely to produce

decisions generated by the System 1 processes (Volk et al., 2014) or slower thinking where participants need more time and tend to opt for utility (Vives et al., 2018).

Based on above foundation, the following two hypotheses are examined with this thesis as follows.

Hypothesis H1

Null Hypothesis H0.1: Utilitarian responses do not increase in impersonal ethical dilemmas presented in a foreign language, hence in a native language.

Alternative **Hypothesis H1: *Utilitarian responses significantly increase in impersonal ethical dilemmas presented in a foreign language.***

If Hypothesis H1 is correct, it is assumed that the proportion of utilitarian responses will be lower in native German (FL1) than that of foreign language replies in English (FL2).

Hypothesis H2

Null Hypothesis H0.2: Participants with work experience over 10 years will not have significantly different moral judgment outcome from those with less than 10 years; and responders with managerial position will not tend to violate expected utility choices more often.

Alternative **Hypothesis H2: *Participants with work experience over 10 years will have significantly different moral judgment outcome from those with less than 10 years; and responders with managerial position will tend to violate expected utility choices more often.***

If Hypothesis H2 is correct, it is expected that the proportion of utilitarian judgments will be lower within participants with less than 10 years work experience than that over 10 years; and it is expected that the percentage of utilitarian inclinations within managers will be higher than that within non-managers.

2. Review of Literature

This chapter explores the theoretical foundation of ethical decision-making – both historical and modern viewpoints on business ethics and morality, deontology and utilitarianism, the role of intuition, reasoning, and language. It reviews definitions and theories to understand how individuals make moral judgments faced with ethical dilemmas in professional life.

2.1. Business Ethics and Morality

Intuitively, all humans know what morality is (Krebs, 2008), even though not everyone can define what exactly this term means. Still, in the literature, there is no single distinct definition of *ethics* and *morality*. Several definitions from wide-cited researchers presented as follows.

According to a scientific founder of the field moral judgment Jean Piaget (1948) “all *morality* consists in a system of rules, and the essence of all morality is to be sought for in the respect which the individual acquires for these rules” (p.1). His follower Lawrence Kohlberg (1976) has asserted that “empathy and justice ... are the basis of morality” (p.20), where empathy and fairness are responsible for the understanding of the Golden Rule (interact with others in the manner you would wish to be treated), and justice oversees the concept of atonement where an action is needed to correct prior wrongdoing. Thus, both theorists have defined morality as actions that influence the economical or psychological well-being of others (Haidt, Koller, & Dias, 1993).

Joshua D. Greene (2013) claims that morality developed to facilitate teamwork and people are biologically created for mutual effort within, but not between group. “*Morality* is a set of psychological adaptations that allow otherwise selfish individuals to reap the benefits of cooperation” (Greene, 2013, p.23). Consequently, morality aims to encourage collaboration within groups rather than competition among groups (Greene, 2013).

Comparable to morality, people can easier describe the term ethics rather than define it, because each of us has its own understanding of what is ethical and what is not. Thus, if a person defines ethics, he or she is giving his or her own way of thinking about ethics, but it can differ to the other person. Hence, this term has an extensive number of interpretations in a society. According to Taylor (1975) *ethics* is described as “inquiry into the nature and grounds of morality where the term morality is taken to mean moral judgments, standards and rules of conduct” (p.1). It asserts someone else’s behavior as good or bad and condemn or praise other people’s actions (Jones, Parker, & Ten Bos, 2005). The study of human conduct is often called ethics and is defined as “behavior or decision made within a group’s values or morals” (Ferrell, Fraedrich, & Ferrell, 2021, p.5). Similarly, Treviño and Nelson (2021) define ethics as “the principles, norms, and standards of conduct governing an individual or group” (p.10). Therefore, *business ethics* “compromises organizational principles, values, and norms that may originate from individuals, organizational statements, or from legal system that primarily guide individual and group behavior in business” (Ferrell et. al, 2021, p.4). A group might be any business organization or a branch, e.g., a firm or an industry. Separate from mission and vision statements, a company defines its values, rules, and regulations. In a particular business situation, organization evaluate these to determine right and wrong. Work is essential for human’s life and how businesspeople behave influence not only the way they work, but also personal, corporate, social, and national reputation (Treviño & Nelson, 2021). Therefore, ethics is an important feature of business where managers are dealing with honesty, fairness in procedures, respect, and transparency of decision-making with employees, customers, investors, vendors etc. However, to act ethical is not always possible for a manager, thus organizations define acceptable and unacceptable behavior by setting guidelines, such as standards, policies, and regulations.

Consequently, morality is the predecessor of ethics, which consecutively comes before ethical theory. Hence, ethics justifies morality to form an ethical framework suitable for a particular situation of moral uncertainty and solve an ethical problem, often referred to as an ethical dilemma (Crane et. al, 2019).

2.2. Ethical Dilemma

Ethical dilemma is defined as “a situation in which two or more important values, rights, or responsibilities are in conflict” requiring a moral choice “between equally unpleasant alternatives” (Treviño & Nelson, 2021, p.26) resulting in harm at least one individual (Christensen & Gomila, 2012). The following ethical dilemma should make these statements clear.

Imagine you are a doctor in an Italian hospital with a massive number of critical COVID-19 cases and should allocate ICU beds by prioritizing some patients over others. If you kill one patient by removing a ventilator and giving it to coronavirus patients, you could save five lives. Any inaction or action will essentially cause some harm in the given situation, untreated patient will also suffer or die.

Would you cut-off a breathing machine from a young woman that recently became a mother with cancer disease whose chances to survive are unknown and supply the ventilator to others with better prognoses?

First identified in China in December 2019 the coronavirus disease (COVID-19) rapidly speeded to other regions across the globe. As of March 2020, there were over 100 countries affected by the virus and the World Health Organization declared COVID-19 as a global pandemic (WHO, 2020 a) with its epicenter in Europe (WHO, 2020 b). Italy was the first European country hit with the virus and on March 13 has reported 16.295 coronavirus cases and 1.017 deaths as per the Italian National Institute of Health (Istituto Superiore di Sanità, 2019). Apart from asymptomatic cases or the ones with symptoms like seasonal influenza, the most critical coronavirus patients have had an infection that affects normal breathing and required special beds admission – intensive care units (ICU), which are very costly and therefore limited. Italian medical professionals had to make end-of-life care decisions (Mannelli, 2020).

There remains a debate whether the medical recommendations given in several European countries are ethical (Ehni, Wiesing, & Ranisch, 2020) as there is a conflict between rights and the best outcome.

These values are essential in research on ethical judgment because they present a high conflict between the moral principles of deontology and utilitarianism.

2.3. Deontology and Utilitarianism

The term *deontology* was first formulated by Jeremy Bentham (1748–1832). Some deontologists focus on rights (e.g, the rights conflict between an MNC aiming for profits and society willing unpolluted air and water), other focus on duties, values and principles (Treviño & Nelson, 2021). Deontology takes its theoretical foundation from the philosopher Immanuel Kant (1724—1804). The pioneer of human ability – namely, judgment – and individual mind’s cognitive capacity and its limits (Arendt & Beiner, 1989, p.10), Kant has stated to act only in accordance with what human would wish for their actions to become a universal law”. He highlighted the universal idea of duty. Therefore, deontologists make their decisions based on “honesty, promise keeping, fairness, loyalty, rights, justice, responsibility, compassion, and respect for human beings and property” (Treviño & Nelson, 2021, p.30). Killing an innocent individual is a morally forbidden act, even if it saves five other people (Kagan, 1998) because this action is contingent on consistency with an obligation not to kill others (Kant & Ellington, 1993).

Before bringing another example of deontology in business ethics, it is important to clarify a definition of a *code of ethics*: “Ethical codes are written documents which presume to state the major philosophical principles of an organization” (Stevens, 1996, p. 72). Researchers have studied 100 companies in the US and 100 organizations globally and found that 95% of these have a corporate code of ethics (Sharbatoghlie, Mosleh, & Shokatian, 2013).

The second example is taken from a Dutch banking company ING Group. Its ethical codes were the following (Jones, Parker, & Ten Bos, 2005):

1. Compliance by legal and regulatory duties.
2. Respectability and obligation of confidentiality.
3. Trustworthy and respectful for customers.

4. Loyalty to the organization.
5. Common respect for individuals and opinions.

However, following these deontological codes employees are not acting on their own free will (Jones et. al, 2005). Rather, every person is thinking about his interests (Bentham & Bowring, 1834). In any case, these ethical codes above did not work for ING effectively since this financial institution was incriminated in one of the biggest money-laundering scandals in the Netherlands (Ravenstijn, 2000).

Utilitarianism was originally formulated by Jeremy Bentham and later extended by John Stuart Mill. This moral principle obtained broad acceptance and influence in modern economics. “The obtaining the pleasure, the avoidance of the pain are the sole motives of human conduct” (Bentham & Bowring, 1834, p.66). Thus, the ethical value of an action depends on the utility: an action is considered as moral if it is maximizing well-being, minimizing suffering, and leads to the best results, in contrast, the action is immoral if it is decreasing well-being, increasing suffering and leads to the reverse of the best outcome. Utilitarianism aims to reach “the greatest happiness of the greatest number” (Jones et. al, 2005, p.28) rather than focusing on the small number of individuals. Utilitarianism is commonly divided into two distinct forms: act utilitarianism and rule utilitarianism (Jones et. al, 2005). Act utilitarianism is mainly associated with Bentham and is defined as follows: “Act utilitarianism looks to single actions and bases the moral judgment on the amount of pleasure and the amount of pain this single action causes” (Crane, Matten, Glozer, & Spence, 2019, p.100). In contrast, rule utilitarianism is commonly known through Mill and it “looks at classes of action and asks whether the underlying principles of an action produce more pleasure than pain for society in the long run” (Crane et. al, 2019, p.100). Hence, act utilitarianism judges an action in every situation as it appears by questioning whether pleasure is greater than pain without following any rules. In contrast, rule utilitarianism gives the possibility to establish numerous generalized rules that are designed to be applied for all such situations for the well-being of society. The following business example serves to clearly illustrate this perspective. Managers who oversee many employees should think about the consequences of decisions he makes for a long period time instead of becoming fully stuck with arguments and counterarguments in a single situation (Jones et. al, 2005).

Following the differences between moral principles, researchers labeled their corresponding responses of moral dilemmas as *deontological* and *utilitarian* (Conway & Gawronski, 2013; Green, 2014; Greene, Morelli, Lowenberg, Nystrom, & Cohen, 2008; Greene, Nystrom, Engell, Darley, & Cohen, 2004).

2.4. Moral Judgment

The scientific foundation of moral judgment is based on rational approach and classical studies of cognitive-developmental theorists Jean Piaget and Lawrence Kohlberg. They were the first making research on the question which processes underlying moral judgment. Here processes can be understood as mental mechanism of a human that transform a particular stimulus (input) into judgment and behavior (output) (De Houwer, 2011; Marr, 1982). Whether, how, and why children develop respect for social rules was the central problem Piaget addressed in his research (1948). Piaget claimed that humans are born without morality and develop moral reasoning first through the cooperation between child and parents (action in respect with authority) of the and later the cooperation between peers (action in respect with equality and reciprocity), which “supply the key to the interiorization of commands and to the autonomy of the moral consciousness” (Piaget 1948, p.19). Kohlberg (1969) extended the cognitive-developmental approach to the empirical study of moral judgment launched by Piaget with the six moral stages of moral reasoning by analyzing children’s responses to a series of moral dilemmas (Kohlberg & Hersh, 1977). “The approach is called cognitive because it recognizes that moral education, like intellectual education, has its basis in stimulating the active thinking of the child about moral issues and decisions. It is called developmental because it sees the aims of moral education as movement through moral stages” (Kohlberg, 1975, p.670). With every following moral stage, a person’s moral judgment becomes more independent on external influence and individuals are acting from the idea of what is right to an understanding the meaning of moral principles of justice and rights (Treviño & Youngblood, 1990). Kohlberg stated that adolescents begin to make their own decisions, form opinions, and solve problems without depending on others. In two of his post-conventional stages, he found that while having respect to moral rules, intellectually mature children sometimes justify wrongdoing following justice (Kohlberg, 1969). His six cognitive moral development stages were applied to test adults in

organizational settings (Treviño & Youngblood, 1990). Individuals can decide differently in identical moral situations of uncertainty as they are in distinct stages (Ferrell et. al, 2011). Hereafter, a brief description of six stages (Kohlberg, 1969, p. 376) and the application of each stage in making ethical decisions in the business context are provided.

Stage 1. Cooperation and Punishment.

The first stage defines good behavior of an individual to authority and following the rules to avoid punishment. Organizations prohibit their purchaser to accept gifts from dealers defining this rule as unethical. However, the purchaser may take a chance of not being taken and punished by obtaining the gift (Ferrell et. al, 2011).

Stage 2. Instrumental Purpose and Exchange.

At this stage rules of reciprocity are considered. A worker might mislead the presence of his colleague at the workplace so that he does the same in return (Crane et. al, 2019).

Stage 3. Interpersonal Accord, Conformity, and Mutual Expectations.

