



Evaluating Ethical Perceptions in Human and Hybrid Decision-Making Across Organizational Cultures

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Abstract

Title: Evaluating Ethical Perceptions in Human and Hybrid Decision-Making Across Organizational Cultures

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This dissertation analyses the influence of hybrid decision-making (a combination of human and AI-based processes) and human-only decision-making on ethical perception, emphasizing the moderating role of organizational culture. Drawing upon Rest's (1986) four-component model of ethical decision-making, the study investigates how cultural types (hierarchy and adhocracy) interact with decision-making processes and how they shape ethical perceptions. Additionally, individual differences in social desirability, ethical orientation, and openness to experience were included as covariates to control for their potential effects.

Using an experimental study, the results showed that participants perceive human-only decision-making as more ethical than hybrid decision-making. Especially in hierarchical cultures, hybrid decision-making was perceived as less ethically consistent than human-only decision-making. However, In adhocracy cultures, both decision-making processes had no significant difference in ethical perception. Moreover, none of the covariates significantly influenced ethical perception, suggesting that organizational and decision-making factors play a larger role. This thesis highlights how organizational culture and technological integration shape perceptions of ethicality in decision-making, offering insights for businesses integrating AI into decision-making processes. While limited by the use of hypothetical scenarios and self-reported measures, this thesis provides a foundation for further exploration of hybrid decision-making in real-world contexts.

Keywords: Hybrid decision-making, ethical perception, organizational culture, AI, hierarchical culture, adhocracy culture

Sumário

Título: Avaliando Percepções Éticas em Tomadas de Decisão Humanas e Híbridas em Diferentes Culturas Organizacionais

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Esta dissertação analisa a influência da tomada de decisão híbrida (uma combinação de processos humanos e baseados em IA) na percepção ética, com ênfase no papel moderador da cultura organizacional. Com base no modelo de quatro componentes de tomada de decisão ética de Rest (1986), o estudo investiga como os tipos culturais (hierarquia e adhocracia) interagem com os processos de tomada de decisão e moldam as percepções éticas. Além disso, diferenças individuais, como desejabilidade social, orientação ética e abertura à experiência, foram incluídas como covariáveis para controlar seus possíveis efeitos.

Utilizando um design experimental, os resultados mostraram que a tomada de decisão híbrida foi percebida como menos consistente eticamente do que a tomada de decisão exclusivamente humana em culturas hierárquicas, mas mais transparente em culturas adhocráticas. No entanto, nenhuma das covariáveis influenciou significativamente a percepção ética, sugerindo que fatores organizacionais e de tomada de decisão desempenham papéis mais relevantes. Esta pesquisa destaca como o contexto organizacional e a integração tecnológica moldam as percepções de ética, oferecendo insights para empresas que integram IA em seus processos de tomada de decisão. Apesar das limitações relacionadas ao uso de cenários hipotéticos e medidas autorreportadas, este estudo fornece uma base para explorar a tomada de decisão híbrida em contextos reais.

Palavras-chave: Tomada de decisão híbrida, percepção ética, cultura organizacional, IA, cultura hierárquica, cultura adhocrática

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Disclosure

I would like to disclose that I used ChatGPT, a large language model, during the preparation of this thesis. The tool was used primarily to enhance clarity and refine the language. Its use was supplementary and always under my critical judgment, ensuring that the thesis's originality, analysis, and conclusions are entirely my own.

This statement is provided in accordance with the guidelines of Católica Lisbon School of Business and Economics to ensure transparency and academic integrity.

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Glossary

AI	Artificial Intelligence
HITL	Human-in-the-loop
α	Cornbach's index of reliability
M	Mean
N	Total Number of cases
p	P Value
SD	Standard Deviation

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1. Introduction

“The rise of AI is likely to be the best or worst thing to happen to humanity.” – Stephen Hawking (2014)

Technological advancements, especially the rise of Artificial Intelligence (AI), have essentially transformed the way organizations operate. AI, a key component of the fourth industrial revolution, or Industry 4.0, has introduced innovations that simplify decision-making processes while raising significant ethical concerns (McKinsey & Company, 2017; Peckham, 2021).

According to a 2022 report by McKinsey, the use of AI in organizations is steadily growing. The report emphasizes that 50% of organizations use AI functions in at least one business area (McKinsey, 2022). Moreover, AI-related technologies are forecasted to contribute \$15.7 trillion to the global economy by 2030, showing the strategic relevance of AI for organizational growth (*PwC’s Global Artificial Intelligence Study | PwC, 2024*).

AI has no standardized definition since it is often context-dependent. It can occur in many fields, such as computer science, cognitive science, robotics, and more (Russell & Nerving, 2020). In the workplace, it can be defined as follows: “AI system is a machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations or decisions influencing real or virtual environments. It uses machine and/or human-based inputs to perceive real and/or virtual environments [...]” (Lane & Williams, 2023, p.11).

With the steady growth of AI, new ethical concerns are emerging. According to Mills (2013), the three major ethical concerns that come with the rise of AI for society are privacy and surveillance, bias and discrimination, and the role of human judgment.

Although research has already been conducted on AI's technological and ethical implications for organizations, the literature lacks an understanding of the influence of organizational culture on shaping ethical perceptions of AI-driven decision-making processes. Organizational culture is an important aspect of decision-making processes, with different types, such as hierarchy and adhocracy, having an influential role (Quinn & Cameron, 2011). Hierarchical cultures emphasize structured, top-down decision-making processes, while adhocracy cultures focus on flexibility, innovation, and decentralized authority (Alsaqqa & Akyürek, 2021).

1.1 Relevance of the topic and problem statement

The rising integration of AI within organizational decision-making increases efficiency, consistency, and data-driven insights (Davenport & Ronanki, 2018). Nevertheless, organizations' adoption of AI systems to support or replace human decision-making raises new questions regarding how these systems align with ethical standards (Jobin et al., 2019). Ethics play an important role when it comes to protecting organizations from biases, legal issues, and trust violations (Han, 2022). Moreover, ethics also influences company culture regarding employee satisfaction, productivity, and keeping a good relationship with customers and business partners (Han, 2022).

Recent studies highlight the potential ethical risks of fully automated decision-making systems, such as the lack of contextual sensitivity in ethical dilemmas (Mittelstadt et al., 2016). For instance, AI-driven hiring decisions have resulted in discriminatory practices when algorithms were found to disproportionately disadvantage certain demographic groups, such as certain gender, race, skin colour, and personality traits (Chen, 2023; Lambrecht & Tucker, 2019). In contrast, human-driven decisions can be prone to biases (Johnson, 2021). Hybrid decision-making (AI + human) also leads to concerns such as cognitive workload in evaluating AI-generated outputs or trust and transparency (Neyigapula, 2023). These contrasting problems can lead to challenges for organizations in providing the best solution in terms of decision-making and ethical outcomes. However, most experts are against fully automated decision-making due to the lack of accountability, misjudgment, or transparency issues (Mills, 2013; Silberg & Manyika, 2019). Given the current limitations and complexities of fully automated decision-making, the most realistic approach at present is either fully human-led decision-making or a hybrid model, which is this thesis's focus.

The gap in understanding how organizational culture influences the perception and ethical evaluation of AI-driven decision-making intensifies this problem. Different organizations have different cultures that influence how decision-making is perceived, especially regarding transparency and trust (Müller, 2020). If not carefully aligned, AI systems could undermine the ethical principles valued in certain cultural contexts, leading to internal resistance, a breakdown in trust, or ethical violations (Müller, 2020).

Therefore, this thesis examines how combining human and AI inputs (hybrid) or relying on human-only decision-making influences ethical decision-making outcomes, particularly when

examined across different organizational cultures (hierarchy vs adhocracy culture). To analyze the problem and identify the research gap, the following overarching problem statement has been developed:

This study explores how hybrid (human + AI) and human-only decision-making processes impact ethical outcomes in organizations, focusing on the potential moderating role of organizational culture. Understanding this relationship is essential as organizations navigate the integration of AI while striving to maintain ethical standards. To answer the problem statement, the following research questions have been determined:

RQ1: How is a hybrid (AI + human) decision-making process perceived ethically in comparison with a human decision-making process?

RQ2: To what extent does the structure of an organization's culture (hierarchy vs. adhocracy) influence the ethical perception of decisions made through hybrid and human-only decision-making?

1.2 Academic and managerial relevance

This research fills a gap in the current literature by exploring the interconnection between different decision types (hybrid vs. human-only) and organizational culture (hierarchy vs. adhocracy culture). There has been significant discussion around AI and ethics, such as the study by Olatundun Olatoye et al. (2024), which analyzes the ethical implications of AI in the context of corporate responsibility, or the research by Santoni de Sio (2024), which investigates how the implementation of AI affects job losses and other social issues. However, as far as I know, no studies have examined how these decision-making approaches interact specifically with organizational cultures. The novelty of this research lies in addressing how hybrid decision-making models operate within distinct cultural frameworks, particularly how these models are perceived in terms of ethical transparency. Thus, this thesis connects the two by focusing on the cultural factors that affect the ethical evaluation of these decision-making types within organizations.

From a managerial view, this research can help to show organizations how they can implement AI within their decision-making processes without risking a negative impact on ethical standards. Managers increasingly use AI technologies to improve efficiency; however, this can also often lead to ethical challenges and trust issues in AI-driven decisions (Martin, 2019). By highlighting the moderating role of organizational culture, this study provides managers with actionable knowledge

on creating an environment where AI can complement human decision-making while maintaining ethical integrity. The findings will provide insights into how individuals in hierarchical and adhocracy cultures may perceive AI integration, particularly in terms of its alignment with ethical values and organizational principles. This understanding could guide future decisions on implementing AI in ways that encourage positive ethical perceptions across different cultural contexts.

1.3 Structure of the thesis

A correlational and experimental study will be conducted to analyze the current research gap. After the introduction and problem statement, a literature review will be provided, analyzing the following concepts: Artificial Intelligence, decision-making types, ethical decision-making and organizational culture. The managerial and academic implication section will follow this. Then, the research methodology will be elaborated, including detailed information on the research design, participants and sample, procedures, measures of variables, data collection methods, and data analysis. After the methodology, the results will be analyzed and discussed. Then, limitations and possible future research will be elaborated. Lastly, the conclusion will include a summary of the most relevant results and their further implications.

