



Personalization with Principles: Ethical AI Strategies in Advertising

Thomas Bayliss and Kate Y. Feng

Master of Science
International Business
SKEMA Business School

Supervisor:

Amine Ezzerouali

September 7th, 2024

"I certify that this work is personal and exempt from plagiarism and that all quotations from sources used are enclosed in quotation marks."

Signatures

A handwritten signature in black ink, appearing to be "Amine Ezzerouali", written in a cursive style.

A handwritten signature in black ink, appearing to be "T. Bayliss", written in a cursive style.

Abstract and Keywords

This thesis delves into the ethical dilemmas and widening trust gap emerging between businesses and consumers in the realm of AI-driven advertising. Through a mixed-methods approach, combining surveys with expert interviews, we show that business professionals trust AI not merely due to familiarity with it but because they actively participate in its adoption, witnessing first-hand the efficiency and benefits it brings to their operations. Consumers, meanwhile, remain more skeptical. With many of them lacking a deep understanding of how AI systems function and how their data is handled, they express concerns about the lack of transparency surrounding these processes. This research highlights a growing need for more transparent practices, stronger consumer control, and more robust ethical frameworks that can bridge this trust gap. It calls for a collaborative governance model that pulls businesses, consumers, regulators, and AI experts together to build trustworthy systems and approaches.

Keywords: AI-driven Advertising, Personalization, Consumer Trust, Data Privacy, Stakeholder Collaboration, AI Ethics

Preface

We decided on this topic because we are both interested in the field of advertising and how it relates to and adapts to new technologies, especially AI. From our studies in international business, we both realized that the advertising industry itself is already quite flawed. It has long been criticized for concerns around the manipulative nature of advertisements and the promotion of consumerism, making it a controversial sector in its own right. As business students, we have learned about the benefits of marketing and the effectiveness of various advertising strategies. However, as consumers, we are also deeply aware of the downsides and ethical implications of this industry. This gave us the unique perspectives and motivation to want to delve into such a subject.

What further interested us in this field was observing how AI, which comes with its own set of ethical questions, interacts with the advertising industry. With AI becoming increasingly incorporated in advertising through personalization, we felt it was essential to understand better the opportunities this technology offers, as well as the challenges and ethical dilemmas it creates for both businesses and consumers. This study allows us to dive deep and investigate just how AI impacts an industry that already walks a fine line between innovation and ethical concerns. We believe that a balanced approach, considering both the benefits and the potential risks, is crucial in the integration of AI in advertising. We hope to contribute to a broader understanding of the implications of AI-driven advertising.

Acknowledgements

First and foremost, we would like to express our sincerest gratitude to our thesis supervisor, Amine Ezzerouali, for his guidance, support, and patience throughout this study. His experience and suggestions have encouraged us to go further and explore our topics more deeply.

We would like to thank Victoria Tang, Remi Aubert, and Noah Douglas for interviewing with us. Their insights helped to push our research into new and exciting directions, and their expertise helped us better understand the links between AI, advertising, and the wider ecosystem in great detail.

Additionally, we extend our sincerest appreciation to all the respondents in our survey. Their contributions helped us a great deal in understanding the different perspectives that guided most of our work.

Lastly, we would like to express our heartfelt appreciation to all of our friends, relatives, and colleagues for their time and patience with us during the course of this work. Without your support, the completion of this project would not have been possible.

Table of Contents

Abstract and Keywords.....	2
Preface.....	3
Acknowledgements.....	4
Table of Contents.....	5
List of Tables and Figures.....	8
Executive Summary.....	10
1. Introduction.....	12
1.1 Historical Context.....	12
1.2 Research Question & Objectives.....	13
1.3 Research Approach.....	14
1.4 Significance of the Study.....	14
1.5 Keyword Definition.....	15
1.5.1 Artificial Intelligence (AI).....	15
1.5.2 Ethics.....	15
1.5.3 Personalization.....	15
1.5.4 Advertising.....	16
1.5.5 Targeting.....	16
1.5.6 Bias.....	16
1.5.7 Segmentation.....	16
1.5.8 Big Data.....	16
1.5.9 Multistakeholder Engagement.....	16
1.5.10 Data Tracking.....	17
2. Literature Review.....	18
2.1 Introduction.....	18
2.2 Advertising: Historical Context and Key Theories.....	18
2.2.1 History and the Evolution of Advertising.....	18
2.2.2 Historical Trends and Ethical Implications in Advertising.....	20
2.2.3 Key Theories and Frameworks.....	21
2.2.4 Impact of Advertising.....	22
2.3 AI and Personalization: Transforming Modern Advertising.....	24
2.3.1 Integration of AI in Contemporary Advertising Strategies.....	24
2.3.2 Definition and Process of Personalization.....	25
2.3.3 Techniques of Personalization in Advertising.....	26
2.3.4 Consumer Responses to AI Personalization.....	26
2.3.5 Societal Perceptions and Acceptance of AI in Advertising.....	30
2.3.6 Opportunities and Challenges in Advertising.....	32
2.3.7 Evaluating the Modern Advertising Landscape.....	33
2.4 Ethics in AI and Personalization.....	34

2.4.1 Theoretical Underpinnings of AI Ethics.....	34
2.4.2 Ethical Concerns in Advertising and Personalization.....	36
2.4.3 Practical Ethical Considerations in the Application of AI.....	39
2.5 Conclusion.....	39
3. Methodology.....	46
3.1 Research Objectives and Hypothesis.....	46
3.2 Research Design.....	47
3.3 Quantitative Methodology.....	48
3.3.1 Quantitative Research Approach.....	48
3.3.2 Quantitative Data Collection.....	50
3.3.3 Quantitative Analysis Process.....	51
3.4 Qualitative Methodology.....	53
3.4.1 Qualitative Research Approach.....	53
3.4.2 Qualitative Data Collection.....	57
3.4.3 Qualitative Analysis Process.....	57
3.5 Integration of Quantitative and Qualitative Data.....	59
3.6 Ethical Considerations.....	59
3.6.1 Consent and Confidentiality.....	59
3.6.2 Bias and Limitations.....	60
4. Results and Findings.....	63
4.1 Quantitative Analysis.....	63
4.1.1 Descriptive Analysis.....	63
4.1.2 Inferential Analysis.....	67
4.2 Qualitative Analysis.....	71
4.2.1 Interview Themes.....	71
4.2.2 AI Implementation.....	72
4.2.3 AI Advertising and Personalization.....	75
4.2.4 Ethical Considerations.....	76
4.2.5 Regulation.....	79
4.2.6 Multistakeholder Interest.....	82
4.2.7 Consumer Education & Perception.....	83
5. Discussion.....	85
5.1 Attitudes Towards AI in Advertising.....	85
5.1.1 Contrasting Attitudes Towards AI in Advertising.....	85
5.1.2 Reasoning for Divergence.....	85
5.1.3 Future of AI.....	86
5.2 Ethical Concerns and Trust.....	86
5.2.1 Convergence in Ethical Concerns.....	86
5.2.2 Divergent Views on Data Collection and Ethical Implications of AI in Advertising.....	87
5.2.3 The Trust Gap Between Consumers and Business Professionals.....	88
5.2.4 Addressing Bias and Ethical Standards in AI Training Data.....	89
5.3 Regulations.....	89
5.3.1 Divergent Views on Current Regulations.....	89
5.3.2 Consumer and Business Perspectives on Regulatory Sufficiency.....	90

5.3.3 Key Regulatory Frameworks: Benefits and Downsides.....	91
5.3.4 Challenges in Achieving Global Regulatory Standards.....	92
5.4 Personalized Advertising.....	93
5.4.1 Convergence on the Benefits of Personalized Advertising.....	93
5.4.2 Future Trends in Personalized Advertising.....	94
5.5 Multistakeholder Interest and Consumer Education.....	95
6. Recommendations.....	97
6.1 Summary of Key Findings: Understanding the Gap.....	97
6.2 Consumer Awareness.....	98
6.2.1 Promoting Consumer Awareness of AI by Businesses.....	98
6.3.2 Raising Consumer Awareness Around AI Systems.....	99
6.3 Consumer Autonomy.....	100
6.3.1 Empowering Consumer Autonomy in Data Practices.....	100
6.3.2 Exercising Consumer Autonomy in Data Practices.....	101
6.4 Collaboration and Communication.....	102
6.4.1 Increased Collaboration in AI Governance by Businesses.....	102
6.4.2 Increased Collaboration in AI Governance by Consumers.....	103
6.5 Transparency.....	104
6.5.1 Building Consumer Trust Through Transparent Data Practices.....	104
6.5.2 Advocating for Transparency in Data Practices as Consumers.....	105
6.6 Limitations of the Study.....	105
6.7 Final Thoughts: Navigating the Divide.....	107
Citations.....	109
Appendices.....	116
Appendix A - Interview Guide with Questions.....	116
Appendix B - Interview Transcriptions.....	119
Appendix C - Interview Thematic Table.....	144
Appendix D - Survey Responses.....	166

List of Tables and Figures

Table 2.1 Summary of Literature Review.....	40
Table 3.1 Survey Approaches and Reasoning.....	48
Table 3.2 Survey Questions and their Reasonings.....	49
Table 3.3 Survey Distribution Methods and Platforms.....	50
Table 3.4 Presentation of Interviewees and Reason for Inclusion.....	54
Table 3.5 Interview Themes and Reasoning.....	55
Figure 3.1 Phases of Thematic Analysis (Braun & Clarke, 2006).....	58
Figure 3.2 Mixed Research Method with a Convergent Triangulation Design Approach.....	59
Table 4.1 Mean, Median and Standard Deviation of Group B, Group C and Both Groups.....	63
Figure 4.1 Median of Group B, Group C and Both Groups.....	64
Figure 4.2 Standard Deviation of Group B, Group C and Both Groups.....	64
Figure 4.3 Mean of Group B, Group C and Both Groups.....	65
Table 4.2 Percentage (%) of Each Survey Question - Group B.....	65
Table 4.3 Percentage (%) of Each Survey Question - Group C.....	66
Figure 4.4 Percentage Distribution of Responses - Group B.....	67
Figure 4.5 Percentage Distribution of Responses - Group C.....	67
Table 4.4 Shapiro-Wilks Test Results.....	68
Table 4.5 Results of the Mann-Whitney U Test Comparing Answers of Group B and Group.....	69
Table 4.6 Summary of Spearman's Rank-order Correlation Test Results.....	70
Figure 4.6 Themes and Subthemes Identified through Thematic Analysis.....	71
Table 4.7 Interview Key Themes.....	72

Executive Summary

Problem

The advertising industry has long been criticized for its manipulative tactics and promotion of unchecked consumerism, and with the rise of AI-driven personalization, these concerns have only deepened. While consumers worry about the ethical consequences of AI, businesses view it as a golden ticket to boost sales and efficiency. This creates a significant tension between ethics and profitability, one that proves hard to resolve given the differing priorities of both parties. On one side, companies eager to enhance their marketing through AI risk alienating customers if they fail to address ethical concerns. On the other side, the complexity of AI systems, which remain opaque to most consumers, only heightens their suspicions and discomfort.

This thesis aims to explore this gap by examining the contrasting viewpoints of business professionals and consumers. It seeks to find actionable insights that balance the need for business efficiency with ethical responsibility. Understanding these differing perspectives is crucial for developing AI-driven advertising strategies that are both effective and meet consumer expectations.

Method

Our research followed a mixed-methods approach, beginning with a literature review to outline the key debates and concerns in the field. We used a Convergent Parallel design to ensure both breadth and depth in our findings, combining survey data and expert interviews.

The quantitative component involved surveys targeting two groups: 100 business professionals and 100 consumers. The surveys aimed to highlight patterns and differences in their attitudes towards AI-driven personalization, focusing on ethical concerns, trust in companies, and comfort with data use. Data analysis included both descriptive and inferential statistics, using non-parametric tests like the Mann-Whitney U test to account for non-normality in the data. Additionally, we performed Spearman's rank-order correlation to dive deeper into the reasons behind the differing perspectives.

For the qualitative aspect, we conducted in-depth, semi-structured interviews with three experts from business, policy, and academia. These interviews offered practical, regulatory, and ethical insights into AI's role in advertising, complementing the survey findings. By integrating quantitative surveys with qualitative interviews, our methodology provided a well-rounded analysis of both broader trends and more nuanced viewpoints.

Findings

Our research identified a significant trust gap between business professionals and consumers. Business professionals tend to trust AI due to their familiarity with the technology as well as their direct involvement in its implementation, which gives them a sense of control and confidence in its benefits. They are also more aware of the operational efficiencies AI provides and are often more exposed to internal safeguards within their organizations. On the other hand, consumers, who have less insight into how AI systems function and how their data is managed, tend to be more cautious and skeptical. Their concerns stem from a lack of transparency, fear of data misuse, and concerns around the broader ethical implications of AI, all of which contribute to their skepticism and discomfort with AI-driven advertising.

To address these challenges, we recommend the development of a Multistakeholder Governance Model that incorporates inputs from businesses, consumers, regulators, and independent experts. This multi-stakeholder approach would assist in balancing technological innovation with ethical responsibility, thus helping to build consumer trust in AI-driven advertising.

Our findings also highlight that the ethical challenges posed by AI in advertising are not new but rather the magnification of existing issues such as privacy concerns and the misuse of consumer data. As AI technologies evolve, businesses must take proactive steps to address these ethical challenges and align their practices with consumer expectations, since these concerns will become more prevalent and noticeable with the use of AI. Therefore, this thesis aims to spark further discussions about the future of AI in advertising. It encourages businesses to prioritize transparency, collaboration, awareness building, and consumer autonomy in their AI strategies. By addressing these core issues, companies can close the trust gap, ensuring that AI-driven innovations benefit both businesses and consumers in a fair and ethical manner.

1. Introduction

Businesses are constantly on the hunt to find new ways to connect with customers, with the purpose of better customer experience, increased customer loyalty, and ultimately maximized profit. However, as consumers become increasingly aware of these strategies, many feel a growing sense of disconnection. With the advent of AI, companies can now achieve this with unprecedented speed and efficiency, but is this merely accelerating the growing divide between businesses and consumers?

The **advertising** industry is experiencing a massive period of growth, which has seen it hit a market size of USD 366.1 billion in 2023 and is projected to reach USD 1,029.7 billion by 2032. This massive expansion has been fueled by increasing internet penetration rates and the advent of **data-driven marketing** strategies (IMARC Group, 2023). Today, businesses use massive amounts of **Big Data** to **target** consumers more effectively through personalizing their marketing efforts. AI-driven **personalization** is at the forefront of this shift, allowing advertisers to deliver customized content that more closely matches people's preferences and behaviors.

Technological advancements in **Artificial Intelligence (AI)** have opened up new possibilities in multiple industries, and advertising is no exception. AI technologies, such as machine learning algorithms (ML) and natural language processing (NLPs), are revolutionizing how advertisers understand and interact with their audiences. AI systems allow real-time **data tracking** and analysis to enhance **segmentation** targeting strategies. This allows brands to better anticipate customer needs, predict future behaviors, and optimize their advertisements to a higher degree. As a result, AI-driven personalization has improved ads' relevance and effectiveness and has made the overall customer experience more seamless and engaging. However, at the same time, concerns have been raised about both the implementation and usage of this technology, especially regarding the **ethics** of AI and the possible **biases** in their programs. These concerns have been exacerbated due to the historical concerns about the advertising industry as a whole.

1.1 Historical Context

To better understand these concerns, some historical context is required to better situate and explain the path that has led to the integration of AI into the advertising industry. In the beginning, advertising was simply seen as a tool to appeal to consumer preferences by

highlighting the distinctions between similar products by emphasizing their features and quality. Throughout the 20th century, the advertising industry has undergone rapid transformations. It moved from the basic persuasive tactics aimed at single audiences through radio and television towards the far more sophisticated and data-driven strategies that have continued on to today.

As the century progressed, advertising strategies became increasingly personalized and advanced, with the introduction of concepts like the Unique Selling Point (USP) and psychological techniques to craft emotionally compelling narratives gaining a lot of attention and usage. This period saw advertisers target specific consumer **segments**, using behavioral insights to build deeper emotional connections and brand loyalty in those targeted. This shift in approach served to amplify the influence of adverts on the everyday lives of millions. However, these same tactics have led to ethical concerns being raised around their manipulative nature and support of a consumerist culture.

Understanding this historical evolution is crucial as AI technologies are now firmly integrated into the advertising industry. These systems allow businesses to enhance the scope of personalized advertisements massively through the use of big data. However, these technologies have also amplified public and civil society concerns around issues such as privacy, manipulation, and transparency. These concerns have led to calls for more robust **regulations**. Therefore, this complex landscape requires delicate engagement between the different stakeholders to balance the need for innovation with ethical considerations around consumer protection.

1.2 Research Question & Objectives

In light of these concerns around the approaches employed in advertising, as well as the critiques of the industry as a whole, we wanted to explore the contrasting perspectives of businesses and consumers around AI-driven personalization in advertising. Numerous studies have been conducted on the subjects of AI from the perspectives of businesses, mainly around how to prioritize profitability and efficiency, using AI to enhance marketing effectiveness and return on investment. On the other hand, some scholars have taken on consumers and societal advocates to focus on ethical concerns such as privacy, data security, and bias in AI algorithms. This gap between the two groups' views underscores a need for deeper exploration. Moreover, comparing these is a critical perspective to add to the conversation since a nuanced view is required to understand all areas of the debate in order to identify converging and diverging views.

Our study aims to deepen our understanding of the concerns and perspectives of both businesses and consumers. Our final goal is to offer practical insights to help guide the creation of ethical strategies of AI-powered personalization. To do so, our research is guided by the following questions: Is there a significant gap between the perspectives of businesses and consumers? If so, what recommendations can be implemented to bridge this gap?

1.3 Research Approach

Answering such questions is a challenging task requiring a broad but deep investigation. In order to do so, in the literature review section, we will first chart the evolution of advertising over time to better understand the present-day trends and debates in the industry. Following this, we will explore the implementation of AI into the advertising ecosystem. Finally, we will provide a broad overview of the critical ethical concerns associated with the technology. This literature review will provide the theoretical backdrop to the state of play within the sector, highlighting the main debates and concerns to better identify the concerns and needs this study will address.

Our research will use a mixed-methods approach by integrating surveys and interviews to gain a more comprehensive view of the topic. The surveys will offer a broad view of the topic by capturing the differences in perspectives between businesses and consumers. The interviews will then allow for an in-depth exploration of certain specific concerns that may have arisen in the survey. They will help us to draw on expert insights to understand the complexities of the space. These surveys will be further broken down using Thematic Analysis to identify key focus areas. By combining these methods, we aim to ensure both breadth and depth of our research, exploring the research questions from multiple angles.

We will then use a triangulation approach in the discussion section to synthesize the findings from both the surveys and interviews. This will allow us to validate and check our results by cross-examining them across the different themes. Through this process, we will be able to identify areas of convergence and divergence, and relate our findings with the broader literature. Finally, we will provide a final set of recommendations and findings to answer the research questions.

1.4 Significance of the Study

This study's significance lies in exploring the ethical implications surrounding AI-driven personalization in advertising, a topic of growing importance as AI technology advances. The thesis argues for the pressing need for more robust ethical guidelines and regulatory oversight in

AI-powered advertising. In the future, AI will be central to the advertising industry; businesses must start to work now on adopting responsible practices that take into account both consumer trust and strong ethical standards. Our research recommendations aim to help guide the development of such ethical AI strategies. These strategies will aim to enhance advertising effectiveness and protect consumer rights, thus promoting a more transparent and trustworthy digital environment.

1.5 Keyword Definition

Before diving into the subject matter, it is important to note that certain key terms will be used throughout this paper, and therefore, it is of the utmost importance to establish clear and consistent terminology throughout the paper. Additionally, certain regulations will be introduced in the paper, so a brief explanation will be provided to provide context to the reader. As multiple definitions often exist for certain terms, this section aims to ensure that key concepts are understood in the research context to minimize potential misunderstandings.

1.5.1 Artificial Intelligence (AI)

AI refers to “computer systems [that are] able to perform tasks normally requiring human intelligence” (Jobin, 2019).

1.5.2 Ethics

Ethics refers to the moral principles that govern a person's or group's behavior. In AI and advertising, ethics involves ensuring that AI technologies are used responsibly, without harming individuals or society, and with respect for privacy, fairness, and transparency (Du, 2021).

1.5.3 Personalization

Personalization is the process of tailoring content, products, or services to individual users based on their preferences, behaviors, and needs. In advertising, this involves using customers' personal and behavioral data and AI to deliver customized ads to specific consumers (Chandra et al., 2021).

1.5.4 Advertising

Advertising can be best understood as the activity of creating and disseminating promotional content to inform or persuade an audience to purchase a product or service. It encompasses a range of media, including print, digital, and broadcast channels. (Turow, 1997)

1.5.5 Targeting

Targeting in marketing refers to the practice of directing advertising efforts toward a specific group of consumers who are most likely to be interested in the product or service (Chandra et. al, 2021).

1.5.6 Bias

Bias in AI refers to systematic and unfair favoritism or discrimination against certain groups, which can occur when algorithms are trained on skewed or non-representative data. In advertising, bias can lead to unequal targeting or exclusion of specific consumer groups (Kenan, 2024).

1.5.7 Segmentation

Segmentation is the process of dividing a broad consumer or business market into subgroups based on shared characteristics, such as demographics, needs, or behavior. This allows marketers to target each segment more effectively with tailored messages (Chandra et al., 2021).

1.5.8 Big Data

Big Data refers to the large volume of data generated by various digital sources, such as social media, e-commerce transactions, and sensor networks. In advertising, Big Data is analyzed to uncover patterns, trends, and insights that inform marketing strategies (Haleem et al., 2022).

1.5.9 Multistakeholder Engagement

Multistakeholder engagement refers to “a diverse group of individuals, organizations, and institutions collaborating to address common issues or problems, such as governments, NGOs, private companies, and local authorities” (ScienceDirect, n.d.).

1.5.10 Data Tracking

Data tracking involves collecting user data to analyze behaviors and interactions across digital platforms. It can be categorized into:

- **First-Party Data:** Data collected directly by a company from its users through its website, apps, or other platforms.
- **Second-Party Data:** Another company's first-party data, shared through partnerships, offering access to new audiences.
- **Third-Party Data:** Data collected by external entities without a direct relationship with the user, often used for targeted advertising but with lower accuracy. (Treanor, 2023)

2. Literature Review

2.1 Introduction

The field of advertising has seen significant shifts in recent times with the rising use of AI, moving towards serving consumers with highly personalized offerings. This literature review will explore the past paths that have led to today's integration of AI into advertising. A particular focus will be given to the ethical issues linked to the process of personalization. The review draws from peer-reviewed journals and scholarly books written in English.

Given the wide scope of both the fields of AI and advertising, this literature review will maintain a narrow focus on the ethical concerns and challenges surrounding AI-driven personalization in advertising. We deliberately avoid delving into the technical details of AI and instead focus our investigations on the technology's implications for consumer privacy, and its broader societal effects.

Throughout the review, five main themes will be highlighted: the historical evolution of advertising, AI's role in advancing personalization, the influence of personalization on consumer behavior, societal views on AI in advertising, and ethical concerns around AI-based advertising strategies.

2.2 Advertising: Historical Context and Key Theories

2.2.1 History and the Evolution of Advertising

Early Beginnings and Pre-Industrial Revolution Advertising

From the earliest chapters of civilization, advertising has been a cornerstone of commerce. Historical records reveal that the Romans employed carvings to publicize their businesses. This practice evolved with the advent of the printing press in the Renaissance, which gave rise to the distribution of handbills (Tungate, 2013). Early modern European merchants used signs, trade cards, and early print media to attract customers, paving the way for modern advertising in a growing capitalist economy (Braudel, 1992).

The Industrial Revolution and the Birth of Modern Advertising

The Industrial Revolution brought significant expansions in advertising. The surge in mass production allowed manufacturers to meet local demand with ease and created new opportunities for expansion into previously unknown markets. This then brought into existence a new type of need for the manufacturer - to communicate the quality and uniqueness of their products to a broader audience. Newspapers, thriving in circulation and readership, became a pivotal conduit in this new marketing landscape. With a significantly larger readership, newspaper agencies were pivotal in this new marketing landscape, serving as both platforms for advertisements and as early advertising agencies that managed ad spaces to showcase brand virtues (Tungate, 2013).

This era marked a transformation in advertising as personal connections between sellers and clients began to decrease; sellers would instead focus on appealing to a broader customer base (Ezzat, 2023). A structured advertising industry arose. However, it was poorly perceived due to corruption as newspaper agencies quickly began exploiting the lack of regulations. This led to negative perceptions of the profession until 1869 when George P. Rowell composed a directory of advertising rates and circulations, and Francis Wayland Ayer invented a fixed commission for advertisements in newspapers in the US (Tungate, 2013).

The 20th Century: Golden Age and the Rise of Personalization

Described as the Golden Age of advertising, the 20th century introduced significant shifts in advertising perspectives and methods (Ezzat, 2023). In the first half of the century, advertising was primarily regarded as a tool for persuasion, and was broadcasted through radios and televisions. The primary view at the time was that advertising is used to skew consumer preferences and create unnecessary distinctions between products from an economic standpoint (Schmalensee & Willig, 2008). However, by the 1960s, the Chicago School's influence ushered in a new perspective that emphasized the informative functionality of advertising. This highlighted advertising's role in reducing the information asymmetry between consumers and businesses, leading to improved market efficiency, which in turn translated into more competitive prices and informed consumer choices (Schmalensee & Willig, 2008).

As the 20th century progressed, a degree of personalization arose as advertisers segmented markets through targeted advertising to refine influences on specific consumer groups (Turow, 1997). The era also witnessed the introduction of the USP by Rosser Reeves (Ezzat, 2023), which guided brands to distinguish themselves by addressing consumers in detailed and

highly customized ways. This led to a shift from a “reason why” approach focused on features and quality to an emotional appeal (Tungate, 2013).

This perspective highlights how advertising adds value to a product by enhancing the consumer’s experience and creating associations with lifestyle or social status (Schmalensee & Willig, 2008). This was seen with Theodore MacManus’s “The Penalty of Leadership” campaign for Cadillac, which emphasized the prestige associated with owning a Cadillac rather than its specifications (Tungate, 2013).

The inventions of radio and television opened new avenues for advertisers to reach even wider audiences. Edward Bernays, who is often called the “father of public relations,” revolutionized advertising by applying psychological principles to the field. His approach centered on “engineering consent,” where he sought to sway public opinion and influence behavior by tapping into people’s unconscious desires and motivations (Arqoub et al., 2019).

Brands began to craft narratives that not only sold products but also built customer loyalty through making emotional connections and creating memorable characters, like the Marlboro Man. The rise of consumerism in the mid-20th century further fueled the growth of advertising, and vice versa. As companies recognized their power to influence consumer choices, they invested heavily to develop the sophisticated marketing strategies used in today's digital world (Tungate, 2013).

2.2.2 Historical Trends and Ethical Implications in Advertising

The evolution of advertising has transitioned from seller-buyer interactions focusing on personal relationships to expansive mass marketing campaigns characterized by innovations such as the USP, which highlights the need for businesses to adopt personalized strategies to stand out in competitive markets (Ezzat, 2023). As we move into the 21st century, personalization continues to be a pivotal technique in the advertiser’s arsenal, adapting to evolving technologies and consumer demands. Additionally, the historical rise of advertising is closely linked with the promotion of consumerism (Pollay, 1986) and is often criticized for fostering a materialistic culture and unethical practices due to regulatory gaps and the potential for exploitation (Tungate, 2013).

Modern advertising still faces challenges around manipulation and transparency, mirroring the negative reputation the industry received in its early days. UNESCO’s description of advertising as “a form of communication that plays on emotions” points to its manipulative aspects (Pollay, 1986). Rather than offering true choices, advertisers often use psychological techniques to tap into people’s desires and insecurities, subtly guiding their decisions.

2.2.3 Key Theories and Frameworks

Traditional Theoretical Frameworks of Advertising

The AIDA model developed by E. St. Elmo Lewis in 1898 is one of the foundational frameworks in the field of marketing and advertising. It outlines the steps that consumers typically go through when interacting with an advertisement. The acronym stands for Attention, Interest, Desire, and Action, and represents a linear progression through which a consumer is first made aware of a product (Attention), becomes interested by learning about its benefits (Interest), develops a desire for it (Desire), and finally takes action, such as making a purchase (Action) (Vakratsas & Ambler, 1999). By following this structured approach, marketers can design campaigns that engage consumers at each critical point, enhancing the likelihood of converting attention into results, in this case, a purchase..

Similarly, the hierarchy of effects model, another seminal concept in advertising, also describes a sequential process through which consumers move from initial awareness to final action. Developed by Robert J. Lavidge and Gary A. Steiner in the 1960s, this model expands on the concept of AIDA by including stages like Knowledge (consumers learn about the product), Liking (they develop a favorable attitude towards it), Preference (they choose the product over competitors), and Conviction (they form a purchase intention) (Vakratsas & Ambler, 1999).

The Advertising Effectiveness Model by Vakratsas & Ambler (1999)

According to Vakratsas & Ambler (1999), the effectiveness of advertising for consumers can be mapped in a three-dimensional space consisting of affect (feeling), cognition (thinking), and experience (past interactions). This model suggests that the impact of advertising is not linear or hierarchical but rather simultaneous across these dimensions, depending on the context such as the product category, target market, and stage of the product life cycle.

Cognitively, adverts process rational information that shapes consumer's beliefs about the product. Effectively, they evoke emotional responses crucial for forming brand connections, which can outweigh rational judgments, especially in lifestyle-related decisions. Experientially, previous brand interactions either bolster loyalty or discourage future purchases based on satisfaction. This multi-dimensional approach allows advertisers to craft messages that are informative, emotionally engaging, and resonate personally with consumers. Additionally, this model challenges traditional sequential advertising frameworks like AIDA and the hierarchy of

effects model by suggesting that advertising's impact is complex and context-dependent rather than strictly hierarchical.