Individuals explore the expectation of their peers and close associates. A worker might utilize organizational resources for personal purposes as others are doing so too (Crane et. al, 2019).

Stage 4. Social Accord and System Maintenance.

Individuals consider the expectation of society in general. An employee is obligated to report the misbehavior of any colleague or management as it is his social responsibility (Treviño & Nelson, 2021).

Stage 5. Social Contract and Individual Rights.

Individuals become more independent from the opinion of others by releasing rules as they are the contract of society. Top management may consider developing an ethical code for a company to provide a safeguard facing legal difficulties (Ferrell et. al, 2011).

Stage 6. Universal Ethical Principles.

Individuals base their actions on moral principles of justice and rights. A businessperson may insist to stop making a product that killed or harmed people or animals as taking someone's life is wrong (Ferrell et. al, 2011).

Whereas rationalist theory has focused on the emphasis of moral reasoning of the children behind rules and laws (Kohlberg, 1969; Piaget, 1948), it was the central theory in studies of moral judgment until 2001, when modern researchers have examined the question of the importance of emotional processes and argued the role of moral reasoning (Haidt, 2001) or the role of both (Greene et. al, 2001) introducing the social intuitionist and the dual-process theories accordingly.

2.5. Social Intuitionist Model

As per the Social Intuitionist Model, moral judgments arise from the influence of two cognitive systems – namely, intuition and reasoning – that are independent once from another. The system driven by intuition is “quick, effortless, and generally quite accurate” (Haidt, 2001, p.822), in contrast, reasoning is slow and requires effort. Haidt (2001) defined *intuition* as “the automatic output of an underlying, largely unconscious set of interlinked moral concepts” (p.1040). He stated that the moral judgments are stem from emotional responses, what comes first causes decision making. Moral *reasoning* is defined as “conscious mental activity that consists of transforming given information about people in order to reach a moral judgment” (Haidt, 2001, p.818). Reasoning plays a minor role in decision-making operating as post hoc justification of choices, thus reinforce existing intuitive moral judgments. In his theory, Haidt (2001) defined *moral judgment* as “evaluations (good versus bad) of the actions or character of a person that are made with respect to a set of virtues held by a culture or subculture to be obligatory” (p.6).

However, social intuitionist theory was not strongly supported by researchers. Landy & Goodwin (2015) made a meta-analyzed 50 empirical studies and found prove indicating publication bias in the reviewed literature, thus overestimation of Haidt's (2001) theory and role of emotions.

2.6. Dual-Process Model

The main characteristic of a *dual-process theory* is a set of automatic and control processes to explain moral judgments and behavior (Gawronski, Sherman, & Trope, 2014; Kahneman, 2003; Moors, 2014). Bringing together aspects of rationalist and intuitionist theories, Green and colleagues developed dual-process model (2001), which holds that moral judgements arise from a combination of reasoning and intuition. Based on the deontological and utilitarian responses to moral dilemmas (Foot, 1967; Thomson, 1976), Greene (2001, 2008, 2014) proposes to analyze the processes underlying these responses. Researchers argued that in moral judgment, upon witnessing an action or hearing a story, an individual feels immediate an endorsement or condemnation, namely intuition, being emotionally charged, and arising spontaneously in consciousness. Intuition indicates whether the action is perceived as right or wrong and is influenced by both natural selection and cultural factors (Greene & Haidt, 2002).

The traditional approaches to moral judgments were based on the Philosopher Philippa Foot's and Judith Jarvis Thomson's moral dilemmas. Foot (1967) proposed the following scenario to a thought experiment well known as the trolley dilemma:

A trolley runs on a track and participants can only redirect it to another track. There are five working men on one track and only one on the other, thus any track the trolley continues to drive will kill someone.

Would you flip the switch and cause the death of one man, saving five other lives?

Thomson (1976) introduced a similar scenario to an experiment well known as the footbridge dilemma:

A man is standing on the footbridge over the tracks and sees an out-of-control trolley that is heading toward five workers who have not enough time to escape from the path back of the bridge. Participants can stop the trolley by dropping something heavy into the track. There is a fat man on the footbridge available.

Would you physically push a man from a bridge to save five persons?

Research (Greene et al., 2001) demonstrates that participants in the experiment were more likely to make utilitarian judgments (find it acceptable to flip the switch and save more lives) in the trolley dilemma and more likely to make deontological judgments (find it unacceptable to physically push one person save five other lives) in the footbridge dilemma. Why the difference?

2.7. System 1 vs. System 2

Dual-process theory (Gawronski et al., 2014; Greene et al., 2008; Kahneman, 2003; Moors, 2014; Stanovich & West, 2000) suggests that both intuition and reasoning are influencing moral judgments. However, there are two different types of judgments, resulting from two functionally separate systems and with two different processing characteristics. The emotional responses to moral dilemmas are fast, come automatically, and can be controlled, in contrast, reasoning responses are slow, manual, and conscious (Greene, 2014). The central tension principle of the dual-process theory (Greene, 2014) assumes that deontological responses are sensitive to emotions and utilitarian responses are sensitive to reasoning.

The first important point is that Greene uses the term *deontological judgment* that is justified in deontological terms of right and duties inherently and that is difficult to explain in utilitarian conditions. In the trolley dilemma, it is unacceptable to flip the switch and redirect the trolley even if it would result in the saving of multiple lives. It is essential to highlight that Kant argued that duty is depending on a free will of an individual and may not be universally good in every situation (Kant & Ellington, 1993). Thus, only action of a good will is an obligation. Contrary, *utilitarian judgment* is naturally justified in

risk-reward reasoning and is hard to defend within a deontological framework (Greene, 2014). According to the dual-process theory, when individuals are engaged in conflict with moral principles in a moral dilemma, they directly feeling negative about the thought to cause harm that leads to deontological judgment. However, when people have enough time, cognitive reasoning might change their prior decision by comparing possible options and finding the one that leads to well-being in general (Greene et al., 2001). Researchers have found that induced positive feelings while making decisions might reduce negative feelings and thus increase utilitarian judgments (Valdesolo & DeSteno, 2006). Conversely, the applied cognitive load might reduce cognitive reasoning that leads to a decrease in deontological judgments (Greene et al., 2008).

The second important point is that Greene and colleagues (2001, Greene & Haidt, 2002) identified the difference between personal and impersonal dilemmas. A moral dilemma is *personal* if meets the following criteria: “(i) likely to cause serious bodily harm, (ii) to a particular person, (iii) in such a way that the harm does not result from the deflection of an existing threat onto a different party” (Greene & Haidt, 2002, p.519), thus involving contact with an individual who is going to be harmed or killed. In *impersonal* dilemmas, individuals who are going to be harmed or killed are far away (Greene et al., 2001). Therefore, the footbridge dilemma can be considered as personal as it meets all three criteria above and the trolley dilemma is impersonal.

In the experiment researchers (Greene et al., 2001) were using 60 types of dilemmas that were categorized into moral or non-moral, personal, or impersonal. Participants were asked to judge the dilemma’s suggested action as appropriate or inappropriate, while their brains were scanned in a functional magnetic resonance imaging. Then the typical brain activity of participants was compared and summarized not only in the engagement of emotions in moral judgments but also in neural correlations of moral reasoning. Generally, Greene and colleagues’ findings bring support in their differentiation between intuitive response to harm and thoughtful comparison of cost-benefit.

2.8. Moral Foreign Language Effect

Skinner (1957) states that a language development is the process when a child makes a sound, which reinforcing the reaction of a parent, e.g., attention, smile, hug in combination with a word. This makes a child to associate this word with an object and event and most likely to repeat the word. In authors view, verbal behavior is the same as other human's behavior – a particular way how people react in response to its environment. This statement confirms Catania's (1992) definition: "Language is behavior" (p. 227).

The early studies on the original FLE were investigating whether the decision-making outcome is affected by the use of the language in which problems are presented to bilinguals. Intuitively, people may expect to make the same decisions using native or foreign tongue (Keysar, Hayakawa, & An, 2012). However, researchers found that the FLE provides greater emotional distancing, thereby reduces biases and the involvement of the System 1 (Costa et al., 2014a; Keysar et al., 2012). Thus, researchers defined the *Foreign Language Effect* as "the activation of systematic reasoning processes by thinking in a foreign language" (Cipolletti et al., 2016, p. 23). Costa and colleagues (2014b) were the pioneers in extending the FLE by applying to moral judgments. The study (Costa et al., 2014b) showed that when individuals face moral dilemmas in a foreign language, they are more likely to make utilitarian decisions as compared to those, who confront the dilemma in their native tongue, and tend to deontological option (Cipolletti et al., 2016), so called MFLE. It is important to notice that MFLE has been mainly shown in personal dilemmas (Greene et al., 2001; Greene & Haidt, 2002), e.g., the footbridge dilemma (Thomson, 1976), but not in impersonal dilemmas, e.g., the trolley dilemma (Foot, 1967). Using personal moral dilemmas, and excluding impersonal dilemmas in different language pairs, later studies mostly replicated the prior results by Costa and colleagues (2014b) and suggested that information processed in the foreign language might cause difference in emotional reactions and thus lower the intuitive thinking (Cipolletti et al., 2016; Corey, Hayakawa, Foucart, Aparici, Botella, Costa, & Keysar, 2017; Chan, Gu, Ng, & Tse, 2016).

3. Methodology

This chapter provides an overview of the research model and methods, the design, sample, and data collection process. It also includes the validity to ensure that the applied methods are reliable.

This study employs a quantitative methodology, using a survey-based design to test both hypotheses. An online questionnaire was distributed between February and March 2022. The randomized survey with impersonal dilemmas was completed independently by participants to analyze how the language (native vs. foreign), work experience, and managerial position impact individuals' ethical judgments.

3.1. Model

The presented model (see Figure 1) illustrates the ethical decision-making process of individuals, highlighting the influence of language, work experience, and managerial position on the final judgment outcome.

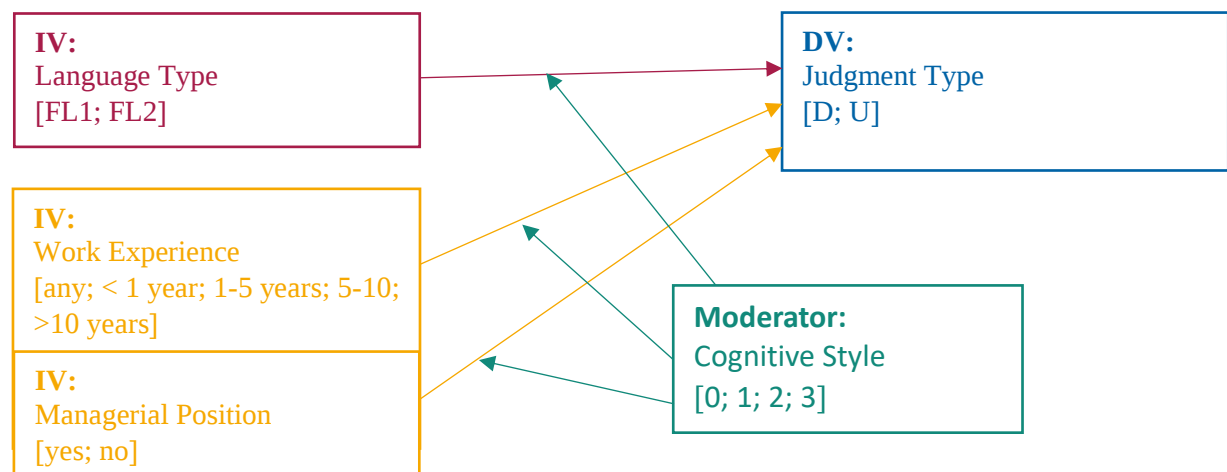


Figure 1. Ethical decision-making process experiment model.

Source: own representation.

Whether deontological or utilitarian, judgment type is the key determinant of how participants respond to ethical dilemmas presented to them either in their mother tongue or foreign language. The language

in which the dilemma is presented to subjects can influence emotional engagement and thereby affect ethical judgment. Despite this, the duration of participants' work experience and their managerial role within organizations can also have an effect on their judgments. Those with many years of work experience can have different judgment patterns compared to less experienced individuals. In addition, managers can approach ethical dilemmas differently due to their responsibility and decision-making authority. The model incorporates cognitive style as a moderator to understand how intuitive versus analytical thinking affects these relationships.

3.1.1. Variables

Dependent Variable (DV): Judgment Type

The dependent variable in this thesis is **judgment type**, quantified through the ethical responses, rated on a binary scale, and labeled as [D; U] for replies no and yes, respectively. Deontological (D) responses are based on rules, duties, or ethical principles, while utilitarian (U) responses seek to optimize utility, emphasizing results. These categories serve as main indications for evaluating participants' ethical decision-making tendencies within the experiment.

Independent variables (IV): Language Type, Work Experience, Managerial Position

The first independent variable is **language type**, which is binary computed and labeled as [FL1; FL2] for native and foreign languages, respectively. The experiment aims to explore how the language used to present ethical dilemmas influences participants' decision-making inclinations.