2. Literature Review

2.1 Artificial intelligence

Artificial Intelligence (AI) is "the theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages" ("The Oxford Dictionary of Phrase and Fable," 2005). Using AI in organizational decision-making is becoming increasingly important (Martin, 2019). AI plays an important role in organizations since it improves efficiency and facilitates data-driven insights (Johnson, 2021). However, it can have both positive and negative impacts on organizations. According to Peeters et al. (2021), if managed well, hybrid decision-making (AI and human) can reduce cognitive biases, improve decision accuracy, and provide a balance between data-driven insights and human contextual awareness. Nevertheless, some challenges could lead to negative ethical perceptions, such as algorithmic bias, lack of accountability, and reduced transparency in decision-making (Peeters et al., 2021). These issues could lead to trust issues among stakeholders or result in potential reputational and legal costs (Mittelstadt et al., 2016). Thus, when implemented effectively, AI can improve trust due to more consistent decisions, providing a competitive advantage to organisations that use AI transparently (World Economic Forum, 2023). There are multiple ways in which AI can be used in decision-making, as we will discuss after understanding different types of decision-making.

2.2 Decision-making types

Decision-making types can be described as frameworks or processes by which decisions are made within an organization (Handoyo et al., 2023). Depending on the framework, it can significantly impact organizational outcomes and influence factors such as efficiency, objectivity and ethical perception (Handoyo et al., 2023). Therefore, understanding decision-making types is highly important as it influences how decisions are perceived, especially when factors like AI or human input impact these decisions. Moreover, this affects trust and transparency in organizational processes (Glikson & Wooley, 2020). The two main types of decision-making that will be analysed within this thesis are hybrid decision-making and human-only decision-making.

2.2.1 Human-only decision-making

Single-type decision-making processes rely on one type of decision-making entity, which can be either human-driven or AI-driven, but not a combination of both. In human-only decision-making, decisions are influenced by experience, intuition, and ethical values, which can be shaped by organizational culture, training, and personal beliefs (Simon, 1997). This approach benefits from a good contextual understanding and moral consideration that individuals have. However, these might also be prone to biases and inconsistencies (Keles, 2023). The other approach is when only AI makes decisions. This happens based on pre-defined criteria and algorithms, which results in consistent and transparent processes (Zerilli et al., 2019). However, AI-driven decision-making is driven by data analysis, machine learning models, and programmed algorithms that act without human intervention (Günther & Kasirzadeh, 2021). Although these decisions are consistent, objective, and efficient, this creates the risk of less sensitivity to context and human ethical standards (Floridi et al., 2018). This thesis will focus on human-only decision-making as it is organizations' most common decision-making approach. Furthermore, AI-only decision-making is still relatively underexplored and needs additional investigation (Trunk et al., 2020).

Therefore, the research will focus on the advantages and disadvantages of human-only decision-making. The advantage of human-only decision-making is interpreting complex and context-dependent situations and considering social and cultural norms that AI might miss (Glikson & Woolley, 2020). A meta-analysis by Karelaia and Hogarth (2008) states that the judgment of an expert often outperforms algorithm models in environments with high levels of uncertainty and incomplete information. The analysis, which includes 86 studies across 249 different task environments, emphasizes how human experts excel when information is vague and unclear since they can rely on experience-based heuristics and deep contextual understanding (Karelaia & Hogarth, 2008). These qualities help professionals deal with complex, ill-structured problems that require flexibility and adaptability, which are less inherent in AI-driven decision-making processes that usually rely upon pre-defined and pre-trained criteria and lack dynamic learning (Karelaia & Hogarth, 2008). Moreover, Karelaia and Hogarth (2008) found that experts were uniquely effective under tasks involving high variability and interdependency between variables. This is because human decision-makers consider nonlinear relationships and interactively adapt their strategies based on unfolding scenarios (Karelaia & Hogarth, 2008). In nonlinear relationships, the relationship is not consistent, predictable, or proportional, the variables rather interact in complex

or dynamic ways (Williams, 2021). For instance, in clinical settings, doctors often consider attributes such as patient emotions and other subtle cues hardly reducible to algorithmic models, making decisions more holistic (Miller et al., 2018).

However, the risks that come with human-only decisions must also be considered. Although human judgment is more adaptable, it is also prone to biases, such as overconfidence and anchoring, especially in high-pressure situations (Tversky & Kahneman, 1974). These biases can potentially lead to systematic mistakes in judgment, especially when experts operate in conditions of information overload or when personal biases influence decisions (Tversky & Kahneman, 1974). Therefore, hybrid decision-making models can be more effective in some cases since they combine humans' contextual sensitivity with AI's consistency and scalability (Chien & Danks, 2024; Shneiderman, 2021).

2.2.2 Hybrid decision-making

Hybrid-decision making is a collaborative approach where both human judgment and AI-driven processes influence decision outcomes (Nilsson, 2011; Simon, 1996). This approach enhances the strengths of human judgment and machine-driven analytical capabilities to increase decision accuracy and efficiency (Nilsson, 2011). Hybrid systems are especially effective in complex situations, where combining human experience and machine learning can reduce biases (Jia et al., 2024).

In organisational settings, the integration of AI systems varies in terms of fully automated systems or hybrid models (Duan et al., 2019). With hybrid systems, there are different types, such as human-in-the-loop, where AI provides recommendations, but humans make the final decision (Wang, 2019). Then there is human-on-the-loop, where AI systems operate autonomously but can be monitored and overridden by humans if needed (Leins & Kaspersen, 2021). A third option is human-out-of-the-loop, where AI makes decisions with little to no human intervention, but humans set parameters and goals (DeKeyrel, 2024). This thesis will focus on human-in-the-loop, as this is the most common hybrid decision-making approach (Mosqueira-Rey et al., 2022).

Studies have shown that a hybrid approach can positively influence organizational outcomes by aligning AI's speed and pattern recognition capabilities and the contextual understanding and ethical considerations of human decision-makers (Fosso Wamba et al., 2015; Kaplan & Haenlein, 2019). Nevertheless, even in hybrid decision models, there are potential drawbacks such as increased complexity in decision processes and a lack of transparency when it

comes to accountability (Kaplan & Haenlein, 2019) Therefore, the hybrid models' key challenge is ensuring that the combined decision-making process is perceived as transparent, trustworthy, and accountable (Morozov, 2013).

A conceptual and empirical study by Peeters et al. (2021) explores how hybrid decision-making impacts moral behaviour by analyzing how the alignment between AI recommendations and human moral intent influences ethical outcomes. The research states that integrating AI into decision-making processes can positively influence ethical considerations by providing data-driven insights that support human judgment. Nevertheless, it also shows that a misalignment between AI recommendations and human moral intent can lead to ethical conflicts and reduce trust in this process (Peeters et al., 2021).

2.3 Ethical perception

The following chapter will discuss decision-making processes and its ethical implications. Before that, ethical perception will be defined. Ethical perception is the ability of an individual to recognize and evaluate the ethical implications of a situation or decision (Rest, 1986; Velasquez et al., 2015). The authors argue that ethical perception in a working environment is formed by personal beliefs, organisational culture, and contextual factors that influence how individuals judge fairness, transparency, accountability, and the possible consequences of decisions.

2.4 Ethical decision-making

Since ethical perception will be of great relevance in this research, Rest's (1986) four-component analysis will be used to understand how an individual's moral decision-making process is shaped by their ability to recognize a moral issue, make a moral judgment, establish moral intent, and engage in ethical behaviour, particularly within varying organisational contexts (see Figure 1 for diagram of Rest's model). While Rest's model has traditionally been used to analyse actual ethical issues, this study extends its use to perceived ethicality. This adaptation is justified by the assumption that differences observed in actual ethical behaviour may also shape perceptions of ethicality.

Rest's (1986) four-component model was selected over other ethical decision-making models because it provides a comprehensive view of the ethical decision-making process by breaking it down into specific stages. Unlike other frameworks focusing only on the final decision or specific cognitive processes, Rest's model emphasizes the progression from recognizing a moral

issue to engaging in moral behaviour. Another example is Ferrell and Gresham's contingency framework (1985), which concentrates on situational factors and how they impact ethical decision-making outcomes. However, this views decision-making through a lens of external and individual factors such as organizational culture or values and attitudes (Ferrell & Gresham, 1985). It does not delve deeply into the cognitive stages leading up to the decision. Moreover, there is Trevino's Person-Situation Interactionist Model (1986), which highlights the interaction between individual characteristics and situational influences on ethical behaviour, particularly emphasizing how these factors influence the final moral judgment or decision rather than exploring earlier stages of the decision-making process.

According to Rest (1986), recognizing a moral issue is the first step in ethical decision-making, where a person identifies an ethical concern. He argues that it is a process of perceiving and interpreting an issue as morally relevant. Some of the variables influencing the recognition of a moral issue are personal values, moral sensitivity, and specific contextual elements, like organizational norms or policies (Rest, 1986). He found that the ability to perceive moral issues provides the basis for the subsequent steps since individuals who do not perceive the moral component of a situation possibly will not take further steps in the ethical decision-making process.

Once the moral issue has been recognised, the second stage is where the individual makes a moral judgment (Rest, 1986). This involves evaluating the morally relevant aspects of a situation and considering the right course of action. According to Rest (1986), this stage requires cognitive and moral reasoning to assess the ethicality of different alternatives. Moral schemas (i.e., internalized beliefs about fairness or justice that guide ethical decision-making) and balancing action consequences and personal and social values are involved (Rest, 1986). Moreover, individuals use ethical frameworks, such as deontology or consequentialism, to evaluate whether the decision meets minimum moral standards before taking further action (Rest, 1986). Deontological emphasizes duties and principles and often dominates human decision-making when there are organizational policies to guide ethical behaviour (Davis et al., 1998; Treviño et al., 2006). However, when the individual faces a scenario without clear rules, utilitarian principles might be applied to assess outcomes and determine the most beneficial course of action (Davis et al., 1998; Treviño et al., 2006).