Neuromarketing

Furthermore, the rise of a new and sophisticated method in marketing, Neuromarketing, focuses on studying human behavior and reactions through data analysis, reflecting the evolution of market dynamics (Nesterenko, 2023). Previously, consumer purchasing decisions were primarily based on product need, quality, and profitability. However, today's consumers, overwhelmed by an abundance of product information, often rely more on brand familiarity and trust rather than objective assessments of quality or value. This shift has led companies to increasingly invest in neuromarketing, which aims to influence consumer behavior more effectively by enhancing brand recognition and trust. Critics argue that neuromarketing could potentially manipulate consumer perceptions, thereby granting companies significant power over consumer choices and potentially deceiving them (Nesterenko, 2023).

2.2.4 Impact of Advertising

Economic Impact of Advertising

Advertising plays a critical role within economic systems, enhancing consumer awareness and fostering competition, which are essential for a dynamic market environment. By disseminating key product details, advertising reduces search costs and facilitates informed consumer choices, thereby increasing market transparency (Calfee and Ringold, 1994; Schmalensee & Willig, 2008). Established brands use advertising to showcase product quality, which builds consumer trust and reduces perceived purchasing risks (Erdem and Swait, 1998). Moreover, it plays a critical role in driving innovation and facilitating market entry for new products. This dynamic encourages companies to compete and improve their offerings, leading to better product quality and lower prices, benefiting consumers overall.

Psychological Impacts of Advertising

Advertising frequently targets psychological processes to influence consumer choices, seeking to shape desires and perceptions about lifestyle and happiness. For instance, manipulative advertising techniques, such as emotional appeals and misleading claims, can create unrealistic expectations and induce anxiety by suggesting that personal success is contingent on the consumption of certain products (Danciu, 2014). The psychological tactics employed, such as the use of idealized images and scenarios, can lead to diminished self-esteem and body image

issues, particularly among vulnerable populations like children and adolescents, eventually contributing to a sense of powerlessness (Pollay, 1986). This is likely to be further exacerbated by the widespread adoption of AI technologies (Cheatham et al., 2019).

Moreover, the omnipresence of advertising can lead to information overload, affecting consumers' ability to make informed decisions. This sensory overload is often compounded by the subtle or not-so-subtle use of neuromarketing techniques, which aim to influence subconscious decision-making processes, raising questions about consumer autonomy and consent (Serota, 2019).

Sociological Impacts of Advertising

On a sociological level, advertising significantly influences and shapes societal norms and cultural identities. It both mirrors and molds social realities, often reinforcing existing stereotypes and beliefs within society.

Advertising plays a pivotal role in shaping a culture that is deeply entrenched in consumerism and materialism. This pervasive influence transforms the societal view of success and personal value, equating them directly with material possessions. The impact of this materialistic culture is profound, leading individuals to measure their worth and success by their ability to accumulate and display wealth. This emphasis on possession over personal growth or contribution to communities reshapes individual identities and societal values, promoting a superficial understanding of success and fulfillment. Consequently, the relentless drive for material accumulation fosters a cycle of endless consumerism, which not only diminishes the quality of human relationships but also leads to environmental repercussions (Pollay, 1986).

Moreover, advertising's influence on culture extends to normalizing certain behaviors and products. The alcohol and tobacco industries provide clear examples where advertising has historically played a significant role in glamorizing consumption despite the well-documented health risks associated with these products (Serota, 2019). One of the most iconic examples of tobacco advertising is the Marlboro Man campaign. Initially introduced by Leo Burnett in 1954, the Marlboro Man was portrayed as a rugged, masculine figure who embodied toughness and charisma. This imagery appeals to a sense of idealized American identity—freedom, adventure, and independence. The campaign was wildly successful, dramatically boosting Marlboro's sales. The Marlboro Man became so ingrained in popular culture that the image of smoking became associated with the desirable traits of the characters depicted in the advertisements (Tungate, 2013).

The glamorization of tobacco use through such powerful imagery and narratives starkly contrasts with the harsh realities of smoking-related health issues. It wasn't until the landmark Surgeon General's report in 1964, which officially recognized the health risks associated with smoking, that public perceptions began to shift somewhat.

Mass Marketing and Stereotyping

Mass marketing is a strategy often employed in advertising by categorizing consumers into broad segments (Danciu, 2014). The goal is to use the same message to reach as many people as possible. The implication being that it can lead to oversimplified and sometimes inaccurate generalizations, as this approach tends to “put people into boxes”, reinforcing narrow identities and reducing the complexity of human diversity to mere stereotypes (Pollay, 1986). The practice not only limits the perception of individual uniqueness but also perpetuates a cycle of stereotyping that can be detrimental to cultural understanding and social harmony. For example, gender stereotyping in advertising perpetuates traditional roles and can hinder societal progress towards gender equality (Danciu, 2014). Today, customers have the desire to stand out while being in a crowd, which can be seen as part of a larger trend towards individualism in Western societies (Chandra et al., 2022). Therefore, traditional marketing practices such as mass marketing no longer fulfill the needs of modern day customers (Chandra et al., 2022).

2.3 AI and Personalization: Transforming Modern Advertising

2.3.1 Integration of AI in Contemporary Advertising Strategies

The advent of AI introduces a significant shift in marketing trends from mass marketing to personalization. Initially conceptualized in 1956, AI has experienced exponential growth in recent years, propelled by advancements in computing speeds, internet accessibility, and the proliferation of Big Data (Du, 2021)

Personalization leverages AI to analyze consumer behavior on an individual level, allowing for marketing efforts tailored to the unique preferences, behaviors, and needs of each consumer (Haleem et al., 2022). This approach stands in stark contrast to mass marketing's broadstroke generalizations and has the potential to help reduce the rigid stereotypes that traditional advertising often reinforces, and ease some of the psychological impacts that traditional advertising poses, if employed ethically (Jaffery, 2022).

For marketers, the benefits of AI and personalization are significant. They can use AI to increase ROI without spending their budget on unsuccessful strategies, as it allows them to examine data thoroughly to know what consumers really want (Nesamoney, 2015). This enables them to cease expending resources on poorly planned advertising campaigns that “miss the mark” with clients or customers. (Haleem et al., 2022). Additionally, the significant impact of personalization on marketing efficiency and revenue generation is evident from data showing that successful personalization strategies can increase revenue by 5-15%, while enhancing marketing efficiency by 10-30% in a single channel (Chandra et al., 2022). This offers businesses an advantage to engage with customers more meaningfully, especially as the landscape of digital marketing becomes increasingly competitive.

2.3.2 Definition and Process of Personalization

Personalization in marketing is the process of delivering tailored products and services to customers at the optimal time and place, enhancing relevance and effectiveness. This concept encompasses a variety of practices known by terms such as "individualization," "segmentation," "one-to-one marketing," and "customization," each highlighting a facet of tailoring offerings to meet specific customer needs (Chandra et al., 2022).

It is important to note that personalization and customization differ regarding the initiator of modifications; personalization is firm-driven, using customer data to tailor marketing, while customization is consumer-driven, allowing individuals to specify product details. This distinction highlights a shift in control from companies to consumers, emphasizing predictive data use versus consumer choice in product design (Chandra et al., 2022).

Personalization in marketing is a dynamic and iterative process that involves several key phases that enhance customer engagement and satisfaction. These stages start with identifying the customer, recognizing their specific needs, interacting with them effectively, customizing the product to meet those needs, and then measuring the effectiveness of these efforts (Lindecrantz et al., 2020).

This refined approach to personalization redefines the traditional marketing mix, which typically revolves around the four "Ps" — Product, Price, Place, and Promotion. Personalization introduces a new framework, the five "Is" — Identification, Individualization, Interaction, Integration, and Integrity. Each "I" represents a critical component of the personalization process, underscoring the importance of a tailored approach in achieving effective marketing outcomes and maintaining customer integrity throughout the interaction (Chandra et al., 2022).

2.3.3 Techniques of Personalization in Advertising

Content Personalization

Content personalization uses AI to tailor the content that each user sees on digital platforms. By analyzing user engagement data—such as click-through rates (CTR), browsing history, and interaction times—AI algorithms can adjust the content dynamically to fit the individual's preferences (Deveau, 2023). This could be in the form of personalized news feeds on social media, customized product pages on e-commerce sites, or even tailored email marketing messages that resonate more deeply with each recipient, thereby increasing the effectiveness of marketing campaigns and fostering greater customer loyalty (Babatunde et al., 2024).

Dynamic Promotion

Dynamic promotion, facilitated by AI, tailors marketing offers and advertisements based on customer behavior and preferences. By analyzing factors such as past purchase history, site navigation patterns, and engagement with previous promotions, AI systems can customize advertising materials and special offers in real-time (Nesamoney, 2015). This personalized approach enhances the relevance of promotions and increases the likelihood of customer engagement and conversion, making promotions more effective and increasing customer satisfaction (Babatunde et al., 2024).

Predictive Analytics

Predictive analytics harness statistical algorithms and machine learning to forecast future consumer behaviors based on historical data. By analyzing patterns from past interactions, marketers can predict which products or services consumers are most likely to be interested in, allowing for the delivery of highly targeted and relevant advertisements (Nesamoney, 2015). This significantly enhances the efficiency of marketing campaigns and improves customer engagement and conversion rates (Kumar et al., 2016).

2.3.4 Consumer Responses to AI Personalization

Recent studies have demonstrated that the influence of personalized advertising on consumer behavior is both significant and complex.

Personalizations Effects on Consumer Decision Making

AI-driven marketing is increasingly popular across various industries due to its ability to enhance efficiencies, amplify revenues, and elevate customer satisfaction. This rise in AI usage is underpinned by its capacity to personalize advertisements deeply, using Big Data to finely tune marketing messages that effectively prompt immediate purchasing actions. Investment in AI technology is expected to surge, with spending projected to reach \$154 billion in 2023 and potentially doubling to \$300 billion by 2026 (Spais et al., 2023).

Personalization in advertising aims to tailor marketing messages to align with individual consumer preferences and behaviors. This targeted approach significantly boosts the likelihood of making purchase decisions. For example, AI-driven marketing strategies harness predictive analytics to anticipate customer needs and preferences, thereby enabling more effective targeting that can trigger impulse purchases. The timely and relevant advertisements generated through these methods are designed to meet consumers at their point of need, thereby increasing the efficacy of marketing efforts.

Beyond impulse buying, personalization influences decision-making by reducing the cognitive load on consumers. When consumers receive advertisements that are closely aligned with their interests and past behaviors, the ease of decision-making increases, leading to quicker and more frequent purchases. This is particularly evident in online retail, where personalized recommendations significantly drive conversion rates by presenting options that consumers are more likely to buy based on their browsing and purchasing history (Saxena, 2020).

One significant study demonstrating the said efficacy is a campaign where AI was used to segment consumers based on their sustainability preferences and then target them with personalized messages promoting eco-friendly products (Bashynska, 2024). This strategy resulted in higher engagement rates and an increase in eco-conscious purchasing behaviors, indicating that personalized advertising can significantly influence consumer decision making efficacy.

Moreover, the data-driven aspect of personalized advertising allows for a continuous feedback loop where consumer responses to adverts are constantly analyzed and used to refine future marketing efforts. This iterative process ensures that the advertising content remains highly relevant and engaging over time, thus fostering a deeper connection between the consumer and the brand. The ability to dynamically adjust marketing messages based on real-time data not only optimizes the consumer experience but also maximizes marketing efficiency (Saxena, 2020).

Enhanced Consumer Experience and Engagement

By customizing the advertising content to the individual's historical behavior and preferences, companies can offer a more relevant and engaging consumer experience. This personalized interaction not only improves customer satisfaction but also boosts brand loyalty and retention. The Elaboration Likelihood Model (ELM) by Joseph Priester and Richard Petty in the early 1980s suggests that the likelihood of persuasion increases when messages require deep cognitive processing, known as message elaboration (Priester & Petty, 2003). In the context of AI-driven marketing, personalized messages are crafted to align closely with individual consumer interests and needs, thereby facilitating higher levels of message elaboration. This deeper cognitive engagement is posited to lead to more substantial and lasting changes in attitudes and behaviors towards the brand (Babatunde et al., 2024).

A study by Shin (2020) applied the Elaboration Likelihood Model to AI-driven marketing, providing insights into how consumers engage in different modes of cognitive processing when exposed to algorithmically generated messages. This research revealed that, when interacting with algorithm-based services, consumers must decide whether to trust these services and to what extent they engage with them. This process of decision-making is important in determining users' level of acceptance surrounding AI advertising, which would in turn affect their attitudes towards the brand.

Another important theory is the Uses and Gratifications Theory (UGT), which is dubbed as an extension of Maslow's Hierarchy of Needs by Richard West and Lynn Turner. It suggests that consumers actively seek out media and content that fulfill their specific needs and desires. AI personalization enhances the ability of marketing strategies to meet these needs by delivering highly relevant and customized content. This targeted approach not only satisfies individual consumer demands but also increases the overall engagement with the marketing content, creating a more fulfilling user experience (Babatunde et al., 2024).

Questions Around Consumer Autonomy

When advertising is intensely personalized, consumers may begin to feel that their choices are being overly dictated by algorithms, leading to a perceived loss of autonomy. This sensation can be unsettling, as consumers might feel that their personal preferences are being infringed upon rather than served. As Saxena (2020) points out, this can trigger psychological reactance, a behavioral response where individuals resist suggestions or offers that they perceive to be impinging upon their freedom of choice. For example, if a consumer feels bombarded by

personalized ads for fitness programs after browsing diet websites, they might react negatively, not just to the ads but to the brands behind them, seeing these marketing efforts as manipulative rather than helpful.

The tension between personalization and privacy, known as the “Personalization Privacy Paradox,” poses a major challenge for businesses. Awad & Krishnan (2006) note that while companies use customer data to enhance personalized services, consumers who value transparency are often reluctant to share their data, creating the paradox. In order to solve it, they highlight that businesses must focus on customers more open to personalization to navigate this issue. Awad & Krishnan (2006) further introduce an important distinction between personalized services and personalized advertising. Personalized services, like tailored recommendations, offer higher utility, making consumers more willing to share their data. In contrast, personalized ads, which solely target based on user behavior, are met with more skepticism, especially by those who’ve experienced privacy breaches.

The Echo Chamber and Filter Bubble Effects

Echo chambers and filter bubbles are phenomena that arise from AI-driven personalization on digital platforms, where algorithms tailor content to user preferences, often isolating individuals from diverse opinions and information. Echo chambers occur when people are exposed only to viewpoints similar to their own, reinforcing existing biases and limiting critical thinking. Filter bubbles, meanwhile, result from algorithms selectively filtering out information that contradicts a user's beliefs, based on their digital behavior and demographic data. Both phenomena can undermine democratic values by creating fragmented audiences, fostering environments where misinformation spreads easily, and reducing effective public discourse by limiting exposure to diverse perspectives (Saxena, 2020).

Trust Erosion and Decision Fatigue

Further complicating the psychological landscape is the issue of trust. Over-personalization can lead consumers to question the authenticity and intentions behind the advertised content. As consumers become more aware of how their data is being used to manipulate their purchasing decisions, they may become more skeptical of the ads they see and the brands they interact with. This skepticism can erode trust over time, which is detrimental to brand loyalty and customer retention. Studies suggest that when consumers perceive a lack of authenticity in marketing efforts, their overall trust in the brand diminishes, potentially affecting long-term business success (Kenan, 2020).

The psychological impact of personalized advertising also extends to how consumers handle information overload. In a digital landscape riddled with constant advertisements, an additional layer of personalization can lead consumers to experience decision fatigue. This occurs when the sheer volume of personalized choices overwhelms the consumer, making it harder to make informed decisions and potentially leading to dissatisfaction with choices made under pressure or haste (Saxena, 2020). For instance, a consumer who receives multiple personalized ads for similar products may find it difficult to discern which product is truly best suited to their needs, leading to frustration and possible disengagement from the purchasing process.

Adjustment and Adaptation Over Time

However, some consumers may adapt to the norms of personalized advertising and even come to expect and appreciate the relevance of the content they are shown. This adjustment can potentially mitigate some of the initial psychological resistance over time. As personalization algorithms improve and become more nuanced in their approach, the advertising experience can become more seamlessly integrated into the consumer's browsing experience, thus reducing the sense of intrusion (Ransbotham et al., 2017). However, this adaptation does not negate the need for marketers to handle personalization tactfully and ethically to maintain a positive consumer relationship.

2.3.5 Societal Perceptions and Acceptance of AI in Advertising

Contrasting Views Around AI Technologies

The perception of AI among professionals and the general public is deeply divided, with opinions ranging from profound admiration to severe skepticism. Sundar Pichai, CEO of Google, has expressed a highly optimistic view of AI, stating, “AI is one of the most important things humanity is working on. It is more profound than electricity or fire.” (Du, 2021). This perspective highlights AI's incredible processing speed, limitless recall, and capacity for self-improvement and learning.

However, contrasting views exist, where notable figures like Elon Musk and Stephen Hawking have voiced concerns over AI's potential dangers. Musk has referred to AI as “humanity’s biggest threat,” while Hawking described it as both miraculous and catastrophic, labeling it as potentially “the last event in our history, unless we learn how to avoid the risks” (Du, 2021). Such fears stem from the belief that AI could render humans obsolete or even pose an existential threat.

Moreover, amid growing public awareness of AI's potential for prejudice, as well as concerns about AI exacerbating societal divisions, it is argued that AI should not be feared indiscriminately. As AI personalization evolves, it needs to adapt continuously to new human behaviors, interests, and lifestyles, which can help mitigate biases if guided by ethical considerations (Shin, 2020). A more positive perspective suggests that AI can promote inclusivity and reduce discrimination by ensuring fair and unbiased decision-making processes, positioning AI as a potential force for positive change (Kenan, 2024).

Generative AI in Advertising

Research has shown that Generative AI (Gen AI) can create advertisements that are sometimes preferred over those created by humans, indicating a statistical difference in how commercials created by AI are perceived compared to those made exclusively by humans (Nesterenko, 2023). These findings suggest that AI-generated ads can be more effective, highlighting AI's potential to utilize company resources more efficiently by saving on marketing activity implementation and reducing costs (Nesterenko, 2023).

Consumer Trust Around AI

Consumer trust in AI also plays a crucial role in its acceptance. Spais et al. (2023) found that people are more likely to delegate decision-making to AI when they perceive the technology as intelligent and when the robot's benefits and appearance meet their expectations (Spais et al., 2023).

According to Shin (2020)'s study on how people react and act around AI algorithms and what influences the trust they have in these AI algorithms, it's crucial that AI exhibits Fairness, Accountability, Transparency, and Explainability (FATE) to build the trust needed for future interactions (Shin, 2020). Trust in AI emerges from three factors: the usefulness of the AI, the convenience it offers, and the emotions it evokes. This logic is applicable to other products and services as well; for example, we trust a fork because of its usefulness in eating, its convenience, and the emotional satisfaction of consuming a good meal (Shin, 2020).

However, algorithmic processing often comes with concerns such as discrimination and bias. Questions arise regarding how to ensure AI systems are fair and how to develop AI that is accountable and just. Fairness is complex and lacks a widely accepted definition (Shin, 2020), which is problematic for achieving ethical AI and fair personalized marketing. Without a careful approach to the fairness of algorithms, AI personalization may end up being discriminatory towards certain groups or individuals. However, Shin (2020) suggests that the fairness of an

algorithm could be potentially measured based on its accuracy, recall (the capacity to locate relevant results), and precision (the ability to produce exact results).

Shin (2020)'s research eventually came to the conclusion that users will trust the recommendations of AI as much as they understand and perceive its FATE attributes. And the influence of FATE on user trust is directly linked to the satisfaction users experience after utilizing AI.

2.3.6 Opportunities and Challenges in Advertising

Leveraging AI for Sustainable Consumer Practices

As AI technology continues to evolve, the capability to personalize marketing efforts with greater accuracy and efficiency presents an opportunity to drive significant environmental benefits. AI-driven personalization can be strategically used to influence consumer behavior towards more sustainable practices. For instance, by analyzing consumer data, AI can identify and target individuals who may be particularly receptive to eco-friendly products or sustainable lifestyle changes. This targeted approach not only improves the effectiveness of campaigns promoting sustainability but also helps in reducing the carbon footprint associated with less targeted advertising methods (Bashynska, 2024).

Promotion of Circular Economy Models

Personalization can also play a pivotal role in promoting sustainable business models such as the circular economy model - Defined by the European Parliament as “a model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible” (2023). AI can help businesses tailor messages about product life cycles, including repair, reuse, and recycling options that may appeal to consumers. This can encourage behaviors that support the circular economy, such as purchasing refurbished products or participating in recycling programs. Personalized advertising can make these options more visible and attractive to consumers who are already inclined towards making sustainable choices, thereby accelerating the shift towards a more sustainable economic system (Bashynska, 2024).

Reducing Bias and Stereotyping

The potential of AI-driven personalization in advertising to reduce traditional stereotypes prevalent in mass marketing is significant. By concentrating on individual consumer behaviors

and preferences rather than broad demographic segments, personalized advertising can tailor messages that resonate more deeply on a personal level. For example, instead of targeting all middle-aged women with ads for household cleaning products—a common stereotype in traditional advertising—AI can identify specific interests and needs based on individual online behavior, such as a preference for high-tech gadgets or professional development courses. This shift from a demographic-based approach to a behavior-based approach can help dismantle stereotypes and biases (Kenan, 2024), as well as deliver a marketing message that is both more relevant and respectful to the consumer (Chandra et al., 2022).

However, the reliance on AI and machine learning for personalization isn't without risks. If the algorithms driving these personalization efforts are built on biased data, there is a risk that these biases will be perpetuated and even amplified (Kenan, 2024). For instance, if an AI system is trained primarily on historical purchasing data that shows a particular demographic group buying certain types of products, the AI might infer that these preferences universally apply to all individuals within this group (Chandra et al., 2022). This will be elaborated further in Chapter 2.4.

2.3.7 Evaluating the Modern Advertising Landscape

The landscape of advertising has been fraught with challenges, notably its psychological and sociological impacts which have shaped consumer behavior and societal norms in profound ways. Advertising, in its traditional form, has earned a reputation for manipulating consumer desires, perpetuating materialism, and often negatively influencing the psychological state of consumers.

This historical backdrop sets the stage for the introduction of personalization in advertising, as it presents a potential remedy to several of these issues. By tailoring messages to individual preferences and behaviors, personalization reduces the reliance on broad stereotypes that mass marketing typically employs. This shift could theoretically lead to a more inclusive and accurate representation of diverse consumer identities and needs, thereby mitigating some of the negative stereotypes that traditional advertising perpetuates (Chandra et al., 2022).

Moreover, personalization can enhance consumer autonomy by providing advertisements that are more aligned with the user's immediate needs and interests, potentially reducing the psychological overload associated with mass marketing campaigns that bombard consumers with irrelevant ads (Chandra et al., 2022).

By leveraging data to better understand consumer behaviors and preferences, AI enables advertisers to tailor their messaging to individuals, promoting products and lifestyles that align with sustainability and circular economy principles, which has the potential to reduce the influence of materialism and consumerism. For instance, one successful campaign that used this technique is Patagonia's "Don't Buy This Jacket". The campaign urged consumers to reconsider their purchasing habits, emphasizing the environmental cost of unnecessary consumption (Bashynska, 2024).

In conclusion, while AI-driven personalization in advertising offers a promising avenue for addressing many of the traditional advertising industry's flaws, it is not a panacea. It requires careful implementation, ongoing oversight, and a commitment to ethical practices regarding consumer data and privacy (Saxena, 2020).

2.4 Ethics in AI and Personalization

2.4.1 Theoretical Underpinnings of AI Ethics

The surge in AI capabilities has enhanced marketing efficiency and performance, but it has also brought to the forefront significant ethical concerns that necessitate thorough scrutiny. When discussing AI ethics, we will take the view of Whittlestone et al. (2019), which is what he refers to as 'Practical AI Ethics', a view rooted in solution and practicality rather than the philosophical origins of ethics. It is also important to note that due to the novelty of the field, multiple participants have taken on the goal of "developing frameworks and guidelines to ensure the ethical use of AI in society". Therefore, these ethical frameworks often come into conflict with each other, creating challenges in agreeing on any single set of principles (Whittlestone et al., 2019, pg. 195). Nonetheless, a systematic literature review by Khan et al. (2022) of AI guidelines and frameworks identified issues of privacy, transparency, safety, and fairness as the most common concerns in the current literature. (Khan et al., 2022)

Moreover, the rapid adoption of AI has sparked a mix of excitement and concern. Challenges in data privacy, AI bias, cybersecurity risks, and potential unemployment have underscored the need for regulatory measures. For instance, UNESCO's "Recommendation on the ethics of artificial intelligence" in 2021 aims to set global standards aimed at guiding the ethical development of AI technologies (Kenan, 2024).

Visibility, Explainability, and Interpretability of AI

As AI becomes more deeply integrated into marketing strategies, it introduces multifunctionality (the ability to perform multiple tasks simultaneously), enhanced interactivity (dynamic engagement with users), and varying levels of intelligence (ranging from basic automation to complex decision-making) in products, each of which has significant ethical implications for products, consumers, and society as a whole (Du, 2021). According to Shin (2020), these implications include issues of transparency, where the visibility, explainability, and interpretability of AI processes become crucial. Visibility ensures that the processes and decisions made by AI are observable to users and regulators, allowing for oversight and accountability. Explainability relates to how AI systems can justify their decisions in terms that are understandable to humans, such as explaining why certain demographics are targeted in ad campaigns. Interpretability goes a step further by allowing stakeholders to comprehend how inputs (such as consumer data) are transformed into outputs (such as personalized ads). Together, these elements help enhance trust and mitigate risks associated with privacy and biases (Shin, 2020).

The Personalization-Privacy Paradox

One significant issue in AI-driven marketing is illustrated by the personalization-privacy paradox theory. This theory suggests that while consumers value the tailored experiences that AI personalization offers, they are also increasingly wary of the extensive data collection practices and potential privacy infringements that accompany these technologies (Saxena, 2020). This paradox highlights the delicate balance between consumer benefits and the need for robust privacy protections, representing not only a technological or regulatory challenge but also an ethical, legal, and human rights dilemma (Saxena, 2020).

Within this complex web of interactions and ethical challenges, we see the paradox that the ethical concerns surrounding AI-driven marketing stem from the very value creation it enables. Key issues include biases in AI, ethical and moral judgments around its use and decision-making, cybersecurity, and unemployment due to automation (Du, 2021). These concerns have prompted calls for stronger ethical scrutiny from leading professionals in computing and AI ethics, popular presses, and forward-looking scholars (Future of Life Institute, 2023).

In the evolving landscape of AI in marketing and other business operations, the imperative grows for companies to thoroughly engage with the ethical dimensions introduced by

these technologies. Ensuring the responsible use of AI involves embracing transparency, justice and fairness, non-maleficence, responsibility and privacy, (Jobin, 2019) and adhering to ethical practices that respect both individual rights and societal norms (Saxena, 2020).

2.4.2 Ethical Concerns in Advertising and Personalization

Addressing Bias and Discrimination in AI Systems

In the field of advertising, the ethical implementation of AI presents numerous challenges. AI's dependency on data is a critical factor; the biases inherent in the data used can significantly influence the decisions made by AI systems. This phenomenon, known as algorithmic bias, can lead to discriminatory outcomes if not properly managed (DEEM, 2023). An infamous example of such a bias occurred in 2018 when Amazon had to abandon its AI recruitment tool when it was discovered to be biased against women, stemming from the tool's training being done predominantly on data from male applicants' resumes (DEEM, 2023).

To mitigate biases in AI, companies must be careful about the data they use to train algorithms. This involves sourcing data from diverse backgrounds to provide multiple viewpoints, and rigorously testing the algorithms to ensure they do not perpetuate existing biases (DEEM, 2023). Moreover, any data used must be carefully collected and analyzed before it is fed into AI systems to prevent poorly trained models that could unfairly target or exclude underrepresented groups.

Misinformation and AI Hallucinations

Like humans, AI can output inaccurate or false information, a trend currently exacerbated in social media contexts and likely to accelerate further as AI systems become more widespread in digital communication (Kenan, 2024). This phenomenon, known as "AI hallucination," occurs when AI generates or presents false information due to flawed data interpretations or gaps in its training data. For example, AI used in news aggregation might amplify sensational but false stories because such content engages users more effectively, inadvertently learning to prioritize misinformation as a valuable marketing tool (Salvagno et al. , 2023)

The increase of AI hallucinations and misinformation in advertising has the potential to severely impact consumer trust and decision-making. As AI technologies advance in generating realistic texts, images, and videos, distinguishing between genuine and AI-generated content becomes increasingly challenging, posing significant ethical questions for marketers. Misleading

information can influence consumer perceptions and behaviors, swaying public opinion on products or brands and potentially leading to consumer distrust or unrest (Salvagno et al. , 2023).

Navigating Privacy and Data Security Concerns

As personalization becomes more prevalent, brands are prioritizing privacy concerns and implementing best practices for collecting, storing, and analyzing data to protect both customers and organizations (Kenan, 2024). Ensuring that AI systems work correctly involves using diverse data sets during testing and being transparent about how these systems are used, which helps customers understand the processes involved and ensures more reliable outcomes (DEEM, 2023).

However, AI's ability to easily collect vast amounts of consumer data, while incredibly useful for companies, raises numerous privacy concerns. Issues such as unauthorized data access can impact a company's image, eroding trust and potentially leading to legal and financial repercussions (DEEM, 2023). For example, a study by ProPublica revealed that an AI-powered system used by a major retailer was more likely to recommend higher prices to customers in predominantly African American and Hispanic neighborhoods than to those in predominantly white neighborhoods, illustrating the risks of biased AI (DEEM, 2023).

To address these challenges, companies need to implement strict controls including transparency, data analytics, feedback, and monitoring mechanisms (Cheatham et al., 2019). Personalization, which involves adapting content, services, and interfaces to individual user preferences, aims to enhance user satisfaction and loyalty but requires extensive data collection. The analysis of this data allows AI to construct detailed user models, which not only leads to profound privacy implications, as it could influence user decisions more easily than before, but also necessitates robust legislative frameworks to protect individual privacy (Saxena, 2020).