The second IV is **work experience**, which indicates how duration of work experience influences the type of ethical judgments participants make. The work experience variable is measured by the number of years, rated in an ordinal scale [any; < 1 year; 1-5 years; 5-10; > 10 years]. For convenience, this IV is divided into two subgroups: [< 10 years; > 10 years] of work experience.

The final IV in this thesis is **managerial position**, which is analyzed by the binary type and labeled as [yes; no] distinguishing individuals in management roles from those in non-managerial positions in their professional careers. It evaluates the influence of holding a managerial position on the ethical decision-making of the participants.

Moderator: Cognitive Style

Cognitive style determines the strength of the relationship between the IVs and judgment types. Measured by the Cognitive Reflection Test (CRT), it distinguishes between intuitive System 1 and analytical System 2 thinking styles. This variable examines how different cognitive thinking influences the effect of language, work experience, and managerial position on ethical decision-making. The moderator is measured with the ordinary type of variable and ranked on a scale of [0; 1; 2; 3]. A higher CRT score indicates individuals who are more analytical and tend to engage in deeper and more systematic processing, which are leading to utilitarian judgments.

Control Variables: Region and Gender

To ensure sufficient control of the experiment, the following variables are kept constant to isolate their influence on the DV and measure the effects of the IVs without influence of other factors:

- **Region.** Participants' nationality is from the DACH region, which includes Germany, Austria, and Switzerland. Nationality is measured on a nominal scale and labeled as [D; A; CH]. By limiting the geographical scope, the experiment controls for cultural differences that can affect ethical decision-making outcomes.
- **Gender.** Labeled as [male; female] and is a binary variable type. The study includes participants of both male and female, controlling for gender-related differences in ethical decision-making.

3.2. Methods

The initial step of both hypotheses analysis in this thesis involves operationalization. Operationalization defines and measures variables so they can be empirically observed and quantified. This statistical

process is ensuring that the survey's findings are grounded in observable and quantifiable data (Babbie, 2016). The definition of the respective variables must align with the initial construct of interest while also being measurable throughout the experiment (Bryman & Cramer, 2011).

In the context of this thesis, operationalization is used to define and measure variables related to decision-making in business ethics. For instance, the abstract concepts of deontological and utilitarian judgment are operationalized by specific impersonal ethical dilemmas presented in the online questionnaire. Participants' responses to these dilemmas are quantified on a defined scale, allowing for empirical analysis of their judgment tendencies. Table 1 presents a summary of the two hypotheses of this thesis, including the relevant variables, their scale and role in hypothesis testing.

Table 1. Operationalization of the Hypotheses.

Hypothesis	Role of the variable	Variable	Values	Scale
H1	DV	Utilitarian judgment	Proportion Range from 0 to 1	Metric
	IV	Language type	FL1 FL2	Nominal, dichotomous
H2	DV	Utilitarian judgment	Proportion Range from 0 to 1	Metric
	IV	Work experience	Less than 10 years More than 10 years	Nominal, dichotomous
	IV	Managerial position	Yes No	Nominal, dichotomous

Source: own representation.

Both hypotheses have the same DV: the utilitarian judgment type. This variable was determined by the number of utilitarian responses given across six ethical dilemmas presented to the participants. Consequently, it is a metric variable by construction and has the support in the interval between 0 and

1. The IVs are all nominal and dichotomous, meaning that for each hypothesis, the DV is compared between two independent groups. This guided the choice of the primary analysis method: the *t*-test for independent samples.

A *t*-test is a statistical method employed to determine if there is a significant difference between the mean values of two independent and unrelated groups. In this thesis the means of language type, work experience, and managerial position based on their sample data are compared. The fundamental assumption of *t*-test is that the two samples come from populations with normal distributions and have equal variances (Moore, McCabe, and Craig, 2017). The test evaluates whether the group means are significantly different from each other, or if their difference is statistically different from zero. As stated by Moore and colleagues (2017): “the *t*-test is appropriate when we compare the means of two independent samples to see if they come from populations with different means” (p. 545). The test procedure involves several steps: first, the test statistic is calculated. This test is based on the mean values and variances of each group as well as their sizes, and is computed based on the following formula:

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}},$$

where $\bar{x}_i, i = 1, 2$ are the group means,

$s_i^2, i = 1, 2$ are the group variances, and

$n_i, i = 1, 2$ are the sample sizes.

The test statistic is then compared with the critical value from the *t*-distribution with $df = n_1 + n_2 - 2$ for a relevant significance level α . Alternatively, a hypothesis can be analysed by using the *p*-value derived from the test statistic. If the *p*-value is lower than the significance level than the null hypothesis can be rejected and the alternative can be accepted, indicating a significant difference between the group means (Field, 2013). Otherwise, the null hypothesis cannot be rejected. In this thesis, both hypotheses testing will be conducted based on *p*-values using the significance level $\alpha = 0.05$.

The first assumption of the *t*-test is having a metric dependent variable. When the group size is generally larger than 30, testing for normal distribution is not necessary as “with larger samples, the *t*-test becomes quite robust against violations of the normality assumption because the sampling distribution of the mean tends to be normal” (Gravetter & Wallnau, 2016, p. 433). The second assumption of the independent sample’s *t*-test is that the variances of the two populations are equal, also known as homogeneity of variances. If these assumption are violated, the test may produce inaccurate results.

Alongside the *t*-test, further tests were performed to gain deeper insights and identify trends in decision-making. First, the proportion of utilitarian responses of each ethical dilemmas is compared and contingency tables for all to independent variables are created including a chi-square independence test results, as well as Cramer’s V.

The chi-square test is used to determine whether there is an association between utilitarian responses and different IVs. The test evaluates the observed frequencies in the contingency table against the expected frequencies, which are derived from the assumption of independence. This test is effective for large sample sizes, and the expected frequencies in every cell of the contingency table exceed five (Agresti, 2018). Cramer’s V is used to assess the strength of association between two variables. It is derived from the chi-square and adjusts for the size of the table (i.e., the number of categories in the variables). The values range from 0 to 1, where 0 indicates no association and 1 signifies a perfect association.

In addition to the above-mentioned methods, the Spearman correlation coefficient was computed where applicable. This method was chosen because at least one variable in each hypothesis is non-numeric. The Spearman correlation coefficient quantifies of the strength and direction of the relationship between two ranked variables (Agresti, 2018). Unlike Pearson’s correlation, it does not assume a linear relationship or normal distribution of the data. Spearman’s rho (ρ) varies from -1 to 1, where -1 shows a negative correlation, 0 suggests no correlation, and 1 indicates a positive correlation. Agresti (2018)

stated that “Spearman’s correlation is particularly useful for ordinal data or when the assumptions of Pearson’s correlation are violated” (p.312).

The final method employed in this thesis is one-way ANOVA (Analysis of Variance), which compares the means of three or more groups. The aim of this analysis is to test the null hypothesis suggesting that all means in the groups are equal. The *F*-ratio, which is the ration of two means square values, analyzes the variance among groups. This methodology assumes normal distribution, homogeneity of variances, and independence of observations (Agresti, 2018). When results are significant, means that at least one group mean differs from the rest, post hoc test, such as Bonferroni correction, is performed to determine which specific group means vary.

3.3. Research Design

3.3.1. Survey Design

The language-based randomizer was employed to ensure that the sample meets the objectives of the study. Individuals participated in the online survey after choosing one of the following categories:

- “German/English” refers to a native German speakers who learned English as a foreign language,
- “German only” identifies a native German speaker who does not speak English,
- “English only” indicates a native English speaker who does not speak German.

Following the language choice, participants were provided with instructions. After the review of instructions, subjects were confronted with six impersonal ethical problems. Each dilemma was presented from a second-person perspective, all portraying the individual as a central figure faced with the moral framework. For every scenario participants assessed whether they would be willing to undertake the action by selecting between “yes” and “no” replies. To introduce an additional layer of variety in the survey design, the order of dilemmas presented to participants was strategically mixed, employing a sequential structure that started with a traditional dilemma, transitioned into a business-

related ethical scenario, and culminating with a dilemma in the context of COVID-19. This sequence was repeated, ensuring participants navigated through this combination twice during the experiment, providing an exploration of their judgments across varied situations. After that, participants completed a tree-item test of cognitive reflection. Finally, the demographic section was completed by participants. This section was designed to collect the data regarding participants' gender, nationality, duration of work experience, and whether they hold managerial position within their firms. Each participant was presented with each survey page only once during the experiment to prevent changing initial responses, thereby maintain the reliability of the results.

3.3.2. Questionnaire

The questionnaire (see Appendix) was designed to collect data on participants moral judgment, necessary to analyze the research questions and test the hypotheses of this thesis. The following parts outline the structure of the questionnaire:

1. *Introduction.*

Respondents select their preferred language at the beginning of the poll.

2. *Welcome message.*

It underscores the anonymous character of the survey and states that there are no right or wrong answers. The projected duration for completion is approximately 10 minutes.

3. *Instructions.*

Participants are notified that they will engage with a series of short stories, each describing an ethical dilemma. Individuals are asked to carefully read each story and decide whether they would perform the specified action.

4. *Ethical Dilemmas.*

A series of six impersonal ethical dilemmas was constructed with a following sequential structure:

- 1) Trolley dilemma,
- 2) Report dilemma,
- 3) Vaccine dilemma,

- 4) Crying baby dilemma,
- 5) Nobel prize dilemma,
- 6) Virus spread dilemma.

5. *Cognitive Reflection Test.*

Participants receive the CRT to evaluate their cognitive thinking style. This test includes three questions that have intuitively appealing but incorrect answers, specially designed to distinguish between intuitive System 1 and analytical System 2 thinking.

6. *Demographic Questions.*

Participants provide demographic information, including gender, nationality, work experience, and managerial status.

3.4. Participants and Sample

The study participants were chosen to ensure a diverse and representative sample. The sample was primarily obtained from the DACH-region, vastly from individuals from the German population. All subjects were aged over 18 years.

Individuals in the experimental group were assigned to the foreign-language condition (FL2) to analyze the impact of a non-native language on their ethical decision-making processes. In contrast, participants in the control group were allocated to the native-language condition (FL1) and serve as a baseline for comparison.

3.4.1. Materials

All materials were translated from English to German to provide linguistic accessibility and understanding for German-speaking participants.

A series of impersonal ethical dilemma scenarios were developed as a foundational component of the survey for collecting comprehensive data. Subjects encountered a varies selection of moral dilemmas set within unique context, including two classical dilemmas that explore the complexity of sacrificing one for the collective benefit; two business-related dilemmas that highlight the challenges individuals encounter while addressing ethical issues in the corporate sector; and two dilemmas contextualized within the CORONA-19 pandemic, dealing with the complex ethical choices presented by such extraordinary circumstances. The ethical scenarios introduced in the dilemmas (see Appendix) were partially inspired by or adapted from the research of Moore and colleagues (Moore, Clark, & Kane, 2008).

The Cognitive Reflection Test (CRT) was utilized to examine individual's cognitive thinking style, differentiating between System 1 and System 2. This test presents a problem with an intuitively attractive solution, corresponding with spontaneous System 1 thinking, and generates an immediate and seemingly obvious response. However, upon exposing the initial answer to reflective analysis and more deliberate consideration (System 2), the apparent correctness of the impulsive response is shown to be incorrect (Frederick, 2005). For instance, examine the following issue:

If 2 professors require 2 hours to grade the assignments of 2 students, how long would it take 200 professors to grade the assignments of 200 students?

If an individual exclusively used intuitive thinking, the most attractive response would be 200 minutes. A reflective thinking approach requires a deeper analytical process, ignoring the initial impulse, and conducting that the correct answer is 2 minutes.

3.4.2. Platform

The primary platform used in this study for managing the online survey is Unipark, recognized for its reliability, user-friendly interface, and secure data collection. Furthermore, the experiment was also

published on Amazon Mechanical Turk (MTurk) – an online platform where users complete surveys for monetary compensation.

3.4.3.Data Collection

Out of 336 persons who received the survey link, a pool of 226 individuals engaged to participate in the experiment, resulting in a response rate of 67.25%. Nevertheless, 65 respondents opted to suspend their participation in the survey. As a consequence, comprehensive data from 161 participants, including 48 females and 113 males, was successfully collected through the Unipark and MTurk platforms, providing an overall completion rate of 47.92%.

3.4.4.Procedure

A hyperlink to the anonymous pool has been distributed via the LinkedIn messenger platform to individuals within the authors' personal network of professional contacts. Moreover, the survey link has been sent by email to a broad network of personal contacts and companies, with a particular focus on those located in DACH region. A total of 94 participants actively engaged with the survey, providing data through the Unipark platform. An additional dataset of 67 replies was collected through MTurk platform. The MTurk participants engaged in the study exchanging their time for a compensation of 1,00 EUR. The experiment was conducted in an online setting, ensuring accessibility for participants across three countries.

Of the 161 participants, a total of 79 individuals fulfilled the criteria of proficiency of English as a foreign language. Employing a random assignment method, 45 participants were allocated to the native-language condition (FL1), whereas the remaining 34 participants were assigned to the foreign-language condition (FL2). This strategic allocation aimed to enable an exploration of the impact of foreign language on ethical judgment. Two participants in the FL1 group and five individuals in the FL2 group selected non-DACH nationalities and were subsequently excluded from the study.