After the individual has made the moral judgment, establishing moral intent is about prioritizing ethical values over other competing interests, such as self-interest or external pressure

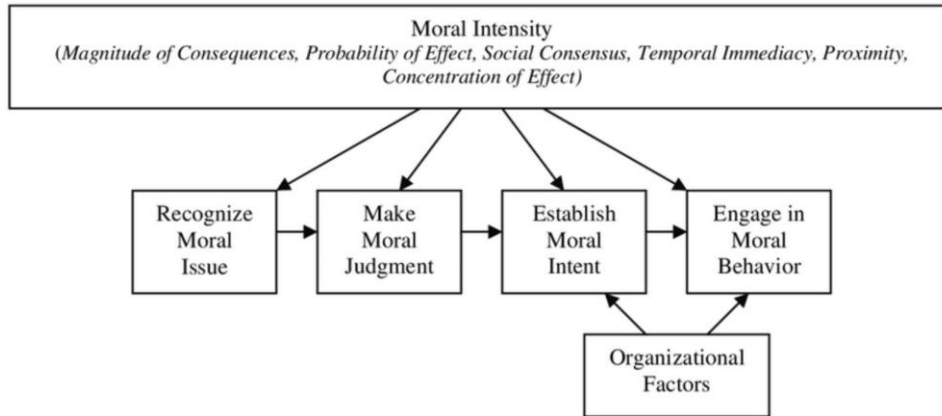
(Rest, 1986). However, even if the right course of action is identified in this stage, factors such as personal desire, organizational expectations, or social influence can lead the individual to choose a less ethical path (Rest, 1986). Therefore, establishing a moral intent means committing to one's moral judgment despite possible opposing forces (Rest, 1986). In organizational contexts that reward and support ethical behaviour, individuals tend to prioritize ethical considerations in their decision-making (Rest, 1986). So, when organizational incentives are misaligned, ethical behavior could suffer (Treviño et al., 2006). This shows the importance of establishing a supportive ethical culture to enforce moral motivation among employees (Treviño et al., 2006).

The last stage, engaging in moral behaviour, is about taking action based on an individual's moral intent and judgment (Rest, 1986). It requires the individual to have courage, perseverance, and strength of character to stick to their ethical decision even if one could face negative consequences (Rest, 1986). The theoretical becomes practical in this stage since the ethical decision is being implemented. External factors, such as organizational support or peer pressure, can heavily influence whether someone engages in moral behavior (Rest, 1986). Research states that when a moral character is lacking or the individual faces conflicting priorities, ethical decisions are often not made, leading to negative ethical perceptions within the organization (Bazerman & Tenbrunsel, 2014).

This thesis will comprehensively analyse how ethical decision-making is perceived in different organisational cultures by examining all four stages of Rest's (1986) model. It also investigates how AI involvement in decisions affects each stage of the ethical process compared to traditional human-only decision-making. This thorough approach captures the full scope of ethical perception and behaviour across different decision-making contexts.

Figure 1

Rest's four-component model of ethical decision-making



Note. Ethical decision-making process adopted from Rest (1986)

2.4.1 Hybrid decision-making and ethical perception

How might the use of hybrid decision-making be perceived through the lens of Rest's (1986) four-component model? To answer this question, this paragraph analyses how the involvement of AI influences decision-making and its ethical implications. Specifically, it explores the relationship between hybrid decision-making and ethical perception. Although this research focuses on ethical perceptions, Rest's (1986) model provides a framework for understanding different decision-making approaches' potential real-world ethical impacts. By analyzing the ethical issues associated with hybrid decision-making, this study investigates whether perceptions align with these expected ethical impacts.

In the first stage of recognising a moral issue, the hybrid system needs to recognize the ethical relevance of a situation, which could differ between human and AI perspectives due to varying levels of moral sensitivity and contextual awareness (Rest, 1986; Treviño et al., 2006). AI can identify patterns and abnormalities based on data; however, it could overlook moral issues that a human could detect, such as the implications of a decision on employee well-being (Rest, 1986; Treviño et al., 2006). Therefore, a combination of both, so hybrid, could provide the analytical precision of AI while incorporating the ethical awareness and contextual understanding of human

judgment. This stage shows the importance of creating hybrid systems that effectively integrate humans' ethical sensitivity with AI's data-driven exactness, which is important for understanding how these systems influence ethical perception.

In the second stage of moral judgment, the hybrid system must align AI-driven analytical outcomes with human moral reasoning. This may include weighing the ethical implications of different choices and comparing them against organizational and societal values. Research has demonstrated that combining utilitarian decision frameworks with the deontological view may sometimes create conflicts (Dietvorst et al., 2015; Rest, 1986). This stage shows how the alignment between AI's utilitarian approach and human deontological reasoning could shape ethical perceptions, highlighting the need for mechanisms in hybrid systems to decrease potential conflicts.

In the third stage, establishing a moral intent, hybrid decision-making could influence an individual's commitment to act ethically. A possible risk is when a human decision-maker heavily relies on AI recommendations, which could result in less ownership over the moral consequences and potentially weaken their moral intent (Sun & Ye, 2023). Therefore, in this stage, organizational culture and internal policies play an important role as they can either reinforce or undermine moral intent, depending on the alignment of AI recommendations and ethical norms (Rakova et al., 2020). The implication is that accountability and ownership must be ensured to decrease the risk of unethical decisions (Rakova et al., 2020).

In the last stage, engaging in moral behaviour, hybrid decision-making can either simplify or impede ethical actions, depending on how well the system supports individuals in implementing decisions. External factors such as organizational support for hybrid decision systems and transparency about AI's role in decision-making can heavily influence whether ethical behaviour is carried out (de Fine Licht & de Fine Licht, 2020; Rest, 1986). Therefore, one needs to ensure transparency and support for hybrid decision-making systems are given to influence the impact on ethical outcomes positively.

While hybrid decision-making presents certain challenges, research suggests this approach can promote more positive ethical outcomes within organizations. Based on prior research, Kaplan and Haenlein (2019) state hybrid decision-making will likely lead to more positive ethical perceptions because it balances AI's objectivity with human moral judgment, reducing biases and

enhancing transparency. Therefore, based on previous literature and research, the following hypothesis has been established:

H1: Hybrid decision-making (AI + human) leads to more positive ethical perceptions across all stages of the ethical decision-making process compared to human-only decision-making.

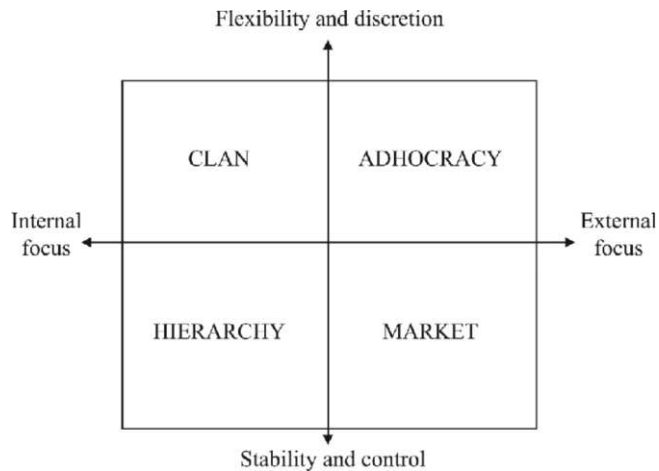
2.5 Organizational culture

Organizational culture refers to shared values, beliefs, norms, and behaviours among members of an organization (Watkins, 2015). Organizational culture is important as it shapes how employees interact with each other and external stakeholders. Moreover, it influences decision-making, motivation, and overall business performance (Alvesson, 2012). Culture can act as an asset or a liability, depending on how well it aligns with an organization's goals and environment (Alvesson, 2012). When well aligned, it can positively impact performance; however, when misaligned, it can lead to negative consequences (Alvesson, 2012).

Cameron and Quinn (2011) state that organisational culture has different typologies (see Figure 2 for typologies). The authors state that the key typologies are clan culture, adhocracy culture, hierarchy culture, and market culture. Other models of organizational culture include Schein's model (1985), which categorizes culture into three levels: visible artefacts, espoused values, and underlying assumptions. Another one is Hofstede's framework (1980), which explores cultural dynamics across dimensions such as power distance and uncertainty avoidance, using a comparative approach that is especially relevant to multinational organizations. However, this study uses Cameron and Quinn's Competing Values Framework (2011) due to its focus on different culture types and its practical applicability in connecting cultural typologies to organizational performance and decision-making processes. The first typology, clan culture, is a collaborative culture that focuses on internal flexibility and teamwork and values communication and participation (Quinn & Cameron, 2011). Adhocracy culture is more about innovation and risk-taking, focusing on external flexibility and quickly adapting to new opportunities and changing environments (Quinn & Cameron, 2011). Market culture is externally focused and puts emphasis on control, prioritising competitiveness, results, and achieving organizational goals (Quinn & Cameron, 2011). The last typology is hierarchy culture, which is internally focused, valuing stability and focusing on structure, procedures, and maintaining control within the organization (Quinn & Cameron, 2011).

Figure 2

Organizational cultures typology of Cameron and Quinn (1999)



Note. Organizational cultures typology adopted from Cameron and Quinn (1999)

How might culture relate to ethical decision-making in the context of human-only and hybrid decision-making? While decision-making types influence how ethical outcomes are perceived, these processes do not operate in isolation (Glazer & Karparti, 2014). They are also shaped and influenced within the broader framework of an organization's culture. Although this thesis focuses on ethical perceptions, the analysis of culture's actual impact on ethical decision-making provides a critical foundation for analysing whether perceptions align with or diverge from these real-world impacts. By analyzing the actual impacts, the thesis explores whether perceived ethicality reflects the expected influence of organizational culture.

This thesis will focus on hierarchical and adhocracy cultures. Hierarchical culture is typically prevalent in large and traditional organizations and industries that emphasize stability, structure, and control (Koberg & Hood, 1991). It is often observed in industries like government or finance, where maintaining stability and control is critical (Quinn & Cameron, 2011). Adhocracy culture, on the other hand, is associated with innovation and flexibility, making it more common in innovation-driven sectors like technology and start-ups, where adaptability and responsiveness are crucial (Quinn & Cameron, 2011). These two cultural types represent contrasting approaches to organizational priorities, on the one hand focusing on control and predictability and on the other hand on adaptability and innovation (Quinn & Cameron, 2011). This thesis explores how these

contrasting environments influence ethical decision-making processes and perceptions within these two cultures.

While also significant, the market and clan cultures were not included to maintain the thesis focus on the contrasting dynamics between stability (hierarchy) and adaptability (adhocracy). Including all four types could have expanded the study and made it out of scope. If market and clan cultures had been included, additional ethical perception factors could possibly arise. For example, market culture, with its emphasis on competition and results, might influence decision-making through performance-driven ethics, while clan culture, with its focus on collaboration and employee engagement, might prioritize interpersonal fairness and relational ethics. Future research could explore how decision-making interacts with these additional cultural types to provide a more comprehensive understanding of ethical perception across all organizational culture types.