Interestingly, some scholars argue that personalization holds the capability to better protect privacy. For instance, personalized security systems can use behavior-based algorithms to detect anomalies, thereby safeguarding user data. This aspect of personalization would not only enhance a users right to privacy but is also indicative of how ethically applied AI can be utilized to protect individual rights (Saxena, 2020). Governance frameworks should thus include proposals for the creation of entities specifically addressing the privacy concerns inherent in digital data collection, fostering an environment of trust between data collectors and users (Saxena, 2020).

In short, while the benefits of AI-driven personalization are clear, it also poses risks to human rights, necessitating a balance between the use of data analytics and the protection of individual privacy. Legislative reforms, restructuring, and technical innovation are required to

safeguard user agency and manage the paradoxes presented by personalization in this digital age (Saxena, 2020).

Ensuring Transparency and Accountability

Transparency and accountability in the use of AI is crucial as the technology becomes increasingly integrated into various aspects of business operations. Shin & Park (2019) highlighted that determining liability for the outcomes of AI services is a complex issue, suggesting that providers of AI should ultimately be held accountable for any risks that arise. This view is echoed by Diakopoulos (2016), who argues that the responsibility for AI actions should rest with the AI providers, underlining the need for a clear accountability framework.

To ensure that accountability standards are met, companies must prioritize the safety of consumer data and rigorously filter the data used by AI systems. This includes establishing transparent practices about what data is collected, how it is used, and when consumers are interacting with an AI-powered bot. As regulations such as the General Data Protection Regulation (GDPR) and the AI Act in the European Union become more stringent, demonstrating compliance will become increasingly important. The transparency of these processes not only fulfills legal requirements but also enhances consumer trust and positively impacts the company's image (DEEM, 2023).

However, challenges arise with AI's potential to manipulate consumers. Businesses need to prioritize informed consent, ensuring that consumers understand what they are agreeing to when they interact with AI-driven services (DEEM, 2023). This becomes particularly pertinent in sectors like social media and content streaming, where platforms such as Netflix, Instagram, and Spotify wield significant influence over public opinion by determining the relative value of content that appears in front of users. While there is a need for better measures to prevent intentionally misleading content, the persistence of false news and disinformation raises questions about the commercial incentives that prioritize engagement over factual accuracy (Shin, 2020).

Ultimately, while AI itself cannot be held accountable, the responsibility falls on humans involved in the AI lifecycle. This includes not only the developers and providers but also those who deploy AI in consumer-facing applications. Establishing a well-thought-out strategy for transparency and accountability around AI implementations, such as chatbots, is vital (Shin, 2020).

2.4.3 Practical Ethical Considerations in the Application of AI

In discussions about the ethical implications of AI, it is important to acknowledge the perspectives of researchers and experts who often downplay fears related to the technological singularity—the notion that AI might surpass human intelligence and replicate complex social skills. These experts emphasize the current limitations of AI and are keenly aware of the widespread concern about job displacement potentially caused by AI advancements (Kenan, 2024). They argue that the purpose of investing in AI is not to replace humans but rather to augment and assist them in their daily tasks and decision-making processes.

This viewpoint is well illustrated by Flock Freight’s Director of Social Media and Partnerships, Bob Wolfley, who compares AI to household appliances like dishwashers or washing machines. He suggests that just as these tools save time and reduce the burden of domestic chores, AI is designed to streamline and simplify professional tasks, enhancing productivity rather than eliminating jobs. “AI is like the dishwasher or washing machine in our homes. Think of all the time you save not washing dishes or clothes by hand,” he explains (Kenan, 2024).

This analogy brings a practical perspective to the ethical debate around AI by highlighting its role as a supportive tool rather than a replacement for human labor. It underscores the importance of ethically developing AI, focusing on enhancing human capabilities and improving quality of life without undermining human value or employment. In doing so, it addresses ethical concerns by reinforcing the notion that AI should be developed in ways that respect and augment human work, ensuring that technology serves humanity positively.

2.5 Conclusion

This literature review has critically examined the profound transformations in advertising driven by AI, focusing on the ethical implications of personalization. The widespread integration of AI into advertising strategies has revolutionized how brands engage with consumers and raised important ethical considerations that demand careful examination. See Table 2.1 for a summary of the points discussed.

Table 2.1*Summary of Literature Review*

Author	Literature Name	Summary of Points Discussed
Tungate (2013)	Adland: A Global History of Advertising”	Evolution of advertising from early methods to modern practices.
		Shifting role and public perception of newspaper agencies from negative to neutral during the Industrial Revolution in advertising development.
		In the 20th century, there was a shift from product-focused advertising, which focuses on product functionality, to emotional appeals, which focuses on the value added by creating better customer experiences.
Braudel (1992)	Civilization and capitalism, 15th-18th century	Discussed early advertising techniques in Europe, like the use of signs and trade cards, which were precursors to modern advertising.
Ezzat (2023)	History and Development of Advertising through Media Technology	Described the negative perception of advertising during the Industrial Revolution due to exploitation and lack of regulations.
		Explained the emergence of personalization such as the introduction of USP in advertising in the 20th century through market segmentation.
Schmalensee & Willig (2008)	Handbook of Industrial Organization	In the 20th century, perceptions of advertising shifted from being a tool to skew consumer preferences to something that helps reduce information asymmetry between consumers and businesses and increase market efficiency.
Turow (1997)	Breaking Up America: Advertisers and the New Media World	Highlighted early personalization attempts in advertising through market segmentation.
Arqoub et al. (2019)	The engineering of consent: A state-of-the-art review	Discussed how Edward Bernay revolutionized advertising by applying psychology, which was described as swaying public opinion and influencing behavior following
Pollay (1986)	The Distorted Mirror: Reflections on the unintended consequences of advertising	Critiqued advertising for promoting materialism and unethical practices, influencing consumer desires and perceptions.
		Discussed advertising's manipulative nature and its role in shaping consumer perceptions and behaviors.
Vakratsas & Ambler (1999)	How advertising works: What do we really know?	Described traditional advertising models, such as the AIDA model and the hierarchy of effects, which outline consumer engagement steps.
		Highlighted the sequential process through which consumers move from awareness to action, according to traditional frameworks.
Nesterenko (2023)	The impact of AI development on the development of marketing communications	Discussed the rise of neuromarketing and its potential to manipulate consumer behavior by enhancing brand recognition and trust.

Author	Literature Name	Summary of Points Discussed
Calfee and Ringold (1994)	The 70% Solution: The Economic Benefits of Reducing Commercial Messages	Highlighted the economic role of advertising in enhancing consumer awareness and fostering competition in the market.
Erdem and Swait (1998)	Brand Equity as a Signaling Phenomenon	Explained how advertising builds consumer trust by reducing perceived risks and improving product quality perception.
Danciu (2014)	Manipulative Marketing: Persuasion and Manipulation of the Consumer through Advertising	Critiqued advertising's psychological impact, including manipulation tactics that create unrealistic expectations and anxiety among consumers. Sociological impact of advertising, such as reinforcing stereotypes and traditional roles.
Cheatham et al. (2019)	Confronting the risks of artificial intelligence	Highlighted that AI exacerbated existing psychological and sociological issues caused by advertising. Suggested companies to implement stricter controls regarding AI ethical issues.
Serota (2019)	Deceptive marketing outcomes: A model for marketing communications	Explored advertising's role in shaping societal norms and consumer behaviors, particularly the glamorization of products like alcohol and tobacco.
Awad & Krishnan (2006)	The personalization privacy paradox	Explores the "Personalization Privacy Paradox," and highlights that personalized services are generally more accepted by consumers, while personalized ads are viewed with greater skepticism.
Chandra et al. (2022)	Personalization in personalized marketing: Trends and ways forward	Discussed the shift from mass marketing to personalized marketing strategies enabled by AI, emphasizing consumer individuality and preferences.
Du (2021)	Paradoxes of artificial intelligence in consumer markets: Ethical challenges and opportunities	Analyzed the transformative impact of AI on advertising, moving from mass marketing to personalized approaches based on consumer data.
Haleem et al. (2022)	Artificial intelligence (AI) applications for marketing: A literature-based study	Highlighted AI's role in increasing marketing efficiency and return on investment by targeting personalized advertising strategies.
Jaffery (2022)	Connecting with meaning: Hyper-personalizing the customer experience using data, analytics, and AI	Suggested that personalization might help reduce stereotypes and ease psychological impacts of traditional mass marketing.
Nesamoney (2015)	Personalized digital advertising: How data and technology are transforming how we	Discussed the application of predictive analytics and dynamic promotion in personalized advertising to boost engagement and conversion rates.

Author	Literature Name	Summary of Points Discussed
	market	
Lindecrantz et al. (2020)	Personalizing the customer experience: Driving differentiation in retail	Explained the different stages of personalization, from identifying customers' needs to measuring the effectiveness of personalization.
Deveau (2023)	AI-powered marketing and sales reach new heights with Generative AI	Explained how AI algorithms use user engagement data, like click-through rates and browsing history, to personalize digital content to match individual user preferences dynamically.
Babatunde et al. (2024)	The role of AI in marketing personalization: A theoretical exploration of consumer engagement strategies	Discussed how AI-driven personalization in marketing can enhance consumer experience and engagement by aligning advertising content with individual preferences and needs, increasing message relevance and customer satisfaction, and fostering brand loyalty and retention.
Kumar et al. (2016)	Creating enduring customer value	Explored how predictive analytics and machine learning can be used by marketers to forecast consumer behaviors and deliver targeted advertisements, enhancing marketing efficiency and customer engagement.
Spais et al. (2023)	AI marketing and AI-based promotions impact on consumer behavior and the avoidance of consumer autonomy threat	Discussed the impact of AI-driven marketing on consumer decision-making by enhancing personalization through Big Data, increasing investment in AI technology, and exploring the role of consumer trust in the acceptance of AI in decision-making processes.
Priester & Petty (2003)	The influence of spokesperson trustworthiness on message elaboration, attitude strength, and advertising effectiveness	Explained that personalized advertising based on individual behavior and preferences enhances consumer experience and engagement, leading to increased satisfaction and brand loyalty, as supported by the Elaboration Likelihood Model, which posits that deeper cognitive processing enhances persuasion.
Saxena (2020)	Balancing Privacy, Personalization, and Human Rights in the Digital Age	Examined the psychological effects of personalized advertising, including potential decision fatigue and loss of consumer autonomy due to over-targeting.
Bashynska (2024)	AI-Driven Personalization in Advertising: Transforming Consumer Engagement through Sustainability and Circular Economy	Explored how AI-driven personalization can promote sustainable consumer practices and support circular economy models by targeting consumers with tailored messages about eco-friendly products and sustainable behaviors, enhancing engagement and encouraging environmentally conscious purchasing decisions.
Shin (2020)	User perceptions of algorithmic decisions in the personalized AI system: Perceptual evaluation of fairness, accountability,	Analyzed the application of the Elaboration Likelihood Model to AI-driven marketing, revealing how consumer trust in AI is influenced by fairness, accountability, transparency, and explainability (FATE). The study emphasized that consumers' trust and engagement with AI advertising depend on their understanding of these FATE attributes and highlighted the importance of transparency and interpretability in

Author	Literature Name	Summary of Points Discussed
	transparency, and explainability.	mitigating concerns about bias, discrimination, and privacy, ultimately affecting consumer attitudes and acceptance of AI-generated marketing messages.
Kenan (2020)	Ai ethics: How marketers should embrace innovation responsibly	Discussed the dual nature of AI in marketing, where it can either diminish consumer trust due to perceived inauthenticity or promote inclusivity by focusing on individual behaviors over demographic stereotypes, while also highlighting risks such as perpetuating biases through flawed algorithms and concerns over privacy and job displacement.
Ransbotham et al. (2017)	Reshaping business with artificial intelligence	Highlighted how consumers may adapt to personalized advertising, which can reduce psychological resistance over time.
Whittlestone et al. (2019)	The role and limits of principles in AI ethics: Towards a focus on tensions	Highlighted the concept of 'Practical AI Ethics', which focuses on creating actionable, solution-oriented ethical frameworks for AI that emphasize transparency, accountability, and fairness, while also noting the challenges of aligning diverse ethical guidelines in a rapidly evolving field.
Khan et al. (2022)	Ethics of AI: A systematic literature review of principles and challenges	Identified privacy, transparency, safety, and fairness as the primary concerns in AI guidelines and frameworks based on a systematic literature review of current research
Jobin (2019)	The global landscape of AI ethics guidelines	Stressed the importance of companies engaging with the ethical dimensions of AI in marketing and business operations, emphasizing the need for transparency, justice and fairness, non-maleficence, responsibility, and privacy to ensure the responsible use of AI technologies.
DEEM (2023)	The Ethics of Artificial Intelligence in Marketing Communications	Discussed the ethical challenges of implementing AI in advertising, focusing on issues such as algorithmic bias and privacy concerns, and highlighted the need for diverse data sourcing and transparency to mitigate biases and ensure responsible AI use. Addressed the potential for AI to manipulate consumers and the importance of informed consent in AI-driven services
Salvagno et al. (2023)	Artificial intelligence hallucinations	Explored the phenomenon of "AI hallucination," where AI generates false information due to flawed data interpretations or training gaps, highlighting the potential negative impact on consumer trust and decision-making as AI-generated content becomes harder to distinguish from genuine content, raising ethical concerns in marketing
Diakopoulos (2016)	Accountability in algorithmic decision making	Argued that responsibility for the actions of AI should rest with the AI providers, emphasizing the need for a clear accountability framework as AI becomes more integrated into business operations
Shin and Park (2019)	Role of fairness, accountability, and transparency in algorithmic affordance	Highlighted the complexity of determining liability for AI service outcomes and suggested that AI providers should ultimately be held accountable for their impacts.

In the first part of the literature review, the impact of advertising is depicted as a double-edged sword with significant consequences for consumer behavior and societal norms. As

discussed, advertising's evolution, from early methods to AI-driven personalization, has led to profound societal and psychological impacts (Pollay, 1986; Serota, 2019). Pollay (1986) notably criticizes the role of advertising in fostering a consumerist culture that equates personal value with material possessions, a view that is echoed by Serota (2019), who points out the ethical concerns and psychological manipulations inherent in modern advertising strategies. These impacts are pivotal in understanding the broader implications of AI in advertising, as they highlight the potential risks of perpetuating these issues through more sophisticated technological means.

Later on, a major agreement across the literature arose regarding the effect of AI-driven personalization on consumer experience enhancement. Researchers like Chandra et al. (2022) have emphasized how AI-powered personalized content increases consumer engagement, boosts brand loyalty, and enhances customer retention. Furthermore, the need for ethical guidelines in deploying AI in advertising is consistently highlighted by scholars such as Whittlestone et al. (2019) and Du (2021). They argue for robust ethical frameworks that ensure transparency, accountability, and fairness to mitigate biases and avoid discriminatory outcomes.

However, the literature also reveals significant disagreements, particularly concerning the impacts of AI-driven personalization on consumer autonomy and privacy. Saxena (2020) and DEEM (2023) raise concerns that highly personalized advertising could manipulate consumer behavior and compromise privacy, potentially leading to consumer distrust and erosion of brand loyalty. Additionally, the broader societal impacts of AI in advertising are a point of contention. While some studies highlight the positive potential of targeted advertising to promote behaviors such as sustainability (Bashynska, 2024), others, like Serota (2019) and Pollay (1986), warn of the psychological and sociological effects that may perpetuate consumerism and materialism.

A significant gap in the research emerges from the contrasting perspectives of the scholars contributing to the discourse. On one side, there are scholars like Kumar et al. (2016), Haleem et al. (2022), Nesamoney (2015), and Babatunde et al. (2024), who often write from the perspective of firms, focusing on how businesses can implement effective AI and personalization strategies to enhance profitability and market efficiency. On the other side are scholars like Pollay (1986), Danciu (2014), and Serota (2019), who approach the topic from the viewpoint of individuals or societies, often with an economic or policy maker's lens, focusing on the ethical, psychological, and sociological impacts of advertising practices.

These differing viewpoints highlight the need for a more integrated approach that considers both the business imperatives and the consumer and societal impacts of AI in advertising. Such an approach would not only balance the benefits of AI personalization with

ethical considerations but also foster a more sustainable and consumer-friendly advertising landscape.

3. Methodology

3.1 Research Objectives and Hypothesis

Based on the insights that were found from our literature review, it is clear that in the field of AI-driven advertising, there exist significant differences between the views of businesses and consumers on the topic. Our literature suggests that businesses mostly focus on profitability and efficiency as the key elements, using AI to increase their return on investment and enhance the marketing effectiveness. Consumers and societal advocates meanwhile, emphasize ethical considerations, such as privacy concerns, data security, and possible biases in AI algorithms as the most important points. These highly different priorities point to a clear gap in the current understanding of AI-driven advertising, which has not been thoroughly explored.

Therefore, the overarching objective of this research is to investigate these differing viewpoints so as to attempt to provide a more comprehensive understanding of the perspectives and concerns held by both businesses and consumers regarding AI-driven personalization and advertising. By examining these different points of view, the study aims to identify actionable insights that can help in the development of balanced and ethical AI personalization strategies. To achieve this overarching objective, one of our specific aims is to test the following hypothesis:

- **Null Hypothesis (H0):** There is no significant difference between the viewpoints of businesses and consumers regarding AI in personalization and advertising.
- **Alternative Hypothesis (H1):** There is a significant difference between the viewpoints of businesses and consumers regarding AI in personalization and advertising.

Testing this hypothesis will provide us with empirical data on both the extent of and specific areas around where these differences in viewpoints exist. However, testing this hypothesis is simply one element of our broader research objectives. By attempting to understand the perspectives of both businesses and consumers, we want to uncover the underlying nuances, and the broader environment within which these two groups interact with AI; factors that influence their attitudes towards AI-driven advertising. This deeper understanding will enable us to identify areas where the interests of businesses and consumers converge or diverge, which is a critical step in the journey towards developing advertising strategies that are not only effective but also ethically sound and socially acceptable.

3.2 Research Design

To achieve our research objective of understanding what approaches should be taken in implementing personalization strategies in AI based advertising in order to both enhance customer trust and business effectiveness, we employed a Convergent Parallel mixed-methods approach (Cresswell & Clark, 2017) that combined both quantitative and qualitative data to find areas of convergence between groups.

Quantitative Methods

The primary reason for conducting surveys was to obtain statistically significant data that can be generalized to a larger population. The benefit of quantitative analysis is that it allows for the identification of patterns, measurements on the differences in viewpoints, and finally it allows tests of the hypothesis to be conducted with a higher degree of reliability and validity.

Qualitative Method

To gain deeper insights in order to support our quantitative findings, as well as to inform our recommendation section, we conducted three qualitative interviews, as the goal of the study was to go beyond simply providing insights but also to develop suggestions for actionable proposals.

Mixed Method Approach

A mixed method approach was chosen in order to ensure a strong “breadth and depth of understanding and corroboration” (Johnson et al., 2007) that solely qualitative (with a lack of generalisability) or quantitative approaches (with its lack of ability to provide in depth explanations) are unable to do (Taherdoost, 2022).

In order to ensure consistency, we designed both our quantitative and qualitative studies around a common set of thematic elements that were to be used in the analysis section of this paper due to Thematic Analysis’s ability to effectively “identify patterns within and across data” (Clark & Braun, 2017). Furthermore, taking a mixed method approach is especially suitable in the business context, as noted by Hurmerinta-Peltomaki and Nummela (2006), who found a mixed method approach to be beneficial due to it increasing the validity of findings and in its efficacy in driving knowledge creation in novel and complex areas, to which AI ethics and personalization falls in line.

3.3 Quantitative Methodology

3.3.1 Quantitative Research Approach

Survey Design

To test our hypothesis, we designed a survey-based study targeting two distinct groups: business professionals and consumers. The goal was to design 2 identical surveys in order to test out the difference in responses by the 2 populations. Table 3.1 details the population, sampling method and sample size of the survey, and the reasoning behind each decision.

Table 3.1

Survey Approaches and Reasoning

Population	Group B: Businesses	Group B was targeted to include individuals in senior roles such as marketing managers, business analysts, and IT professionals. These roles were chosen because these professionals are directly involved in digital marketing and data analysis. They are likely to have firsthand experience with AI-driven advertising tools and personalization strategies and potentially decision making power in those areas. This group's perspectives are crucial in assessing how business stakeholders view the benefits, challenges, and ethical considerations of AI technologies in their field.
	Group C: Consumers	Group C was composed of individuals aged 16 to 55 who use digital platforms for shopping. This age range was selected to capture a broad spectrum of digital consumers who are active in online shopping environments and are, therefore, frequently exposed to AI-driven advertising. This consumer group's viewpoints are vital in understanding the public's reception to AI personalization and their concerns about privacy and ethical issues.
Sampling Method	Purposive Sampling	For this study, we employed a purposive sampling method to ensure that our sample accurately represented the target populations of business professionals and consumers. This involved selecting individuals who have specific characteristics or experiences relevant to the research question. This is done through displaying a disclaimer message specifically asking only individuals with the aforementioned attributes to participate (e.g., only individuals with the specified roles should participate in the survey intended for businesses), and requesting detailed occupation and age information to further ensure the eligibility of the participant.
Sample Size	200 Participants	The sample size for this study was set at 200 respondents, equally divided between 100 business professionals and 100 consumers. This balanced sample size allows for robust statistical analysis, enhances the generalizability of the findings, and aligns with common practices in similar research studies such as those identified by Comrey & Lee (2013).

Survey Content

The survey for this study was designed to capture a comprehensive view of respondents' attitudes towards AI-driven advertising and personalization. It was divided into four main sections. Table 3.2 is a detailed breakdown of the themes, the reasoning for inclusion, detailed questions and their types.

Table 3.2

Survey Questions and their Reasonings

Theme	Reasoning	Question	Type
Demographic	To ensure a balanced and diverse sample with respondents from different geographical regions and gender backgrounds.	What is your age?	Number
		What is your gender?	Multiple Choice
		Which country do you currently live in?	Open-ended
		What is your occupation?	Open-ended
Perception of AI Advertising	To understand overall sentiment towards AI in advertising, to establish a baseline for further analysis.	Q1. How do you feel about the use of AI in advertising?	Likert Scale (1-5)
		Q9. How effective do you believe personalized advertising is compared to non-personalised ones?	Likert Scale (1-5)
Ethical & Regulatory Concerns	To assess respondents' concerns about the ethics of using AI in personalized advertising and to evaluate their views on the current regulatory environment so that we can compare the levels of concern.	Q2. How concerned are you about the ethical implications of using AI in personalized advertising?	Likert Scale (1-5)
		Q3. Do you think the regulations in place are sufficient to address your concerns?	Binary (Yes/No/Unsure)
		Q10. Do you believe that every company needs to adopt an ethical AI framework in their advertising?	Binary (Yes/No/Unsure)
Trust in Companies and Comfort Level in Data Handling	To measure the level of trust and comfort level respondents have in companies to handle various types of data, essential for understanding differences in viewpoints between the two groups.	Q4. To what extent do you trust companies to use your data ethically?	Likert Scale (1-5)
		Q5. How comfortable are you with companies using your purchase history to provide more personalized advertising?	Likert Scale (1-5)
		Q6. How comfortable are you with companies using your browsing history to provide more personalized advertising?	Likert Scale (1-5)
		Q7. How comfortable are you with companies using your social media activity to provide more personalized advertising?	Likert Scale (1-5)

Theme	Reasoning	Question	Type
		Q8. How comfortable are you with companies using your personal information to provide more personalized advertising?	Likert Scale (1-5)

3.3.2 Quantitative Data Collection

Survey Distribution

Two identical surveys were created on Google Forms and launched in June 2024. One survey targeted business professionals, while the other targeted general consumers. They were distributed using a combination of online survey tools which were able to assist in targeting answers from specific populations, and through social media platforms to maximize reach and ensure diversity in the type of user targeted. The details of said platforms are provided in Table 3.3.

Table 3.3

Survey Distribution Methods and Platforms

Method	Platform	Description
Survey Tools	SurveyCircle	A community-based survey platform that allows researchers to share their surveys with a wide audience in exchange for completing other surveys.
	SurveySwap	Another platform similar to SurveyCircle, providing a mutual exchange system where users take each other's surveys.
	PollPool	A survey-sharing platform that enables researchers to reach a broad audience by pooling their surveys together.
Social Media	LinkedIn	Targeted primarily for reaching business professionals. Posts and direct messages were used to invite participation from individuals in relevant roles such as marketing managers, business analysts, and IT professionals.
	Instagram	Utilized to reach a broader consumer base, leveraging the platform's wide reach and engagement features like stories to encourage survey participation.
Direct Messaging	WhatsApp	Group chats and direct messages were used to distribute the survey links to a diverse set of contacts, ensuring both business professionals and consumers were reached.
	Group Chats	Various group chats (such as student groups) were used to share the survey links, encouraging participation through our personal networks and professional groups.

Data Handling and Cleaning

Upon receiving 100 responses each from the Business and Consumer groups (for a total of 200 responses), the surveys were closed and the responses were downloaded from Google Forms in Excel format and securely stored. The data was then cleaned to ensure completeness and accuracy. This process involved checking for and addressing any missing responses, correcting typos, and standardizing entries (e.g., using 'US' instead of variations like 'America,' 'United States,' or 'USA') to ensure consistency in grouping and analysis. Additionally, binary answers (Yes, No, Unsure) were assigned numerical values (Yes = 5, Unsure = 3, No = 1) to facilitate statistical analysis in later steps and ensure consistency in matching the Likert Scale answers (1-5).

3.3.3 Quantitative Analysis Process

Descriptive Analysis

After cleaning the data, we used several descriptive methods to analyze and compare the responses from groups B and C. This approach helped us understand the central tendencies and variability within each group. The approach is as follows:

1. **Central Tendency Analysis (Means and Medians):** We compared the means and medians of the responses from both groups to identify central tendencies. This allowed us to determine the typical response and the central point around which most responses clustered.
2. **Variability Analysis (Standard Deviation):** By analyzing the standard deviation, we assessed the spread and variability of the responses. This helped us understand the consistency and variability of the responses within each group and identify any significant deviations.
3. **Frequency Analysis (Response Distribution):** Frequency analysis was performed to determine the percentage of respondents who selected each answer. This analysis enabled us to compare the distribution of responses between groups. Unlike means and standard deviations, which can be influenced by outliers, frequency analysis would provide a clearer picture of the most common responses, offering additional insights into the data.

Inferential Analysis

To draw meaningful conclusions from our data, we needed to go beyond descriptive statistics and perform inferential analysis. The reason being, descriptive statistics do not allow us to make generalizations or infer relationships between variables within a larger population. Inferential tests, on the other hand, would allow us to determine whether the observed differences between groups are statistically significant and not due to random chance (APA Dictionary of Psychology, n.d.).

However, to determine the appropriate statistical tests, we first needed to assess the normality of the data. The Shapiro-Wilk test was specifically chosen for this purpose due to its robustness and sensitivity in detecting departures from normality. The Shapiro-Wilk test is highly recommended for small to medium sample sizes and is considered one of the most powerful tests for normality (Razali & Wah, 2011). This makes it particularly suitable for our dataset of 200 respondents.

The null hypothesis (H0) for this test is that the data is normally distributed, while the alternative hypothesis (H1) is that the data is not normally distributed.

- If we failed to reject the null hypothesis, meaning the data is normally distributed, we planned to use the independent samples t-test to compare the differences between the two groups. The t-test is appropriate for normally distributed data and helps determine if there is a significant difference in the means of the two groups.
- If we rejected the null hypothesis, meaning the data is not normally distributed, we then planned to use the Mann-Whitney U test, a non-parametric test suitable for comparing two independent groups when the data does not follow a normal distribution. The Mann-Whitney U test does not assume normality and is effective in detecting differences in central tendencies between the two groups (McKnight & Najab, 2010).

In the end, the Mann-Whitney U test was performed due to the non-normality of all of our dataset.

In addition to these analyses, we sought to delve deeper into the differences between Q1 (feelings about AI in advertising) for the two groups—Group B and Group C. During the initial analysis, we observed that Group B had generally more positive views about AI in advertising compared to Group C. To further explore the potential relationships between these attitudes and other factors in our survey, we decided to conduct a series of correlation analyses using Spearman's rank-order correlation.

This test was selected because our data was not normally distributed, as indicated by the results of the Shapiro-Wilk test. Since Spearman's rank-order correlation does not assume normality, it is a suitable choice for examining the strength and direction of associations between non-normally distributed variables.

We specifically focused on testing correlations between Q1 (feelings about AI in advertising) and the following questions:

- Q2 (levels of ethical concerns regarding AI in advertising): To understand whether higher ethical concerns about AI are associated with more negative feelings about its use in advertising for both Group B and Group C.
- Q4 (extent of trust in companies' ethical data use): To assess whether individuals' trust in companies to use data ethically is related to their views on AI in advertising for both Group B and Group C.

And finally, to explain the lower levels of ethical concerns in companies, we chose to test out the correlation between Q3 (perceived sufficiency in current regulations) and Q2 (levels of ethical concerns) for only Group B.

3.4 Qualitative Methodology

3.4.1 Qualitative Research Approach

Complementing the survey data, the qualitative component involved conducting in-depth semi-structured interviews with key stakeholders in the AI and advertising industries. This approach was selected in order to add to the findings from the survey by bringing in expert viewpoints to go along with customer-side findings. Additionally, discussing survey findings with experts was seen as an additional method to better contextualize the quantitative findings and a possible way to gain more insights. Given the relatively new field of AI-driven personalization, a semi-structured interview approach was chosen to allow the most flexibility in exploring points of interest, as this approach facilitates a more natural flow of discussion.

Interview Design

We conducted interviews with three individuals from diverse backgrounds (see Table 3.4), with no consideration for gender or age of the participants, rather simply around their occupation and expertise in the field. The three experts were from three specific fields: Business, Policy, and Academia. These areas were selected because they represent key perspectives in the

field of AI and personalization, as identified in the literature review, and they provide a range of viewpoints, highlighting areas of both similarity and difference.