Further 82 participants were assigned to the subsets of control group L1 if they reported insufficient knowledge in English as a foreign language and experimental group L2 if English was their native language. 71 individuals completed the survey in German and 11 participants in English, respectively. Five participants in the group L1 have chosen non-DACH nationalities and were consequently eliminated from the study. Seven participants in group L2 were identified as having other nationalities, nonetheless, they were not excluded from the experiment since German is not their primary language, allowing for diverse nationalities.

Consequently, from a final sample of 149 participants, a final total of 72 subjects were randomized into control FL1 (n=43) and experimental FL2 (n=29) groups, while remaining 77 individuals were allocated to the control L1 (n=66) and experimental L2 (n=11) subsets (see Figure 2).

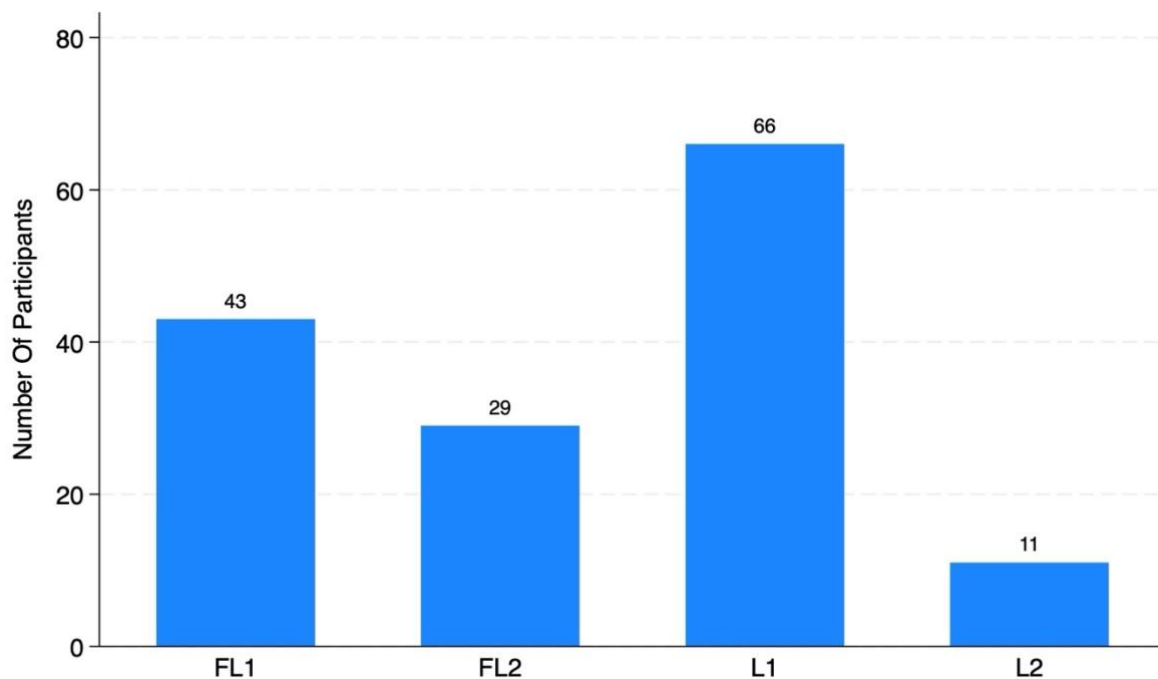


Figure 2. Participants categorized by group assignment.

Source: own representation

Participants had to deal with six impersonal dilemmas. Each moral dilemma included a scenario and two possible responses “yes” and “no” displayed simultaneously on the screen. Each dilemma was

presented individually and remained displayed until individuals responded and pressed the “next” button to continue. Following moral dilemmas, subjects proceeded with three-item cognitive assessment, providing their numerical responses in the designed spaces below each question. All three questions were shown simultaneously and remained visible until participants submitted their answers and selected the “next” button to proceed. The CRT score for each participant was then computed by aggregating their correct responses, resulting in a scoring range from 0 (no correct answers) to 3 (three correct answers). Upon completion of the CRT subjects provided their demographic data, including gender (female, male), nationality (“Austria”, “Germany”, “Switzerland” or other), duration of work experience (“any”, “less than 1 year”, “1-5 years”, “5-10 years”, “more than 10 years”), managerial position (“yes”, “no”).

The ethical decisions of all participants, their CRT responses and demographic information were recorded for the analysis.

3.4.5. Validity

This study demonstrates internal and external validity for reliable results. The **internal validity** is achieved by the following manipulations of IVs:

1. *Random assignment*

Individuals were randomly allocated to either the native or foreign language condition, reinsuring that any variations in ethical judgment is referred to the language rather than pre-existing differences among participants.

2. *Control variables*

Region and gender were kept constant to exclude their influence on the judgment outcome, thus controlling for cultural differences.

3. *Exclusion criterion*

Exclusion criterion based on nationality was applied to ensure the validity of the language manipulation and ensure that native German language remained consistent across participants.

The **external validity** is supported by the diverse and representative sample. By including participants with different work experience and managerial positions, the experiment enhances the generalizability of the findings across different professional contexts.

4. Results and Discussion of the Findings

This chapter applies the previously mentioned methods to the data for a statistical analysis of the study hypotheses. Furthermore, the discussion will connect the empirical findings to the literature review explored in the Chapter 2.

4.1. Results of Hypothesis 1

The Hypothesis H1 examined whether utilitarian judgments significantly increase in impersonal moral dilemmas when presented in a foreign language. To assess the moral foreign language effect at the aggregate level, the means of two language groups were compared. Summary statistics presented in Table 2 indicating that the native-speaking group had a slightly higher mean proportion of utilitarian responses $M_{FL1} = 57.75\%$ compared to the foreign language group $M_{FL2} = 56.32\%$.

Table 2. Summary statistics of the Hypothesis 1.

Variable	n	Mean	SD
FL1	43	0.5775	0.2555
FL2	29	0.5632	0.2332

Source: own representation

No significant difference observed between the means in the native language FL1 group and of the foreign language FL2 group. The chi-square test for the overall proportion of utilitarian responses between FL1 and FL2 groups is as follows: $\chi^2(1) = 0.0204; p = 0.8864$. The results indicate that there is no statistically significant correlation between linguistic groups for the proportion of utilitarian decisions. The extremely low Cramer's V value of 0.0072 signifies a slight association between the groups.

Figure 3 graphically illustrates the mean values of proportion of utilitarian judgments for both language types, reinforcing the absence of a significant difference.

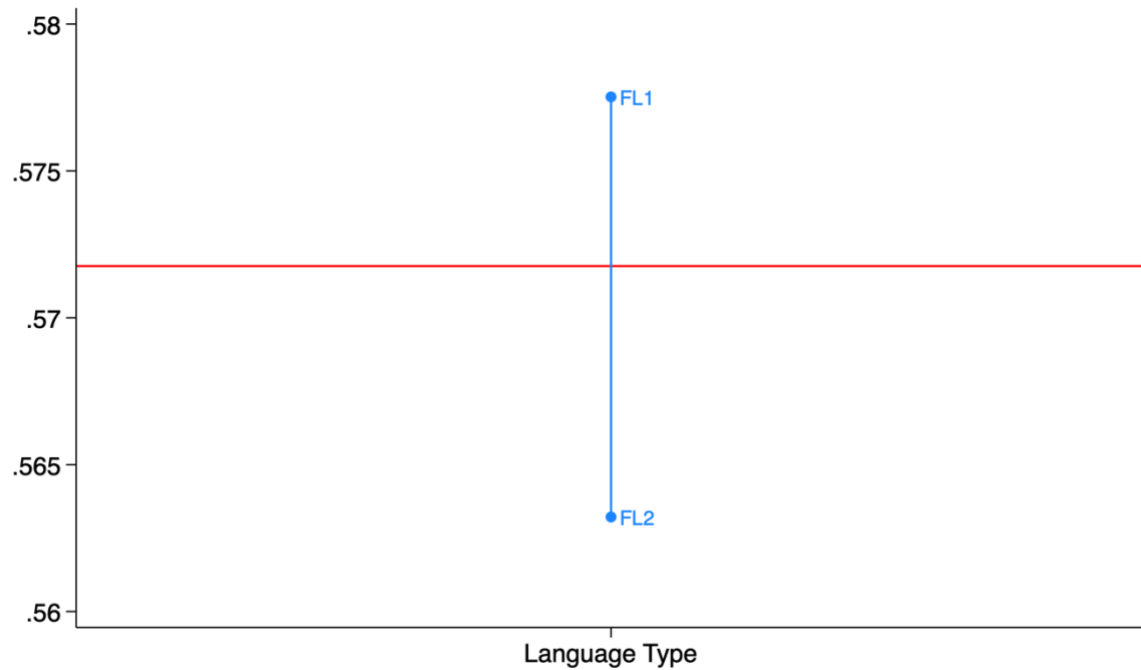


Figure 3. Means of the proportion of utilitarian responses by language type variable.

Source: own representation

Additionally, the variance comparison test results $F(42,28) = 1.2001; p = 0.6183$ indicated that the null hypothesis of equal variances cannot be rejected, hence confirming the validity of the t -test assumption. The two-sided t -test ($t(70) = 0.2411; p = 0.8102$) further demonstrated no statistically significant difference in the dependent variable between the FL1 and FL2 groups.

Table 3. Summarized experiment responses per language type variable.

Variable	Trolley		Report		Vaccine		Baby		Nobel		Virus	
	U	D	U	D	U	D	U	D	U	D	U	D
FL1	30	13	35	8	15	28	15	28	24	19	30	13
FL2	21	8	16	13	14	15	9	20	14	15	24	5

Source: own representation.

To deepen the analysis, each moral dilemmas presented to the participants was analyzed separately.

Table 3 below provides a summary of experimental answers per language group across six scenarios.

The bar chart (see Figure 4) illustrates the ratio of utilitarian judgments among the native and foreign language groups across different ethical dilemmas. Each bar shows the proportion of utilitarian responses for a certain group inside a specific dilemma. This comparison highlights how the language distributed utilitarian replies across different scenarios. While there is a slight visual tendency for a foreign language in Covid-related dilemmas, specifically “Vaccine” and “Virus” indicated higher proportion of utilitarian judgments, commercial scenarios in “Report” and “Nobel” demonstrated the opposite.

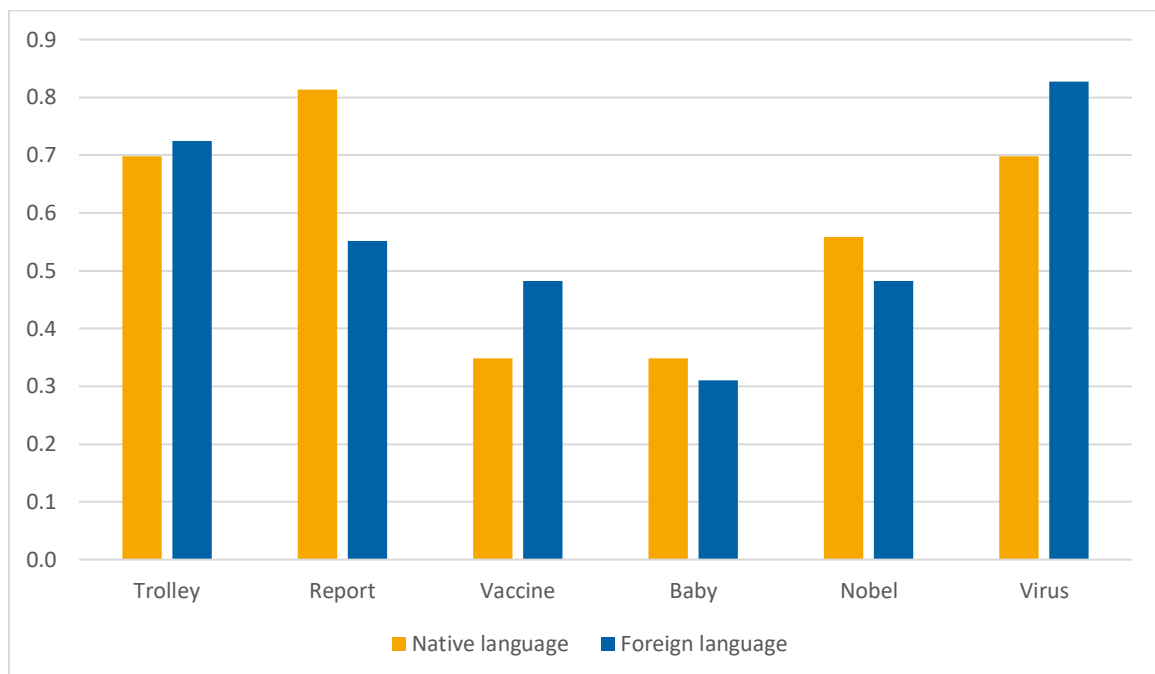


Figure 4. Proportion of utilitarian judgments among native and foreign language groups for each ethical dilemma.

Source: own representation.