2.5.1 Hierarchy culture

Since the focus will lie on hierarchical and adhocracy cultures, one will examine how decision-making interacts within these kinds of organizational cultures. For hierarchical cultures, policies, standards, and codes of conduct are emphasized (Quinn & Cameron, 2011). Moreover, consistency, compliance, and predictability in decision-making are very important, where the focus lies on rules, procedures, and formal authority (Cameron & Quinn, 2006). This culture often exists in industries that need to follow rules and regulations, where minimizing risk and assuring compliance is crucial for the organization's effectiveness (Cameron & Quinn, 2006). Within these environments, decision-makers need to follow clear procedures, which also helps to reduce the possibility of ethical violations (Kaptein, 2008). Moreover, codes of conduct and compliance frameworks might be used as decision guidance, supporting alignment with legal and ethical standards (Pain, 1994).

In general, research shows that decision-making by humans in such cultures is consistent, predictable, and aligned with established norms, as the focus on rule-following and conformity minimizes ambiguity and reduces ethical misconduct (Glazer & Karpati, 2014; Weber, 2013; Kaptein, 2008).

Although no previous research studies the exact connection between hybrid vs. human-only decision-making and hierarchical cultures, assumptions can be made due to other relevant findings. According to Glazer and Karpati (2014), hierarchical cultures focus on decision-making that prioritizes keeping a traditional order and ensures that decisions benefit the entire organization

rather than an individual. Thereby, the focus on conformity and rule-following leads to decision-making processes that are consistent and predictable, aligning with ethical norms and reducing the possibility of ethical misconduct (Glazer & Karpart, 2014). Moreover, their findings indicate that decision-makers are less likely to deviate from established norms since the environment focuses on clear rules and procedures.

Another author argues that human decision-making in such cultures reduces ambiguity since the scope for personal interpretation is limited (Weber, 2013). Since the procedures outline clear steps to follow, decision-makers are less likely to face conflicts when choosing a course of action, making it easier to justify decisions ethically (Weber, 2013). This is especially helpful in environments where any deviation from the rules could lead to consequences, such as legal penalties or reputational damage (Pain, 1994). Moreover, research has also shown that when decision-makers operate within a structured framework, the consistency of decisions is perceived as more ethical by stakeholders (Kaptein, 2008; Treviño et al., 2006).

However, assumptions can be made that hybrid decision-making could combine the “rule-following” of human decision-makers and AI systems' computational efficiency and data analytical capabilities. This could enable organizations to ensure that legal and organizational standards are upheld while benefiting from the ability of AI to monitor and identify potential risks or deviations in real-time (Kaplan & Haenlein, 2019). Furthermore, even in environments that strictly follow rules and regulations, the risk of human bias can be present. Thereby, hybrid systems could help mitigate these biases by providing AI-based recommendations based on data, which the individual could then evaluate in the context of rules and procedures (Floridi et al., 2018). Nevertheless, hybrid decision-making in such environments can also cause ambiguity, especially when the human interpretation deviates from the AI's recommendations (Floridi et al., 2018). This could result in ethical inconsistencies or confusion about accountability when decisions are challenged (Floridi et al., 2018; Johnson, 2021). An example would be a rule-based financial institution, where the AI might detect a transaction as fraud due to predefined criteria, but the human decision-maker overrides this recommendation because of contextual knowledge or empathy. This could lead to a perception of the inconsistency of the appliance of rules within the organisation (Floridi et al., 2018). Moreover, this could also result in trust issues in decision-making and transparency (Floridi et al., 2018). Besides, Kaptein (2008) argues that organisations with strong ethical values and a strong emphasis on rule-following report fewer unethical behaviors and higher levels of trust in the

outcome of decision-making. This supports the argument that human only decision-making could more effectively maintain ethical standards. Furthermore, Weber (2013) advises that hierarchical organizational contexts support ethical decision-making due to their clear guidelines, which help prevent deviation and reduce subjective judgment. Therefore, based on previous research and findings, the following hypothesis has been established:

H2: In hierarchical organizational cultures, human-only decision-making will be perceived as more ethically consistent compared to hybrid decision-making.

2.5.2 Adhocracy culture

Adhocracy is the opposite of the hierarchical culture. According to Cameron and Quinn (2006) this flexible and dynamic culture emphasizes innovation, creativity, and adaptability. Typical characteristics are the willingness to take risks, experiment, and innovate to stay competitive (Cameron & Quinn, 2006). The authors argue, that this culture is successful in environments where responsiveness to external changes and fast decisions are crucial. The leaders in adhocracy cultures preach independence and give people room to think independently, helping organizations respond to unpredictable changes and complex challenges (Cameron & Quinn, 2006).

Adhocracy cultures differ from hierarchical cultures in the context of ethical perception and decision-making. Although, here again, there has not been exact research on hybrid vs. human-only decision-making and adhocracy cultures, assumptions can be derived from similar research and findings. This organisational culture often uses decentralized decision-making structures, allowing employees to quickly respond to changes and use situational awareness (Birkinshaw & Ridderstråle, 2015). Moreover, decisions are often made with experimentation and direct action instead of undergoing hierarchical approval processes, which fits better to environments that need agile responses (Birkinshaw & Ridderstråle, 2015). Compared to hierarchical cultures, where conformity and consistency are important, in an adhocracy culture, individuals can deviate from standard processes as long as they contribute to the overall organizational goals (Denison & Mishra, 1995).

In adhocracy cultures, human decision-making can be beneficial when quick judgments or context-specific decisions are needed. Human decision-makers can tap into their understanding of the organisation's environment and stakeholders' needs to devise ethically appropriate solutions

that align with the organisation's strategy (Banks et al., 2022). Nevertheless, flexibility in this culture can also introduce variability and subjective biases, compromising ethical standards (Banks et al., 2022).

Given the emphasis on flexibility and responsiveness in adhocracy cultures, integrating a hybrid decision model, where AI would complement human decisions, could mitigate these drawbacks. AI systems provide consistency and analytical capabilities, while human oversight includes contextual awareness and ethical sensitivity (Frankish & Ramsey, 2015). It can be assumed that this synergy is especially valuable in adhocracy cultures, where decisions must be made fast and require a balance of innovation and ethics consideration. This allows organizations to maintain adhocracy's dynamic and creative aspects while mitigating potential ethical risks and inconsistencies by using AI to complement human decision-making (Archer et al., 2013). Studies have shown that such a combination can be especially effective in complex situations, where AI's objectivity supports human capabilities in addressing ethical and contextual concerns that could be overlooked by humans or AI alone (Peeters et al., 2021). Consequently, hybrid models could improve decision quality and increase stakeholder trust and satisfaction in the decision-making process (Sun & Ye, 2023). Given these previous findings, the following hypothesis will be tested:

H3: In adhocracy organizational cultures, hybrid decision-making (AI and human) will be perceived as more ethically transparent compared to human-only decision-making.

3. Methodology

3.1 Research design

To test the proposed hypotheses, a quantitative experimental and correlational study was conducted. The study was designed and distributed using the Qualtrics platform. I chose this approach because it was considered the best way to collect data on participants' ethical perceptions in decision-making. Since assessing ethical perception can be a sensitive topic, participation was online and anonymous to reduce social desirability bias and encourage honest responses (Nikolopoulou, 2022).

An experimental design was used to analyze the relationships between the two decision-making types and their ethical perceptions. Experimental studies have been identified as the most accurate way to test causal relationships because they allow for the controlled manipulation of variables to isolate and observe their direct effects (Krauss, 1996). The vignette paradigm method has been used, with vignettes created by myself, to assess participants' views on the ethicality of decisions. This method is often used to examine peoples' attitudes, beliefs and behaviours by presenting them with hypothetical scenarios (Aguinis & Bradley, 2014). Participants were randomly assigned to one of four conditions that resulted from manipulating the independent and moderator variables: decision-making type (hybrid vs. human-only) and organizational culture (adhocracy vs. hierarchy). The aim of these manipulations was to measure the effect on the dependent variable: ethical perception.

The study used a between-group design, meaning that each participant was exposed to one decision-making vignette (hybrid or human-only) and to one organizational culture (adhocracy or hierarchy). This approach helps prevent a carryover effect when exposure to a previous condition influences participants' answer to the next one, and the fatigue effect, meaning getting tired when presented with too many scenarios (Bhandari, 2021). Besides, the separation of conditions in a between-subjects design allows for clearer isolation, helping to improve internal validity and ensuring that observed differences can be attributed to the independent variables (Charness et al., 2012).

3.2 Participants

Participants were sourced through personal networks and various platforms, including the survey exchange site Prolific and social media networks such as Facebook and LinkedIn. Participation was open to all, voluntary and unpaid. A total of 220 responses were gathered, where 203 were considered valid and complete. Of these respondents, 37.4% were males and 61.6% were females. The average age of participants was 29 years, with 53.5% in the age group 18–29, followed by 35.6% in the age group 30–49, and 10.9% aged 50 or older. Regarding education, 43.8% of participants had a bachelor's degree, 26.6% had secondary education, and 24.1% held a master's degree. Participants represented 38 different nationalities, with the United Kingdom accounting for the highest percentage of respondents at 22.2%, followed by Germany with 20.7% and the United States with 19.2%. For more information, see Appendix C.

3.3 Procedure

The survey started with a welcome page, informing participants about the study's purpose and asking for their consent to participate. After receiving consent, participants were asked demographic questions designed to be inclusive, including aspects like gender, age, country, level of education, professional and industry background and the organizational culture of participants. This was followed by a questionnaire assessing ethical orientation, social desirability and openness to new experiences as control variables. For the experimental part, participants were presented with one decision-making vignette. They were asked to imagine themselves in each scenario and respond to questions assessing their moral perception, judgment, and intent regarding the decision-making processes described. In the end, a comprehension check was made by asking the participants which decision-making type and organizational culture they encountered in the scenario they read.

3.4 Variable measurement

3.4.1 Vignettes

The four vignettes presented in the study illustrate a combination of organizational culture and decision-making approach. Participants were asked to imagine themselves in a promotion context within a hypothetical organisation, with scenarios varying across two primary dimensions: the type of organizational culture (adhocracy or hierarchy) and the decision-making process (human-only or hybrid).

To assess the ethical perception of respondents, they were presented with one vignette. One vignette featured hybrid decision-making, and the other focused on human-led decision-making within two distinct organizational cultures. Each vignette started by describing the attributes of the respective culture, helping the participants understand the environments in which decisions are made. Moreover, fictional company types, such as startups or traditional companies, have emphasised the environment participants should imagine themselves in.