Table 3.4

Presentation of Interviewees and Reason for Inclusion

Name	Experience	Reason for Inclusion
Noah Douglas	Policy analyst at Tremau, a leading European digital consultancy firm	To provide insights into the ethical considerations around AI development, the current regulatory ecosystem, and the broader societal implications of AI-driven advertising.
Rémi Aubert	CEO and founder of AB Tasty, a leading multinational web optimization software company,	To share practical experiences and strategies for implementing AI-driven personalization in business and advertising, along with a business-side view around AI regulations.
Victoria Tang	Professor of Marketing at INSEEC Business School, a French higher education institution	To provide an overview of the academic research around AI driven advertising, the challenges of the technology, as well as the current and future trends that are developing.

Interview Content

The interview questions were structured to explore the following overarching themes (see Table 3.5). Questions were slightly tweaked to adapt to the interviewee's background, and the differences will also be explained in the Reasoning section.

- Questions intended for Business professional are marked as (B)
- Questions intended for Academia are marked as (A)
- Questions intended for Policy expert are marked as (P)

Table 3.5*Interview Themes and Reasoning*

Themes	Specific Questions	Reasoning
Current state of AI Implementation		To start the conversation with a general understanding of the drives behind the implementation of AI in businesses in order to get a clear view of the use cases identified.
	(B) “Can you tell me about how your business has currently incorporated AI into its business operations?”	This information would be useful in understanding the differences and agreements between the three
	(B) “What were the primary drivers for adopting AI in your business strategy? How do you measure the success of these AI initiatives?”	perspectives in terms of AI implementation in order to establish a baseline for further questions.
	(A) “Our survey data shows mixed feelings about personalized ads. What, in your opinion, are the key benefits and drawbacks of personalized advertisements for customers?”	Questions meant for Business professionals are more about his own experience regarding AI implementation, as he is the only person able to give hands-on experience in the field. Question for Academia is focused on survey insight interpretation,
Ethical challenges and best practices	(P) (B) (A) “Our survey results indicate a high level of concern among respondents about the ethical implications of AI or using AI in personalization. How can companies balance the need for AI with concerns about user privacy and data security?”	To better understand what specific areas of ethical concern were of importance to the different interviewees. Possible similarities or differences in the answers would thus act to provide valuable insights into the priorities of different fields and where areas of concern existed.
	(B) “What were your main concerns about using AI when you were developing your offering?”	
	(B) “How do you ensure that your AI-driven personalization practices adhere to ethical standards? What frameworks or guidelines do you follow?”	
	(A) “What are your main ethical concerns about personalization in advertising, especially considering AI-driven personalization?”	
	(A) “Are there any specific frameworks or guidelines that you see as valuable to address ethical concerns around AI and personalized advertising?”	
	(P) “What are the main ethical concerns you have observed around AI technologies?”	
Regulatory Compliance	(B) (P) (A) “What is your view about the current regulations coming out around AI? Where do they work well? Where do you see issues?”	To better understand the current regulatory environment around AI

Themes	Specific Questions	Reasoning
	(B) “In our survey, we’ve seen low levels of trust and comfort with companies using specifically personal data for AI-driven ads. How do you think companies can build and maintain consumer trust when using AI?” (P) “What are the current regulations governing the use of AI in personalized advertising?” (P) “How can policymakers ensure that regulations keep pace with technological advancements in AI?”	and advertising, insights from the interviews will provide a view of how different fields are accepting current regulations and where more work may need to be done.
Multistakeholder Approach	(A) “Do you see the points of tension between businesses, regulators, and academia around the adoption of personalized advertising? What are the points of Agreement that you possibly see occurring?” (A) (P) (B) “How can companies, academics, and policymakers collaborate more effectively to address the challenges of implementing personalized advertising across various sectors?” (P) “What role do you believe industry self-regulation should play alongside formal governmental regulations?”	This section delves deeper into the tension between different parties and its reasonings. It also helps us in composing the final recommendations regarding a multistakeholder approach.
Consumer education	(P) (B) (A) “What are the biggest misconceptions about AI that you encounter among the general public and businesses?” (A) “How do you think we can better educate customers around the use of AI, especially in advertising?” (A) “Our survey highlighted significant age-related differences in the familiarity and acceptance of AI-driven personalized ads. Do you have any insights around how demographics may influence customer perceptions?” (A) “How do factors such as cultural background and socioeconomic status influence advertising approaches?” (B) “What role do you believe consumer education plays in building and maintaining trust in AI-driven advertising?”	To better understand the gaps in current consumer education, in order to compose final recommendations.
Future trends in the AI space	(B) (A) “How do you foresee the role of AI evolving in business, more specifically in advertising or personalization over the next five years?” (A) “Are there specific areas where human input might continue to outperform AI?” (A) “How can academic research contribute to developing best practices for AI implementation in advertising to ensure ethical and effective use?”	As the current uptick in AI usage is both exceedingly rapid and very new, we wanted to gauge the viewpoints of interviewees around the future of AI trends and their long term impact, a topic which is more abstract and uncertain. Questions in this category went beyond just implementation, but also into fields such as ethics, and regulations, in order to understand what the key trends of tomorrow likely will look like, and what is informing them.

This interview approach was developed to have a degree of structure in which to operate, while at the same time allowing flexibility for specific questions to the different participants. For a complete list of questions, please refer to Appendix A. Two Interviews were conducted in person, with one being held over Zoom. All interviews were conducted in English, and took place in June 2024.

3.4.2 Qualitative Data Collection

Interview Guide

Prior to the interview, participants were provided with a brief interview guide to give some background on the thesis and to help them prepare for the interview by providing them with the overarching themes that will be discussed. This was done in order to ensure both sides were on the same starting point and to make the best use of the interview time. Interview Guides were sent out 2 days before the interview and examples of the information provided are included in Appendix A.

Recording & Transcription

To ensure the reliability and validity of the qualitative data, all interviews were recorded on mobile phones (with participants' consent). After recording the interviews, they were transcribed using TurboScribe.ai, an AI interview transcriber tool. For the full transcription of the interviews, please see Appendix B.

Cleaning

Following the collection and transcribing of the data, the output was manually cleaned in order to ensure complete accuracy. This was done by listening to the recording and reading through the text to fix any mistakes that had occurred during transcription, and adding in clarifications when necessary to ensure clear readability of the interview.

3.4.3 Qualitative Analysis Process

Coding & Thematic Analysis

We decided to use the analytical approach of Thematic Analysis as laid out by Braun & Clarke (2006). Such an analysis was chosen as it allows for a flexible approach that can be applied across multiple datasets in order to combine information and thus identify areas of

agreement and difference across different areas of the AI debate. As the questions had already been categorized by specific themes, it made sense to continue with this approach, with an inductive coding (emerging from the discussions with participants) approach being used, as conceptualized by Fereday & Muir-Cochrane (2006). The steps used in the analysis are laid out in Figure 3.1.

Figure 3.1

Phases of Thematic Analysis (Braun & Clarke, 2006)

Phase	Description of the process
1. Familiarising yourself with your data:	Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.
2. Generating initial codes:	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes:	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing themes:	Checking in the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis.
5. Defining and naming themes:	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells; generating clear definitions and names for each theme.
6. Producing the report:	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

Following the transcription, the interviews were reviewed, and key quotes and points of information for each interviewee were highlighted and organized into a table. This process generated codes reflecting the core messages of the participants (e.g., 'Area of Ethical Concern - Transparency,' 'Consequences of Poor Ethics in AI'). These codes were subsequently grouped into broader themes (e.g., Ethical Considerations, Future Trends), which were further refined through iterative review.

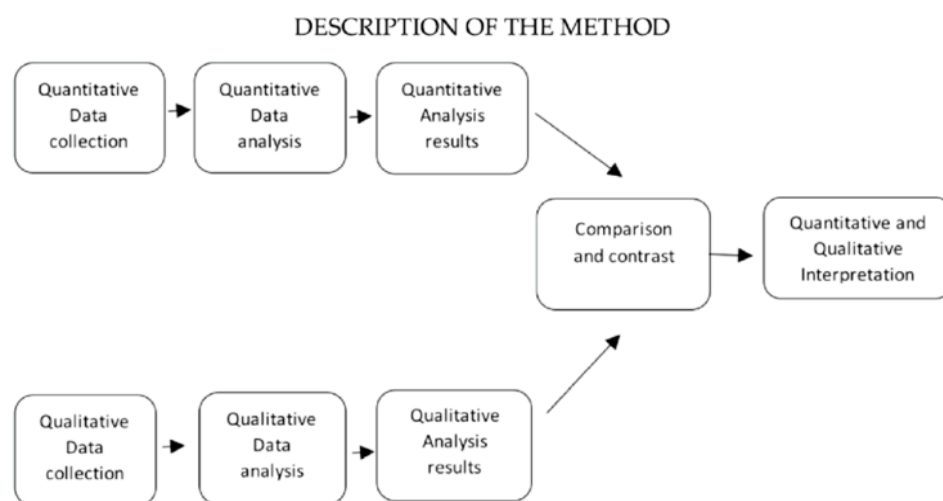
The three tables containing the themes and codes from each interview were consolidated into a single comprehensive table (see Appendix C). Quotes from each interviewee were clustered according to their respective codes and compared to identify and contrast the viewpoints of the interviewees across various topics. The outcome of this process was a thematic map of the key areas of interest and perspectives, which is presented in the Results section.

3.5 Integration of Quantitative and Qualitative Data

The results from the quantitative survey will be integrated with qualitative insights obtained from in-depth interviews with key stakeholders. This integration will be achieved through a convergent triangulation approach (See Figure 3.2) wherein the two types of data will be collected and analyzed before a comparison between them will be made to allow for a more comprehensive analysis that combines the breadth of the survey data with the depth of interview insights. This approach will ensure a robust understanding of the research problem is found, capturing both general consumer sentiments and detailed stakeholder perspectives and helping understand the ‘two sides of the coin’ (namely the businesses and the consumers) and identify points of agreement and difference.

Figure 3.2

Mixed Research Method with a Convergent Triangulation Design Approach



From “Designing and conducting mixed methods research” by Cresswell & Clark, 2017, SAGE Publications.

3.6 Ethical Considerations

3.6.1 Consent and Confidentiality

Survey Participants

All participants in our survey were informed that their responses would be anonymous and used solely for academic purposes. This information was provided at the beginning of the

survey to ensure participants understood the anonymous nature of their contributions. The survey was designed to collect data without any identifying information.

Interview Participants

Interview participants were sent an interview guide prior to the interview date. This guide included detailed consent and confidentiality information, as well as background information for our thesis. During the recording, we also verbally confirmed their consent to each clause. Participants were assured that their responses would remain confidential and only be used for academic purposes. They were also informed that they could review and approve any quotes before inclusion in the thesis. Additionally, participants were asked to give their consent to be recorded and to use their full name, job title, and company in the thesis.

3.6.2 Bias and Limitations

We strive to present as comprehensive an understanding of the differing viewpoints between business professionals and consumers regarding AI-driven advertising and personalization as possible. However, we acknowledge that there may exist certain biases and limitations to our research that may impact our findings and their interpretation.

Sampling Bias

The study used online survey tools and social media platforms for data collection, which may lead to a degree of sampling bias. Participants who are more active on digital platforms and more likely to respond to online surveys may have different perspectives compared to the general population. Additionally, for Group B, we specifically targeted individuals in certain professional roles, as we assumed that they would likely represent their company's viewpoints. However, the responses provided may still be influenced by personal opinions, potentially skewing the results.

Response Bias

Participants may exhibit response bias, particularly social desirability bias (King & Bruner, 2000), where they provide answers they believe are more socially acceptable or favorable. Business professionals might downplay their concerns about ethical issues to align with their professional roles, while consumers might exaggerate their privacy concerns due to heightened media attention given to data breaches and privacy violations.

Self-Selection Bias

Given that participation in the survey was voluntary, there is a risk of self-selection bias (Bethlehem, 2010). Individuals with strong opinions about AI-driven advertising, whether positive or negative, might be more inclined to participate in it, potentially leading to an overrepresentation of extreme views and underrepresentation of more moderate perspectives.

Limitations in Generalizability

The study's findings may have limited generalizability due to the specific sample composition. Although efforts were made to reach as diverse a group of respondents as possible, the results might not fully represent the wider populations of business professionals or consumers. For example, business professionals from certain industries or regions might have different views compared to those in the sample.

Measurement Limitations

The survey relied on self-reported data, which can be subject to inaccuracies due to recall bias or misunderstanding of questions. Additionally, the use of Likert scales, while useful for measuring attitudes and perceptions, can introduce central tendency bias, where respondents avoid extreme responses (Crosetto et al. 2020).

Statistical Limitations

The choice of statistical tests, such as the Shapiro-Wilk test for the normality assessment and the Mann-Whitney U test for comparing non-normally distributed data, have specific limitations.

The Shapiro-Wilk test assumes that the sample is randomly selected and that the data is continuous. However, this test can be sensitive to sample size; with large samples, it might detect miniscule departures from normality, while with small samples, it might not detect significant departures at all. (Boehmke, 2016)

On the other hand, the Mann-Whitney U test assumes that the samples are independent and that the variable of interest is ordinal or continuous. While it is a robust alternative to the t-test, it comes with limitations. The Mann-Whitney U test has less statistical power compared to tests like the t-test when the data points are approximately normally distributed. Additionally, it only evaluates differences in the distributions of the two groups, not specifically their means or

medians, which can limit result interpretability when central tendency measures are of key interest. (Nachar, 2008)

Limitations in Qualitative Data

The qualitative component of the study involved interviews with only three key stakeholders: a CEO, a professor in marketing, and a policy analyst in AI regulations. While these interviews provided valuable insights, the small number of interviews limits the breadth of perspectives captured. The findings from these interviews cannot be generalized to all business leaders, academics, or policymakers but rather are aimed at providing insights into some of the key views held and areas of interest.

Integration Limitations

Combining quantitative and qualitative data provides a more expansive understanding of the research problem, but it also presents challenges. Integrating data from different sources requires careful interpretation to ensure consistency and avoid overgeneralization.

4. Results and Findings

4.1 Quantitative Analysis

4.1.1 Descriptive Analysis

After gathering our data and cleaning it we proceeded to do three calculations (Mean, Median, and Standard Deviation) for each response from Group B (Business), Group C (Consumers) and both groups, the results are detailed in Table 4.1.

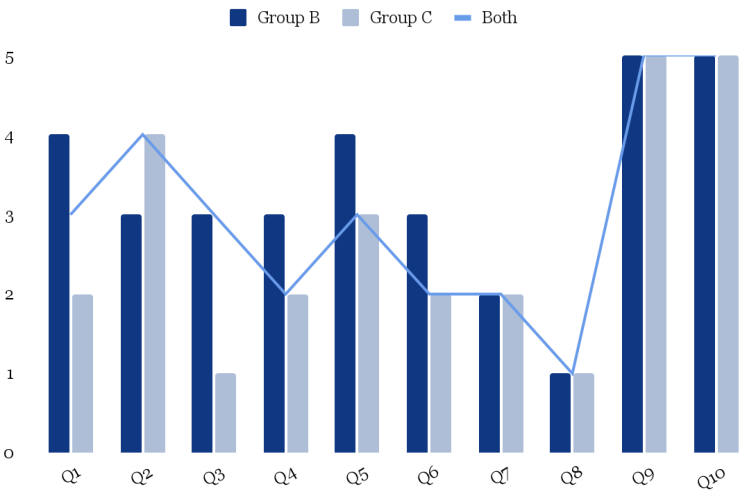
Table 4.1
Mean, Median and Standard Deviation of Group B, Group C and Both Groups

		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Median	Group B	4.0000	3.0000	3.0000	3.0000	4.0000	3.0000	2.0000	1.0000	5.0000	5.0000
	Group C	2.0000	4.0000	1.0000	2.0000	3.0000	2.0000	2.0000	1.0000	5.0000	5.0000
	Both	3.0000	4.0000	3.0000	2.0000	3.0000	2.0000	2.0000	1.0000	5.0000	5.0000
Standard Deviation	Group B	0.8396	1.3407	1.5428	0.9426	0.7844	0.8713	0.9783	0.9648	0.8299	1.0971
	Group C	0.9690	1.2284	1.2220	0.9092	1.0860	0.8725	0.9814	0.8928	0.8773	1.0780
	Both	1.0671	1.3484	1.4937	1.0656	0.9995	0.9378	1.0272	0.9356	0.8518	1.1051
Mean	Group B	3.6100	2.9800	3.0600	3.0200	3.4700	2.7800	2.5500	1.7200	4.4100	4.2200
	Group C	2.4800	3.8100	1.9600	1.9600	2.8200	2.0800	1.9200	1.4700	4.4100	4.6400
	Both	3.0450	3.3950	2.5100	2.4900	3.1450	2.4300	2.2350	1.5950	4.4100	4.4300

Median

The median (see Figure 4.1) provides the middle point for each question, highlighting the typical response for each group. The median response for Group B is generally higher than for Group C, indicating greater acceptance of AI in advertising among business professionals. Notably, Question 1 (feelings about AI) shows the most significant difference, with Group B consistently rating AI more positively. Questions 7, 9 and 10 (comfort with social media, perceived effectiveness of personalization and the need for an ethical framework) show Group C aligning more closely with Group B. Overall, business professionals tend to rate their experience and perception of AI higher than consumers.

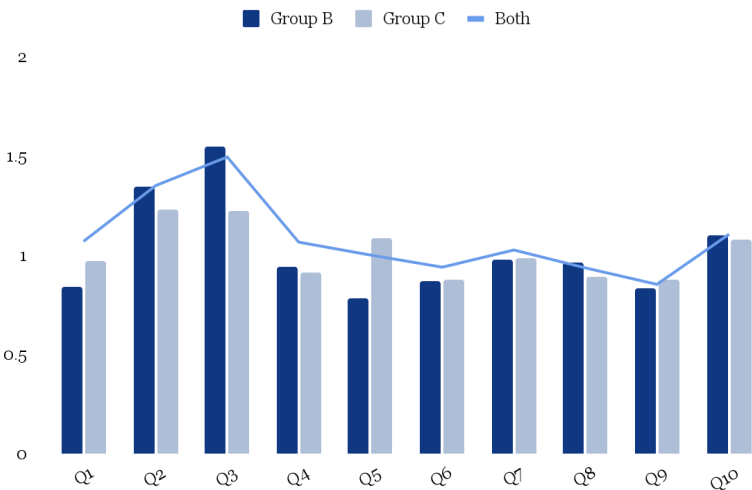
Figure 4.1
Median of Group B, Group C and Both Groups



Standard Deviation

Calculating the standard deviation (see Figure 4.2) allowed us to measure the variability and dispersion in responses. For Group B, questions 2 and 3 (level of ethical concern, perceived regulation efficiency) show greater variability, indicating diverse opinions. In contrast, responses regarding feelings about AI (Q1) and comfort with purchase history (Q5) show low variability, suggesting consistent responses. For Group C, high variability is observed in questions 2, 3 and 5 (level of ethical concern, perceived regulation efficiency and comfort with purchase history) while the responses regarding comfort with browsing history (Q6) show low variability.

Figure 4.2
Standard Deviation of Group B, Group C and Both Groups

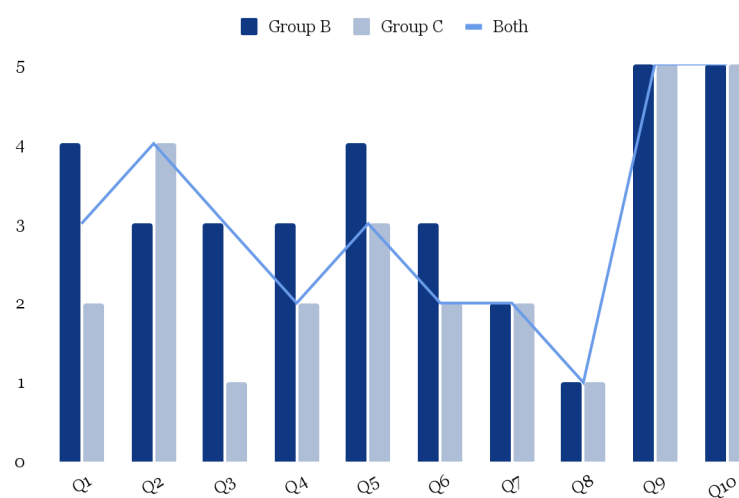


Mean

The mean (see Figure 4.3) provides an overall summary of responses. Group B shows higher means in questions 9 and 10 (perceived effectiveness of personalized ads and need for ethical framework) suggesting a more positive response in those areas. Group C shows a high mean in those questions as well, aligning with Group B, but significantly lower means in the perceived regulation (Q3) and Comfort with data use (Q8).

Figure 4.3

Mean of Group B, Group C and Both Groups



This analysis reveals a higher perception of AI in advertising and comfort level with data handling, and lower concern level among business professionals compared to consumers. It also highlights the diversity of opinions within each group for certain questions.

Frequency Analysis

Table 4.2

Percentage (%) of Each Survey Question - Group B

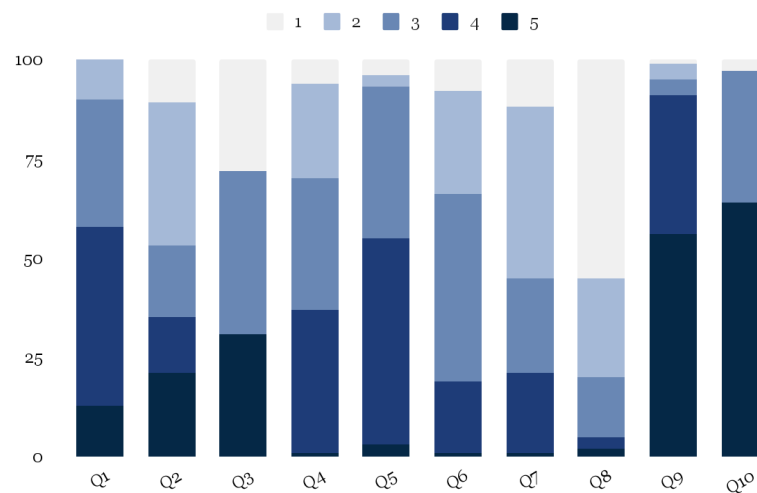
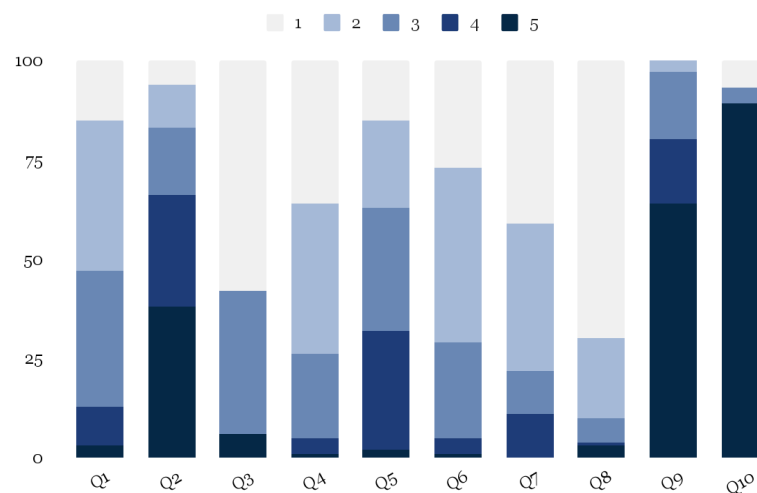
Scale	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
5	13	21	31	1	3	1	1	2	56	64
4	45	14	0	36	52	18	20	3	35	0
3	32	18	41	33	38	47	24	15	4	33
2	10	36	0	24	3	26	43	25	4	0
1	0	11	28	6	4	8	12	55	1	3

Table 4.3*Percentage (%) of Each Survey Question - Group C*

Scale	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
5	3	38	6	1	2	1	0	3	64	89
4	10	28	0	4	30	4	11	1	16	0
3	34	17	36	21	31	24	11	6	17	4
2	38	11	0	38	22	44	37	20	3	0
1	15	6	58	36	15	27	41	70	0	7

Business professionals generally exhibited a more positive attitude (see Table 4.2 and Figure 4.4), with one of the highest percentages of respondents selecting ratings of 4 and 5 across questions related to general feelings about AI (Q1), as well as perceived needs of ethical AI framework (Q10), and comfort with companies using their personal information (Q9). On the other hand, consumers displayed significant skepticism, particularly around the ethical concerns and sufficiency of current regulations, with many respondents choosing ratings of 1 and 2 (see Table 4.3 and Figure 4.5). Trust in AI-driven decisions is also lower among consumers, as indicated by the higher frequency of lower ratings. However, one similarity we can see from the chart is that both groups tended to rate perceived needs of ethical AI framework (Q10), and comfort with companies using their personal information (Q9) higher.

Overall, despite some variability within Group B, the overall trend shows that business professionals appear to be more optimistic and comfortable with AI, whereas consumers demonstrate more caution and concern with the technology, particularly around ethical and regulatory issues. These results will be further contextualized and compared with the other results in the Discussion section.

Figure 4.4*Percentage Distribution of Responses - Group B***Figure 4.5***Percentage Distribution of Responses - Group C*

4.1.2 Inferential Analysis

Shapiro-Wilk Test

The normality of the data was assessed using the Shapiro-Wilk test for each question across two groups (Group B and Group C). This test evaluates the null hypothesis that the sample comes from a normally distributed population. A significance level of 0.05 was used to determine the critical value for the test statistic. The null hypothesis (H0) for this test is that the

data is normally distributed, while the alternative hypothesis (H1) is that the data is not normally distributed.

We will be performing the Shapiro-Wilks Test individually on every column from Group B and C, to determine the normality of each data column. The results of the Shapiro-Wilk test for normality are summarized in Table 4.4.

Table 4.4

Shapiro-Wilks Test Results

Q	Group	Test Statistic (W)	P-value	Critical Value (W) at $\alpha = 0.05$	Group	Test Statistic (W)	P-value	Critical Value (W) at $\alpha = 0.05$
Q1	B	0.867105	0.000000	0.974577	C	0.892590	0.000001	0.974577
Q2	B	0.869983	0.000000	0.974577	C	0.838703	0.000000	0.974577
Q3	B	0.806471	0.000000	0.974577	C	0.704119	0.000000	0.974577
Q4	B	0.863900	0.000000	0.974577	C	0.839759	0.000000	0.974577
Q5	B	0.770679	0.000000	0.974577	C	0.886171	0.000000	0.974577
Q6	B	0.880943	0.000000	0.974577	C	0.856652	0.000000	0.974577
Q7	B	0.876313	0.000000	0.974577	C	0.798792	0.000000	0.974577
Q8	B	0.744015	0.000000	0.974577	C	0.580619	0.000064	0.974577
Q9	B	0.691403	0.000000	0.974577	C	0.685014	0.000001	0.974577
Q10	B	0.620062	0.000020	0.974577	C	0.359385	0.000000	0.974577

For each question and group, the calculated Shapiro-Wilk test statistic (W) was compared against the critical value of 0.974577 at the 5% significance level. Additionally, the p-values for all tests were below the significance threshold of 0.05. The results showed that for every question and group, the null hypothesis of normality was rejected, indicating that the data is not normally distributed.

Mann-Whitney U Test

Due to the non-normality of our data set, the Mann-Whitney U test was then conducted for each survey question to compare the responses between Group B and Group C. This analysis directly addresses our research objective to test the hypothesis regarding the differing viewpoints on AI-driven advertising and personalization:

- Null Hypothesis (H0): There are no significant differences between the viewpoints of businesses (Group B) and consumers (Group C) regarding AI-driven advertising and personalization.

- Alternative Hypothesis (H1): There are significant differences between the viewpoints of businesses (Group B) and consumers (Group C) regarding AI-driven advertising and personalization.

The results are summarized in Table 4.5.

Table 4.5

Results of the Mann-Whitney U Test Comparing Answers of Group B and Group

Q	U Statistic	Z-score	p-value	Significance at $p < 0.05$
Q1	1999.5	7.33017	< .00001	Significant
Q2	3279.0	-4.20385	< .00001	Significant
Q3	4727.0	4.72674	< .00001	Significant
Q4	2192.0	6.85981	< .00001	Significant
Q5	3284.0	4.19163	< .00001	Significant
Q6	2871.5	5.19953	< .00001	Significant
Q7	3201.5	4.39321	< .00001	Significant
Q8	4193.5	1.96937	0.04884	Significant
Q9	4840.0	-0.38972	0.69654	Not Significant
Q10	3640.5	-3.32057	0.00090	Significant

The Mann-Whitney U test results indicate significant differences in responses between businesses and consumers for most questions. Specifically:

- Q1 to Q7, Q10: The p-values for these questions are all less than .00001, which is below the significance level of 0.05, indicating significant differences in viewpoints between businesses and consumers.
- Q8: The p-value Q8 is 0.04884, which is slightly below 0.05, still indicating a significant difference at the 0.05 level.
- Q9: The p-value Q9 is 0.69654, which is above 0.05, indicating no significant difference in responses between businesses and consumers for this question.

Therefore, we rejected the null hypothesis (H0) for questions Q1 to Q8 and Q10, confirming that there are significant differences between the viewpoints of businesses and consumers regarding AI-driven advertising and personalization. However, we failed to reject the null hypothesis (H0) for question Q9, indicating that there is no significant difference in viewpoints for this particular question.

These findings allow us to prove our primary hypothesis that significant differences exist between the perspectives of businesses and consumers on AI-driven advertising and personalization. The qualitative section will further explore and elaborate on these differences.

Spearman's Rank-order Correlation Test

A series of Spearman's rank-order correlation tests were conducted to assess the relationships between various survey questions for Groups B and C. See Table 4.6 for summary of results.