To evaluate the MFLE in each dilemma between FL1 and FL2, the overall proportions of utilitarian judgments were analyzed (see Table 4). Consequently, in the “Report” dilemma a significant difference was observed: $\chi^2(1) = 5.7646; p < 0.05$, with the FL1 group showing a stronger utilitarian inclination compared to the FL2 group.

Table 4. Proportion of utilitarian judgments among native and foreign language groups for each dilemma.

Ethical dilemma	FL1	FL2	Chi-square test	Cramer's V
Trolley	0.6977	0.7241	$\chi^2(1) = 0.0587; p = 0.809$	-0.0286
Report	0.8140	0.5517	$\chi^2(1) = 5.7646; p < 0.05$	0.2830
Vaccine	0.3488	0.4828	$\chi^2(1) = 1.2913; p = 0.256$	-0.1339
Baby	0.3488	0.3103	$\chi^2(1) = 0.1155; p = 0.734$	0.0400
Nobel	0.5581	0.4828	$\chi^2(1) = 0.3949; p = 0.530$	0.0741
Virus	0.6977	0.8276	$\chi^2(1) = 1.5589; p = 0.202$	-0.1471

Source: own representation.

To understand the strength of the relationship between the language type and utilitarian judgments, the CRT results were analyzed. The Spearman correlation analysis ($\rho = 0.0396; p = 0.7410$) indicated no association between the CRT scores and utilitarian choices. However, ANOVA results $F(3,68) = 3.99; p < 0.05$) and post-hoc tests with Bonferroni correction revealed, that participants with a CRT score of 2 had significantly lower proportions of utilitarian responses compared to those with CRT scores of 1 ($\Delta = -0.2584; p < 0.05$) and of 3 ($\Delta = -0.1901; p < 0.05$).

Table 5. Proportion of deontological and utilitarian judgments across all language groups.

Group	Total number of D responses	Total number of U responses	Total responses	D Proportion	U Proportion
FL1	109	149	258	0.4225	0.5775
FL2	76	98	174	0.4368	0.5632
L1	178	218	396	0.4495	0.5505
L2	23	43	66	0.3485	0.6515

Source: own representation.

To control for any effects specific to the German language, both FL1 and L1 language types of responses were compared. The FL1 group has a slightly higher mean value ($M_{FL1} = 57.75\%$; $SD_{FL1} = 0.2555$) than the L1 group ($M_{L1} = 55.05\%$; $SD_{L1} = 0.2004$), but the difference is small. The t -test: $t(107) = 0.6164$; $p = 0.5389$ demonstrated that the proportion of the utilitarian responses between these two groups do not significantly differ. The proportion of utilitarian and deontological judgments across all language groups is presented in the Table 5 and Figure 5.

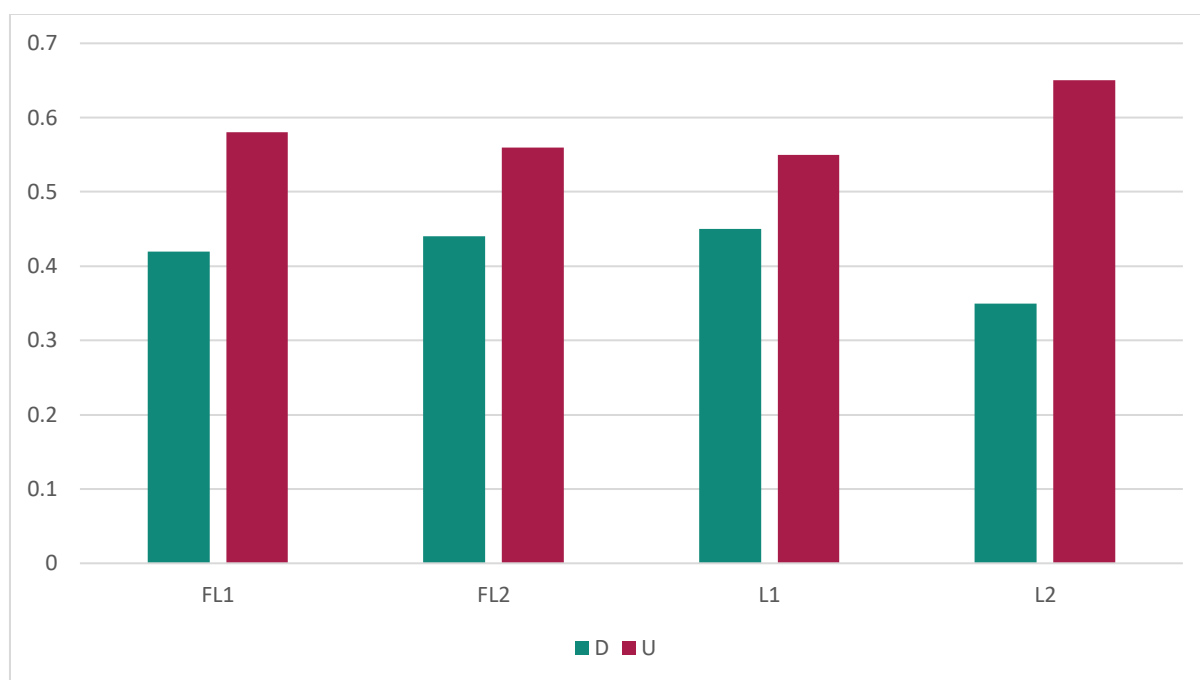


Figure 5. Proportion of deontological and utilitarian judgments across all language groups.

Source: own representation.

To control for any effects specific to the English language, both FL2 and L2 language types of responses should be compared. However, it is important to acknowledge that this group consisted of only 11 participants. Such a small sample size limits the statistical power and reliability of t -test. Conducting t -test under this condition may not demonstrate valid results due to violation of fundamental assumptions described in the Section 3.1. Therefore, the data trends observed within the L2 language type is summarized in the Table 5 and illustrated in the Figure 5.

To sum up, the findings **did not provide evidence to support Hypothesis H1**. The FL1 and FL2 groups do not significantly differ in their proportions of utilitarian responses. Nonetheless, a significant exception was observed in the “Report” dilemma and will be discussed in the next section 4.2.

4.2. Discussion of the Findings of Hypothesis 1

The findings suggest that Hypothesis 1, which proposed that utilitarian responses would significantly increase in impersonal moral dilemmas when presented in a foreign language, is not supported by the data. The results demonstrate no statistically significant difference in utilitarian judgments between the native language (FL1) and foreign language (FL2) conditions and were confirmed by multiple statistical tests.

The results question the foundational basis of FLE, which consider that processing moral dilemmas in a foreign language should reduce emotional engagement, thereby leading to more utilitarian decision-making (Costa et al., 2014; Keysar et al., 2012). According to the dual-process model (Gawronski et al., 2014; Greene et al., 2008; Kahneman, 2003; Moors, 2014; Stanovich & West, 2000), foreign language use is expected to decrease the influence of System 1’s intuitive, deontological judgments, while increasing reliance on the more deliberative, utilitarian reasoning of System 2. However, the lack of significant differences observed in this experiment suggests that the FLE might be less consistent or context-dependent than previously suggested.

The minimal difference between the FL1 and FL2 groups can be interpreted as follows. It is possible that the impersonal dilemmas used in this study did not sufficiently engage emotional responses, which support deontological judgment. This is consistent with previous research by Greene et al. (2001), who found that personal dilemmas are more likely to trigger intuitive, emotion-driven responses, while impersonal dilemmas tend to cause more utilitarian choices, regardless of language. In this study, the impersonal dilemmas may have reduced emotional engagement, thereby minimizing the impact of language on utilitarian judgment.

The significant result of the “Report” dilemma provides an interesting shift from the overall findings related to Hypothesis 1. In this dilemma, the findings indicated a statistically significant difference between the FL1 and FL2 groups, with the FL1 group displaying a stronger tendency toward utilitarian decisions compared to the FL2 group. This raises questions regarding the influence of dilemma type and language on ethical judgment and highlights that specific scenarios may provoke varying responses. However, the current finding that native speakers in the FL1 group exhibited a stronger utilitarian inclination suggests that specific contextual factors in this dilemma could overcome the language effect. The “Report” dilemma involves a business-related scenario that might connect more strongly with participants’ moral frameworks when presented in their native language. Prior literature review found that duty-oriented ethical scenarios may engage deeper societal norms (Treviño & Nelson, 2021), which are more accessible in one’s native language. Therefore, native speakers might approach such dilemmas with a clearer sense of the potential consequences and professional duties, leading to more utilitarian choices in German. This corresponds also with the role of cultural and contextual factors in moral decision-making. Researchers like Ferrell et al. (2011) highlight that professional settings often demand decisions that balance ethical norms with business outcomes. In this case, the “Report” dilemma may activate cognitive processes linked to ethical judgment more effectively in the native language FL1. This observation demonstrates that the utilitarian tendency observed in the FL1 group could stem from a more automatic decision-making process, consistent with the commercial context. The business significance of the scenario may enhance cognitive engagement, thereby reducing the expected MFLE, which is commonly observed in emotionally intense situations, such as personal moral dilemmas (Greene et al., 2001; Geipel et al., 2015). The inconsistency between the findings of “Report” dilemma and the Hypothesis 1 underscores the complexity of the MFLE. While reviewed literature focuses on how foreign languages enhance utilitarian reasoning through emotional distancing, this study’s findings shows that dilemma type also play an important role. The results indicate that in business-related contexts, native languages may facilitate a stronger connection to established norms and duties, leading to more utilitarian judgments.

The CRT aimed to explore the moderation effect of cognitive style on ethical judgments. The Spearman correlation coefficient indicated no significant linear association between CRT scores and the proportion of utilitarian choices. This suggests that, across the participants sample, higher CRT scores do not correspond to an increased utilitarian judgment. However, the one-way ANOVA demonstrated significant differences in the proportions of utilitarian responses among participants with different CRT scores. Post-hoc comparisons using the Bonferroni correction showed that participants with a CRT score of 2 had significantly lower proportions of utilitarian responses compared to those with CRT scores of 1. Furthermore, the findings indicate that individuals scoring 2 on the CRT were less likely to make utilitarian judgments than those scoring 3. Thus, cognitive style may moderate moral decision-making in different languages, though not across all participants.

To investigate effects to German language on moral judgment types, responses of the control group FL1 and subgroup L1 were compared. The aim was to determine whether the replies in German language by native speakers with English knowledge (FL1) versus native speakers who does not speak English as a foreign language (L1) have a significant difference. The results indicated that the FL1 group had a slightly higher mean proportion of utilitarian responses compared to the L1 group. However, this difference was small and not statistically significant. Therefore, language proficiency in English does not significantly affect moral judgment types when the dilemmas are presented in German. Both groups exhibited similar tendencies toward utilitarian and deontological choices. This implies that any observed effects in ethical decision-making are unlikely to be influenced by German language in this study.

Investigating the same for the English language by comparing responses of the experimental group FL2 and subgroup L2 was not possible due to small sample size. Therefore, only descriptive statistics for this specific group was presented in a section 4.1.

The findings of Hypothesis 1 highlight the need for future research to explore how the specific type of dilemma interacts with language effects. Future studies should also include a larger number of participants in the L2 group to enhance the reliability of the results and allow for statistical analyses.

4.3. Results of Hypothesis 2

Hypothesis 2 aimed to determine whether participants with work experience over 10 years will have significantly different moral judgment outcome from those with less than 10 years and whether responders with managerial position will tend to violate expected utility more often. Table 6 presents a summary of the key descriptive statistics used to test the Hypothesis 2, examining differences in work experience and managerial position.

Table 6. Summary statistics of the Hypothesis 2.

Group		n	Mean	SD
Work experience	<10 years	66	0.5657	0.2426
	10 or more years	83	0.5703	0.2084
Managerial position	No	113	0.5782	0.2337
	Yes	36	0.5370	0.1873

Source: own representation.

To test the Hypothesis 2, the work experience is summarized into two groups, where 0 is a group with less than 10 years of experience and 1 are those with 10 years or more (see Figure 6). Individuals with 10 or more years of work experience exhibit slightly higher mean value $M_{\text{work_exp}<10} = 57.03\%$ compared to those with less than 10 years of experience $M_{\text{work_exp}>10} = 56.57\%$. Additionally, the table compares statistics between individuals in managerial and non-managerial positions, providing a variability within each group. Although the DV shows no statistically significant differences across the groups, slight variations can be observed. Specifically, individuals in non-managerial positions display a higher mean $M_{\text{non-manager}} = 57.82\%$ than those in managerial positions $M_{\text{manager}} = 53.70\%$. These findings suggest that while the differences are minimal, they may still offer insights into the influence of work experience and managerial status on the DV.

Figures 6 and 7 illustrate the mean values between the groups, providing a visual representation of the data presented in Table 6.