In the first vignette, adhocracy culture, participants were placed in a fast-paced, innovative tech startup that values flexibility, collaboration, and creativity. The description started with the culture's description for adhocracy: “Imagine you are working in a fast-paced tech startup where the organizational culture emphasizes innovation, collaboration, and flexibility”. Participants were told that promotion decisions are made solely by a human manager who independently reviews candidate data and uses their expertise to make the final decision without AI input. The vignette emphasizes independent, human-driven judgment and reflects traditional decision-making in organizations where leaders rely only on their personal evaluation of data, such as project outcomes, performance scores, and other relevant metrics.

In the second vignette within the same organizational culture, the AI system provides candidate recommendations based on data analysis, which the human manager then reviews and combines with their own judgment to make the final promotion decision. In this vignette, participants were presented with a scenario involving a hybrid, human-in-the-loop (HITL) approach. Here, an AI system generates recommendations based on performance metrics and other candidate data, which a human manager then reviews. The final decision remains with the human, who considers both the AI's recommendations and their own judgment to make the promotion decision

Then, in the third vignette, hierarchy culture, participants were asked to imagine a hierarchical organization. The culture was described as: “Imagine you have joined a traditional, structured organization that emphasizes stability, structure, and adherence to formal procedures.” In this scenario, a human manager independently evaluates candidate information and relies solely on their expertise to make the promotion decision, with no AI involvement as in the first scenario.

A fourth vignette, presented within a hierarchical culture as well, also includes the hybrid decision-making approach, as in the second vignette, which combines the AI’s insights with human judgment before making the final decision. The promotion scenario and the description of the hierarchical culture remained the same as in the previous scenario.

The vignettes were created to simulate real-world decision-making situations. Overall, they were designed to be as similar as possible to keep internal validity and separate the effects of the two primary variables: decision-making and organizational culture. This controlled approach minimizes confounding factors and ensures that any differences in participant responses can be attributed to manipulations rather than irrelevant variations (Aguinis & Bradley, 2014). For the vignette description, please see Appendix A.

The vignette development was guided by previous research on vignette methodologies, which emphasise the importance of clear, context-rich descriptions to capture participant perceptions reliably (Aguinis & Bradley, 2014). These vignettes created a controlled, relatable framework for participants to assess ethical perceptions. Drawing from Cameron and Quinn’s (2011) typology of organisational cultures, the scenarios use specific language and characteristics that define adhocracy (innovation, flexibility, collaboration) and hierarchy (stability, structure, rule-following) cultures. This theoretical framework provided a foundation to illustrate the cultural environments within each vignette.

In designing the decision-making processes, the vignettes were based on common organizational practices, capturing realistic decision-making approaches that occur in workplace settings. For human-only scenarios, the emphasis was on independent decision-making by a manager using personal expertise, reflecting real-life situations where leaders rely on their judgment and experience (Mintrom, 2016). For hybrid decision-making, the vignettes incorporated an AI system providing data-driven recommendations that a human reviewer integrated into their final judgment, a model inspired by the human-in-the-loop approach frequently observed in

organizations adopting AI for decision support (Fosso Wamba et al., 2015; Kaplan & Haenlein, 2019).

Overall, the experimental vignette methodology presents participants with realistic scenarios to assess factors such as intentions, attitudes, and behaviours (Aguinis & Bradley, 2014). By providing controlled, hypothetical scenarios, experimental vignette methodology supports manipulating independent and moderating variables, ensuring robust experimental control (Aguinis & Bradley, 2014). Additionally, experimental vignette methodology improves external validity, as respondents can relate more authentically to these hypothetical but realistic situations, engaging responses that align closely with real-world reactions (Sweeney et al., 2010).

3.4.2 Dependent variable

Ethical perception: The dependent variable, ethical perception, was assessed through participants' responses to the hypothetical organisational vignettes presented before. Aligned with Rest's (1986) four-component model, participants rated the ethicality of the scenarios on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). High scores showed a strong perception of ethicality, whereas lower scores reflected perceived ethical concerns within the scenario. For each step of Rest's model, participants were asked to rate their agreement or disagreement with two specific statements related to the given scenario. For step one (moral awareness), participants rated the statement: "I do not see any ethical problem with this promotion procedure." For step two (moral judgment), they responded to: "This promotion procedure probably results in unfair outcomes." For step three (moral intention), the statement was: "I would have the intention to act against this promotion procedure." Finally, for step four (moral behaviour), participants evaluated: "I would take actions to stop this promotion procedure." The full list of statements can be found in Appendix A.

3.4.3 Independent variable

Decision-making types: The independent variable, decision-making types, was manipulated with two distinct conditions: human-only decision-making and hybrid decision-making. Participants were presented with these conditions through vignettes, with each scenario differing in the decision-making approach and organizational culture, as seen in the vignette section.

The main difference between the two conditions was the content of the vignettes, which differentiated the two decision-making processes. All other aspects of the scenarios, including the organizational setting and type of data reviewed (project outcomes, performance scores, etc.), remained the same across both conditions.

3.4.4 Moderator variable

Organizational culture: The moderator variable is organizational culture. With the help of Cameron and Quinn's (1999) typologies, hypothetical scenarios have been established to assess decision-making within the two typologies, hierarchical culture and adhocracy culture, which can be found in the vignette section in more detail. According to Feldman and Lynch (1988), contextualizing scenarios according to organizational norms and culture helps generate responses relevant to the studied variables. The authors also state that when assessing ethical behaviour, organizational culture can be an important factor influencing individuals' perceptions and actions.

3.4.5 Control variables

Three control variables have been included to ensure that individual differences in ethical and social views do not influence the results. These variables include social desirability, ethical orientation, and openness to experience.

Social desirability bias was controlled using a shortened version of the Marlowe-Crowne Social Desirability Scale by Loo & Thorpe (2000). A shortened version has been used to reduce participants' fatigue, which is important in maintaining participant engagement (Bowling, 2005). Moreover, research has shown that a shortened version of the Marlowe-Crowne scale keeps good reliability and validity, effectively capturing social desirability tendencies (Loo & Thorpe, 2000). The scale addresses the tendency of individuals to showcase themselves in a better light by choosing socially acceptable responses (Crowne & Marlowe, 1960). Participants rated the five statements using a 5-item Likert scale from "strongly disagree" to "strongly agree". A sample item from this scale is, "I never hesitate to go out of my way to help someone in trouble." (For all items, see Appendix A)

Ethical orientation has been assessed to detect individual differences in moral and ethical self-perception. This study used a shortened version of a moral identity scale inspired by Aquino and Reed (2002). The scale focuses on participants' self-perception of traits such as honesty, integrity, and trustworthiness. These items reflect the importance of ethical and moral traits to an individual's self-concept. Participants responded to 10 statements using a 5-point Likert scale (1 =

strongly disagree, 5 = strongly agree). A sample item is: "I am a moral person." Or "I am someone who has a lot of integrity." The shortened scale was chosen to decrease participants' fatigue while including important elements relevant to the study context. For the complete list of items, see Appendix A.

Openness to Experience was used to examine participants' attitudes toward novel situations. In this thesis, it has been used to assess openness towards technological integration, more specifically towards AI (Shin et al., 2023). This was measured using three items adapted from the Big Five Inventory (John & Srivastava, 1999). This trait reflects a person's curiosity and willingness to explore new ideas. Participants rated each item on a 5-point scale (*1 = strongly disagree, 5 = strongly agree*). A sample item is "I am open to new ideas and experiences." For the remaining statements, please see Appendix A.

Demographics: Various demographic variables were collected to provide a clear overview of participant characteristics and control for potential confounding factors. Gender was assessed with options: "male," "female," "other" and "prefer not to say." Age was measured as a continuous variable in years, while country of origin was selected from a dropdown list of countries. Participants also reported their highest level of education ("Primary education," "Secondary education," "Bachelor's degree," "Master's degree," "Doctoral degree," or "Other"), current employment status ("Full-time," "Part-time," "Self-employed," "Unemployed," "Student," or "Retired"), and their industry ("Finance," "Healthcare," "Technology/IT," "Manufacturing," etc., with an "Other" option). Finally, participants described the organizational culture they work in based on predefined categories: "Adhocracy," "Hierarchy," "Market," "Clan," or "Other." This information allowed for a better understanding of the sample and additional analysis of the effects of demographic factors. The full set of demographic questions can be found in Appendix A.

4. Results

4.1 Data preparation

Some of the scales used in the survey included reverse-coded items, which were reversed in scoring before combining them into their mean scores and assessing the scale reliability, representing each variable of interest. This was done for the control variable, social desirability and ethical perception, and the dependent variable ethical perception. Moreover, dummy variables were created to analyse the correlation of categorical variables such as gender and educational level. Furthermore, no outliers were found in all variables; the only data excluded were unfinished surveys.

4.2 Scale reliability

To ensure that the scales in this study are reliable, Cronbach's α was calculated for all scales. According to Bland and Altman (1997), a Cronbach's α value of .70 or above can be seen as an acceptable score for internal consistency. Scales with α values between .60 and .70 are acceptable but should be analyzed cautiously (Bland & Altman, 1997).

The results of the reliability analysis can be seen in Table 1. The ethical orientation scale, consisting of 10 items, shows a high internal consistency with $\alpha = .92$. The openness to experience scale, with three items, also shows good reliability with $\alpha = .78$. Ethical perception with $\alpha = .62$ demonstrates limited but acceptable reliability. However, the five-item social desirability scale shows lower reliability with $\alpha = .51$. Despite trying to remove items from the scale, the overall reliability did not improve. Therefore, the scale was kept complete. Although Cronbach's α values below .60 suggest limited internal consistency, scales with such values can still be informative when interpreted cautiously, especially when they align with findings from previous research (Bland & Altman, 1997). The scale scores have been averaged for all variables to create a compound measure for further analysis. Overall, the high-reliability scores of most scales indicate their suitability for the analysis.

Table 1*Scale's Reliability Test Results*

Scale	Number of Items	Cronbach's α
Social Desirability	5	.51
Openness to Experience	3	.79
Ethical Orientation	10	.92
Ethical Perception	32	.62

4.3 Descriptive statistics

Descriptive statistics were conducted to summarise the most important characteristics of the sample and study variables. Table 2 shows the mean values for ethical perception among the four scenarios.

For control variables, participants scored a mean of 3.52 ($SD = 0.60$, $N = 203$) for ethical orientation, 4.22 ($SD = 0.69$, $N = 203$) for openness to experience, and 4.30 ($SD = 0.59$, $N = 203$) for social desirability (See Table 8 in the Appendix C).