Table 4.6

Summary of Spearman's Rank-order Correlation Test Results

Group	Variables	Spearman's rsrs	p-value	Interpretation
Group C	Q2 (ethical concerns) and Q1 (feelings about AI in advertising)	-0.35	< .001	Negative correlation, statistically significant
Group C	Q4 (trust in companies) and Q1 (feelings about AI in advertising)	0.20	.044	Positive correlation, statistically significant
Group B	Q2 (ethical concerns) and Q1 (feelings about AI in advertising)	-0.54	< .001	Strong negative correlation, statistically significant
Group B	Q4 (trust in companies) and Q1 (feelings about AI in advertising)	0.54	< .001	Strong positive correlation, statistically significant
Group B	Q3 (sufficiency in regulations) and Q2 (ethical concerns)	-0.33	< .001	Negative correlation, statistically significant

The first test examined the relationship between Q2 (levels of ethical concerns) and Q1 (feelings about AI in advertising) for Group C. The results indicated a negative correlation, $rs = -0.35$, which was statistically significant, $p < .001$ (two-tailed). This suggests that higher levels of ethical concerns about AI in personalized advertising are associated with more negative feelings toward AI in advertising.

Next, we assessed the correlation between Q4 (extent of trust in companies' ethical data use) and Q1 (feelings about AI in advertising) for Group C. The analysis revealed a positive correlation, $rs = 0.20$, which was statistically significant, $p = .044$ (two-tailed). This indicates that lower trust in companies' ethical data use corresponds with more negative feelings toward AI in advertising.

For Group B, the correlation between Q2 (levels of ethical concerns) and Q1 (feelings about AI in advertising) showed a strong negative correlation, $r_s = -0.54$, which was statistically significant, $p < .001$ (two-tailed). This means that the more ethical concerns individuals have, the more negative their feelings toward AI in advertising.

We then examined the relationship between Q4 (extent of trust in companies' ethical data use) and Q1 (feelings about AI in advertising) for Group B. The results indicated a strong positive correlation, $r_s = 0.54$, which was statistically significant, $p < .001$ (two-tailed), suggesting that higher trust in companies to use data ethically is associated with more positive feelings toward AI in advertising.

Finally, we tested the relationship between Q3 (perceived sufficiency in current regulations) and Q2 (levels of ethical concerns) for Group B, showing negative correlation, $r_s = -0.33$, which was statistically significant at $p < .001$ (two-tailed), meaning that lower levels of ethical concerns businesses have is associated with higher level of perceived regulation sufficiency.

4.2 Qualitative Analysis

4.2.1 Interview Themes

Figure 4.6

Themes and Subthemes Identified through Thematic Analysis



The thematic analysis undertaken led to the identification of six key themes emerging from the interviews. These themes are detailed in Table 4.7:

Table 4.7

Interview Key Themes

Theme	Definition
AI Implementation	The current state of AI technologies and their integration into business processes, including the reasons for integrating AI and their benefits.
AI Advertising and Personalization	The usage of AI in personalization-based advertising. This theme is closely linked to AI implementation but treated as a separate category due to its specific focus in this paper and the emphasis given by the interviewees.
Ethical Considerations	The various ethical concerns surrounding the usage and implementation of AI, and their associated dangers.
Regulation	The regulatory environment within which AI and personalized advertisement technologies operate.
Multistakeholder Interest	The interests and perspectives of different stakeholders (businesses, policymakers, academics, and consumers) in the development, implementation, and regulation of AI technologies.
Consumer Education & Perception	The understanding of the awareness of consumers about AI technologies and their implications, including how consumers can make informed decisions.

Each theme is composed of multiple subthemes, as identified during the initial coding process (see Figure 8). The interviewees' views on each subtheme were identified and collected to allow for a clear understanding of the specific viewpoints of the different stakeholders interviewed: Aubert (Business Perspective), Douglas (Policy Perspective), and Tang (Academia Perspective). Due to the semi-structured nature of the interviews, not every participant touched on every specific subtheme; However, relevant points were still included even if only mentioned by one participant. The tables below provide an overview of the points raised by the different interviewees around each subtheme. Direct quotes are included throughout in (*“Italics”*).

4.2.2 AI Implementation

Reasons for Implementing AI

Aubert	Aubert noted that for his business, they started with curiosity. They then saw enormous possibilities (<i>“We see that those possibilities in comparison to what you used to have in mind for AI are huge”</i>) in leveraging AI to enhance their operations. A significant motivation for AI implementation is the desire to increase business efficiency.
---------------	---

Douglas	Douglas highlighted that a significant driving factor for the large-scale integration of AI in advertising and personalization is the "fear of missing out" (FOMO). Organizations are increasingly adopting AI technologies to stay competitive and ensure they do not lag behind in the fast-evolving market landscape.
Tang	Tang pointed out that the primary reason for implementing AI in advertising is to enhance the effectiveness and efficiency of marketing campaigns. By utilizing AI technologies, businesses can better target their audiences, personalize advertisements, and achieve greater impact with their marketing initiatives.

Interviewee Perspectives: Convergence - All three agreed that the primary motivations for businesses to implement AI in advertising are to enhance overall performance and stay competitive.

Areas of AI Implementation

Aubert	Aubert mentioned that the initial motivation for integrating AI was to provide new features for clients. However, it ultimately proved more beneficial for raising internal productivity (<i>"the main usage is essentially concerning internal productivity"</i>). He noted that the technology is not yet mature enough to analyze data at a high level, but there is significant interest in using AI to extract valuable insights from large datasets.
Douglas	Douglas highlighted that the integration of AI is seen in pretty much all areas of operations.
Tang	Prof. Tang pointed to the use of AI in marketing (personalization), Gen AI in image generation (<i>"I was actually shocked by the quality of the images created by AI, because they just look fantastic"</i>) and the rise of "phygitalization," the blending of physical and digital experiences.

Interviewee Perspectives: Convergence - All three recognize the widespread integration of AI in business operations and agree on its potential to enhance various business practices.

Benefits Seen from Implementing AI

Aubert	Aubert highlighted the benefits of AI in saving time by performing tasks that no one wants to do such as answering basic questions and writing simple documentation.
Tang	Tang mentioned that AI is beneficial in handling boring work. AI also offers benefits in creating effective ad campaigns at a low cost due to its image generative capabilities. Additionally AI will be able to assist in reducing advertising spend for companies by driving higher customer conversion rates through more effective targeting

Interviewee Perspectives: Convergence - Both agree on the benefits of AI in removing repetitive tasks.

Current state of AI

Aubert	Aubert mentioned that there are no clear measurements around the success of AI as businesses are still trying to understand its best uses (<i>"we still are in a phase of trying to understand where we can push those possibilities"</i>). While they have already used narrow AI [tools for specific tasks like analyzing data], Gen AI is new to them. There are significant discussions around developing key performance indicators (KPIs) for AI use.
---------------	---

Douglas	Douglas observed the rapid evolution and development of AI technology, driven by recent advancements in Gen AI. He noted that companies are rushing (<i>"It seems like there's a rush, kind of similar to the dot-com bubble in the 2000s at the moment where every company is trying to become AI-ified."</i>) to find viable use cases for AI but expressed concern about this haste.
Tang	Prof. Tang pointed out that businesses are trying to gain more access to direct data and manage it better to improve AI implementation.

Interviewee Perspectives: Mixed -

Areas of Convergence: All three acknowledge that Gen AI has left companies navigating new waters as they explore various areas of usage and implementation.

Areas of Divergence: There is an unstated disagreement between Douglas and Aubert regarding concerns with the rapid adoption of AI, with Douglas expressing caution and Aubert focusing on exploring potential applications.

Future of AI in Business

Aubert	Aubert mentioned that everyone is currently thinking about how to integrate AI everywhere, so adoption will increase. While it may not happen as fast as expected, in ten years, AI will be pervasive. He highlighted autonomous vehicles as a case where this technology will rapidly advance and become integrated. (<i>"We usually overestimate the change in the next two years and underestimate in the 10 years"</i>)
Douglas	Douglas stated that not every problem will be solved with AI, and many "AI hype" companies may fail as their offerings don't fit the intended purposes. In the next few years, it will become clearer where AI works and where it doesn't, likely resulting in a landscape dominated by a few big players. Currently, there's significant interest in integrating AI into various sectors, and its development and use will undoubtedly expand. He believes that specialized AI applications in areas such as personalized medicine, autonomous vehicles, and advanced manufacturing will become mainstream, driving efficiency and innovation across industries. However, in the short term, AI's integration may not be as extensive as believed, but in ten years, as capabilities improve and clear use cases emerge, AI will be far more integrated into our lives. (<i>"I like to apply Amara's law to this situation, which is basically that we tend to overestimate the effect of a technology in the short run and underestimate the effect in the long run"</i>)
Tang	Tang noted that one area where AI won't be able to replicate human capabilities is in human intuition.

Interviewee Perspectives: Convergence - Douglas and Aubert agree that AI adoption and integration will significantly increase over the next decade, though it may not happen as quickly in the short term. They acknowledge the broad interest in AI across various sectors and the range of possible use cases.

Summary of Thematic Findings

The theme of AI implementation was discussed, and the interviewees shared views and differed. All three agreed that the primary reason for AI adoption is to enhance efficiency and effectiveness, with Aubert and Tang emphasizing operational improvements and better-targeted

marketing. Douglas noted that the fear of missing out (FOMO) drove adoption as companies want to stay competitive, which is further supported by Aubert's point on curiosity.

While all acknowledged AI's benefits in automating repetitive tasks, Tang also pointed out its potential to reduce advertising costs through better targeting. The current state of AI implementation was described as experimental, with Aubert and Douglas noting a lack of clear success metrics and concerns about the rush to adopt AI without understanding its full potential. Looking ahead, Aubert and Douglas expected AI to become more integrated over the next decade, though not uniformly or as quickly as anticipated, while Tang stressed its limitations, particularly in replicating human intuition. Overall, the interviewees agreed on AI's transformative potential but differed in their perspectives on its motivations, applications, and future.

4.2.3 AI Advertising and Personalization

Use Cases of AI Personalization

Tang	Tang explained that AI personalization is revolutionizing marketing by driving an omnichannel strategy across all devices. This involves integrating technologies like augmented reality, virtual reality, chatbots, and phygital systems for hyper-personalization. Customer Data Platforms (CDPs) have replaced traditional Customer Relationship Management (CRMs), leveraging AI-powered customer sentiment analysis to go beyond demographics and psychographics, using voice, images, and behavior to understand emotions. This enables highly targeted promotions, such as knowing a customer's preference for discounts, and personalizing social media feeds to display the most relevant content. (<i>"They [business] may even know, for example, that you don't really purchase items with only 10 or 20% off on a promotion, but you'll only look at like 60 to 70% off on something."</i>)
-------------	--

Interviewee Perspectives: AI personalization is revolutionizing marketing by driving an omnichannel strategy across all devices. CDPs now replace traditional CRMs. This enables highly targeted promotions and personalized social media feeds.

Benefits of Personalization

Aubert	Aubert mentioned that personalization in social media is beneficial when suggesting new posts that may be tangentially related to users' interests, helping them discover new things. He raised the point that without personalization, people might lose interest if non-relevant posts were shown to them. (<i>"If Facebook does not personalize the article you see, you will not come back on Facebook."</i>)
Tang	Tang highlighted several benefits of personalization for both companies and consumers. For companies, personalization helps reduce wasteful spending on advertising by avoiding showing people things they are not interested in. Additionally, relevant recommendations can lead to higher customer loyalty and retention. For consumers, personalization leads to a better user experience, more consistency in information quality, and more relevant product promotions.

Interviewee Perspectives: Convergence - Tang and Aubert both highlighted the enhancements of business effectiveness and increased customer retention through personalization.

Summary of Thematic Findings

When discussing advertising and personalization, Aubert and Tang both agreed on the point that AI-personalization is changing marketing. Aubert talked about how showing people the right content on social media keeps them interested. Tang focused on how maintaining consistent, high-quality information and promoting products that match user preferences improves their experience. Tang also pointed out that this approach helps companies avoid wasting money on ineffective ads and builds stronger customer loyalty, which keeps people coming back.

4.2.4 Ethical Considerations

Misinformation/Manipulation

Douglas	Douglas expressed concerns that AI can lead to significant issues with fake news, as people may struggle to discern what is true due to AI's advanced capabilities in generating believable content (<i>"Take the issues with fake news and magnify them by ten fold, maybe more and you'll see some serious concerns to be had in something as important as elections"</i>). He pointed out that AI systems could create very convincing fake images and videos, raising concerns about the notion of truth.
Tang	Tang highlighted that AI generation is very cheap, fast, and realistic, which can lead to risks around manipulation, propaganda, and even altering content like an interview by hacking a system and changing a voice or what was said.

Interviewee Perspectives: Convergence - Both Douglas and Tang recognize that AI's advanced capabilities in generating believable content pose significant risks related to misinformation, manipulation, and the creation of fake images and videos.

Transparency of AI Systems

Douglas	Douglas highlighted the "black box" issue, which makes it difficult to understand how AI reaches its conclusions.
----------------	---

Privacy

Tang	Tang expressed concern about companies potentially taking advantage of intimate and private situations, such as funerals, to push personalized ads. (<i>"And I think AI or companies can take advantage of those kinds of intimate situations [funerals, birthdays etc] and push ads"</i>)
-------------	--

Bias

Aubert	Aubert stated that there are no ethical concerns around bias with his AI platform as it does not work with personal data.
Douglas	Douglas expressed concern about the training data used in AI systems and how this could impact outputs, especially in contexts such as hiring processes where biases might not be noted. He pointed out inherent biases in AI systems like ChatGPT, which can produce biased outputs based on the socioeconomic status of the person it is interacting with.
Tang	Tang raised similar concerns about discrimination in AI systems based on the data used, highlighting the potential for biased outcomes.

Interviewee Perspectives: Divergence - There is a strong disagreement between Aubert and Douglas & Tang regarding biases in AI systems. Both Douglas & Tang expressed significant concerns about biases in training data, Aubert does not share these concerns. It is worth noting that Aubert's lack of concern is specific to his own AI platform, as his AI solution EmotionsAI does not work with third party data, but rather anonymized in-site tracking, which is GDPR compliant (AB Tasty, 2024).

Data

Aubert	Aubert argued that it is too late to worry about data collection, as companies have been collecting data for over 20 years. He emphasized that the issue is not AI or ethics, but the longstanding practice of data collection. He pointed out that it is not a concern for most people. (<i>"And that's nearly not a problem for 99% of the people."</i>) From a business perspective, as long as companies do not link individual data points with a person and their personal data (data profiling), it is not problematic. He acknowledged that when personal data can be used against people, it becomes an issue. His company is more interested in finding broader trends rather than targeting individuals.
Tang	Tang thinks that new data collection methods will emerge from smart devices, including audio and video, which could be very intrusive for people. She believes that such practices will draw a line where customers will not tolerate the use of personal data and very intrusive marketing, even if it means getting a better deal on a product.

Interviewee Perspectives: Mixed -

Points of convergence: Both Aubert and Tang agree that targeting and use of personal data in AI systems are areas of concern.

Points of divergence: There is a clear disagreement between business and academia regarding the collection of data. Aubert argues that data collection has been happening for a long time and believes that many people do not care about the use of personal data. In contrast, Tang disagrees, expressing concern that data collection will become more intrusive.

Other Areas of Ethical Concerns

Aubert	Aubert highlighted concerns about "echo chambers" created by algorithms, which can place people in environments where they are only fed content that aligns with their interests, potentially
---------------	---

	limiting exposure to diverse perspectives. (<i>“Being able to unplug the algorithm would be something cool for people to have in the hand.”</i>)
Douglas	Douglas pointed to concerns within the industry regarding the development of general-purpose AI systems.
Tang	Tang noted that AI systems are prone to error and mentioned the issue of filter bubbles, where data profiling by algorithms shows people only ideas that align with their existing beliefs. (<i>“Consumers will only be exposed to information that aligns with their own existing beliefs and attitudes, which means, by default, you're limiting exposure to more diversity in perspective or insight.”</i>) She also expressed concerns about AI replacing jobs and limiting people's ability to make informed decisions.

Interviewee Perspectives: Convergence - Aubert and Tang both highlighted concerns about the creation of echo chambers and filter bubbles by AI algorithms, which limit exposure to diverse perspectives.

Reasons behind Poor Ethical Approaches

Tang	Tang mentioned that in the best case, companies will protect consumers while optimizing marketing. However, there is a risk that they may compromise on proper data silos to prioritize high performance, customer conversion, and profit.
-------------	--

Consequences of Poor Ethical Approaches

Douglas	Douglas stated that poor ethical practices in AI can pose significant risks to fields such as scientific research due to issues such as misinformation. Issues with bias in AI systems can cause major discrepancies in outputs, leading to numerous downstream problems due to the quality of the training data. Bias in AI applications, especially in sensitive areas like hiring or healthcare, have the potential for significant harm. When combined with bias, a lack of transparency in AI systems, particularly Gen AI, can result in harmful outputs without a clear understanding of their causes.
Tang	Tang noted that if customers do not interact with a brand and receive personalized ads from them, it may come across as inauthentic. Additionally, receiving detailed ads can make people paranoid and distrustful of companies and brands. If ads are based on a private event people do not want public, they would be upset. People will feel vulnerable about their data not being secure anywhere. (<i>“Personal info is used and people at a certain point, I think, will feel powerless or very vulnerable if you're using any touchpoint on internet or smart device.”</i>)

Interviewee Perspectives: Convergence - Both Douglas and Tang acknowledge the potential for poor ethical practices in AI to result in significant negative consequences, including misinformation and loss of trust.

Future Risks

Tang	Tang emphasized that human oversight is essential as AI continues to develop (<i>“human oversight, that needs to still be in place”</i>). She noted the need to adapt and learn alongside AI systems to ensure responsible use. She warned that if AI reaches superintelligence without regulation and oversight, it could be too late to manage its impact. Therefore, systems should be developed to
-------------	--

override superintelligence if necessary. Ensuring responsible use of AI and maintaining security to protect against data breaches and hacks are critical priorities.

Summary of Thematic Findings

The theme of ethical considerations in AI highlighted a range of concerns among the interviewees, focusing on misinformation, transparency, privacy, bias, and data usage. Douglas and Tang both expressed worries about AI's potential to generate convincing fake news and manipulate content, raising significant ethical concerns about misinformation and truth. Regarding transparency, Douglas highlighted the “black box” issue, which obscures how AI systems make decisions, complicating accountability.

Privacy emerged as another major concern, with Tang warning about the invasive potential of AI in sensitive contexts and data collection. Aubert argued that AI and ethics are not the problem, but rather data collection. He noted that data collection has been conducted for years with barely any concerns, implying the recent surge in concern appears to be more about the perceived threats of AI than about data privacy or ethics. He advocated that companies should not conduct data profiling or any activities that could be harmful to individuals. When discussing bias, both Douglas and Tang were concerned about the implications of biased training data on AI output, especially in fields such as hiring and healthcare.

The interviewees also discussed the broader ethical implications of AI, such as the creation of echo chambers and the potential loss of diverse perspectives due to algorithmic filtering. Tang and Aubert both pointed out that AI could reinforce existing biases and limit exposure to diverse views. Additionally, concerns about AI's impact on jobs and the necessity of maintaining human oversight were raised by Tang to ensure AI is used responsibly. Overall, the interviewees highlighted the spectrum of ethical concerns associated with AI.

4.2.5 Regulation

Views on the Current State of Regulations

Aubert	Aubert sees current regulations as being too early, potentially stifling innovation, and not based on reality but rather on fears. (<i>“But my feeling is that essentially in Europe, we will lose time or limit our R&D or possibilities of using AI based on stress, not based on reality”</i>) His view is that companies should be able to explore the technology, and then, when side effects arise, legislation should be drawn up to limit their impact. He also expressed concern about whether companies and individuals would actually follow the guidelines in place.
Douglas	Douglas stated that regulators are unable to keep pace with the advancements of AI in order to effectively regulate it. He identified a second issue in ensuring the actual enforcement of regulations, noting that lessons from other laws, such as the Digital Services Act (DSA), show that companies are often not prepared. He also pointed out that there are no guardrails in place to mitigate risks that may arise from developing AI technologies. (<i>“We don't yet have any real actual guardrails around how to effectively [...] develop and implement these AI technologies while also mitigating the risks that may arise”</i>)
Tang	Tang stated that even with regulations in place, there will still be people acting unethically, echoing enforcement concerns. She mentioned that governments around the world are worried about non-compliance, given the potential impact of AI in areas such as defense and crime.

Interviewee Perspectives: Divergence - Douglas and Aubert were diametrically opposed on this topic. Douglas emphasizes the difficulty regulators face in keeping pace with AI advancements and the lack of guardrails to mitigate risks. Aubert, on the other hand, believes current regulations are premature and stifle innovation, suggesting that legislation should follow on from the exploration of technology with the goal being to address side effects.

Relevant Regulations

Aubert	Aubert pointed out that for personal data, the GDPR and California laws are relevant. (“ <i>Yeah, but it's [concerns around personal data is] already the case. I mean, they're not waiting [for] AI to use it the right way.</i> ”) Highlighted the upcoming AI Act. Aubert also mentioned that retargeting, which is the technique that websites use to gather user data across multiple websites based on their previous internet behavior without their consent, has been banned [with GDPR] about 10 years ago, which is why the use of [third party] cookies has reduced over time.
Douglas	Douglas stated that under the AI Act, personalized advertising would likely fall into the limited risk category. This means organizations would need to ensure transparency about their use of AI and provide opt-out options, as well as avoid using subliminal messaging. Douglas also pointed to regulations such as the GDPR and the having specific requirements around personalization and customers rights
Tang	Tang mentioned the AI Act and the Safe, Secure, and Trustworthy Development of AI executive order in the US. She also noted that the United Nations (UN) and the Organisation for Economic Co-operation and Development (OECD) are creating governance frameworks. [These frameworks aim to act as international guidelines to standardize AI development practices and enhance accountability, and ethical guidelines]

Interviewee Perspectives: Convergence - Douglas and Aubert share similar views on the sufficiency of existing laws for data governance, while all three experts underscore the significance of the AI Act. Both Douglas and Aubert recognize the regulatory efforts around personalized advertising. They acknowledge that there are existing frameworks and measures in place to address concerns related to targeted ads and data privacy.

Recommendations for Companies Developing AI

Douglas	Douglas stated that companies should: ● Get consent from users regarding data collection and usage. ● Ensure privacy and data security are a priority. (“<i>companies should already [...] deal with concerns about user privacy and data</i>”) ● Make advertising options transparent and provide users with opt-out options. ● Better inform users about their data use practices.
Prof. Tang	Prof. Tang stated that companies should: ● Follow best practices for prioritizing privacy and security. ● Ensure transparency around data use. ● Respect individual autonomy and allow users to decide how much they want to engage with AI. ● Understand the risks associated with their systems and design them to prevent potential

issues.

- Find balance on integrating AI systems to add benefit without disempowering users. (*"I think that companies need to make a decision on how much they want to integrate AI systems where it adds benefit but does not endanger the consumer."*)
-

Interviewee Perspectives: Convergence - Both Douglas and Tang agree that companies should prioritize privacy and security, ensure transparency around data use, and provide users with control over their engagement with AI systems.

Identified Gaps in the Current Regulations

Aubert	Aubert pointed out the immaturity of legal structure. (<i>And I guess we are in this "in between" with the AI about what we have to create as a norm, but what will be in reality something acceptable. We are still not mature on that, even on those legal aspects."</i>)
---------------	---

Douglas	Douglas identified several gaps in current regulations: • Ensuring systems are designed from the start with privacy in mind. • Addressing issues around copyright laws and fake content. • Focusing more on the training data used for AI systems. • The lack of universal ethical standards.
----------------	---

Tang	Tang highlighted several gaps in current regulations: • The need for a global standard for security, fairness, and unbiased data collection. • The necessity for very specific transparency requirements for ads. • The practice of watermarking AI-produced images to distinguish them from human-created content.
-------------	--

Interviewee Perspectives: Convergence - Douglas, Aubert, and Tang all recognize the absence of universal ethical standards and norms as a significant gap in current AI regulations.

Future Directions of Regulations

Douglas	Douglas stated that once a few countries establish solid AI regulations, companies will likely adapt their systems globally to avoid missing out on major markets like the EU, India, and China. However, he noted that there is still much knowledge to be created, and gaps will persist as policymakers learn about new risks and best practices. He anticipates that many more gaps will need addressing in the near future.
----------------	---

Summary of Thematic Findings

The theme of regulation in AI revealed varying perspectives among the interviewees on the current state, effectiveness, and future directions of regulatory frameworks. Aubert viewed current regulations as premature and potentially stifling innovation, arguing that laws should be developed based on observed impacts rather than fears. Douglas and Tang on the other hand shared concerns about the ability of regulations to keep pace with rapid AI advancements and the challenges of enforcement, citing potential gaps in ensuring compliance and the lack of robust guardrails to mitigate risks.

Regarding relevant regulations, all three interviewees referenced the upcoming AI Act, with Douglas noting that personalized advertising would likely fall under a limited risk category, requiring transparency and opt-out options.

The interviewees also identified gaps in current regulations. Aubert pointed out the immaturity of legal structures, while Douglas highlighted issues such as inadequate privacy-focused design and the need for universal ethical standards. Tang emphasized the importance of global standards for fairness and transparency, as well as measures like watermarking AI-generated content.

Looking to the future, Douglas suggested that regulations would evolve as more countries establish solid frameworks, influencing global practices. However, he acknowledged that as AI technology progresses, new regulatory gaps would likely emerge, necessitating ongoing adaptation and refinement. Overall, the interviewees agreed on the need for more robust and adaptive regulatory measures, though they differed in their views on how and when these should be implemented.

4.2.6 Multistakeholder Interest

Areas of Disagreement Amongst Stakeholders

Douglas	Douglas mentioned that there is no agreement on conclusive solutions yet, leading to tensions among stakeholders.
Tang	Tang highlighted high tensions between the three groups (governments, academia, and business). (“there are three agendas.”) Key issues include: • Businesses try to find the balance between protecting the security of consumer data and the desire to increase profitability by selling/using it. They do not want to provide open access to their data or proprietary processes and algorithms. • Marketing efforts possibly compromising data security. • Concerns around how much to limit AI systems.

Interviewee Perspectives: Convergence - Both Douglas and Tang acknowledge the presence of tensions among stakeholders regarding AI solutions and implementation.

Calls for a Multistakeholder Approach

Douglas	Douglas advocated for a collaborative approach to AI governance, (“it’s not a job regulators can do alone.”) He emphasized that collaboration between industry, experts, and regulators is crucial for establishing core ethical practices and keeping pace with AI advancements, arguing that this approach leverages industry and academic expertise to fill gaps in oversight and inform policy decisions, while the government ensures compliance. He suggested that regular conferences, joint projects, and public-private partnerships are vital to facilitate this collaboration, (“it’s about creating a shared understanding and developing solutions that are both innovative and ethically sound.”) He pointed to how the AI Act exemplifies this approach by involving AI developers and researchers in creating codes of conduct. This aligns with efforts from companies like Google [With its Responsible AI Practices] and IBM [With its Principles for Trust and Transparency],
---------	---

	who are developing ethical principles and seeking public feedback to enhance them. While he highlighted that self-regulation offers flexibility and rapid adaptation to new developments, he cautioned that it is “insufficient” due to potential abuses and public interest concerns, particularly in critical areas like healthcare, finance, and criminal justice.
Tang	Tang highlighted a strong initiative among AI developers, who possess extensive knowledge of these systems and are aware of their risks, to take a more active role in building safe, transparent, and secure AI systems. She mentioned that the general public has little control and should trust that governments and developers will collaborate to create effective governance. She outlined that the responsibility for AI development and usage lies with four key parties: developers, companies, regulatory bodies (governments and compliance institutions), and users.

Interviewee Perspectives: Convergence - Both Douglas and Tang call for a collaborative, multistakeholder approach to AI governance, highlighting the importance of involving developers who can provide their expertise to fill gaps in regulatory oversight. They also stress the need to include the public in these efforts.

Summary of Thematic Findings

The theme of multistakeholder interest in AI governance was brought up by both Tang and Douglas, and their viewpoints highlighted the need for a collaborative approach among different groups, such as governments, academia, and businesses. Douglas and Tang both noted significant tensions between these stakeholders, with disagreements centered around data security, proprietary information, and the extent to which AI systems should be limited. Tang emphasized that businesses face a conflict between protecting consumer data and maximizing profitability while also being reluctant to share their proprietary data and algorithms. Douglas observed that these disagreements have resulted in a lack of consensus on effective solutions for AI governance.

Both interviewees called for a multistakeholder approach to address these challenges. Douglas advocated for a collaborative model combining industry self-regulation with formal oversight. Tang echoed the need for collaboration, highlighting the importance of trust in government and developer partnerships to establish effective governance frameworks. She also mentioned that the general public lacked control. On top of developers, companies, and regulators, she thought that users should be involved as the fourth key party responsible for ethical AI development and usage. Overall, the interviewees agreed on the necessity of a collaborative, multistakeholder approach to effectively govern AI, despite ongoing tensions and differing priorities among the groups involved.

4.2.7 Consumer Education & Perception

Issues around a Lack of Education

Aubert	Aubert pointed out that pop-ups asking for cookie usage consent are often not read at all, questioning their effectiveness. He further noted that this topic does not interest the majority of users who visit websites, as they are likely to just click away without reading anything. (“But those cookie topics does not interest 98% of the users that go on the website”)
---------------	---

Tang

Tang emphasized that people need to be educated on how AI systems work and the ethical behavior surrounding their use. Users must be fully aware of what they're engaging with and avoid relying on AI merely for convenience. She warned that AI systems now interpret and influence thinking, posing a danger of dependency if users are not self-aware. (*"I think there's going to be a codependency with AI."*) She advocated for AI education starting from birth, involving parents, companies, schools, and governments to ensure a comprehensive understanding and responsible usage of AI.

Interviewee Perspectives: Convergence - Both Aubert and Tang recognize the need for greater awareness and education regarding AI usage. They agree that users often lack engagement with important information related to AI, as they do with other relevant information, such as cookie consent pop-ups.

Recommendations to Consumers

Tang

Tang recommended that customers should carefully decide how much they want to engage with AI-influenced interactions to maintain control over their online presence. (*"It's my choice at the end [of the day]"*) To manage AI-driven personalization and advertising, she suggested that users can reduce social media use and their digital footprint if they feel uncomfortable. She advised avoiding responses to spam or push ads and being cautious of personalized content aimed at data collection.