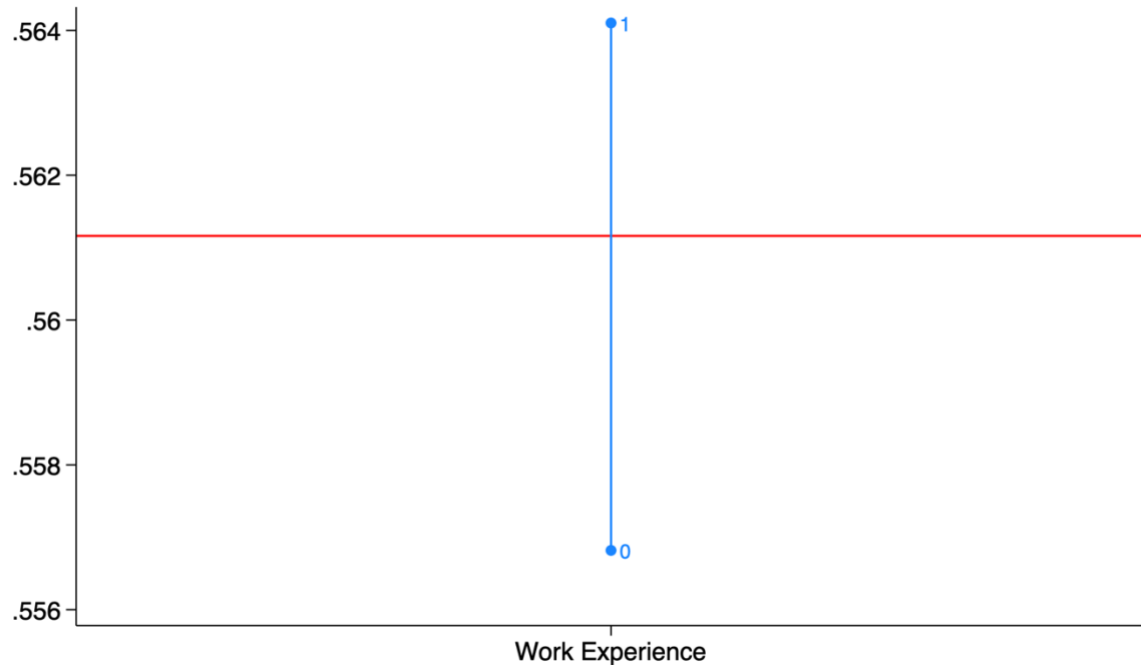


Figure 6. Mean values of the proportion of utilitarian responses for work experience.

Source: own representation.

In terms of the variance equality test, the results for work experience $F(65,82) = 1.3552; p = 0.1923$) and managerial position $F(112,35) = 1.5556; p = 0.1348$) were not significant. This indicates that the variances in both groups are equal, meeting the assumptions required for conducting independent samples t -tests.

However, both t -tests showed non-significant results. For work experience $t(147) = -0.1251; p = 0.9006$, there is no evidence to suggest that the proportion of utilitarian responses differs between those with less than 10 years and those with 10 or more years of work experience. Similarly, in terms of managerial position $t(147) = 0.9616; p = 0.3378$, there is no significant difference in the utilitarian judgment between individuals without a management role and those in a managerial position.

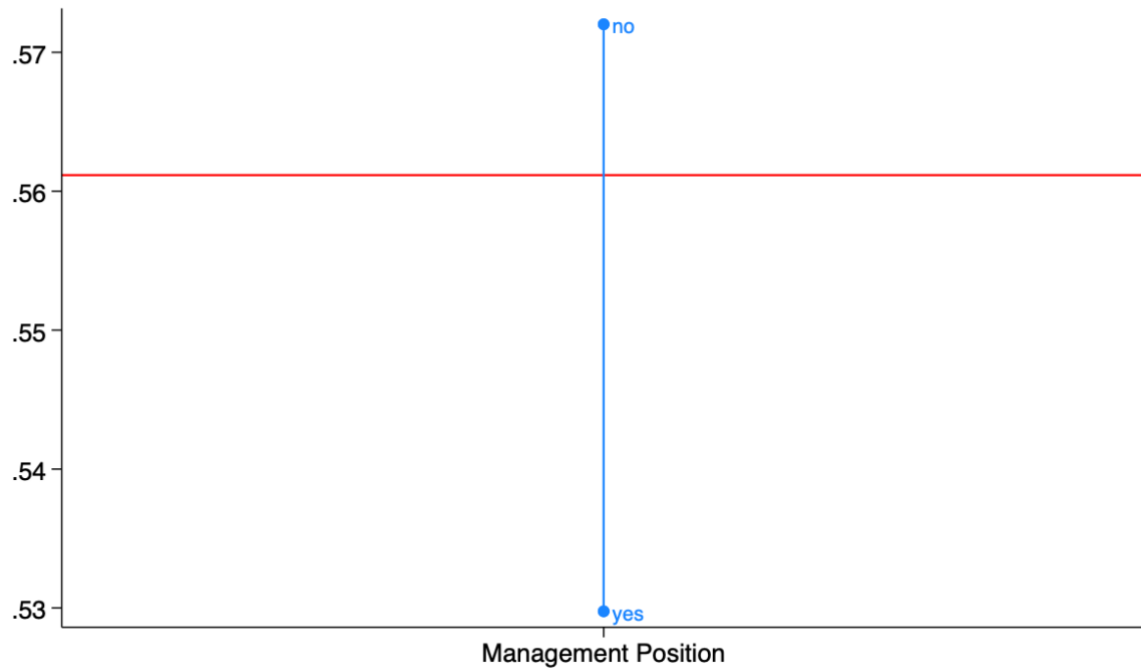


Figure 7. Mean values of the proportion of utilitarian responses for management position.

Source: own representation

Table 7 provides the proportion of utilitarian inclination for each moral dilemma across all categories of work experience. It includes chi-square test results to determine whether there are statistically significant differences in the distribution of responses across the groups. Additionally, Cramer's V is provided to measure the strength of association between the work experience categories and the utilitarian judgment.

While utilitarian inclinations vary across work experience groups for some dilemmas, the differences are mostly not significant, except in the case of the "Report" dilemma. In this dilemma the proportion of utilitarian inclinations varies significantly, ranging from 33.33% to 85.54% across the work experience categories. The chi-square test ($p = 0.004$) is showing a statistically significant difference in utilitarian response across work experience groups. Cramer's $V = 0.3187$, indicating a moderate association between work experience and utilitarian judgment for this dilemma.

Table 7. Proportion of utilitarian responses in work experience groups.

Ethical dilemma	Work Experience					Chi-square test	Cramer's V
	any	<1	1-5	5-10	>10		
Trolley	1	0.6667	0.6842	0.7391	0.6988	$\chi^2(4) = 1.0805; p = 0.897$	0.0852
Report	0.5	0.3333	0.7105	0.5217	0.8554	$\chi^2(4) = 15.1369; p = 0.004$	0.3187
Vaccine	0.5	0.6667	0.4737	0.4348	0.2892	$\chi^2(4) = 5.7766; p = 0.216$	0.1969
Baby	1	0.3333	0.3158	0.3478	0.2410	$\chi^2(4) = 6.4065; p = 0.171$	0.2074
Nobel	0	0.3333	0.5789	0.6087	0.6506	$\chi^2(4) = 4.8258; p = 0.306$	0.1800
Virus	0	0.6667	0.7368	0.6522	0.6867	$\chi^2(4) = 4.9394; p = 0,294$	0.1821

Source: own representation.

For consistency, the Spearman correlation was calculated and there was no significant association between the variables. The results aligned with the earlier findings and showed no significant correlation: $\rho = -0,0024; p = 0,9764$. These findings further validate that work experience, whether assessed in two or four categories, has no significant correlation with moral judgment outcomes, particularly in terms of utilitarian decisions. Thus, work experience and the DV are independent of each other.

Contrary to the **Hypothesis H2**, participants with more than 10 years of work experience **did not show significantly different moral judgments** from those with less than 10 years, thus the null hypothesis H0.2 can be accepted.

The same procedure was repeated for testing the significance in responses with and without managerial position. Table 8 provides the proportion of utilitarian responses for each moral dilemma by managerial position. The results suggest that having a managerial position does not significantly affect the proportion of utilitarian inclinations across the six ethical dilemmas analyzed. None of the chi-square tests in Table 8 show a statistically significant difference in utilitarian responses between those with and

without managerial positions (all p -values > 0.05). The Cramer's V values for all dilemmas indicate very weak association between managerial position and utilitarian judgment.

Table 8. Proportion of utilitarian judgments in managerial position groups.

Ethical dilemma	Managerial position		Chi-square test	Cramer's V
	Yes	No		
Trolley	0.6944	0.7080	$\chi^2(1) = 0.0240; p = 0.877$	0.0127
Report	0.6944	0.7699	$\chi^2(1) = 0.8330; p = 0.361$	0.0748
Vaccine	0.3056	0.3894	$\chi^2(1) = 0.8238; p = 0.364$	0.0744
Baby	0.3056	0.2832	$\chi^2(1) = 0.0665; p = 0.796$	-0.0211
Nobel	0.6111	0.6106	$\chi^2(1) = 0.0000; p = 0.996$	-0.0004
Virus	0.6111	0.7080	$\chi^2(1) = 1.1860; p = 0.276$	0.0892

Source: own representation.

Further, the Spearman correlation test was calculated between the proportion of utilitarian judgments and CRT scores, resulting in $\rho = 0.1004$ with a p -value of 0.2226. This indicates a very weak, positive correlation between CRT scores and the tendency to make utilitarian moral judgments. However, the correlation is not statistically significant, as the p -value exceeds 0.05. This means that individuals who answered correctly and scored higher on the CRT, which measures reflective, analytical thinking, show a slight tendency toward more utilitarian responses, but this tendency is so small that it could easily be due to random variation. The lack of statistical significance further suggests that there is no moderator effect between CRT scores and utilitarian decision-making in Hypothesis 2.

Additionally, the ANOVA test for the comparison of the proportion of utilitarian inclinations across different CRT scores showed the following results (see Table 9). Analysis of variance between groups found that the F -ratio = 1.92 is not significant, as the p -value = 0.1282. Moreover, Bartlett's test for equal variances suggests that the assumption of equal variances is not violated (as the p -value is greater than the significance level $\alpha = 0.05$), meaning that the ANOVA test is valid. None of the pairwise

comparisons between CRT scores groups show significant differences, even after adjusting for multiple comparisons using the Bonferroni method.

Table 9. Proportion of utilitarian judgments across CRT scores.

CRT scores	Interpretation	n	Mean	SD
0	0 correct answers	21	0.5159	0.1659
1	1 correct answer	21	0.6270	0.2577
2	2 correct answers	39	0.5171	0.2501
3	3 correct answers	68	0.5956	0.2063

Source: own representation.

Thus, there is no evidence to suggest that CRT significantly moderate the proportion of utilitarian judgments in the ethical dilemmas. While participants with only 1 correct answer had the highest mean proportion of utilitarian responses $M_{\text{CRT1}} = 62.70\%$, and those without and with two correct answers had lower mean proportions, the differences between groups are not statistically significant. This indicates that cognitive reflection does not have an effect on utilitarian moral decision-making.

To sum up, the **Hypothesis H2** assumption that responders in managerial positions tend to violate expected utility more often **was not supported by the data**. No significant differences were found between managerial and non-managerial participants in terms of their moral judgment outcomes across the dilemmas.

4.4. Discussion of the Findings of Hypothesis 2

In this section, the findings of Hypothesis 2 are integrated with the theoretical framework and literature reviewed in the chapters 2 of this thesis. The hypothesis assumed that participants with over 10 years of work experience would demonstrate significantly different moral judgment outcomes than those with

less than 10 years of experience, and that individuals in managerial positions would tend to violate expected utility choices more often than non-managers.

The results related to work experience showed no significant difference in moral judgment outcomes between participants with over 10 years of experience and those with less than 10 years across ethical dilemmas. This challenges the Hypothesis 2 that work experience would result in significantly different moral judgments, particularly through the lens of dual-process theory (Gawronski et al., 2014; Greene et al., 2008; Kahneman, 2003; Moors, 2014; Stanovich & West, 2000). Dual-process theory assume that System 2 reasoning, which is more analytical, would likely become more refined over years of experience, leading to more utilitarian decision-making. However, this was not supported by the data, where the moral judgments of more experienced and less experienced individuals did not vary greatly.

It would be beneficial to replicate this study using student populations to assess whether individuals with no work experience make similar judgments to those with experience. Comparing these two groups could show the development of moral reasoning over time (Kohlberg, 1969) and clarify the role that work experience plays in affecting ethical decision-making.

The one notable exception was the “Report” dilemma, where a significant difference was observed. In this scenario, participants with more than 10 years of work experience exhibited a stronger tendency toward utilitarian responses. This is consistent with the idea that work experience might impact moral judgments differently, as experienced employees may place greater emphasis on achieving optimal outcomes (Treviño & Nelson, 2021). This assumes that in business scenarios, work experience can indeed influence moral judgment, leading to more utilitarian choices.

Contrary to the Hypothesis H2, no significant difference in moral judgments was found between those in managerial positions and non-managers. This result diverges from the literature, which argue that individuals in managerial roles tend to utilitarian reasoning due to the nature of their responsibilities, which often involves making decisions that impact larger groups (Ferrell et al., 2011). It was expected

that managers, who are frequently required to prioritize organizational goals, would demonstrate a greater tendency to violate expected utility choices in favor of achieving these objectives. However, the data did not support this, with both managers and non-managers showing similar inclinations across the dilemmas.