Then frequencies and percentage distribution of workplace culture shows that 36.0% ($N = 73$) of participants reported that their current or most recent workplace culture was hierarchical. This was followed by 27.6% ($N = 56$) in adhocracy, 22.2% ($N = 45$) in market, and 11.8% ($N = 24$) in clan. A small group, 2.5% ($N = 5$), selected "other" as their workplace culture type (See Table 14 in the Appendix C).

Table 2*Means (M) and Standard Deviations (SD) for Ethical Perception*

Scale	<i>N</i>	<i>M</i>	<i>SD</i>
Adhoc human-only	51	3.28	0.75
Adhoc hybrid	51	3.35	0.67
Hierarch human-only	49	3.32	0.72
Hierarch hybrid	52	3.04	0.79

4.4 Bivariate correlations

A bivariate correlation analysis has been conducted to analyse the relationship between the study variables. Table 15 in the Appendix D presents the pearson correlation coefficients, including the control variables (ethical orientation, openness to new experiences, and social desirability), the dependent variable (ethical perception), workplace characteristics (people working in adhocracy and hierarchy cultures & in the technology/IT industry), demographic variables (employment status and education level), as well as the independent variable (decision types) and the moderator variable (cultural types).

The following key findings and correlations have been detected: for the control variables, there were significant positive correlations of ethical orientation with both social desirability ($r = .385, p < .001$) and openness to experience ($r = .303, p < .001$). This suggests that individuals with a higher ethical orientation tend to report greater social desirability and openness to new experiences.

A significant positive correlation was observed between social desirability and workplace adhocracy culture ($r = .146, p < .05$). Meaning that individuals with higher social desirability are more likely to work within adhocracy workplace cultures. Besides, no significant correlations were observed between social desirability and ethical perception.

No strong or consistent correlations were observed between ethical perception and either decision type (0 = Human, 1 = Hybrid) or cultural type (0 = Hierarchy, 1 = Adhocracy).

A strong negative correlation was observed between people who work in adhocracy and hierarchy workplace cultures ($r = -.461, p < .01$), reflecting their mutual exclusivity.

4.5 Hypothesis testing

4.5.1 *The effect of decision-making type on ethical perception*

The first hypothesis, H1, suggests that Hybrid decision-making (AI + human) leads to more positive ethical perceptions than human-only decision-making. To test this hypothesis, I conducted a moderation analysis using PROCESS Model 1, with ethical perception as the dependent variable (Y) and decision type as the independent variable (X) (See Table 16 in the Appendix E). The decision type variable was coded as 1 for hybrid decision-making and 0 for human-only decision-making.

The analysis shows a statistically significant main effect of decision type, $b = -0.33$, $SE = 0.15$, $p = .023$, suggesting that participants perceived human-only decision-making as more ethical than hybrid decision-making. This result contradicts hypothesis H1, which states that hybrid decision-making should lead to higher ethical perception.

4.5.2 *The moderating role of organizational culture*

H2 and H3 explore the moderating role of organizational culture on the relationship between decision type and ethical perception. Specifically, H2 hypothesizes that human-only decision-making in hierarchical organisational cultures will be perceived as more ethically consistent. Conversely, H3 states hybrid decision-making (AI and human) will be perceived as more ethical in adhocracy organisational cultures.

For H2 and H3, the same moderation analysis (model Process 1) was conducted, with decision type as the independent variable (X), organisational culture (hierarchy = 0, adhocracy = 1) as the moderator (W), and ethical perception as the dependent variable (Y) (See Table 16 in the Appendix E). The interaction between decision type and organizational culture was found to be statistically significant ($b = 0.40$, $SE = 0.18$, $p = 0.031$), thereby supporting the moderating role of culture.

The simple slope analysis showed that hybrid decision-making was perceived as significantly less ethical in hierarchical cultures than human-only decision-making ($b = -0.33$, $SE = 0.15$, $p = .023$). Conversely, in adhocracy cultures, there was no significant difference between hybrid and human-only decision-making ($b = 0.07$, $SE = 0.14$, $p = .620$). Therefore, the results support H2, which states that human-only decision-making is more ethical in hierarchical cultures. In hierarchical cultures, which emphasize rules and formality, hybrid decision-making may disrupt

established norms and procedures, leading to less ethical perception. Adhocracy cultures' flexible and innovative environment may reinforce hybrid decision-making without major concerns.

As covariates, the model included openness to experience, social desirability, and ethical orientation. However, none of the covariates significantly affected ethical perception (all $p > .05$), suggesting that personality-related factors did not considerably influence ethical evaluations in this context.

5. Discussion

5.1 Summary of results

The current study presented three hypotheses regarding the relationship between the type of decision-making process, organizational culture, and ethical perceptions.

H1 suggested hybrid decision-making would result in more positive ethical perceptions than human-only decision-making. However, the results showed that human-only decision-making was perceived as significantly more ethical than hybrid decision-making. These findings indicate that participants are sceptical towards hybrid decision-making processes, potentially due to concerns about transparency and accountability (Florida et al., 2018).

A possible reason is the ambiguity introduced by hybrid decision-making processes, where the responsibility for ethical outcomes is shared between humans and AI (Floridi et al., 2018; Johnson, 2021). This sharing of responsibility could lead to a dispersion of accountability, leading to uncertainty about who is ultimately responsible for the ethical implications of the decision. This can threaten the perception of ethicality, as participants may feel that the involvement of AI decreases the moral perception of human decision-makers (Johnson, 2021).

Furthermore, the presence of preexisting biases against AI in ethically charged decision-making contexts may influence the evaluations. Previous research has shown that AI is often associated with lacking empathy, emotional intelligence and understanding of the complexity of ethical dilemmas (Floridi et al., 2018; Kaplan & Haenlein, 2019). This could have reinforced the preference for human-only decision-making in the promotion scenario. Moreover, these biases may be stronger in decisions with moral consequences, where participants might see AI as unable to handle the ethical aspects of the situation (i.e., determining whether to promote an employee based on their leadership potential versus relying solely on quantitative performance metrics). Besides, research on AI acceptance has also shown that individuals have less trust in AI when moral judgment or empathy is needed (Xu et al., 2020).

The effect of decision type remained strong even when covariates like openness to experience, social desirability, and ethical orientation were considered. Since none of these factors significantly influenced ethical perception, it suggests that the results reflect a general scepticism toward hybrid decision-making rather than individual differences.

Hypothesis 2 and 3 proposed that organizational culture would moderate the relationship between decision type and ethical perception. Specifically, it was hypothesized that organizations with a hierarchical culture emphasising structure and rules would favour human-only decision-making. In contrast, those with an adhocracy culture characterised by flexibility and innovation would favour hybrid decision-making. The results offer some support for this hypothesis. The interaction between decision type and organisational culture was found to be statistically significant, indicating that ethical perception of decision-making processes differs depending on the organisational culture. The results of the analysis indicated that, in organisational cultures characterised by a strong hierarchical structure, the ethical perception of hybrid decision-making processes was significantly less favourable than that of human-only decision-making. This finding is consistent with the view that hierarchical cultures attach great importance to formalised processes and clear accountability (Quinn & Cameron, 2011). This may be undermined by the involvement of AI in hybrid systems. Conversely, no significant difference in ethical perception was observed between hybrid and human-only decision-making in adhocracy cultures. The flexibility and openness to innovation in adhocracy cultures may facilitate greater acceptance of hybrid systems, in contrast to other types of cultures, thereby mitigating ethical concerns.

Despite including the covariates openness to experience, social desirability and ethical orientation, none of these variables significantly affected ethical perception. Past research has shown mixed evidence on these variables and ethical perception. For instance, openness to experience has not been directly linked to ethical perception. However, it was still included due to the assumption that it could influence individuals' openness to AI systems and technologies (Kaplan & Haenlein, 2019). The lack of significant findings indicates that openness to experience does not directly influence the perceptions of ethical decision-making as initially assumed. While past research has shown that social desirability and ethical orientation correlate with ethical constructs, the lack of significant correlation in this study could be due to the smaller sample size, different demographics or cultural contexts, which limits the generalizability of results.

The findings indicate that individual differences in personal characteristics or views do not significantly influence participants' evaluations of decision-making processes within this context. The observed effects seem more likely driven by the characteristics of the decision-making process and the organizational culture.

5.2 Academic and managerial implications

The findings of this study contribute to the existing research on ethical decision-making and hybrid systems by revealing that hybrid decision-making is sometimes perceived as less ethical than human-only approaches. This underscores the necessity of incorporating considerations of moral agency and accountability into decision-making frameworks. The moderating role of organisational culture provides valuable insight, indicating that those with a hierarchical culture are more resistant to hybrid systems. In contrast, those with an adhocracy culture are more accepting. These findings are consistent with existing theories on the influence of culture on ethical evaluations and provide a foundation for future research into decision-making contexts, types of decisions, and long-term changes in perceptions.

Moreover, the findings highlight the importance of addressing concerns about transparency and accountability when implementing hybrid systems, which is particularly important for managers. In organizations with a hierarchical structure, strategies such as clarifying roles and introducing trust-building measures may mitigate resistance. Thus, managers should assess the organisational culture before implementing new technologies to align their strategy with established cultural values and thus enhance stakeholder acceptance.

5.3 Limitations and future research

This study has a few limitations to consider when interpreting the results. First the generalizability and sample composition. Participants in this research mostly worked in hierarchical and adhocracy organizational environments. While it fits the focus of this research, it limits the generalizability of findings to other cultural and organizational contexts, such as clan or market-oriented cultures. Moreover, the sample mostly consisted of people from specific demographic and geographic regions, such as Germany and the UK, which might not fully represent the broader range of ethical perceptions across diverse populations. A more diverse sample regarding demographics and organizational culture would have been useful in testing the robustness of these results.

Another limitation is that the decision-making scenarios in this study were hypothetical, which could fail to fully reflect the complex and pressured situation of real-world decision-making. Moreover, the study relied on self-reported measures to evaluate ethical perceptions. These measures are useful for receiving subjective evaluations; nevertheless, they are prone to biases such as social desirability, where participants may provide socially acceptable answers rather than their

true perception (Podsakoff et al., 2003). Besides, participants were asked to imagine themselves in specific decision-making contexts, but their decisions could potentially differ when faced with real ethical dilemmas (Bostyn et al., 2018). Despite finding results that partly support the hypothesis, factors like group dynamics, power hierarchies, and accountability might influence decision-making in real workplace settings (Rogers & Senturia, 2013). Moreover, many organizations are already adopting AI-assisted decision-making processes in areas such as recruitment, operations and strategic planning (Jarrahi, 2018). Therefore, implementing hybrid decision-making in real-world situations and measuring participants' perceptions through real outcomes, such as decision effectiveness, transparency, or accountability, could lead to more actionable insights.