Summary of Thematic Findings

The theme of consumer education and perception was brought up by both Tang and Aubert, who highlighted concerns about the general public's understanding of AI and its implications. Aubert observed that many consumers do not engage with information about data usage, indicating a lack of interest or understanding.

Tang stressed the importance of educating the public about AI systems and their ethical implications, arguing that users need to understand what they are engaging with to avoid becoming overly dependent on AI for convenience. Tang advocated for comprehensive AI education starting from a young age, involving parents, schools, companies, and governments to ensure responsible usage. Overall, both interviewees emphasized the need for better consumer education to foster a more informed and critical engagement with AI technologies.

5. Discussion

5.1 Attitudes Towards AI in Advertising

5.1.1 Contrasting Attitudes Towards AI in Advertising

Our quantitative results (see Chapter 4.1) showed that business professionals generally hold a more favorable view of AI in advertising, as seen through a higher median score and a substantial number of respondents giving AI positive ratings (Figure 4.4 and Figure 4.5). The Mann-Whitney U test further highlighted significant differences in attitudes between business professionals and consumers (according to Table 4.5).

5.1.2 Reasoning for Divergence

This positive outlook from the business side largely stems from the practical benefits AI offers, such as improved performance across different business areas and its ability to manage repetitive tasks efficiently. Our qualitative findings also back this up, with all three interviewees pointing to these advantages (see Chapter 4.2.2), and the literature review supports this as well. Studies by Haleem et al. (2022) and Babatunde et al. (2024) similarly highlight the fact that AI enhances customer loyalty, retention, and overall market efficiency.

Another factor contributing to this positive perception is the high level of trust business professionals have in companies' ethical data handling. The quantitative analysis revealed a positive correlation between this trust and favorable attitudes toward AI in advertising (see Table 4.6). This suggests that business professionals' confidence in responsible data practices contributes to their more positive view of AI. Our qualitative results also support this, with interviewee Aubert expressing little concern about his company's AI systems. Aubert's first-hand knowledge of his system's operations, particularly the fact that his system does not use third-party data, likely explains his confidence (refer to Chapter 4.2.4).

On the other hand, consumers tend to have a more negative view of AI in advertising, which aligns with lower levels of trust in how companies handle data (see Table 4.6). A global study by Pega suggests this distrust may partly come from a "fear of the unknown," as many consumers do not fully understand how AI systems work. This study found that while 70% of

consumers claimed to understand AI, many could not identify its basic functions. This knowledge gap likely drives uncertainty and skepticism, resulting in lower trust in companies and a more negative perception of AI in advertising (Pega, n.d.).

This greater skepticism toward AI in advertising from consumers' side echoes issues found in the literature from Pollay (1986), Danciu (2024), and Saxena (2020), which focus on privacy, data security, and the ethical issues surrounding advertising and personalization. This skepticism surfaced in our data, with a negative correlation observed between ethical concerns and consumer attitudes toward AI (see Table 4.6). The stronger one's ethical concerns are, the more negative views they have on AI in advertising. To summarize, ethical concerns and trust are key drivers of these contrasting views on AI.

5.1.3 Future of AI

Looking to the future, the interviewees in the qualitative study generally agreed that AI integration will likely continue to grow over the next few years, although they acknowledged that many practical applications are still in development. However, a significant difference in opinion emerged between Aubert and Douglas. Douglas expressed concerns about the rapid adoption of AI, warning about potential risks and unforeseen consequences. On the other hand, Aubert remained optimistic, emphasizing the potential benefits AI could bring (see Chapter 4.2.2). This contrast mirrors a broader debate in the literature, where there is a tension between calls for AI regulation and fears of stifling innovation through overregulation (Panait et al., 2021).

5.2 Ethical Concerns and Trust

The topic of ethical considerations in AI sparked considerable debate, highlighting the complex challenges in aligning stakeholder perspectives on ethical issues. These considerations hold particular importance as they directly tie into the survey findings, existing literature, and potential recommendations. They bring key concerns to the surface, revealing both areas of agreement and disagreement within specific focus subthemes.

5.2.1 Convergence in Ethical Concerns

Both the survey and interviews revealed a strong alignment of concerns about AI's ethical implications, especially regarding risks like privacy concerns (see Chapter 4.1.1 and Chapter 4.2.4). These concerns mirror broader issues identified in the literature, such as how social media

algorithms contribute to echo chambers (Saxena, 2020). The survey data shows that 66% of consumers rated their concern about AI in personalized advertising at level 4 or 5. This contrasts with only 35% of business professionals who shared the same high level of concern (refer to Table 4.2 and Table 4.3).

The lower concern among business professionals is consistent with their generally more positive attitudes toward AI in advertising, as indicated by the negative correlation in our quantitative analysis (Table 4.6). This reduced concern stems from their belief that current regulatory frameworks are adequate, as shown by the inverse relationship between ethical concerns and the perception of regulatory sufficiency. Aubert echoed this sentiment in his interview, stating that regulations are moving "too fast" (Chapter 4.2.5), suggesting that some business professionals feel more confident in the sufficiency of current regulations, if not overly sufficient.

On the consumer side, there is a clear alignment between higher ethical concerns and a more negative view of AI in advertising. This is evident in our quantitative analysis (Table 4.6) and is further supported by interview data, with both Aubert and Douglas raising issues around transparency, privacy, and the connection of personal data to individual users (Chapter 4.2.4). These concerns are in line with academic research that highlights the growing fear of AI's misuse in handling personal data (Cheatham et al., 2019). The 2024 Boston Consulting Group (BCG) report further adds weight to this, showing that 29% of people are concerned about the use of generative AI in lifestyle contexts like advertising, compared to just 15% in workplace settings (Balaji et al., 2024). This alignment of our research and industry reports validates the higher level of concerns from the consumers' side compared to businesses.

5.2.2 Divergent Views on Data Collection and Ethical Implications of AI in Advertising

A significant divergence in perspectives on data collection emerged. Aubert argued that data collection has long been a part of business practices and that public concern primarily centers around AI itself rather than data collection. He suggested that the public worry stems from AI's ability to amplify the impact of data collection, intensifying public sensitivity to the issue (Chapter 4.2.4). This view aligns with Cheatham et al. (2019), who found that AI tends to magnify existing concerns rather than create new ones. The same logic applies to data collection, as the practice of data collection has been ongoing since 1935 (Muhammad, 2023); the recent

survey in concern is directed at AI, again linking back to the "fear of the unknown" phenomenon (Pega, n.d.).

In contrast, Tang expressed worries about increasingly invasive data collection methods and the growing range of data types being gathered (Chapter 4.2.4). The survey results support Tang's concerns, revealing low levels of comfort among consumers when it comes to various data collection methods, particularly those involving personal information. Business professionals, on the other hand, showed a higher level of comfort across all data collection methods (see Table 4.1). This could be explained by Ransbotham et al. (2017), who suggests that people may become more accustomed to and less resistant to personalized advertising as they are exposed to it more often. Being more familiar with these algorithms, business professionals may feel more at ease with data collection practices.

However, despite their general comfort, business professionals also expressed significant concern regarding the use of personal data, as indicated by the notably lower mean response for Question 8 (1.72) compared to other questions (Q5 - 3.47, Q6 - 2.78, and Q7 - 2.55) (refer to Table 4.1). This discrepancy suggests that concerns over personal data surpass the usual comfort levels that come with professional familiarity. Two key factors may explain this heightened concern: first, the sensitive nature of personal information itself, which can cause discomfort even among those used to data collection practices; and second, their deeper understanding of risks like privacy breaches or data misuse, which could likely amplify their concerns (Lina & Setiyanto, 2021).

These findings align with the Mann-Whitney U test results, where a p-value of 0.049 indicates a statistically significant, though minor, difference between business professionals and consumers regarding their comfort with the use of personal information (Table 4.5). This suggests that both groups share concerns about the ethical implications of personal data use, underscoring the widespread worry about privacy in the age of AI.

Interestingly, when it comes to other methods of data collection, both groups were relatively more comfortable with companies using their purchase and browsing history (Table 4.1). This comfort likely stems from the perception that these types of data are less intrusive and more directly relevant to enhancing personalized advertising (Lina & Setiyanto, 2021).

5.2.3 The Trust Gap Between Consumers and Business Professionals

The survey results reveal a noticeable trust gap between business professionals and consumers when it comes to confidence in companies handling data ethically. Business

professionals showed significantly more trust (average: 3.02) than consumers (average: 1.96), as indicated by responses to Q4 (see Table 4.1). This difference, underscored by a p-value of less than 0.00001, points to a substantial contrast in perceptions. Our findings are consistent with KPMG's 2023 study, which reported that 68% of the general public were worried about how much data businesses collect, while only 33% of business leaders believed customers should be concerned about how their personal data is used (KPMG, 2023).

5.2.4 Addressing Bias and Ethical Standards in AI Training Data

Concerns about biases in AI training data revealed even greater differences in opinion. For instance, Douglas and Tang expressed worries about potential discrimination due to biased data (see Chapter 4.2.4), while Aubert was more optimistic, pointing out that his company's AI system, EmotionsAI, does not have these concerns as it relies on anonymized in-site tracking rather than third-party data (AB Tasty, 2024). This underscores the idea that concerns about bias may vary based on the AI system's design and the type of data it uses, and the fact that some systems are inherently more GDPR compliant and future proof.

Tang stressed the importance of customers taking proactive measures to protect their data and being mindful of their browsing habits as companies increasingly implement optimized marketing strategies in Chapter 4.2.4. Without strong ethical guidelines, there's a risk of companies misusing data to maximize profits. As data becomes more integral to our world, this risk grows, emphasizing the urgent need for responsible AI governance frameworks (Schmid & Wiesche, 2023). The development and adoption of such frameworks is becoming more critical than ever.

5.3 Regulations

5.3.1 Divergent Views on Current Regulations

In the interview, experts hold sharply different views on the current state of AI regulations. Interviewee Douglas pointed out the difficulties regulators face in keeping up with the rapid pace of AI developments, noting that there aren't enough safeguards in place to manage the risks. He argued that the fast-evolving nature of AI often outpaces the ability of existing regulations to provide proper oversight, leaving gaps that could lead to misuse or unforeseen consequences in Chapter 4.2.5. This highlights the need for regulations that are flexible and can quickly adapt to technological changes. This is aligned with the views of Zaidan (2024) who

highlighted the challenges in regulating the field due to a lack of technical capabilities and the huge investments that have already been made in AI technologies driving rapid increases in capabilities.

On the other hand, Interviewee Aubert believed that current regulations are premature and could potentially hinder innovation. He suggested that laws should come after technological exploration, allowing AI to evolve more organically, with regulations responding to issues as they emerge. This reflects a larger debate between governments and tech companies about how much regulation is appropriate. While Interviewee Douglas advocates for proactive measures to protect public interests, Interviewee Aubert supports a more reactive approach that encourages innovation by keeping early regulatory restrictions to a minimum. Indeed, concerns about overregulation have been raised, with Panait (2021) pointing to possible issues such as “decelerating AI competitiveness, delaying technological growth, missing out on innovative solutions which could benefit lives and the environment, to losing potential innovators, investors, top-talents, as well as private companies and startups, which might decide to relocate” (Panait, 2021).

These concerns are important to note, and the challenge lies in striking the balance between the varied goals held by different stakeholders within the area, as solutions need to be found that strike the balance between safety and innovation.

5.3.2 Consumer and Business Perspectives on Regulatory Sufficiency

This difference in opinions is reflected in the quantitative results, where consumers showed more skepticism than business professionals regarding whether current regulations adequately address their concerns about AI in advertising. The majority of consumers (58%) felt that existing regulations are not sufficient (see Table 4.3), which aligns with other studies, such as the one from the University of Queensland and KPMG Australia, where only 35% of Australian participants believed the regulations were sufficient (Gillespie et al., 2023).

In contrast, business professionals generally had more confidence in the current regulatory frameworks, with less rating them as insufficient (28%), suggesting business professionals have more confidence in the sufficiency of current regulations (see Table 4.2). This highlights a significant gap between the two groups and their differing levels of trust in these frameworks. This difference can be explained by the fact that consumers often see regulations

around emerging technologies, like AI, as insufficient due to their lower levels of trust in the institutions responsible for developing and managing these technologies. For example, the level of consumer concern around AI is similar to that of genetically modified foods and nanotechnology. Consumer distrust is increased when the public believes that companies are more focused on profit than on public welfare, which can lead to a perception that current regulations are inadequate in protecting their interests (Zhang 2020).

5.3.3 Key Regulatory Frameworks: Benefits and Downsides

The AI Act (EU AI Act, 2024)

All interviewees acknowledged the AI Act as a landmark regulation, set to take effect in 2025, with far-reaching implications for AI systems. This upcoming European Union law aims to ensure that AI used within the EU is safe, lawful, and respects fundamental rights. It categorizes AI applications based on their risk levels, imposing regulatory requirements accordingly. The Act provides a comprehensive framework centered on risk management, transparency, and accountability. While its guidelines are designed to protect consumer rights and uphold ethical standards, some critics argue that its strict requirements could stifle innovation and place heavy compliance burdens on smaller companies and startups (Panait, 2021), aligning with Interviewee Aubert's point regarding the speed of regulation (see Chapter 4.2.5).

The General Data Protection Regulation (GDPR)

The GDPR, introduced by the European Union in 2016, governs how personal data is collected, processed, and stored. All interviewees pointed to the GDPR as an important factor in discussions about AI regulation, especially regarding data practices. While the GDPR has successfully raised global standards for data privacy and security, it doesn't fully address the unique challenges that AI presents, such as the need for transparency in algorithmic decision-making and accountability for AI-driven outcomes (Varytimidou, 2023). Though it lays a solid foundation for data protection, additional regulations like the AI Act are needed to address these gaps. In the U.S., the California Consumer Privacy Act (CCPA) plays a similar role (White & Case LLP., 2024).

Safe, Secure, and Trustworthy Development of AI Executive Order

The U.S. Executive Order on Safe, Secure, and Trustworthy Development of AI, which was briefly mentioned by Interviewee Tang (see Chapter 4.2.5), outlines the federal

government's strategy for advancing AI technologies in a way that ensures public trust, safety, and security. It emphasizes the responsible development and use of AI, with a focus on protecting civil liberties and promoting transparency. The order sets guidelines for government agencies to adopt AI in ways that align with ethical standards and prioritize human rights. Additionally, it encourages stronger collaboration between the private sector, academia, and the government to speed up innovation while addressing the risks associated with AI. However, some experts have expressed concerns about the broad scope of the Executive Order, questioning whether it offers enough detail to address the complex ethical and security issues AI presents (White & Case LLP, 2024).

United Nations Resolution on 'Safe, Secure, and Trustworthy' AI Systems (2024)

Tang also briefly mentioned the UN General Assembly's resolution (see Chapter 4.2.5), which marks a significant international initiative to establish common principles for AI development and deployment. The resolution calls for AI systems to be designed and implemented in ways that are safe, secure, and trustworthy, with a focus on ethical considerations, human rights, and transparency. While not legally binding, the resolution serves as a framework to guide member states to adopt national policies and regulations that reflect these principles (U.S. Department of State, 2024).

5.3.4 Challenges in Achieving Global Regulatory Standards

Both Douglas and Tang highlighted the absence of universally accepted standards as a significant gap in current AI regulations. They emphasized that without a global consensus, the development of ethical AI systems will be inconsistent, varying significantly across different regions and sectors. Despite this, there are notable attempts to establish common guidelines, such as the UN resolution on 'safe, secure, and trustworthy' AI systems, which seeks to create broad principles for ethical AI use worldwide. This resolution promotes a holistic approach by emphasizing general principles like safety, security, and trustworthiness, aiming to guide countries toward a shared understanding of ethical AI practices.

In contrast, based on insights from the literature review, Shin (2020)'s Elaboration Likelihood Model (ELM) offers a more targeted approach by focusing specifically on fairness, accountability, transparency, and explainability (FATE) to build consumer trust in AI. While the UN resolution takes a broad, principle-based approach to create a foundational ethical framework for AI, Shin's model is more focused on how ethical principles directly impact consumer

perception and trust in AI technologies. The UN's approach is expansive, aiming to cover various aspects of AI ethics globally, while Shin's model is narrower, providing a specific framework for companies to foster ethical AI development through transparency and fairness.

The FATE model's targeted approach may be particularly effective in organizational contexts, as it provides clear guidelines for fostering ethical AI development. Consumers often see current regulations as insufficient because they lack this focus on clear, actionable steps, leaving many with doubts about data use and potential biases in AI systems. Shin (2020) suggests that by integrating FATE principles into AI development, businesses can build trust and address the ethical concerns that consumers feel are currently not met by existing regulatory frameworks.

These differing approaches illustrate the challenges of achieving universal acceptance: while the UN resolution aims for broad applicability and global consensus, its generality might make it difficult to enforce, especially in contexts with different legal systems, cultural values, or technological capabilities. Shin's model, while potentially more practical for direct application in organizational contexts, may not have the broad appeal needed for global adoption due to its specific focus. Balancing these competing needs, being practical applicability for businesses and more broad global standards for consumers will be essential to ensure any future frameworks gain widespread acceptance.

5.4 Personalized Advertising

This theme offers first-hand insights into the key forces driving businesses' focus on personalized advertising, further clarifying the motivations behind this approach and highlighting likely future trends

5.4.1 Convergence on the Benefits of Personalized Advertising

AI-driven personalization offers numerous benefits to businesses, especially in boosting customer engagement and retention. Both Tang and Aubert highlighted how AI-powered personalized advertising can significantly improve business performance by enhancing customer loyalty and optimizing targeted promotions. Personalized ads are more relevant to individual consumers, increasing the chances of engagement and, ultimately, a purchase (see Chapter 4.2.3).

The literature backs this up as well. Studies by Chandra et al. (2022), Haleem et al. (2022), Nesamoney (2015), and Babatunde et al. (2024) all highlight the potential of AI personalization in advertising. These studies emphasize how AI-driven personalization enables

businesses to create more targeted and efficient marketing strategies. By better understanding customer preferences and behaviors, companies can cut down on wasted advertising spending and focus on the most promising opportunities. Furthermore, the findings of Awad & Krishnan (2006) are of key importance. They suggest that companies should focus on emphasizing the value of what they refer to as *personalized services* (such as customized product suggestions or tailored user experiences), which offer clear utility to consumers. Highlighting personalized services over general personalized content can encourage more positive views on data-sharing which will in turn lead to more enthusiasm around sharing data by customers. Transparency about how both personalized ads and services function, along with clear communication about how consumer data is used, will also play a key role in building trust, especially among those skeptical of targeted marketing.

Survey results also reflect this point, as both consumers and business professionals agreed on the effectiveness of personalized advertising compared to non-personalized methods. The mean responses for both groups were identical, and the Mann-Whitney U test revealed no significant difference in their perceptions of personalized advertising's effectiveness. Notably, this was the only question where the null hypothesis (H_0) was not rejected, meaning no difference in responses between business professionals and consumers were found (see Table 4.5).

This shared perspective highlights a mutual recognition of the value of personalized advertising in improving engagement and the relevance of Personalized ads in resonating with the target audience due to their tailoring to individual preferences and needs.

5.4.2 Future Trends in Personalized Advertising

Tang highlighted the emergence of CDPs as a significant future trend in AI-driven advertising. A CDP is a software platform that centralizes and organizes customer data from various sources, such as websites, mobile apps, email systems, and social media, into a unified customer database. By consolidating this information, CDPs allow businesses to create comprehensive customer profiles, which can be used to deliver highly personalized advertisements (CDP, n.d.).

CDPs improve the accuracy and efficiency of AI algorithms by providing a comprehensive and large dataset for analyzing and predicting customer behavior and preferences. This ability to aggregate and analyze diverse data sources is crucial for personalized advertising, as it enables companies to better tailor their marketing efforts to individual customer needs. For

example, if a customer frequently browses a website for a specific product but never makes a purchase, a CDP can help the business understand this behavior and deliver targeted promotions or discounts to encourage conversion (CDP, n.d.).

Bashynska (2024) highlights another promising trend where AI-driven personalization can be leveraged to promote sustainability by targeting individuals who prefer eco-friendly products. This approach not only aligns with consumer values but also helps reduce the carbon footprint of advertising by delivering relevant, targeted content. As sustainability becomes a growing concern, AI-powered advertising can play a key role in promoting eco-conscious behaviors. By focusing on consumers with a preference for environmentally friendly products, businesses can effectively contribute to shaping a sustainability-driven culture, which is becoming more mainstream. Pollay (1986)'s work also recognizes advertising's power to shape pop culture, and in this case, it can be seen as a positive force in pushing forward the sustainability agenda.

Moreover, Kenan (2024) points out that AI can help reduce biases and stereotypes in advertising by focusing on individual behaviors and preferences, rather than relying on broad demographic segments. This ability to tailor ads based on personal interests enables more respectful and relevant marketing, avoiding the pitfalls of generalized or stereotypical advertising. By delivering personalized content that resonates with individuals on a deeper level, AI-driven personalization not only improves engagement but also fosters a more inclusive and equitable advertising landscape. This shift toward behavior-based personalization has the potential to make marketing more sensitive and aligned with consumers' unique identities and needs.

5.5 Multistakeholder Interest and Consumer Education

The theme of engaging multiple stakeholders in shaping AI policy offers great potential for creating solutions that cater to diverse needs. A governance model that involves industry experts, academics, governments, and users has become essential for developing fair and effective responses to the challenges posed by AI technology. This approach aims to fill regulatory gaps and ensure public interests remain a priority, as noted by both Tang and Douglas (see Chapter 4.2.6). The AI Act is a prime example of this, advocating for a collaborative process in creating codes of conduct for generative AI, as outlined in Articles 55 and 56 of the 2024 EU AI Act (EU AI Act, 2024).

From the consumer's standpoint, there's a growing demand for better awareness and education about AI's role in daily life. Both Aubert and Tang pointed out that many people don't fully understand the impact AI has on their everyday interactions. Aubert critiqued current awareness campaigns, like cookie pop-ups, arguing that they are often overlooked and fail to provide meaningful insights. Tang extended this discussion by warning of the risks, such as over-reliance on tools like ChatGPT, emphasizing that users need to stay in control and recognize when it's time to disengage from AI systems (see Chapter 4.2.7). This is further supported by Pega (n.d.)'s study, which showed that a majority of consumers fail to recognize even the most basic functions of AI.

These perspectives underscore the importance of consumer education in helping users make informed choices about their interactions with AI. Research supports this need, showing that over-dependence on AI can diminish decision-making abilities and foster complacency (Ahmad et al., 2023). A multistakeholder approach to governance could be key to addressing this issue by involving consumer advocacy groups and educational institutions in the policy-making process. By doing so, the focus on public education and awareness could become integral to AI regulation, empowering people to navigate AI systems confidently.

While industry self-regulation and ethical codes are steps in the right direction for mitigating AI-related risks, the possibility of misuse remains a significant concern, as Douglas pointed out (see Chapter 4.2.6). This highlights the need for a stronger governance framework that brings together diverse voices. Both the quantitative data and existing literature point to differing perspectives, reinforcing the call for a multistakeholder model in AI governance. Such a model wouldn't just close gaps in oversight but would also align the development and deployment of AI technologies with the public's best interest.

6. Recommendations

6.1 Summary of Key Findings: Understanding the Gap

Our research reveals that a significant difference exists between how business professionals and consumers view AI-driven advertising. Business professionals' focus was mostly on the operational benefits provided by AI, with them focusing on its ability to boost marketing effectiveness and overall efficiency. Consumers, meanwhile, held higher levels of concern around ethical issues such as privacy, data security, and transparency. This difference in viewpoints between the two groups highlights the broader tension that exists between technological progress and responsible data use. It points to an urgent need for businesses to address consumer concerns by building public trust and convincing the public of the benefits of using AI in advertising.

Trust and Ethical Concerns

A key factor shaping these attitudes is the difference in trust levels and ethical concerns the two groups have towards companies. Business professionals generally reported a higher amount of trust in companies to have ethical data practices, and they showed less concern about data handling. Their trust may stem from interacting more closely with AI systems, which would give them more insights into how the systems work. As a result, they would primarily see AI as a valuable tool for improving their efficiency and profitability, with ethical concerns taking the back seat.

On the other hand, consumers show a much lower level of trust in companies to use their data ethically. This could in part be due to a lack of understanding of AI systems. This "fear of the unknown" would inform their view, leading to a much stronger focus on being given to privacy risks and the potential misuse of their personal data, causing their more negative attitudes toward AI-driven advertising.

Familiarity and Comfort with Data Practices

Business professionals reported feeling more comfortable with the collection of all types of their data. This could be due to their understanding and familiarity with the AI systems.

However, even among this group, there was still a low level of comfort around the collection of personal information, suggesting that concerns about personal data is a universal area.

In contrast, consumers expressed significantly lower comfort levels towards the collection of all types of data, with particularly low comfort levels being seen around the collection of personal information. Their discomfort is likely heightened due to their perceived lack of transparency around how their data is being used. This would lead to more concerns about privacy violations and data handling.

The Case for a Multistakeholder Approach to Governance

Bridging the gap between the views of businesses and consumers will require a collaborative approach to governance across different stakeholders. The input of various stakeholders, including businesses, consumers, regulators, and academia, is essential for creating a robust governance framework that strikes a balance between profitability and ethical considerations, in order to increase consumer trust in AI technology and its use in advertising.

6.2 Consumer Awareness

To bridge the gap that has been identified in our research between consumers and businesses, we lay out below a set of recommendations for both parties to adopt. These recommendations are drawn from our findings and have been formulated to help assist in building a stronger, more cooperative relationship. These actions focus on four key areas: Awareness, Autonomy, Collaboration, and Transparency.

6.2.1 Promoting Consumer Awareness of AI by Businesses

Consumers' skepticism about AI-driven advertising often stems from a lack of understanding and trust, which is partly driven by a "fear of the unknown." Businesses must prioritize building awareness about how AI operates and how it benefits consumers. Educating consumers about AI systems, not just through technical explanations but by addressing broader ethical concerns, will help demystify AI and reduce fears.

Increasing Familiarity Through Engagement

One effective way to build trust is by fostering consumer familiarity with AI technologies and data practices. Research has shown that people are generally more skeptical of technologies

they don't understand (Pega, n.d.). By actively educating consumers on how AI operates within advertising, businesses can help demystify the process, and make it more accepted. This could involve creating educational campaigns or interfaces that allow consumers to understand AI systems and explore how these systems work. For example, interactive platforms where consumers can adjust their data-sharing preferences and immediately see how those choices influence their ad experience could help in fostering trust.

Consistency in Brand Messaging Across Channels

Another key recommendation is to ensure that messaging about ethical AI and data usage is consistent across all consumer touchpoints. Inconsistent messages across platforms can confuse and erode consumer trust. To strengthen this trust, businesses should adopt a unified approach across advertising, customer service, and data policies, ensuring that their ethical values are clearly communicated, whether online or offline. Consistent messaging reinforces a brand's commitment to ethical practices and builds consumer confidence, as supported by HT Media Team (2024), which found that transparency across platforms significantly boosts consumer trust. A coherent message about data security and ethical practices encourages long-term relationships and loyalty.

Implications

By focusing on awareness-building and education, businesses can not only increase consumer engagement but also build lasting trust. This trust, built on a foundation of transparency and ethical practices, will differentiate businesses in a competitive market. Over time, this can lead to stronger customer relationships, improved loyalty, and sustained profitability, positioning companies as leaders in responsible AI-driven personalization.

6.3.2 Raising Consumer Awareness Around AI Systems

A significant portion of consumer skepticism toward AI stems from a lack of awareness about how AI systems operate. This "fear of the unknown" fuels distrust in companies' data practices. To bridge this gap, consumer education is essential. By educating consumers on how AI systems collect and use data, they can develop a more balanced understanding of the risks and benefits involved, leading to more informed perspectives.

Implementation

Educational institutions, consumer advocacy groups, and technology companies should collaborate to create accessible guides, interactive tutorials, and webinars that explain AI systems and data use in simple, non-technical terms. Personalized learning experiences, such as interactive FAQs or AI-driven educational platforms like chatbots, can further enhance consumer understanding of AI-driven advertising and data collection processes.

Businesses and regulators can also offer online courses focused on AI literacy, covering AI's role in everyday applications, its benefits, risks, and the ethical dimensions of data collection. These courses can incorporate case studies, actively demonstrating how AI-driven scenarios impact consumer privacy and personalization.

Implication

Improving AI literacy will empower consumers to make informed decisions about their data and the companies they choose to engage with. This will reduce unsubstantiated fears about AI technologies and foster a more collaborative relationship between consumers and businesses. Educated consumers are more likely to trust companies that prioritize transparent data practices, resulting in increased engagement and improved customer satisfaction.

6.3 Consumer Autonomy

6.3.1 Empowering Consumer Autonomy in Data Practices

The more consumers understand how their personal data is used to tailor the advertisements they see, the more likely they are to trust the brand and engage with personalized content. According to the Elaboration Likelihood Model (ELM), providing clear, relevant, and detailed information fosters more positive consumer attitudes toward brands. In advertising, this means demystifying how personalization works and ensuring consumers feel informed and in control of their data.

Aubert's company showed that by using context-based tracking and relying on first-party data, businesses can significantly reduce ethical concerns related to data collection. By focusing on in-site tracking, anonymized data, and exploring cookie-less tracking technologies, companies can personalize ads without infringing on consumer privacy. This approach reduces dependence

on third-party data, which is often viewed negatively, and promotes responsible, consent-driven data collection and usage for customers.

Implementation

To enhance consumer autonomy, businesses should transition away from third-party data and prioritize first-party data collection through consent-based tracking. Consumers should be fully informed in real-time about what data is collected and how it is used. AI tools with natural language processing (NLP) capabilities could be used to offer simple, easy-to-understand explanations about why specific ads are shown.

Additionally, businesses should offer opt-out options for tracking options, such as location-based or behavior-based data, giving consumers greater control over their experience. Cookie-less tracking technologies, which avoid the need for storing personal information in cookies, provide an additional layer of privacy and can further enhance trust.