These results indicate that managerial position alone does not inherently lead to different moral judgments. Instead, other factors, such as individual moral frameworks or organizational culture, can play an important role in shaping moral decision-making. The weak associations between managerial position and utilitarian judgments (as measured by Cramer's V values) further support this conclusion, indicating that managerial status may not be a strong predictor of ethical judgment tendencies in the presented dilemmas.

CRT performance also does not significantly affect the likelihood of making utilitarian moral judgments. The CRT results demonstrate that System 2 does not moderate work experience and managerial position in ethical decision-making.

The findings of Hypothesis 2 raise important questions about the relationship between work experience, managerial status, and ethical judgment. While utilitarianism (Mill & Crisp, 1999) would predict that managers, and those with significant work experience, would prioritize outcomes, the data suggests that these professional characteristics do not significantly alter individuals' moral judgments. This may be because moral decisions are deeply influenced by individual moral principles rather than just executive roles or years of work experience. From a deontological perspective (Kant & Ellington, 1993), the absence of significant differences may indicate that managers and non-managers alike rely on similar moral norms, as all participants were from DACH-region. This finding reflects the idea that ethical judgments are influenced by universal ethical standards, rather than solely by work experience or managerial position.

5. Conclusion

This thesis provides insights into the relationship between language, work experience, and managerial position in ethical decision-making. The study aimed to explore the impact of these factors on ethical judgments in organizations. By addressing how impersonal moral dilemmas presented in both native and foreign languages influence moral judgment, and by examining the role of work experience and managerial position, this research contributes to the understanding of how ethical decisions are shaped in MNCs.

One of the key findings of this study is the relatively limited impact of foreign language on ethical decision-making. Despite the Hypothesis H1 that foreign language use would significantly increase utilitarian decision-making, the data showed no significant difference in moral judgments between participants processing dilemmas in their native versus foreign languages. This finding has implications for MNCs, as it shows that the ethical decision-making process of executives and employees is not significantly change when using a foreign language. This study's results show that the influence of language might be more context-dependent than previously thought. For instance, in routine business decisions (such as compliance with regulations or strategic decisions affecting a wide range of stakeholders), the language in which the problem is presented does not have an effect as hypothesized.

Contrary to expectations, the study also found no significant differences in moral judgment between participants with less than 10 years of work experience and those with more than 10 years, except in the case of the "Report" dilemma. This finding suggests that work experience alone may not significantly change the ethical decision-making process. For international business practice, this has an implications for how companies train their employees and leaders in ethical decision-making. It indicates that work experience may not significantly influence an individual's moral framework in a way that impacts their decision-making across different ethical scenarios.

The finding that managers do not significantly differ from non-managers in their moral judgment challenges the assumption that managerial roles lead to more utilitarian decisions. This has profound implications for both business theory and practice, as it demonstrates that the responsibilities associated with management positions do not automatically result in a more outcome-focused judgments. In MNCs, managers are often expected to balance complex ethical dilemmas that affect not only their immediate teams but also the broader organizational strategy and global market performance. The assumption has been that managers might make more utilitarian decisions, prioritizing the business outcomes over individual interests. However, this study advises that managerial position alone does not predict a significant shift in utilitarian judgment tendencies. This indicates that organizations cannot assume that managers will naturally develop more utilitarian judgments simply by nature of their role. Instead, there is a need for ethical decision-making training for managers too, focusing on both deontological and utilitarian choices, to ensure they are prepared to handle the complex problems they face in a globalized business environment.

Therefore, MNCs may need to place more emphasis on ethical training and moral awareness, regardless of the duration of work experience of their employees or management position and ensure that all employees, regardless of their hierarchical position, have access to tools that enhance their moral framework.

5.1. Limitations and Future Directions

The current research is not without limitations. The first potential limitation for the Hypothesis 1 could be an insufficient sample size. Given the complexity involved in measuring the DV, it is reasonable to consider that increasing the sample size “yield statistically significant results” (Cohen, 1988, p.1). To explore this probability, a statistical power analysis was conducted (see Figure 8). Power analysis is a method used to calculate the necessary sample size to reliably identify a certain effect. The analysis was performed using the primary testing method of the *t*-test. By inputting observed measures, such as

descriptive statistics from the FL1 and FL2 groups, the sample size required to achieve statistically significant results was calculated.

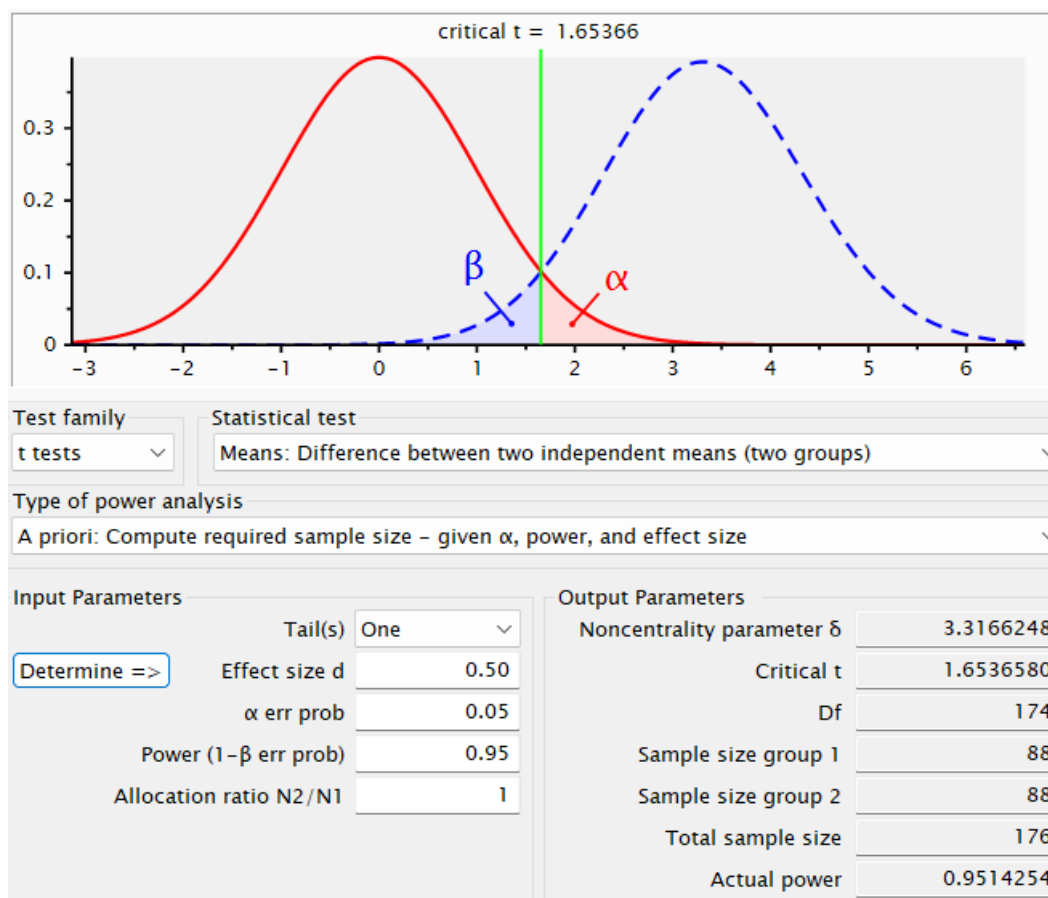


Figure 8. Power analysis.

Source: own representation.

The power analysis focused on the Hypothesis 1, revealing that a minimum of 88 participants is needed in each sample size group FL1 and sample size group FL2, to ensure significant findings. Thus, in the future researchers should consider increasing the number of participants involved in their studies to enhance the robustness of the results. However, it is important to acknowledge that expanding the sample size comes with greater challenges, including increased efforts and higher costs. Therefore, researchers must carefully weigh these considerations when designing their studies to ensure that the potential benefits of a larger sample size justify the additional resources required.

The second potential limitation for the Hypothesis 1 is a family of languages. When conducting experiments using German and English as test languages, a key limitation lies in the fact that both languages belong to the same Germanic language family. This linguistic similarity can lead to reduced moral foreign language effect detachment when German-speaking participants engage with English in a foreign context. Researchers (Cipolletti et al., 2016; Corey et al., 2017; Chan et al., 2016) suggest that emotions are often less intense when expressed in a foreign language, due to cognitive distancing. However, when the foreign language is closely related to a participant's native tongue, as is the case with German and English, this distancing effect may be diminished. This similarity may result in participants experiencing less emotional distance in the experimental context, thereby affecting their responses. As a result, it can be challenging to generalize findings about MFLE in foreign languages when the languages in question are closely related. For future studies, researchers need to consider using languages from different language families (e.g., Romance or Slavic languages) to increase the emotional distancing effect and obtain more reliable results.

German moral dilemmas were translated by the author, which could be seen as a limitation of the current research. This may affect the accuracy of the translation, potentially altering participants' understanding and interpretation of the moral scenarios. In studies involving multilingual content, even minor discrepancies in translation can influence the consistency of responses and the validity of the results. For future research, professional or native bilingual translators should be used to ensure the dilemma scenarios retain their intended meaning across languages for validity of the findings.

Incorporating personal dilemmas into future research is essential for a deeper understanding of decision-making processes. Personal dilemmas offer realistic scenarios that engage participants more authentically, allowing researchers to capture more context-dependent behaviors. Including personal dilemmas provides several advantages. First, it introduces a layer of emotional complexity that is often missing in impersonal scenarios, enabling researchers to study how emotions interact with cognition. Second, personal dilemmas bring ethical dimensions into play, helping to reveal the impact of values, cultural background, and personal experiences on choices. Additionally, personal dilemmas can help

bridge the gap between controlled experimental conditions and real-world application, where the findings become more transferable to real-life situations, which enhances the participant's engagement, leading to bigger data collection.

The type of ethical dilemma presented is very important in impacting how participants respond in decision-making research. Different types of dilemmas used in the present research – such as traditional, business-related, and COVID-19-specific scenarios – offered diverse contextual settings that tested participants' ethical framework. In future research, focusing only on the business-related dilemma type is crucial because these scenarios closely replicate the complexities of real-world decision-making processes that professionals encounter in their daily work environments. Unlike traditional dilemmas that often involve hypothetical situations, business-related dilemmas are directly tied to practical concerns such as profit, stakeholder interests, ethical leadership, and corporate social responsibility.

These findings highlight areas for future research, particularly the need to explore moral judgments in more business context-specific dilemmas. The lack of significant differences across work experience and managerial positions in most of the dilemmas suggests that these factors alone may not strongly influence moral decisions. Future studies could examine whether it is the type of work experience (e.g., ethical decision-making in high-stakes business environments, situations where the consequences of the decisions are significant, involving substantial risks or potential rewards) rather than the number of years that affects moral judgment outcomes.

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Appendix – Questionnaire

English version	German version
Dear Participants, I invite you to take part in the study about moral judgements. The study is anonymous and voluntary. There are no right or wrong answers. Please read the instructions before answering the questions. The survey will approx. 10 minutes of your time. Thank You!	Liebe TeilnehmerInnen, ich lade Sie ein, an der Studie über moralische Entscheidungen teilzunehmen. Die Studie ist anonym und freiwillig. Es gibt keine richtigen oder falschen Antworten. Bitte lesen Sie die Anweisungen, bevor Sie die Fragen beantworten. Die Umfrage wird ca. 10 Minuten Ihrer Zeit in Anspruch nehmen. Vielen Dank!
Instructions On the following pages you will see a series of short stories. Please read them carefully. Please note that some stories refer to things that may seem unpleasant to think about. This is because this study aims to understand people's thoughts in difficult, real-life challenges. After each story, you will be asked to make a decision about whether you would do the described action or not. Choose the answer that best corresponds to your personal opinion and seems best to you. There is no right or wrong answer.	Anleitung Auf den folgenden Seiten finden Sie eine Reihe von Kurzgeschichten. Bitte lesen Sie sich diese sorgfältig durch. Bitte beachten sie, dass einige dieser Geschichten unangenehme Themen behandeln. Der Grund hierfür ist, dass diese Studie darauf abzielt, die Gedanken der Menschen im Umgang mit schwierigen, realen Herausforderungen zu verstehen. Nach jeder Geschichte werden Sie gebeten, eine Entscheidung darüber zu treffen, ob Sie die beschriebene Handlung durchführen würden oder nicht. Wählen Sie die Antwort, die Ihrer persönlichen Meinung am ehesten entspricht und

Trolley Dilemma

A runaway trolley is heading down the tracks toward five workmen who will be killed if the trolley proceeds on its present course. You are standing next to the track on which the trolley is speeding down, but you are too far away from the workmen to warn them of the impending danger. Next to you there is a control switch for the tracks that can reroute the trolley. You could divert the trolley onto another track and spare the five workmen from certain death. However, there is another workman on the new track that will certainly die if you divert the trolley. Would you flip the control switch to redirect the trolley and kill one person in order to save lives of five people?

Report Dilemma

You are working for an automotive steel casting company. You are a part of a small group asked to investigate the cause of an operating problem that

Ihnen am besten erscheint. Es gibt keine richtige oder falsche Antwort.