The thesis then focused on the binary comparison between decision types (human-only vs. hybrid) and organizational cultures (hierarchy vs. adhocracy). However, real-world situations are usually more complex, and hybrid systems could, for instance, vary in the degree of human and AI involvement. Besides, organizational cultures are rarely just hierarchical or adhocratic but could combine different cultural elements, possibly changing respondents' environmental perceptions.

The relatively small sample size, due to time limitations, could have also affected the robustness of the survey. While the survey was open to a wide range of participants, this approach risks self-selection bias since participation was voluntary rather than systematically randomized (Bethlehem, 2010). Moreover, including participants from a broader professional and organizational setting could have provided better insights into the dynamics of hybrid decision-making and ethical perception.

Then, there is also the complexity of measuring ethicality since it is complex and influenced by different contextual factors, such as cultural norms or individual values (Rest, 1986). This study measures ethicality using responses to hypothetical scenarios, but it did not consider how ethical judgment might change over time or in different situations.

To build on the identified limitations, future studies could help to explore areas further to enhance the applicability of these findings. Firstly, long-term studies could investigate whether ethical perceptions regarding hybrid systems increase over time, for instance, as participants become more familiar with them. Repeated exposure or experience with such systems could influence the perception of ethicality, transparency, and accountability, revealing trends that cannot be attained in a cross-sectional design. Furthermore, real-world applications and practical scenarios could help address hypothetical scenarios' limitations. Furthermore, it would be beneficial to

include more decision types and cultural contexts beyond the two compared in the study. Investigating other decision types, such as fully automated decision-making systems, could lead to a broader perspective on ethical perceptions. Besides, including other organizational cultural environments, such as clan or market-oriented cultures, could further deepen the understanding of how cultural norms influence the evaluations of such decisions. Another idea for future studies is to enhance transparency and accountability by testing interventions that clarify the roles of AI and humans in the decision-making process, such as providing detailed explanations of accountability mechanisms. Experimental research could analyze whether these strategies reduce scepticism and improve ethical evaluations. Moreover, behavioural and experimental approaches could help observe participants' decision-making behavior in controlled experiments or analyse responses to real-world dilemmas. This could lead to a broader understanding of ethical perception. Future research could also analyse context-specific decision-making to understand how ethical evaluations vary depending on the context. For instance, perceptions might differ between strategic and operational decisions or between low-stakes and high-stakes scenarios. Investigating these differences could reveal how ethicality is judged in different decision-making contexts. Lastly, addressing individual preferences in perceptions could deliver additional insights. Although this study did not identify significant effects related to covariates like openness to experience or social desirability, other variables, such as trust in technology and previous interactions with AI systems, may affect ethical assessments. Future research should investigate these characteristics to understand better how hybrid systems are perceived. By addressing these limitations and further exploring these areas, future investigations can offer a boarder and more practical comprehension of hybrid decision-making processes, their ethical implications, and their significance within different organizational contexts.

6. Conclusion

This research contributes to the existing literature on ethical decision-making by investigating how hybrid and human-only decision-making processes are perceived within different organizational cultures. The findings show that human-only decision-making is overall perceived as more ethical than hybrid systems, where the environment of hierarchical cultures shows a preference for traditional methods. Contrarily, adhocracy cultures show a higher openness to hybrid decision-making, reinforcing the moderating role of organizational cultures.

These findings highlight the critical need for transparency and accountability in the design and execution of hybrid systems. Organizations should carefully align these decision-making systems with their own cultural values to increase ethical acceptance. Although this study offers valuable insights, it also shows that further investigation is needed, especially in real-world situations, long-term studies and broader cultural contexts. Addressing these aspects will help facilitate the gap between theoretical understanding and practical implementation, ensuring hybrid systems effectively emphasize ethical decision-making across different organizational environments.

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Appendices

Appendix A: Experimental Survey

Welcome, and thank you for participating in this study as part of my Master's Thesis at Católica Lisbon School of Business and Economics. This research focuses on AI decision-making and ethics in the workplace.

You will be presented with a scenario, followed by statements regarding your perceptions and opinions related to those scenarios. The survey will take approximately 5–7 minutes to complete. Your participation is entirely voluntary, and all your answers will remain anonymous and confidential, ensuring that your identity will not be linked to your responses. The data collected will be used solely for academic purposes in this research.

If you have any questions or concerns about this study, please feel free to contact me at sckazemkhani@ucp.pt. By continuing, you confirm that you agree to participate in this study.

Thank you for your valuable contribution!

What is your gender?

- Male
- Female
- Other
- Prefer not to say

How old are you?

—

Which country are you from?

Afghanistan

What is your highest level of education?

- Primary education
- Secondary education
- Bachelor's degree
- Master's degree
- Doctoral Degree
- Other ____

What is your current employment status?

- Full-time employment
- Part-time employment
- Self-employed / Freelance
- Unemployed
- I'm a Student
- Retired

Which industry does your organization operate in?

(Select the closest match from the options below or specify if not listed.)

- Finance
- Healthcare
- Technology/IT
- Manufacturing

- Education
- Retail
- Hospitality
- Government/Public Sector
- Other ____

How would you describe the culture in your current or most recent workplace?

- Adhocracy (Flexible, innovative, and dynamic, encouraging creativity)
- Hierarchy (Formal, structured, rule-based with clear levels of authority)
- Market (Competitive, results-driven, focused on performance and efficiency)
- Clan (Collaborative, family-like, focused on employee engagement and development)
- Other ____

In the following section, you'll find a series of statements about various **personal attitudes** and **behaviours**. Please read each statement carefully and indicate how strongly you agree or disagree based on how you generally feel or act.

Please rate the following statements.

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I never hesitate to go out of my way to help someone in trouble.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am always respectful, even to people who are disagreeable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I sometimes feel resentful when I don't get my way.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I'm always willing to admit it when I make a mistake.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There have been times when I felt like rebelling against people in authority even though I knew they were right.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please rate the following statements.

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I am open to new ideas and experiences.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I enjoy exploring new concepts and ways of doing things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am curious about things that are unfamiliar or complex.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please rate the following statements.

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I am a moral person.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am someone who has a lot of integrity.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am honest.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am a good person.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am ethical.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am fair.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am generous.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am kind.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am compassionate.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am trustworthy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In the next section, you will be presented with a **scenario**. Please take a moment to carefully read the scenario and **imagine yourself** in the described situation. Please read each statement carefully and indicate **your level of agreement**, from "Strongly disagree" to "Strongly agree," based on **your perspective** of the scenario.

Imagine you have joined a **fast-paced tech startup** that **emphasizes innovation, flexibility, and creativity**. The organizational culture encourages **collaboration and dynamic problem-solving**. Working in this type of environment often requires adaptability and a readiness to explore undiscovered territories.

In this company, **promotion decisions are made solely by a human manager**. The manager independently reviews candidate data (including project outcomes, performance scores, and other metrics) and uses their own expertise and judgment to make the final decision on promoting employees **without any input from AI**.

Regarding this decision-making process for promotion decisions, please rate the following statements:

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I do not see any ethical problem with this promotion procedure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe this promotion procedure may violate one or more moral principles.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This promotion procedure probably results in unfair outcomes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This promotion procedure probably results in just decisions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would have the intention to act against this promotion procedure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would have the intention to defend this promotion procedure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would take actions to stop this promotion procedure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would take actions to defend this promotion procedure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Imagine you have joined a **fast-paced tech startup** that **emphasizes innovation, flexibility, and creativity**. The organizational culture encourages **collaboration and dynamic problem-solving**. Working in this type of environment often requires adaptability and a readiness to explore undiscovered territories.

In this company, **promotion decisions are made using a hybrid decision-making process (AI + human)**. An AI system analyzes candidate data (including project outcomes, performance scores, and other metrics) and provides recommendations, which a human manager then reviews. The manager **combines the AI's recommendations with their own insights** and expertise to make the final decision on promoting employees.

Regarding this decision-making process for promotion decisions, please rate the following statements:

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I do not see any ethical problem with this promotion procedure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe this promotion procedure may violate one or more moral principles.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This promotion procedure probably results in unfair outcomes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This promotion procedure probably results in just decisions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would have the intention to act against this promotion procedure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would have the intention to defend this promotion procedure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would take actions to stop this promotion procedure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would take actions to defend this promotion procedure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Imagine you have joined a **traditional, structured organization** that **emphasizes stability, structure, and adherence to formal procedures**. The organizational culture values **consistency and predictability** in decision-making. Working in this type of environment often means aligning closely with established protocols and ensuring that roles and responsibilities are clear and consistent.

Here, **promotion decisions are made through a hybrid approach (AI + human)**. An AI system analyzes candidate data (including project outcomes, performance scores, and other metrics) and makes recommendations. These recommendations are then reviewed by a human manager, who **considers both the AI input and their personal judgment** before making the final decision on promoting employees.

Regarding this decision-making process for promotion decisions, please rate the following statements:

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I do not see any ethical problem with this promotion procedure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe this promotion procedure may violate one or more moral principles.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This promotion procedure probably results in unfair outcomes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This promotion procedure probably results in just decisions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would have the intention to act against this promotion procedure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would have the intention to defend this promotion procedure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would take actions to stop this promotion procedure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would take actions to defend this promotion procedure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Which type of organizational culture was presented in the scenario you just read?

- Adhocracy (emphasizing flexibility, innovation, and collaboration)
- Hierarchy (emphasizing stability, structure, and formal procedures)
- Market (focused on competitiveness and results)
- Clan (focused on teamwork and internal cohesion)

How was the decision-making process conducted in the scenario?

- A human decision-maker made the final decision without AI assistance.
- The decision was made using a hybrid approach, with AI providing recommendations that the human decision-maker reviewed.
- AI made the decision without any human involvement.
- A group of human decision-makers made the decision collectively.

Thank you very much for participating in my survey. If you have any feedback please insert it here.