Implications

By adopting first-party data tracking methods and moving away from cookie-based tracking, businesses will build trust with consumers, as they will feel more in control of their personal data. This will not only ease privacy concerns but may also increase engagement with personalized ads and improve conversion rates in the long time if consumers are more aware of what information has led to them being shown. In the long term, companies that embrace these practices will be viewed as more ethical and consumer-centric, enhancing their brand reputation and competitive positioning.

6.3.2 Exercising Consumer Autonomy in Data Practices

While businesses play a crucial role in fostering trust, consumers also need to take an active role in demanding control over their data and transparency from the companies they engage with. Exercising autonomy means making informed decisions about which brands to support, particularly those that prioritize ethical AI practices and responsible data usage. By advocating for their rights and choosing ethical brands, consumers can influence the development of AI systems that uphold transparency and integrity.

Implementation

Consumers can enhance their autonomy by staying informed about how companies collect and use their data, and by engaging directly with businesses to request clearer, more transparent privacy policies. This could involve reaching out through customer service channels, submitting inquiries about data usage, or participating in public discussions about data privacy. By demanding that businesses provide straightforward information about data practices, consumers can push for greater transparency and ethical standards in AI. Additionally, consumers should be mindful of which companies align with their values, choosing to support those that prioritize ethical data usage. By making conscious decisions about the brands they engage with, consumers can promote responsible business practices and encourage industry-wide adoption of transparent and ethical AI systems.

Implications

By actively supporting ethical brands and demanding transparency, consumers create a market environment where responsible AI development is prioritized. This collective consumer action encourages businesses to adopt ethical data practices, raising industry standards. As a result, autonomy and trust are reinforced, leading to an improved consumer experience and stronger accountability across the marketplace.

6.4 Collaboration and Communication

6.4.1 Increased Collaboration in AI Governance by Businesses

Businesses should actively engage in multistakeholder governance initiatives, such as those outlined in the UN Resolution on Safe, Secure, and Trustworthy AI Systems. By collaborating with regulators, academia, and consumer groups, businesses can help develop AI frameworks that are both ethical and effective. Engaging in multistakeholder governance enables businesses to align their operations with societal values, ensuring a balance between innovation and ethical responsibility.

Implementation

Businesses should establish internal teams and designate representatives to regularly engage with regulatory bodies, academic institutions, and consumer organizations. Active

participation in AI governance forums and public consultations on AI technologies and data practices is crucial. Additionally, companies should adopt internal policies that reflect these multistakeholder values and integrate these standards into their long-term AI strategies.

Regular audits of AI systems, conducted in collaboration with external stakeholders, can ensure compliance with evolving ethical and legal standards as well as build trust in their brand. By taking an active role in creating ethical guidelines and frameworks, businesses can influence the future development and deployment of AI in a responsible and proactive manner, while also ensuring that they have a seat at the regulatory table.

Implication

Engaging in multistakeholder governance allows businesses to align with broader societal interests while maintaining ethical responsibility in AI innovation. This active collaboration will enhance public trust in AI systems, reduce regulatory risks, and position companies as leaders in ethical AI development. Businesses that prioritize these initiatives will likely gain consumer trust and long-term stability, as their commitment to ethical practices becomes clear to both consumers and regulators.

6.4.2 Increased Collaboration in AI Governance by Consumers

Consumers and public society should feel empowered to actively participate in public consultations, regulatory discussions, and advocacy groups focused on AI governance. By participating in these conversations, consumers can help shape how AI technologies are implemented and regulated. Initiatives like the UN Resolution on AI provide platforms for consumers to voice their concerns and contribute to the development of AI governance policies.

Implementation

Consumers should be encouraged to participate in public forums, surveys, and town halls hosted by regulatory bodies to provide feedback on AI policies and practices. Additionally, consumers should use social media and feedback platforms to directly engage with companies and share concerns about data usage, ensuring their voices are heard and considered when building business practices.

Implication

By participating in AI oversight, consumers can help shape the development of ethical standards and regulations that protect their interests. This engagement ensures businesses are held accountable for their data practices and approach to using AI, leading to increased transparency and stronger consumer protections. A proactive consumer role in AI oversight will foster greater trust between consumers and companies, promoting a more responsible AI-driven ecosystem.

6.5 Transparency

6.5.1 Building Consumer Trust Through Transparent Data Practices

Transparency is a cornerstone for building consumer trust. Consumers want to know how their data is collected, used, and protected, and businesses must provide clear, accessible information to address these concerns. Transparent practices not only reduce uncertainty but also empower consumers to make informed decisions about their data, fostering a more trusting relationship between consumers and businesses.

Implementation

To improve transparency, businesses should implement clear, straightforward data policies that explain how personal information is collected, stored, and used in AI systems. This includes providing easy-to-understand explanations about how personalized content is generated, and how consumer data influences these processes. AI-driven tools, such as interactive dashboards or personalized privacy settings, can help consumers monitor and control how their data is being used in real time.

Implication

By fostering transparency, businesses can alleviate consumer concerns around data privacy and use, leading to stronger engagement with personalized advertising and services. Clear communication about data practices will position companies as ethical and responsible, increasing brand loyalty and trust. Over time, companies that prioritize transparency are likely to experience reduced legal and regulatory risks, and will stand out as leaders in ethical AI, further enhancing their competitive edge.

6.5.2 Advocating for Transparency in Data Practices as Consumers

Consumers have the right to know how their personal data is being collected, used, and stored by the businesses they engage with. Transparency is key to building trust, and when consumers are fully informed about data practices, they can make more confident decisions. However, businesses often fall short in providing clear, accessible explanations of how AI impacts personalized content. Consumers must be proactive in ensuring they understand these processes.

Implementation

To foster greater transparency, consumers should actively engage with companies by asking for clear explanations of how their data is used in AI-driven advertising and personalization. This can include reaching out through customer support, social media, or feedback channels to request detailed information on data collection and processing. By actively seeking out this information, consumers can hold businesses accountable and push for better communication regarding AI's role in shaping their experiences.

Implication

When consumers actively demand transparency, businesses are incentivized to provide clearer, more accessible data policies. This not only fosters trust but also improves the overall consumer experience by ensuring that data practices align with customer expectations. In turn, companies that prioritize transparency are more likely to build stronger relationships with their customers, enhancing loyalty and brand reputation.

6.6 Limitations of the Study

There are several limitations that should be acknowledged, mainly arising from the challenges we encountered during the thesis process. One of the key limitations was the scarcity of academic literature on the use of AI in advertising, particularly when focusing on the ethical considerations of the technology. Although AI is a widely discussed topic, much of the discourse around it focuses on its broader applications and societal impacts rather than its specific integration into the advertising industry, outside of general references to personalization.

The novelty of Gen AI compounded this limitation. As a relatively new technology, there is still a great deal of uncertainty surrounding its full range of applications, and many of its

ethical implications, especially in advertising, are still unexplored. Its emergent nature meant that much of the existing literature and expert discourse did not directly address the specific questions we sought to investigate, leaving a gap in relevant academic resources to review. Additionally, as the field of AI is rapidly evolving and filled with uncertainty, ethical guidelines and frameworks are often playing catch-up, which further hindered our ability to ground the study in any established structures from which to provide detailed solutions.

A third limitation arose from the niche knowledge base around our topic. During our research, we realized that advertising and AI, while two fields that do interact with each other, do not do so in a way that easily provides actionable suggestions. This was seen during the qualitative phase of our research, where the interview participants provided general commentaries on AI rather than focusing on its use within advertising. This limited our ability to gather precise expert opinions on our specific research focus. While their contributions were still valuable, they often veered toward discussing AI's broader societal impacts, detracting from the depth of insight into the advertising sector.

The Misalignment Problem around AI and Advertising

We believe a significant problem arises from the fact that, when it comes to implementing Ethical AI practices in advertising, a clear target user does not exist within businesses to which actionable outcomes can cater: An advertiser may utilize the AI tools developed by engineers, but they typically have no influence over the data used to train these models or the ways in which this data is collected. Likewise, the AI engineer creating these tools has no control over the specific advertising strategies that may lead to such heavy consumer resistance to personalization. This disconnect highlights a crucial gap between the developers of AI systems and the practitioners who use them, underscoring the lack of accountability or a single control point in the organizational structure to ensure AI systems are both developed and used ethically. This is a concern that has likely occurred due to the rapid implementation of the technology to which structure changes have not yet adapted. This, in turn, limits our abilities to provide actionable insights that can be adopted by any company, so instead, our recommendations remain general and should be seen as guidelines rather than a step-by-step guide.

We believe this area warrants further attention, not only within advertising but across other sectors that have incorporated AI into their operations. As businesses continue to evolve and adjust their organizational structures to integrate AI throughout their functions better, this disconnect between developers and practitioners must be addressed.

6.7 Final Thoughts: Navigating the Divide

The gap between businesses and consumers keeps expanding, a divide that has surfaced repeatedly in our research. It reveals a stark misalignment between what businesses aim for and what consumers value, especially around AI-powered personalization.

Our investigation, as laid out in the results and discussion sections, has uncovered several key factors that may contribute to this divide. Businesses appear to view AI primarily as a tool to enhance their marketing strategies and boost profitability. This perspective may arise due to their trust in and familiarity with AI. However, this perspective may, at the same time, limit their awareness of the broader ethical concerns around AI. Consumers meanwhile, approach AI cautiously, prioritizing trust, transparency, and ethical data management. However, some of this skepticism may be due to an unfamiliarity with the technology rather than specific, justified concerns.

Our initial goal was to formulate a set of guidelines that would bring all stakeholders together and help bridge this gap. Instead, the recommendations we created are intended to inspire change rather than offer definitive solutions.

Here are the four key areas of change we identified: businesses need to raise consumer awareness, offer greater autonomy, foster collaboration, and ensure transparency in their data practices. To rebuild trust, businesses should actively educate consumers about how their AI systems work and provide interactive platforms where consumers can gain familiarity and confidence. Clear, consistent messaging across channels and transparency around how data is used, especially with a focus on first-party data, can help restore consumer confidence. On the consumer side, it's vital that they also take a proactive role—staying informed, demanding clarity around data use, and supporting brands that commit to ethical standards. Finally, collaboration between businesses, regulators, and consumers will be critical to creating AI frameworks that genuinely prioritize transparency, autonomy, and trust in the market.

What we've uncovered is that the challenges businesses face, whether it's the misalignment between AI developers and marketing practitioners or consumers' ethical concerns, are deeply interwoven with the longstanding issues within the advertising industry itself. Looking back, many of the ethical and operational problems we identified aren't new. AI hasn't introduced new dilemmas; it's simply intensified problems that have been lurking in the industry for over a century—psychological manipulation, privacy violations, and consumer exploitation, all of

which trace back to the early days of commercial advertising. AI has only magnified the ethical flaws that have always existed.

And so, the guidelines we've presented are broad by necessity. They're not a definitive answer but a starting point, meant to spark deeper discussions on how businesses can better align their AI strategies with what consumers expect and deserve. Because if these internal and external gaps remain unresolved, the divide between businesses and consumers will only continue to grow, and the ethical challenges surrounding AI in advertising will remain a constant, unresolved issue.

In the end, the question is no longer about what AI can do for businesses but about what businesses are willing to do with AI to foster trust. Without addressing these core issues, the technological future will only exacerbate the existing issues of today.

Citations

- AB Tasty. (2024, July 9). Emotionsai. abtasty. <https://www.abtasty.com/emotions-ai/>
- Ahmad, S. F., Han, H., Alam, M. M., Rehmat, M., Irshad, M., Arraño-Muñoz, M., & Ariza-Montes, A. (2023). Impact of artificial intelligence on human loss in decision making, laziness and safety in education. *Humanities and Social Sciences Communications*, 10(1), 1-14.
- APA Dictionary of Psychology. (n.d.). Inferential statistics. In APA Dictionary of Psychology. Retrieved from <https://dictionary.apa.org/inferential-statistics>
- Arqoub, O. A. A., Özad, B. E., & Elegu, A. A. (2019). The engineering of consent: A state-of-the-art review. *Public Relations Review*, 45(5), 101830.
- Awad, N. F., & Krishnan, M. S. (2006). The personalization privacy paradox: An empirical evaluation of information transparency and the willingness to be profiled online for personalization. *MIS quarterly*, 13-28.
- Babatunde, S. O., Odejide, O. A., Edunjobi, T. E., & Ogundipe, D. O. (2024). The role of AI in marketing personalization: A theoretical exploration of consumer engagement strategies. *International Journal of Management & Entrepreneurship Research*, 6(3), 936–949. <https://doi.org/10.51594/ijmer.v6i3.964>
- Balaji, N., Bharadwaj, A., Apotheker, J., & Moore, M. (2024). Consumers know more about AI than business leaders think. BCG Global. <https://www.bcg.com/publications/2024/consumers-know-more-about-ai-than-businesses-think>
- Bashynska, I. (2024). AI-Driven Personalization in Advertising: Transforming Consumer Engagement through Sustainability and Circular Economy. *Scientific Journal of Bielsko-Biala School of Finance and Law*, 27(4), 106-112. <https://doi.org/10.19192/wsfp.sj4.2023.15>
- Bethlehem, J. (2010). Selection bias in web surveys. *International statistical review*, 78(2), 161-188.
- Boehmke, B. (2016). Assessing the assumption of normality. UC Business Analytics R Programming Guide. https://uc-r.github.io/assumptions_normality
- Bradford, A. (2020). *The Brussels effect: How the European Union rules the world*. Oxford University Press, USA.
- Braudel, F. (1992). *Civilization and capitalism, 15th-18th century, vol. II: The wheels of commerce (Vol. 2)*. Univ of California Press.

- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), 77-101.
- Calfee, J. E., & Ringold, D. J. (1994). The 70% majority: Enduring consumer beliefs about advertising. *Journal of Public Policy & Marketing*, 13(2), 228-238.
- CDP. (n.d.). What is a customer data platform (CDP)?
<https://cdp.com/basics/what-is-a-customer-data-platform-cdp/>
- Chandra, S., Verma, S., Lim, W. M., Kumar, S., & Donthu, N. (2022). Personalization in personalised marketing: Trends and ways forward. *Psychology & Marketing*, 39(8), 1529–1562. <https://doi.org/10.1002/mar.21670>
- Cheatham, B., Javanmardian, K., & Samandari, H. (2019). Confronting the risks of artificial intelligence. *McKinsey Quarterly*, 2(38), 1-9.
- Clark, E. (2024). The ethical dilemma of AI in marketing: A slippery slope. *Forbes*.
<https://www.forbes.com/sites/elijahclark/2024/03/14/the-ethical-dilemma-of-ai-in-marketing-a-slippery-slope/>
- Clarke, V., & Braun, V. (2017). Thematic analysis. *The journal of positive psychology*, 12(3), 297-298.
- Comrey, A. L., & Lee, H. B. (2013). *A first course in factor analysis*. Psychology press.
- Cresswell, J. W., & Clark, V. L. P. (2017). *Designing and conducting mixed methods research*. Sage publications.
- Crosetto, P., Filippin, A., Katuščák, P., & Smith, J. (2020). Central tendency bias in belief elicitation. *Journal of Economic Psychology*, 78, 102273.
- Danciu, V. (1970, January 1). Manipulative marketing: Persuasion and manipulation of the consumer through advertising. *Theoretical and Applied Economics*.
[https://ideas.repec.org/a/agr/journal/vxxiy2014i2\(591\)p19-34.html](https://ideas.repec.org/a/agr/journal/vxxiy2014i2(591)p19-34.html)
- DEEM. (2023). *The Ethics of Artificial Intelligence in Marketing Communications*. Deem Communications.
<https://deemcommunications.com/blog/the-ethics-of-artificial-intelligence-in-marketing-communications/>
- Deveau, R., Griffin, S. J., & Reis, S. (2023). AI-powered marketing and sales reach new heights with Generative AI. *McKinsey & Company*.
<https://www.mckinsey.com/capabilities/growth-marketing-and-sales/our-insights/ai-powered-marketing-and-sales-reach-new-heights-with-generative-ai>
- Diakopoulos, N. (2016). Accountability in algorithmic decision making. *Communications of the ACM*, 59(2), 56-62.

- Du, S., & Xie, C. (2021). Paradoxes of artificial intelligence in consumer markets: Ethical challenges and opportunities. *Journal of Business Research*, 129, 961-974.
- Erdem, T., & Swait, J. (1998). Brand equity as a signalling phenomenon. *Journal of Consumer Psychology*, 7(2), 131-157.
- EU AI Act (2024).
- European Parliament. (2023). Circular economy: Definition, importance and benefits. European Parliament.
- Ezzat, Rania (2023) "History and Development of Advertising through Media Technology," *Journal of Art, Design and Music*: Vol. 2 : Iss. 1 , Article 3. Available at: <https://doi.org/10.55554/2785-9649.1011>
- Fereday, J., & Muir-Cochrane, E. (2006). Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. *International journal of qualitative methods*, 5(1), 80-92.
- Future of Life Institute. (2023). Pause giant AI experiments: An open letter. <https://futureoflife.org/open-letter/pause-giant-ai-experiments/>
- Gillespie, N., Lockey, S., Curtis, C., Pool, J., KPMG Australia, The University of Queensland, Mabbott, J., Fentener Van Vlissingen, R., Wyndham, J., Boele, R., Akbari, A., Opperman, I., Bianchi, R., Sadiq, S., Richmond, M., Namvar, M., Smith, N., Edwards, M., Colville, S., & Macdade, A. (2023). Trust in Artificial Intelligence: a global study. The University of Queensland and KPMG Australia. <https://doi.org/10.14264/00d3c94>
- Haleem, A., Javaid, M., Qadri, M. A., Singh, R. P., & Suman, R. (2022). Artificial intelligence (AI) applications for marketing: A literature-based study. *International Journal of Intelligent Networks*, 3, 119-132
- HT MEDIA TEAM. (2024, July 9). The psychology behind effective advertising. HT Media. <https://www.htmedia.in/blog/the-psychology-behind-effective-advertising>
- Hurmerinta-Peltomäki, L., & Nummela, N. (2006). Mixed methods in international business research: A value-added perspective. *Management International Review*, 46, 439-459.
- IMARC Group. (2023). Digital Marketing Market Report by Digital Channel, End Use Industry, and Region 2024-2032. IMARC Group.
- Jaffery, B. (2022). Connecting with meaning: Hyper-personalizing the customer experience using data, analytics, and AI . Deloitte Analytics. <https://www2.deloitte.com/content/dam/Deloitte/ca/Documents/deloitte-analytics/ca-en-omnia-ai-marketing-pov-fin-jun24-aoda.pdf>

- Jobin, A., Ienca, M., & Vayena, E. (2019). The global landscape of AI ethics guidelines. *Nature machine intelligence*, 1(9), 389-399.
- Johnson, R. B., Onwuegbuzie, A. J., & Turner, L. A. (2007). Toward a definition of mixed methods research. *Journal of mixed methods research*, 1(2), 112-133.
- Kenan, J. (2024). Ai ethics: How marketers should embrace innovation responsibly. Sprout Social. <https://sproutsocial.com/insights/ai-ethics/>
- Khan, A. A., Badshah, S., Liang, P., Waseem, M., Khan, B., Ahmad, A., ... & Akbar, M. A. (2022, June). Ethics of AI: A systematic literature review of principles and challenges. In *Proceedings of the 26th International Conference on Evaluation and Assessment in Software Engineering* (pp. 383-392).
- King, M. F., & Bruner, G. C. (2000). Social desirability bias: A neglected aspect of validity testing. *Psychology & Marketing*, 17(2), 79-103.
- KPMG. (2023, June 21). Corporate data responsibility: Bridging the consumer trust gap. KPMG. <https://kpmg.com/us/en/articles/2023/bridging-the-trust-chasm.html>
- Kumar, V., & Reinartz, W. (2016). Creating enduring customer value. *Journal of marketing*, 80(6), 36-68.
- Lina, L., & Setiyanto, A. (2021). Privacy concerns in personalized advertising effectiveness on social media. ResearchGate. <https://doi.org/10.29259/sijdeb.v5i2.147-156>
- Lindecrantz, E., Gi, M. T. P., & Zerbi, S. (2020, April 28). Personalizing the customer experience: Driving differentiation in retail. McKinsey & Company. <https://www.mckinsey.com/industries/retail/our-insights/personalizing-the-customer-experience-driving-differentiation-in-retail>
- McKnight, P. E., & Najab, J. (2010). Mann-Whitney U Test. *The Corsini encyclopedia of psychology*, 1-1.
- Monem, H. A. (2021). The effectiveness of advertising personalization. *Journal of Design Sciences and Applied Arts/Journal of Design Sciences and Applied Arts*, 2(1), 335–344. <https://doi.org/10.21608/jdsaa.2021.31121.1061>
- Muhammad, F. (2023, May 5). Advertising evolution: How personalization has improved over time. Instapage. <https://instapage.com/blog/advertising-evolution-how-personalization-has-improved-over-time-4/>
- Nachar, N. (2008). The Mann-Whitney U: A test for assessing whether two independent samples come from the same distribution. *Tutorials in quantitative Methods for Psychology*, 4(1), 13-20.

- Nesamoney, D. (2015). *Personalized digital advertising: How data and technology are transforming how we market*. Pearson Education.
- Nesterenko, V., & Olefirenko, O. (2023). The impact of AI development on the development of marketing communications. *Marketing i menedžment inovacij*, 14(1), 169-181.
- Panait, C., Ljubenkova, D., & Alic, D. (2021). Striking the balance between innovation and regulation in AI-is Europe leading the way or lagging behind. *Europuls Policy J. EU Affairs*, 1, 27-45.
- Pega. (n.d.). What consumers really think about AI: A global study.
https://www.kmu-wert.at/fileadmin/jkb/redaktion/main/pdfs/marktdaten/Studie_Artificial_Intelligence_2017.pdf
- Pollay, R. W. (1986). The Distorted Mirror: Reflections on the unintended consequences of advertising. *Journal of Marketing*, 50(2), 18. <https://doi.org/10.2307/1251597>
- Priester, J. R., & Petty, R. E. (2003). The influence of spokesperson trustworthiness on message elaboration, attitude strength, and advertising effectiveness. *Journal of Consumer Psychology*, 13(4), 408-421. https://doi.org/10.1207/S15327663JCP1304_08
- Ransbotham, S., Kiron, D., Gerbert, P., & Reeves, M. (2017). Reshaping business with artificial intelligence: Closing the gap between ambition and action. *MIT sloan management review*, 59(1).
- Razali, N. M., & Wah, Y. B. (2011). Power comparisons of shapiro-wilk, kolmogorov-smirnov, lilliefors and anderson-darling tests. *Journal of statistical modeling and analytics*, 2(1), 21-33.
- Salvagno, M., Taccone, F. S., & Gerli, A. G. (2023). Artificial intelligence hallucinations. *Critical Care*, 27(1), 180.
- Saxena, A. K. (2020). Balancing Privacy, Personalization, and Human Rights in the Digital Age. *Eigenpub Review of Science and Technology*, 4(1), 24-37.
- Schmalensee, R., & Willig, R. D. (2008). *Handbook of Industrial Organization* (Vol. 3). Elsevier.
- Schmid, A., & Wiesche, M. (2023). The importance of an ethical framework for trust calibration in AI. *IEEE Intelligent Systems*, 38(6), 27-34.
<https://doi.org/10.1109/MIS.2023.3320443>
- ScienceDirect. (n.d.). Multi-stakeholders. ScienceDirect.
<https://www.sciencedirect.com/topics/social-sciences/multi-stakeholders>
- Serota, K. B. (2019). Deceptive marketing outcomes: A model for marketing communications. *The Palgrave handbook of deceptive communication*, 813-837.

- Shin, D. (2020). User perceptions of algorithmic decisions in the personalized AI system: Perceptual evaluation of fairness, accountability, transparency, and explainability. *Journal of Broadcasting & Electronic Media*, 64(4), 541-565.
- Shin, D., & Park, Y. J. (2019). Role of fairness, accountability, and transparency in algorithmic affordance. *Computers in Human Behavior*, 98, 277-284.
- Spais, G., Phau, I., & Varsha Jain, M. I. C. A. (2023). AI marketing and AI-based promotions impact on consumer behavior and the avoidance of consumer autonomy threat. *Wiley Journal of Consumer Behaviour*, Hoboken.
- Taherdoost, H. (2022). What are different research approaches? Comprehensive Review of Qualitative, quantitative, and mixed method research, their applications, types, and limitations. *Journal of Management Science & Engineering Research*, 5(1), 53-63.
- Treanor, T. (2023). What is the difference between first-party, second-party and third-party data? CDP.
<https://cdp.com/articles/the-difference-between-first-party-second-party-and-third-party-data/>
- Troy, T. (2023). Examining the impacts, both positive and negative, of artificial intelligence on businesses. Medium.
<https://medium.com/@timothytroy/examining-the-impacts-both-positive-and-negative-of-artificial-intelligence-on-businesses-ac17758d787e>
- Tungate, M. (2013). *Adland: A global history of advertising*. Kogan Page.
- Turow, J. (2007). *Breaking up America: Advertisers and the new media world*. University of Chicago Press.
- United Nations. (2024). UN chief calls for inclusive, human rights-based regulation of AI. UN News., from <https://news.un.org/en/story/2024/03/1147831>
- U.S. Department of State. (2024). United Nations General Assembly adopts by consensus U.S.-led resolution on seizing the opportunities of safe, secure, and trustworthy artificial intelligence systems for sustainable development.
<https://www.state.gov/united-nations-general-assembly-adopts-by-consensus-u-s-led-resolution-on-seizing-the-opportunities-of-safe-secure-and-trustworthy-artificial-intelligence-systems-for-sustainable-development/>
- Vakratsas, D., & Ambler, T. (1999). How advertising works: What do we really know? *Journal of Marketing*, 63(1), 26. <https://doi.org/10.2307/1251999>
- Varytimidou, C. (2023). GDPR stress tests by AI: Towards a user-centric data protection approach. Centre for European Policy Studies (CEPS).

<https://cep-project.org/publications/gdpr-stress-tests-by-ai-towards-a-user-centric-data-protection-approach-winner/>

White & Case LLP. (2024). AI watch: Global regulatory tracker - United States.

<https://www.whitecase.com/insight-our-thinking/ai-watch-global-regulatory-tracker-united-states>

Whittlestone, J., Nyrup, R., Alexandrova, A., & Cave, S. (2019). The role and limits of principles in AI ethics: Towards a focus on tensions. *Proceedings of the 2019 AAAI/ACM Conference on AI, Ethics, and Society* (pp. 195-200).

Zaidan, E., & Ibrahim, I. A. (2024). AI Governance in a Complex and Rapidly Changing Regulatory Landscape: A Global Perspective. *Humanities and Social Sciences Communications*, 11(1), 1-18.

Zhang, B., & Dafoe, A. (2020, February). US public opinion on the governance of artificial intelligence. In *Proceedings of the AAAI/ACM Conference on AI, Ethics, and Society* (pp. 187-193).

Appendices

Appendix A - Interview Guide with Questions

Interview Pre-read

As part of our Master's thesis titled "**Personalization with Principles: Ethical AI Strategies in Advertising**", we are investigating the relationship between AI-driven personalization in advertising and its ethical considerations, taking both a business, policy, and consumer viewpoint to identify areas of similarity and difference. This study aims to provide an understanding of how businesses can ethically leverage AI technologies while also safeguarding user trust. This qualitative interview follows a quantitative survey we've conducted, to ensure a nuanced perspective on the issues raised and to inform actionable recommendations.

This thesis is a collaborative effort between Kate Feng and Thomas Bayliss, students at Skema Business School majoring in International Business.

Interview Logistics

- **Date and Time:** [Date], [Time]
- **Duration:** 30 minutes
- **Format:** In person/Online

Consent and Confidentiality: The information shared during this interview will be used solely for academic purposes and will remain confidential. You will have the right to review and approve any direct quotes or specific references before they are included in the thesis.

Voluntary Participation: Your participation is voluntary, and you may withdraw at any time.

Recording: The interview will be recorded and transcribed to ensure data collection accuracy. The recordings will be securely stored and only accessible to the aforementioned individuals involved in this study.

Interview Structure: During our interview, we will explore the issue from 4 main areas, **ethics, regulation, customer education, and future trends.**

Interview Questions

For Business Experts

1. Understanding AI Implementation:
 - a. How has your business currently incorporated AI into its operations?
 - b. What were the primary drivers for adopting AI the your business strategy? How do you measure the success of these AI initiatives?
2. Ethical Considerations:

- a. What were your main concerns about using AI when you were developing your offering?
 - i. Follow up - Have these concerns changed over time? If so, how?
 - b. Our survey results indicate a high level of concern among respondents about the ethical implications of AI or using AI in personalization. How can companies balance the need for AI with concerns about user privacy and data security?
 - c. How do you ensure that your AI-driven personalization practices adhere to ethical standards? What frameworks or guidelines do you follow?
- 3. Regulatory Compliance:
 - a. In our survey, we've seen low levels of trust and comfort with companies using specifically personal data for AI-driven ads. How do you think companies can build and maintain consumer trust when using AI?
 - b. What is your view about the current regulations coming out around AI? Where do they work well? Where do you see issues?
- 4. Consumer Perception:
 - a. What role do you believe consumer education plays in building and maintaining trust in AI-driven advertising?
 - b. What are the biggest misconceptions about AI that you encounter among the general public and businesses?
- 5. Looking Forward:
 - a. How can companies, academics, and policymakers collaborate more effectively to address the challenges of AI?
 - b. How do you foresee the role of AI evolving in business, more specifically in advertising or personalization over the next five years?