Straßenbahn Dilemma

Eine außer Kontrolle geratene Straßenbahn fährt auf den Gleisen auf fünf Arbeiter zu, die getötet werden, wenn die Straßenbahn ihre Fahrt fortsetzt. Sie stehen neben dem Gleis, auf dem die Straßenbahn fährt, aber Sie sind zu weit von den Arbeitern entfernt, um sie vor der drohenden Gefahr zu warnen. Neben Ihnen befindet sich ein Schalter für die Weiche, mit der die Straßenbahn umgeleitet werden kann. Sie könnten die Straßenbahn auf ein anderes Gleis umleiten und die fünf Arbeiter vor dem sicheren Tod bewahren. Auf dem neuen Gleis befindet sich jedoch ein weiterer Arbeiter, der mit Sicherheit sterben wird, wenn Sie die Straßenbahn umleiten.

Würden Sie den Schalter umlegen, um die Straßenbahn umzuleiten und eine Person zu töten, um das Leben von fünf Personen zu retten?

Bericht Dilemma

Sie arbeiten für ein Unternehmen, das Stahlguss für die Automobilindustrie herstellt. Sie gehören zu einer kleinen Gruppe, die die Ursache eines

bad developed in the wheel castings of a new Luxury automobile and to make recommendations for its improvement. The problem did not directly create an unsafe condition, but it did lead to irritating sounds. The Director of Engineering, who introduced you to the company, told the group that he was certain that the problem was due to tensile stress in the castings. You and a lab technician conducted tests and found conclusive evidence that the problem was not tensile stress. As you began work on other possible explanations of the problem, you were told that the problem had been solved. A report prepared by your boss strongly supported the tensile stress hypothesis. All of the data points from your experiments have been changed to fit the curves, and some of the points which were far from where the theory would predict have been omitted. The report "proved" that tensile stress was responsible for the problem.

Would you contradict your boss's report being aware of his support for you in the past?

Problems untersuchen soll, das bei Gussrädern eines neuen Luxusautos aufgetreten ist, und die Empfehlungen für dessen Verbesserung aussprechen soll. Das Problem führte nicht direkt zu einem Sicherheitsrisiko, sondern zu störenden Geräuschen. Der technische Leiter, der Sie dem Unternehmen vorgestellt hat, teilte der Gruppe mit, dass er sicher sei, dass das Problem auf Zugspannungen in den Gussteilen zurückzuführen sei. Sie und ein Labortechniker haben Tests durchgeführt und schlüssige Beweise dafür gefunden, dass das Problem nicht auf Zugspannungen zurückzuführen ist. Als Sie mit der Arbeit an anderen möglichen Erklärungen für das Problem begannen, wurde Ihnen mitgeteilt, dass das Problem gelöst sei. Ein von Ihrem Chef verfasster Bericht stützte die Hypothese der Zugspannung nachdrücklich. Alle Datenpunkte aus Ihren Experimenten wurden so verändert, dass sie zu den Kurven passten, und einige Punkte, die weit von dem entfernt waren, was die Theorie vorhersagen würde, wurden weggelassen. Der Bericht "bewies", dass die Zugspannung für das Problem verantwortlich war.

Würden Sie dem Bericht Ihres Chefs widersprechen, obwohl Sie wissen, dass er Sie in der Vergangenheit unterstützt hat?

Vaccine Dilemma

A new epidemic has spread across the globe killing thousands of people every day. You are the first medical researcher who has developed two substances in your laboratory. You know that one of them is a vaccine, but you don't know which because both vials have been mislabeled as vaccine. You also know that the other substance is deadly. Once you figure out which substance is the vaccine you can create more to save thousands of lives. Reproduction of a new sample would take four to six month and delay the vaccination process. You could allow a doctor to inject two unsuspecting patients, who need the vaccine, with these substances without warning them or the doctor that one of the substances is deadly. One person will live, the other will die, and you will be able to start saving lives with your vaccine. Would you let one of these people die from a deadly injection to identify a vaccine that will save thousands of lives?

Impfstoff Dilemma

Eine neue Epidemie hat sich auf der ganzen Welt ausgebreitet und tötet täglich Tausende von Menschen. Sie sind der erste medizinische Forscher, der in Ihrem Labor zwei Substanzen entwickelt hat. Sie wissen, dass eine davon ein Impfstoff ist, aber Sie wissen nicht, welche, da beide Fläschchen fälschlicherweise als Impfstoff gekennzeichnet wurden. Sie wissen auch, dass die andere Substanz tödlich ist. Sobald Sie herausgefunden haben, welche Substanz der Impfstoff ist, können Sie weitere herstellen, um Tausende von Leben zu retten. Die Reproduktion einer neuen Probe würde vier bis sechs Monate dauern und den Impfprozess verzögern. Sie könnten einem Arzt erlauben, zwei ahnungslosen Patienten, die den Impfstoff benötigen, diese Substanzen zu injizieren, ohne sie oder den Arzt zu warnen, dass eine der Substanzen tödlich ist. Eine Person wird überleben, die andere wird sterben, und Sie können damit beginnen, mit Ihrem Impfstoff Leben zu retten. Würden Sie zulassen, dass einer dieser Menschen an einer tödlichen Injektion stirbt, um einen Impfstoff zu finden, der Tausende von Leben retten wird?

Crying Baby Dilemma

Enemy soldiers have occupied your town and threaten to kill all civilians. You, your baby, and ten neighbors are hiding in the basement of a large house. Suddenly, you hear the voices of soldiers who have entered the house to search for valuables to steal. In this instance your baby begins to cry loudly. The crying will attract the attention of the soldiers and they will kill you and the other members of your group. If you turn on a loud furnace, the baby's screams will be muffled. However, the furnace creates a level of heat that is extremely unpleasant for children and adults but deadly for babies. This will kill your baby but save you and your ten neighbors.

Would you turn on the furnace, creating extreme heat in order to prevent the soldiers from discovering you, your baby and the ten neighbors?

Nobel prize Dilemma

You and a fellow researcher have discovered a powerful new energy source that is cheap, safe, and clean. You realize that this could lead to the elimination of pollution and poverty around the

Weinendes Baby Dilemma

Feindliche Soldaten haben Ihre Stadt besetzt und drohen damit, alle Zivilisten zu töten. Sie, Ihr Baby und zehn Nachbarn verstecken sich im Keller eines großen Hauses. Plötzlich hören Sie die Stimmen von Soldaten, die in das Haus eingedrungen sind, um nach Wertgegenständen zu suchen, die sie stehlen wollen. In diesem Moment beginnt Ihr Baby laut zu schreien. Das Weinen wird die Aufmerksamkeit der Soldaten auf sich ziehen und sie werden Sie und die anderen Mitglieder Ihrer Gruppe töten. Wenn Sie einen lauten Ofen anstellen, werden die Schreie des Babys gedämpft. Der Ofen erzeugt jedoch eine Hitze, die für Kinder und Erwachsene äußerst unangenehm, für Babys jedoch tödlich ist. Dies wird Ihr Baby töten, aber Sie und Ihre zehn Nachbarn retten.

Würden Sie den Ofen einschalten und extreme Hitze erzeugen, um zu verhindern, dass die Soldaten Sie, Ihr Baby und die zehn Nachbarn entdecken?

Nobelpreis Dilemma

Sie und ein Forscherkollege haben eine leistungsstarke neue Energiequelle entdeckt, die billig, sicher und sauber ist. Ihnen ist klar, dass dies zur Beseitigung von Umweltverschmutzung

world. However, your colleague wants to sell this discovery to the military, which will turn it into a powerful new weapon. You know your colleague well enough to know that he will sell the discovery to the highest bidder at the first opportunity. You know that he plans to contact the potential buyers through email, some of whom will certainly try to use this as a horrible weapon. You can prevent this by releasing a flammable gas in the lab, so that when he turns on his computer, it will cause an explosion. Everyone will think that it was just a lab accident, and the discovery will not be sold to those who might create a weapon out of it. Would you release the gas, leading to an explosion, to keep this discovery out of the hands of those who might use it as a weapon?

Virus Spread Dilemma

You are a doctor. One of your patients, shows typical symptoms of a COVID-19 infections, but has been tested negative on all known virus types. You are sure he is carrying a new variant of the

und Armut auf der ganzen Welt führen könnte. Ihr Kollege möchte diese Entdeckung jedoch an das Militär verkaufen, das sie in eine mächtige neue Waffe verwandeln will. Sie kennen Ihren Kollegen gut genug, um zu wissen, dass er die Entdeckung bei der ersten Gelegenheit an den Meistbietenden verkaufen wird. Sie wissen, dass er plant, die potenziellen Käufer per E-Mail zu kontaktieren, von denen einige sicherlich versuchen werden, die Entdeckung als schreckliche Waffe einzusetzen. Sie können dies verhindern, indem Sie im Labor brennbares Gas freisetzen, das beim Einschalten des Computers eine Explosion auslöst. Alle werden denken, dass es sich um einen Laborunfall handelt, und die Entdeckung wird nicht an diejenigen verkauft, die daraus eine Waffe herstellen könnten. Würden Sie das Gas freisetzen, was zu einer Explosion führt, damit diese Entdeckung nicht in die Hände derjenigen gelangt, die sie als Waffe verwenden könnten?

Virusausbreitung Dilemma

Sie sind ein Arzt. Einer Ihrer Patienten zeigt typische Symptome einer COVID-19-Infektion, wurde aber auf alle bekannten Virustypen negativ getestet. Sie sind sich sicher, dass er eine

virus but cannot prove it with the lab equipment available in your country. Therefore, the patient should be released from the hospital. The patient has told you, in the confidence of your doctor-patient relationship, that he intends to travel back home tonight for his wedding which takes place tomorrow. Thus, he can infect many people with the new variant, risking their lives. There is no legal way to stop this man from taking the plane home. Even if you warned the police, they would not be able to arrest him, since your medical information cannot be proved. You know that you could change his test result in the hospital's computer which would result in his need to quarantine and inability to board the flight. Would you change this man's test result in the computer, thereby forcing him into quarantine and missing his wedding, in order to prevent him from spreading the virus?

Cognitive Reflection Test

Please answer the following questions by writing your answers in the fields below.

neue Variante des Virus in sich trägt, können dies aber mit den in Ihrem Land verfügbaren Laborgeräten nicht nachweisen. Daher sollte der Patient aus dem Krankenhaus entlassen werden. Der Patient hat Ihnen im Vertrauen auf Ihr Arzt-Patienten-Verhältnis mitgeteilt, dass er heute Abend zu seiner morgen stattfindenden Hochzeit nach Hause fahren will. So kann er viele Menschen mit der neuen Variante anstecken und deren Leben riskieren. Es gibt keine rechtliche Handhabe, diesen Mann daran zu hindern, das Flugzeug nach Hause zu nehmen. Selbst wenn Sie die Polizei warnen würden, könnte diese ihn nicht festnehmen, da Ihre medizinischen Informationen nicht beweisbar sind. Sie wissen, dass Sie sein Testergebnis im Computer des Krankenhauses ändern könnten, was dazu führen würde, dass er unter Quarantäne gestellt und den Flug nicht antreten darf. Würden Sie das Testergebnis dieses Mannes im Computer ändern, so dass er unter Quarantäne gestellt wird und seine Hochzeit verpasst, um zu verhindern, dass er das Virus weiterverbreitet?

Cognitive Reflection Test

Bitte beantworten Sie die folgenden Fragen in den Antwortboxen.

A bat and a ball cost \$1.10 in total. The bat costs \$1.00 more than the ball. How much does the ball cost?

... cents

If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets?

... minutes

In a lake, there is a patch of lily pads. Every day, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half of the lake?

... days

Demographic data

Please answer the following questions.

What is your gender?

- female
- male

How many years of work experience do you have?

- any
- < 1
- 1-5
- 5-10
- > 10

Ein Schläger und ein Ball kosten zusammen \$1,10. Der Schläger kostet \$1,00 mehr als der Ball. Wie teuer ist der Ball?

... Cents

Wenn 5 Maschinen 5 Minuten benötigen, um 5 Gegenstände zu produzieren, wie lange brauchen 100 Maschinen für 100 Gegenstände?

... Minuten

In einem See ist ein Seerosenfeld. Jeden Tag verdoppelt sich die Größe des Feldes. Wenn das Seerosenfeld 48 Tage benötigt, um den See komplett zu bedecken, wie viele Tage benötigt das Seerosenfeld, um den halben See zu bedecken?

...Tage

Demografische Daten

Bitte beantworten Sie die folgenden Fragen.

Welches ist Ihr Geschlecht?

- weiblich
- männlich

Wie viele Jahre Berufserfahrung haben Sie?

- keine
- < 1
- 1-5
- 5-10
- > 10

Do you hold a managerial position?

- yes
- no

What is your nationality?

- Austria
- Germany
- Switzerland
- other

Thank you for your participation!

Sind Sie in einer Führungsposition?

- ja
- nein

Welche Staatsangehörigkeit haben Sie?

- Österreich
- Deutschland
- Schweiz
- andere

Vielen Dank für Ihre Teilnahme!