—

Appendix B: Scale Reliability Test

Table 3

Scale reliability test Social desirability

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.507	.512	5

Table 4

Scale reliability test Openness to experience

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.782	.790	3

Table 5

Scale reliability test Ethical orientation

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.916	.917	10

Table 6

Scale reliability test Ethical perception

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.473	.620	4

1

Appendix C: Descriptive statistics and frequencies

Table 7

Scenarios

	N	Minimum	Maximum	Mean	Std. Deviation
Adhoc human-only	51	1.13	4.75	3.2794	.74983
Adhoc hybrid	51	1.50	4.75	3.3529	.67440
Hierarch human-only	49	1.00	4.75	3.3240	.71622
Hierarch hybrid	52	1.38	4.50	3.0409	.78774
Valid N (listwise)	0				

Table 8

Control variables

	N	Minimum	Maximum	Mean	Std. Deviation
Social Desirability	203	1.60	5.00	3.5222	.59971
Opentone experiences	203	1.33	5.00	4.2184	.68613
Ethical Orientation	203	2.10	5.00	4.3039	.58942
Valid N (listwise)	203				

Table 9

Gender frequencies

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	76	37.4	37.4	37.4
	Female	125	61.6	61.6	99.0
	Other	1	.5	.5	99.5
	Prefer not to say	1	.5	.5	100.0
	Total	203	100.0	100.0	

Table 10*Countries frequencies*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Afghanistan	3	1.5	1.5	1.5
	Albania	1	.5	.5	2.0
	Argentina	2	1.0	1.0	3.0
	Armenia	2	1.0	1.0	3.9
	Australia	4	2.0	2.0	5.9
	Austria	1	.5	.5	6.4
	Bahrain	1	.5	.5	6.9
	Belgium	2	1.0	1.0	7.9
	Bosnia and Herzegovina	1	.5	.5	8.4
	Canada	11	5.4	5.4	13.8
	Czech Republic	1	.5	.5	14.3
	France	10	4.9	4.9	19.2
	Germany	42	20.7	20.7	39.9
	Greece	1	.5	.5	40.4
	India	9	4.4	4.4	44.8
	Indonesia	2	1.0	1.0	45.8
	Ireland	1	.5	.5	46.3
	Luxembourg	1	.5	.5	46.8
	Nigeria	5	2.5	2.5	49.3
	Pakistan	1	.5	.5	49.8
	Poland	2	1.0	1.0	50.7
	Portugal	1	.5	.5	51.2
	Romania	1	.5	.5	51.7
	Serbia	1	.5	.5	52.2
	South Africa	2	1.0	1.0	53.2
	Spain	5	2.5	2.5	55.7
	Sweden	3	1.5	1.5	57.1
	Taiwan	1	.5	.5	57.6
	United Kingdom	45	22.2	22.2	79.8
	United States	39	19.2	19.2	99.0
	Vietnam	2	1.0	1.0	100.0
	Total	203	100.0	100.0	

Table 11*Education frequencies*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Primary education	7	3.4	3.4	3.4
	Secondary education	54	26.6	26.6	30.0
	Bachelor's degree	89	43.8	43.8	73.9
	Master's degree	49	24.1	24.1	98.0
	Doctoral Degree	4	2.0	2.0	100.0
	Total	203	100.0	100.0	

Table 12*Employment status frequencies*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Full-time employment	98	48.3	48.3	48.3
	Part-time employment	24	11.8	11.8	60.1
	Self-employed / Freelance	19	9.4	9.4	69.5
	Unemployed	12	5.9	5.9	75.4
	I'm a Student	49	24.1	24.1	99.5
	Retired	1	.5	.5	100.0
	Total	203	100.0	100.0	

Table 13*Industry frequencies*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Finance	19	9.4	9.4	9.4
	Healthcare	15	7.4	7.4	16.7
	Technology/IT	43	21.2	21.2	37.9
	Manufacturing	16	7.9	7.9	45.8
	Education	30	14.8	14.8	60.6
	Retail	21	10.3	10.3	70.9
	Hospitality	7	3.4	3.4	74.4
	Government/Public Sector	15	7.4	7.4	81.8
	Other	37	18.2	18.2	100.0
	Total	203	100.0	100.0	

Table 14*Work cultures frequencies*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Adhocracy (Flexible, innovative, and dynamic, encouraging creativity)	56	27.6	27.6	27.6
	Hierarchy (Formal, structured, rule-based with clear levels of authority)	73	36.0	36.0	63.5
	Market (Competitive, results-driven, focused on performance and efficiency)	45	22.2	22.2	85.7
	Clan (Collaborative, family-like, focused on employee engagement and development)	24	11.8	11.8	97.5
	Other	5	2.5	2.5	100.0
	Total	203	100.0	100.0	

Appendix D: Bivariate Correlations

Table 15

Correlation test

		Correlations											
		EthiPerc	EthOrien	OpenExp	SocDes	Hierarchy_workplace	Adhocracy_workplace	TechnologyIT_Recoded	Employment Status (0 = Student/Unemployed/Retired, 1 = Employed)	Education Level (0 = Secondary/Primary, 1 = Bachelor's or Above)	Cultural Type (0 = Hierarchy, 1 = Adhocracy)	Decision Type (0 = Human, 1 = Hybrid)	
EthiPerc	Pearson Correlation	1	.023	.048	.056	-.054	.145*	-.042	.048	.020	.084	-.102	
	Sig. (2-tailed)		.749	.499	.431	.450	.039	.556	.498	.774	.236	.151	
	N	201	201	201	201	201	201	201	201	201	201	200	
EthOrien	Pearson Correlation	.023	1	.330**	.407**	-.028	.127	-.120	.117	.042	-.002	.067	
	Sig. (2-tailed)	.749		<.001	<.001	.692	.071	.088	.097	.557	.981	.344	
	N	201	202	202	202	202	202	202	202	202	202	201	
OpenExp	Pearson Correlation	.048	.330**	1	.355**	.008	.076	.004	.006	.043	-.103	-.019	
	Sig. (2-tailed)	.499	<.001		<.001	.910	.283	.954	.931	.546	.143	.787	
	N	201	202	202	202	202	202	202	202	202	202	201	
SocDes	Pearson Correlation	.056	.407**	.355**	1	-.042	.157*	-.136	.100	.096	-.209**	-.057	
	Sig. (2-tailed)	.431	<.001	<.001		.555	.026	.054	.158	.174	.003	.418	
	N	201	202	202	202	202	202	202	202	202	202	201	
Hierarchy_workplace	Pearson Correlation	-.054	-.028	.008	-.042	1	-.461**	-.034	.039	-.096	.000	.072	
	Sig. (2-tailed)	.450	.692	.910	.555		<.001	.636	.579	.175	1.000	.311	
	N	201	202	202	202	202	202	202	202	202	202	201	
Adhocracy_workplace	Pearson Correlation	.145*	.127	.076	.157*	-.461**	1	-.079	-.026	.022	-.066	-.120	
	Sig. (2-tailed)	.039	.071	.283	.026	<.001		.264	.711	.757	.348	.089	
	N	201	202	202	202	202	202	202	202	202	202	201	
TechnologyIT_Recoded	Pearson Correlation	-.042	-.120	.004	-.136	-.034	-.079	1	.158*	.079	-.012	.053	
	Sig. (2-tailed)	.556	.088	.954	.054	.636	.264		.025	.266	.864	.456	
	N	201	202	202	202	202	202	202	202	202	202	201	
	Pearson Correlation	.048	.117	.006	.100	.039	-.026	.158*	1	.108	.011	.064	

Employment Status (0 = Student/Unemployed/Retired, 1 = Employed)	Sig. (2-tailed)	.498	.097	.931	.158	.579	.711	.025		.128	.879	.367
	N	201	202	202	202	202	202	202	202	202	202	201
Education Level (0 = Secondary/Primary, 1 = Bachelor's or Above)	Pearson Correlation	.020	.042	.043	.096	-.096	.022	.079	.108	1	-.011	.097
	Sig. (2-tailed)	.774	.557	.546	.174	.175	.757	.266	.128		.879	.172
	N	201	202	202	202	202	202	202	202	202	202	201
Cultural Type (0 = Hierarchy, 1 = Adhocracy)	Pearson Correlation	.084	-.002	-.103	-.209**	.000	-.066	-.012	.011	-.011	1	-.025
	Sig. (2-tailed)	.236	.981	.143	.003	1.000	.348	.864	.879	.879		.725
	N	201	202	202	202	202	202	202	202	202	202	201
Decision Type (0 = Human, 1 = Hybrid)	Pearson Correlation	-.102	.067	-.019	-.057	.072	-.120	.053	.064	.097	-.025	1
	Sig. (2-tailed)	.151	.344	.787	.418	.311	.089	.456	.367	.172	.725	
	N	200	201	201	201	201	201	201	201	201	201	201

*. Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Appendix E: Moderation analysis

Table 16

Moderation analysis test (Process Model 1)

```

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 4.2 *****

      Written by Andrew F. Hayes, Ph.D.      www.afhayes.com
      Documentation available in Hayes (2022). www.guilford.com/p/hayes3

*****
Model   : 1
Y       : EthiPerc
X       : DecType
W       : CulType

Covariates:
EthOrien OpenExp SocDes

Sample
Size: 200

*****
OUTCOME VARIABLE:
EthiPerc

Model Summary
      R      R-sq      MSE      F      df1      df2      p
      .2159   .0466   .5100   1.5721   6.0000   193.0000   .1572

Model
      coeff      se      t      p      LLCI      ULCI
constant  2.7626   .4586   6.0243   .0000   1.8581   3.6671
DecType   -.3328   .1453  -2.2909   .0230   -.6192   -.0463
CulType   -.0723   .1464   -.4941   .6218   -.3610   .2164
Int_1     .4037   .2034   1.9845   .0486   .0025   .8049
EthOrien  -.0563   .0986   -.5710   .5687   -.2508   .1382
OpenExp   .0693   .0808   .8576   .3922   -.0901   .2287
SocDes    .1169   .0999   1.1699   .2435   -.0802   .3139

Product terms key:
Int_1      :      DecType x      CulType

Test(s) of highest order unconditional interaction(s):
      R2-chng      F      df1      df2      p
X*W      .0195      3.9383      1.0000      193.0000      .0486
-----
      Focal predict: DecType (X)
      Mod var: CulType (W)

Conditional effects of the focal predictor at values of the moderator(s):

      CulType      Effect      se      t      p      LLCI      ULCI
      .0000      -.3328      .1453      -2.2909      .0230      -.6192      -.0463
      1.0000      .0710      .1428      .4968      .6199      -.2107      .3526

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

DATA LIST FREE/
      DecType      CulType      EthiPerc      .
BEGIN DATA.
      .0000      .0000      3.3584

```

```
1.0000      .0000      3.0257
 .0000      1.0000      3.2861
1.0000      1.0000      3.3571
```

END DATA.

GRAPH/SCATTERPLOT=

DecType WITH EthiPerc BY CulType .

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:

95.0000

----- END MATRIX -----