For Policy Experts

- 1. Understanding AI Implementation:
 - a. From your perspective, how are companies generally incorporating AI into their operations?
- 2. Ethical Considerations:
 - a. What are the main ethical concerns you have observed around AI technologies?
 - i. Follow-up: How have these concerns evolved, and what trends are you seeing?
 - b. Our survey results indicate a high level of concern among respondents about the ethical implications of AI or using AI in personalization. How can companies balance the need for AI with concerns about user privacy and data security?
- 3. Regulatory Landscape:
 - a. What are the current regulations governing the use of AI in personalized advertising?
 - b. What is your view about the current regulations coming out around AI? Where do they work well? Where do you see issues?
 - c. How can policymakers ensure that regulations keep pace with technological advancements in AI?
- 4. Consumer Perception:
 - a. What are the biggest misconceptions about AI that you encounter among the general public and businesses?
- 5. Looking Forward:

- a. What role do you believe industry self-regulation should play alongside formal governmental regulations?
- b. How can companies, academics, and policymakers collaborate more effectively to address the challenges of AI implementation across various sectors?

For Academia

1. Research Insights:

- a. Our survey data shows mixed feelings about AI-driven personalized ads. What, in your opinion are the key benefits and drawbacks of personalized advertisements for customers?
- b. What do you see as the points of tension between business, Regulators, and academia around the adoption of AI? Are there significant areas of agreement or contention?

2. Ethical Implications:

- a. What are the main ethical concerns you have observed around AI technologies, especially considering AI-driven personalization?
 - i. Follow-up: How have these concerns evolved, and what trends are you seeing?
- b. Are there any specific frameworks or guidelines that you have seen arising to address ethical concerns around AI?
- c. Our survey results indicate a high level of concern among respondents about the ethical implications of AI or using AI in personalization. How can companies balance the need for AI with concerns about user privacy and data security?

3. Regulatory Compliance

- a. What is your view about the current regulations coming out around AI? Where do they work well? Where do you see issues?

4. Consumer Perception:

- a. Our survey highlighted significant age-related differences in the familiarity and acceptance of AI-driven personalized ads. Do you have any insights around how demographics may influence customer perceptions?
- b. How do factors such as cultural background and socioeconomic status influence advertising approaches?
- c. What are the biggest misconceptions about AI that you encounter among the general public and businesses?
- d. How do you think we can better educate customers around the the use of AI, especially in advertising?

5. Future Directions:

- a. How do you foresee the role of AI evolving in business, more specifically in advertising or personalization over the next five years?
- b. Are there specific areas where human input might continue to outperform AI?
- c. How can companies, academics, and policymakers collaborate more effectively to address the challenges of AI?
- d. How can academic research contribute to developing best practices for AI implementation in advertising to ensure ethical and effective use?

Appendix B - Interview Transcriptions

Appendix B.1 - Interview with Aubert (Business)

[Kate] (0:00 - 0:31)

So first of all, thank you for agreeing to participate in this interview. I am Kate, and I'm conducting this as part of my master's thesis in association with Skema Business School. And before we begin, I'd like to go over a few points regarding consent and confidentiality. So first of all, your responses will be used solely for academic purposes and will remain confidential. You'll have the right to review all of your answers and approve any direct quotes before they're included in my thesis. Do you consent to this?

[Aubert] (0:32 - 0:33)

Yeah, yeah, no problem.

[Kate] (0:33 - 0:47)

Okay, and this interview will be recorded and transcribed for accuracy. The recordings will be securely stored and accessible only to myself, Kate Feng, and my thesis partner, Thomas Bayliss. Do you consent to being recorded?

[Aubert] (0:48 - 0:49)

Yeah, yeah, no problem.

[Kate] (0:49 - 0:55)

Okay, and may we have your consent to have your full name, job title, and company name in the thesis?

[Aubert] (0:55 - 0:56)

Yeah, sure.

[Kate] (0:56 - 1:03)

Okay, cool. And the interview will cover four areas and should last 30 minutes. So do you have any questions before we begin?

[Aubert] (1:03 - 1:05)

No, no, no, it's pretty clear.

[Kate] (1:05 - 1:15)

All right, so let's jump straight in. So first of all, could you tell me a bit about how AB Tasty has currently incorporated AI into our business operations?

[Aubert] (1:16 - 3:23)

Yeah, sure. So I would say that when the AI wave came one year and a half ago, essentially with OpenAI

releasing ChatGPT, first thought were about how to integrate AI giving new features for clients. But at the end, we realized that the main usage is essentially concerning internal productivity.

Could be how to accelerate teams' work, how to synthesize the things, create documentation in an easier way, etc., etc. So we came from what can we bring to the client to what can we bring internally to maximize operations. And so we've developed different projects.

A productivity project - I can share one for the client. It's a bit paradoxal to what I just said, but we created something. Our promise for our client is to be able to modify their website without technical skills.

And so we have integrated within our platform what we call copilot, able to code for the client. So if the client doesn't know how to make a modification on his website, he's able to ask the AI to do it for him or her. And usually it goes by coding the modification by itself.

So this is one of the usage we have. We have tried to use it as well analyzing the data, but we are still not mature on that. It means that the kind of analyzer the AI is able to provide at the present time is more what an intern could do, I would say, not a senior analyst, so we still have to work on it. And that's pretty [much] all today.

[Kate] (3:24 - 3:43)

All right, that's pretty cool. And what were the primary drivers for adopting AI? Would you say it's because of how everybody is incorporating AI, or do you have any other reasons for that?

[Aubert] (3:43 - 4:41)

No, I guess the first thought was curiosity for everybody. Saying, okay, we see that those possibilities in comparison to what you used to have in mind for AI are huge. Because at the end, AI does not mean anything.

I mean, we used to work with machine learning, but the generative AI, which is the ability to write something understandable by a human, I would say is a new thing happening. So it first started with curiosity and then led to concerning those work nobody wants to do, like writing documentation, like answering basic questions to clients, like basic things, time-consuming. So second thought was about how can we save time to people using those technologies.

[Kate] (4:43 - 4:51)

I see, that's very interesting. And how do you currently measure the success of these AI initiatives?

[Aubert] (4:53 - 6:15)

For the moment, we don't. I mean, we still are in a phase of trying to understand where we can push those possibilities, but we are still not clear about measuring the impact. One of the projects we have, for example, concerning the CSM team, at the present time, each CSM managed 100 million of revenue.

So we have in mind that using AI, are we able to go to 1.2 million or 1.3 million managed by each CSM or not? So this will be the measure, but this kind of measure cannot be fixed because at the end, the measure is made by the CSM saying, yes, I'm able to handle 1.2 instead of 1, due to the fact that I automate a lot of things, but it's more subjective than objective. Objective for me saying nowadays, they are able to manage 1.2 with the same amount of tools, but it doesn't mean that the people don't have the impression to work more. So there's something to discuss with everybody about the, there's no real KPIs for the moment. It's more perception.

[Kate] (6:15 - 6:19)

I see. And do you think in the future we should develop some kind of KPI for that? [Aubert] (6:22 - 6:35)

For pure technical way, there's already KPIs about is it relevant or not. For the increasing productivity, it will be always a mix between KPI and feeling of the people.

[Kate] (6:35 - 6:37)

Right. Yeah. No, I see that.

[Aubert] (6:37 - 6:37)

Yeah.

[Kate] (6:39 - 6:56)

Okay. So moving on to the sort of ethical considerations of AI, what were your main concerns about using AI when you were developing your offering and say incorporating AI into the business operations?

[Aubert] (6:57 - 7:03)

Yeah. But concerning specifically the ethics?

[Kate] (7:03 - 7:03)

Yeah.

[Aubert] (7:04 - 7:20)

To be honest, I don't have any ethical concern. Due to the fact that we don't work with personal data.

And to me, ethic is closely related with personal things.

[Kate] (7:20 - 7:21)

Yeah.

[Aubert] (7:21 - 8:29)

So I don't really see on a B2B business, I don't really see any topic on that. I just thought, because I read this question before, I just thought about the fact that it's a bit too late for everybody to think about ethic. I would say the problem is not the AI and the ethic.

The problem is in collecting and storing the data. And this is more than 20 years that companies like Google, Apple, et cetera, they collect data, store data. I mean, we all have a phone in the pocket that get our geolocation every minute.

And that's nearly not a problem for 99% of the people. And I would say that the ethical part of data is here, not necessarily in the AI that will use this data. So AI is not the reveal that there is something around data or around ethic, but it comes from something much older than that.

[Kate] (8:30 - 8:43)

Yeah, I see what you mean. But as one consumer yourself, would you say you're concerned about your data being used wrongly by other companies like Google or Amazon?

[Aubert] (8:44 - 9:07)

Yeah, but it's already the case. I mean, they're not waiting [for] AI to use it the right way. That's why we have the GDPR in Europe, there's a California law concerning data storage as well.

So I mean, AI is just another piece of that. That's a consequence, it's not the cause, I guess.

[Kate] (9:08 - 9:33)

Yeah. So for AB Tasty, I understand that basically we do not store any personal data. So that's why there's not much of a concern in regards to ethics.

But would you say that there are some clients that have explicit concerns when it comes to the usage of AI included in the AB Tasty solution?

[Aubert] (9:36 - 11:30)

Good question. For me, as long as it's not personal, I don't think so. I mean, our job is to increase the number of conversions on websites.

So as long as we don't use something, so we have individual data, which are not personal data, which is a bit different. So as long as we don't tend to link those individual data with personal data, I don't think that it's a problem for clients. Okay.

I mean, what interests people using AI is not necessarily one single person. It's more about those groups where we will be able to work on those groups. But using data at an individual level is not the purpose of the topic.

It's more about converting more. But what a specific person does specifically does not really interest people because we want to treat those millions of information at once. So that's why I'm not so...

I can say that in other topics where they store personal data, where it can be used by intelligences or where it can be used against people, trying to create more, to generate more sales, it's not really used against people. It's more about trying to understand people's motivation to see if it's fit or not, what we have to offer. It's a bit different.

[Kate] (11:30 - 12:17)

On that topic, so I would say we've done a quantitative survey before the qualitative interview. And actually our results indicate a sort of high level of concern amongst consumers about the ethical implications of AI, especially in regards to how they don't want to see their personal data being used. And when it comes to, especially because my topic is in the area of personalized ads.

So they do not want to see their personal data being used for ads purposes. And how would you sort of respond to this sort of concerns from consumers?

[Aubert] (12:22 - 14:08)

But before going to the customer side, let's go to the merchant side or to the advertiser side. Their concern is make more sales without being fined - not respecting the law. Yeah.

So I guess their first thoughts are not about ethics. Concerning customer, the thing is, I guess this concern has already been addressed essentially on ads, essentially with the retargeting business 10 years ago. I mean, when Criteo, Google, Meta used to generalize retargeting, those concerns have raised saying: "Guys, you are not allowed." So then we vote some laws saying that you are not allowed to follow user from a website to another, which was all the third party cookie that browser at the end deleted from the technical way, I mean. Then they've been one step further saying that you are not able to reconcile those visits based on single user ID. So that's why cookies have reduced in time.

So I guess this topic goes on the same kind of legislation and concern at the end. [Kate] (14:09 - 14:16)

So you would say it's more about regulations and legislation related. [Aubert] (14:19 - 16:06)

But if I would have understood your question, it's more about does AI will increase those kind of problems. The thing is, I'm not sure due to the fact that those technical things that, or how to say that, there were technical possibilities by the past allowing that and those browsers deleted those possibilities. So on a technical way, you cannot do it anymore, not so much.

And on the legal way, you can't as well. So at the end, if people want to abuse using AI doing that, in any case, they do it out of the law. And even if they vote this new AI Act for Europe, part of this AI Act is using those old legislative tools that they used to have to avoid the same kind of side effect for AI.

So I don't know if it's the kind of answer you would wait, but I'm not so stressed or concerned about that because I guess everybody already have in mind that by design, what you have to create, you need to respect some guidelines. So there's two kind of people, people that know that they cross the line, others that by design will create something which is legal.

[Kate] (16:07 - 16:15)

Yeah. On that note, do you think the current regulations are enough to address the concerns or do you think they should be stricter?

[Aubert] (16:17 - 17:33)

I think that they should the legislation a bit too early. I mean, we still don't know all the possibilities. So we are in mind that we first have to create regulation and then we see when, this is a personal point of view, my personal point of view is more about we try

what we can try with this kind of technology and if there is side effect, then we use the legislation to limit them.

But my feeling is that essentially in Europe, we will lose time or limit our R&D or possibilities of using AI based on stress, not based on reality, effective reality of side effects. I see. So, but this is something that we lack in Europe.

It's to first vote some laws and then think and the ability of European countries to innovate will be limited due to

that, I guess.

[Kate] (17:33 - 18:12)

I see. Would you say that as consumers, so when we looked at our survey results, we saw that the concerns they had, well, they were not mostly about privacy. It was sometimes about bias as well and sometimes about misinformation.

And in that regard, do you think that there should be legislation to sort of regulate what AI can and cannot sort of do in terms of misinformation and giving like, you know, biased data?

[Aubert] (18:13 - 18:34)

Yeah, that's interesting because we always think about, so if you take your Facebook or if you take Google News, you always have the impression to see the same kind of news. We never know if it's egg or chicken, will you say that in English, like in French or not?

[Kate] (18:34 - 18:34)

No.

[Aubert] (18:38 - 20:29)

So in French, you never know what is the cause, what is the consequence. I mean, so the algorithms sell you those kind of news because this is something that interests you, so you stay in those kind of domain topics, etc. Or is it influence from those medias trying to put you into that?

So you never know which one is the first. The thing is, if they do that, essentially it's because you consume more articles or you interact more if you stay in your comfort zone in terms of topics. Being able to unplug the algorithm would be something cool for people to have in the hand.

I mean, if you are on Facebook, being able to say, okay guys, don't choose an algorithm, just send all notifications in time lapse or in timestamp, I don't know how to say that, would be something that some people want to do sometimes. But I don't know, I mean, if you take the billion people using Facebook, how many of them will really think about, I

don't want to be retargeted to read only the article that interests me. Or the side effect of that would be if Facebook does not personalize the article you see, you will not come back on Facebook.

So I don't understand why they do it. Would it be better if they don't do it? For them, for sure, no.

So where is the right limit on that?

[Kate] (20:29 - 20:33)

Maybe the middle ground, they have to find some kind of...

[Aubert] (20:33 - 21:08)

Impossible to say. So sometimes this is what they do on Instagram, we all use Instagram, so they suggest some posts at some point which are not necessarily related with what we are used to see, but not so far, which is a clever way to use AI to make us discover new things, which for me, it's a good usage of AI. But for the rest, I

don't have a precise answer on that because I know, I understand as well where is the business interest in doing that.

[Kate] (21:09 - 21:24)

I see. Okay, let's move on to consumer education. What would you say, what role do you believe consumer education plays in building and maintaining trust in AI?

[Aubert] (21:32 - 22:20)

If I take the education we try to do since six, seven years on the website, we don't do it the right way. I mean, we always have those pop-ups coming on the website saying, do you agree, don't agree. Nobody reads those pop-ups, you only click yes or no mechanical way.

So I'm not sure that this pop-up was made to educate people, but at the end, people don't read them anymore. So does it work? Not sure.

So what would be the right methodology around AI? Yeah. To be honest, I don't know.

I don't know. The thing is, we always try to force people to interest themselves to a specific topic.

[Kate] (22:20 - 22:20)

Yeah.

[Aubert] (22:21 - 22:48)

But those cookie topics does not interest 98% of the users that go on the website. So for me, the concern is only if you use AI on the wrong way. So what is the definition of wrong?

So then it's complicated, but you have to educate. But if AI is just here to help, where is the concern?

[Kate] (22:49 - 22:49)

Yeah.

[Aubert] (22:49 - 24:00)

I just give you an example for the medical purpose. I had in mind to create a startup applying AI on scanners, to identify hidden lessons and stuff like that. You can think about, yes, but you will need to train the algorithm on millions of scanners from people, blah, blah, blah.

Yes, for sure. But at the end, the goal of that is to save all the lives. So there is contextual things, which is exactly the same in any domain.

You have the legal things, you have then justice that has to adapt the legal to the actual situation. And I guess we are in this "in between" with the AI about what we have to create as a norm, but what will be in reality something acceptable. We are still not mature on that, even on those legal aspects. And by the way, on those educational aspects, because we still don't know how to differentiate right from wrong on this usage. Some usage are obviously wrong. The rest is still a blur.

[Kate] (24:01 - 24:15)

Okay, and last question. So how do you foresee the role of AI evolving in business, let's say, over the next five years? Do you think it's going to overtake everything?

[Aubert] (24:16 - 24:51)

Yeah, I will use a sentence I guess from Bill Gates, which is we usually overestimate the change in the next two years and underestimate in the 10 years. But my feeling is that everybody at the present time are thinking about how can we integrate AI within everything. So for sure, AI will progress, usage will progress, and it will be everywhere,
for sure.

In five years, probably not. In 10 years, for sure.

[Kate] (24:52 - 24:53)

You think so?

[Aubert] (24:53 - 25:20)

Yeah. And I personally have a point of view. I wait for that.

I have a Tesla, for example. The promise is the car can drive by itself. The thing is, it's still not true.

But if one day I can sit in my car and don't touch anything and go to the end point, I would wait for that. Only AI can do that.

[Kate] (25:21 - 25:51)

Yeah, I see. All right. Okay, so thank you so much for your time and insights today.

As mentioned earlier, you can obviously have the opportunity to review any quotes and approve it before we include it in our thesis. And if you have any additional thoughts or questions arise earlier after today's interview, you can always reach out to me. And thank you once again for your participation and support.

[Aubert] (25:51 - 25:52)

No, you're welcome. Perfect.

Appendix B.2 - Interview with Douglas

[Kate] (0:00 - 0:44)

So I just want to say, thank you for agreeing to participate in this interview. My name is Kate, and I'm conducting this study as part of my master's thesis in association with Skema Business School. Before we begin, I'd like to go over a few points regarding consent and confidentiality. First of all, your responses will be used solely for academic purposes and will remain confidential. You'll have the right to review all of your answers and can reject any direct quotes before they're included in my thesis. Do you consent to this?

[Douglas] (0:45 - 0:48)

Yes, that sounds fine.

[Kate] (0:49 - 1:00)

Also, this interview will be recorded and transcribed for accuracy. The recordings will be securely stored and accessible only to myself, Kate Feng, and my thesis partner, Thomas Bayliss. Do you consent to being recorded?

[Douglas] (1:01 - 1:03)

Um, Yep.

[Kate] (1:04 - 1:15)

Okay, and can we have your consent to have your full name, job title, and company name in the thesis?

[Douglas] (1:16 - 1:18)

Sure.

[Kate] (1:19 - 1:40)

Perfect. The interview will cover four areas and should last around 30 minutes. So, do you have any questions for me or concerns that you want to flag before we begin?

[Douglas] (1:41 - 1:45)

Looking forward to it, ask away.

[Kate] (1:46 - 2:05)

Great, so, starting off, from your perspective, how are companies generally incorporating AI into their operations?

[Douglas] (2:06 - 4:05)

Thanks for the question. From my perspective, it seems like there's a rush, kind of similar to the dot-com bubble in the two thousands at the moment where every company is trying to become AI-ified so to speak, to keep up with the trend and avoid their FOMO. It appears that all areas of operations are seeing AI approaches being developed, from hiring to workflow to the actual business propositions themselves.

What's concerning is that we don't yet have any real actual guardrails around how to effectively, effectively being the important word, develop and implement these AI technologies while also mitigating the risks that may arise. For example, using an AI system in a hiring process would raise concerns about biases within the algorithms and a lack of explainability of the outputs.

There's also major concern within the industry itself about the development of specifically general-purpose or strong AI systems, with a letter signed by over, um, a thousand, I think, experts, including Elon Musk and Steve Wozniak, calling for a pause on the research and development of general AI models. Which, well, has obviously not happened, instead it's a bit of a free-for-all where everyone wants a piece of the AI shaped Pie.

[Kate] (4:06 - 4:20)

Yeah, I totally see that happening. Companies might feel pressured to adopt AI just to keep up with competitors, right?

[Douglas] (4:21 - 4:30)

Exactly. And that can lead to some really poorly thought-out applications that don't necessarily bring the value they promise, instead uh they actually can lead to a lot of further risks if improperly managed.

[Kate] (4:31 - 4:45)

That's interesting, yeah I can see that. Moving onto the field of ethics, which you've kind of started talking about. What are the main ethical concerns you have observed around AI technologies?

[Douglas] (4:46 - 7:00)

Where to begin! From the development side, there are two key areas of concern that I have: bias and transparency. On the bias side, it specifically relates to the actual training data—How it is sourced? What data is chosen? How is it cleaned and categorized? Issues here can lead to major big discrepancies in the outputs since the systems are only as good as the data they're trained on, and issues here will lead to lots of problems downstream.

One example I remember reading about was how ChatGPT would give different career suggestions based on a hypothetical child's affluence. If both children said they were interested in history and French, ChatGPT would suggest the richer child consider being a diplomat, while the poorer child might be recommended to be a, um, translator. While this is a low-stakes example, imagine the same issue in hiring or healthcare—suddenly it becomes a lot more concerning.

Then there's the black box issue. It's difficult to understand exactly how an AI system arrives at its conclusions or predictions. This is an issue of transparency that hasn't been solved yet, so when combined with bias, especially for generative AI systems, we may not even know why harmful outputs are developed.

From the actual use case side, the key issue is that AI systems can create content that manipulates information and produces very convincing fakes. AI technologies have developed so rapidly that it's becoming very very hard to distinguish between real and AI-generated content, even for videos. So take the issues with fake news and magnify them by ten fold, maybe more and you'll see some serious concerns to be had in something as important as elections, and in the longer term, apologies for the philosophical tangent, but the very notion of truth may become absolutely impossible to distinguish, which would be a huge issue in scientific research for example.

So combine all of these issues with an ecosystem that seems, in my mind, to be rushing to develop the next big use case of AI, and companies also need to be the first ones there in order to not lose out, and that is, in my mind, a complete recipe for disaster. This is especially true since, while there is some degree of guidance and agreement, researchers and governments haven't yet been able to agree on conclusive solutions yet, although there have been some strides, but I think you may have a question about that later?

[Kate] (7:01 - 7:15)

Yep, we'll get to the regulations in a little bit. Our survey results indicate a high level of concern among respondents about the ethical implications of AI, particularly in personalization. How can companies balance the need for AI with concerns about user privacy and data security?

[Douglas] (7:16 - 9:30)

Hmm, that's a challenging question, especially since regulators are taking very different approaches globally. We see the US taking a much more laid-back approach to AI development, while both China and the EU are looking closely at AI systems. Um, a bit off topic so let me get back to the question.

I can't talk too much about personalization in advertising for AI specifically as advertising isn't by area of expertise, but in my opinion, user privacy and data security should already be a priority for companies. Regulations such as the DSA - the Digital Services Act or the GDPR have specific provisions requiring companies to offer users the option to opt out of personalization based on profiling and to have strong data security practices, at least for EU citizens. Similar regulations exist in many other countries, but a big one where these protections don't exist is the US.

So, back to your question, sorry for the tangent, but companies should already do so, uh deal with concerns about user privacy and data, and what they can do to improve customer trust is to better inform users about their data practices and provide easy-to-use solutions for customers to control what data companies can use. Actually, now that I think about it, one area that needs more attention is the actual training data companies collect. If I comment on a forum, can that data be sold to train a program without my permission? What about my information on Facebook? More could probably be done by companies to get consent from users around their data. Another thing to help with this in the long run is ensuring that AI systems are designed from the start with privacy in mind from the start. This would include incorporating things like data minimization and anonymization techniques into the workflow.

[Kate] (9:31 - 9:43)

That makes a lot of sense. It sounds like there's a lot that companies can do to improve transparency and trust. What about on the regulatory side?

[Douglas] (9:44 - 12:33)

Here we go! So I mentioned this earlier, but the EU AI Act will come into force in um around um 18ish months for certain high-risk AI systems. What is very interesting about the AI Act is its risk-based approach, which I think makes a lot of sense. Basically, AI systems are categorized into different risk brackets based on their use case and the associated level of risk. Certain systems, like social scoring systems, are not allowed, while others are categorized as high-risk, like biometric identification systems, for example buying tickets using your face. High-risk systems have much stricter requirements, such as providing access to researchers and conducting yearly compliance reviews of their functioning, for example.

Now, I would say that personalized advertising would probably, most likely fall into the limited risk category since such a system likely doesn't pose any major risks to fundamental rights, safety, or critical infrastructure in the EU, which is a characteristic of a high-risk system. This means organizations using personalized advertising would need to be transparent about it and provide opt-out options to users. These rules should already be in

place with the DSA and GDPR, so probably not an issue for them. Of course, if more subliminal approaches are used, those would not be allowed and would lead to serious repercussions.

Globally, I know that India and Canada are also considering adopting a similar risk-based approach. But it's very interesting because there is a very wide range in approaches though. The UK has actually chosen not to create a comprehensive regulation, instead aiming for more sector-specific approaches. China has closer government control over AI systems development, which in some ways I see as being another safe approach. The US, meanwhile, has no federal law around AI, and I honestly wouldn't bet on anything coming out soon, especially since they don't even have any data protection laws, which, in my opinion, are a prerequisite to any actual AI legislation. Another point is the enforcement of these regulations. It's one thing to have laws in place, but ensuring they are actually followed is another challenge altogether. I can say from experience with the Digital Services Act, even with being in the pipeline for years and also being in the second year of actual implementation and review by the European Commission, there are still a lot lot lot of companies who are not fully prepared.

So, at the end of the day, there is a big range of approaches, but we have to assume that once a few countries have something solid in place, then companies will probably find it easier to just um um adapt their systems globally since otherwise, they don't want to miss out on major markets such as the EU or India or or China.

[Kate] (12:34 - 12:52)

Yeah, enforcement is definitely key. So, are there any gaps in current policies that you believe need to be addressed to ensure the ethical use of AI in advertising?

[Douglas] (12:53 - 15:27)

A big area of public debate around AI is copyright laws. Current regulations seem to have gaps in this area as they focus more on safety, but there are adjacent regulations that cover copyright law, so I imagine this will be adapted. However, areas like biases and fake content require much more attention.

The key thing to remember is that the widespread development of this technology is so new and evolving so rapidly that there will inevitably be lots of gaps as policymakers themselves are learning about new risks and best practices. So, um to sum up so to speak, there are lots of gaps that need addressing, and there are also lots of unknown unknowns, so expect many more gaps to need plugging in the near future.

But another big gap is in the area of AI ethics. While there are discussions and some frameworks in place, there's a lack of universally accepted ethical standards that all AI developers and users can adhere to, if ethics ever can be fully agreed on.

Another gap is in the training data transparency. There's a need for clearer guidelines on how data is collected, processed, and used in AI training. I mean, without these standards, we really run a big risk around having inequalities and biases in our systems, which is a huge ethical concern.

[Kate] (15:28 - 15:42)

It seems like there are quite a few areas of concern, how can policymakers ensure that regulations keep pace with technological advancements in AI?

[Douglas] (15:43 - 19:05)

That's a really good question. Um, right now, I don't actually see much hope in regulators being able to keep pace with AI advancements. As I mentioned earlier, due to the sudden leap forward in generative AI, it has only just really come into focus as a field of major importance, and there is a lot of knowledge that still needs to be created.

The best way to actually keep up with these advancements, and what can be done, is likely going to be through collaboration between industry, experts, and regulators to find some degree of agreement on core ethical practices. From there, they can engage in best practices until the regulations can catch up. So basically, it's not a job regulators can do alone, and a big positive is that we are already seeing many big players like Google and IBM developing their own sets of core principles to that very end. There is a lot of very public discussion around them. This is super cool and beneficial in allowing for feedback from diverse stakeholders, including technologists, ethicists, and the public too.

[Kate] (19:06 - 19:16)

That makes a lot of sense. It really does seem that regulations need to be just as dynamic as the technology they're governing.

[Douglas] (19:17 - 19:19)

Exactly

[Kate] (19:20 - 19:30)

What are the biggest misconceptions about AI that you encounter among the general public and businesses?

[Douglas] (19:31 - 21:25)

I think that lots of people completely misunderstand the fact that weak AI, you know, AI for specific tasks, has been around for a long time. Take for example, spell-checkers, they are narrow AI, Google autofilling a search, that's narrow AI, your email filtering out spam, that's a narrow AI. People have been using them for a long time and honestly, there isn't much of a problem with them, and I don't see many major issues arising from that sphere.

Now generative AI is far stronger, and that is also a lot newer, and thus a lot more exciting. But in its current form, it really isn't that super incredible silver bullet that lots of people and businesses seem to think it is. I mean it is incredible and has lots of benefits, but not to the extent some people will have you believe. Not every problem will be solved with AI, and I predict that lots of these 'AI hype' companies will likely realize that what they are offering doesn't actually fit the intended purpose very well and will go down. In the next few years, we will really be seeing where AI works and where it doesn't, and I can see, in the long run, the landscape being dominated by a few big players.

[Kate] (21:26 - 21:43)

What role do you believe industry self-renovation, sorry industry self-regulation should play alongside formal governmental regulations?

[Douglas] (21:44 - 23:11)

I think that self-regulation is going to be very very important. Industries should one hundred percent have a key voice in the public debate around AI governance, especially since lots of the actual technology is being developed by them, hence they may understand it better than the regulators and can pinpoint technical inefficiencies in regards to what the regulations may be asking to do. Self-regulation also allows for far more flexibility and a more rapid adaptation to new developments, while formal regulations can provide the necessary framework to ensure ethical standards are maintained.

However, self-regulation is definitely not enough. Government regulations do give a degree of more accountability and oversight, and help in ensuring that an actual baseline does exist for safety, fairness, and transparency. Also, there is a bit of concern about asking an industry to regulate itself as there would be major concerns around possible abuses and the protection of public interest, especially in areas with a very serious societal impact like healthcare, finance, or criminal justice.

A collaborative approach is in my mind, ideal. Industry self-regulation should complement formal regulations, filling gaps where government oversight might be lacking and offering expertise that policymakers may not possess. This partnership would be great in leading to a more adaptive and comprehensive regulatory framework, where industry insights inform policy decisions, and governmental oversight ensures compliance.

[Kate] (23:12 - 23:22)

Absolutely, that balance seems crucial. How can companies, academics, and policymakers collaborate more effectively to address the challenges of AI implementation across various sectors?

[Douglas] (23:23 - 25:06)

That's a great question. Collaboration is key. Companies, academics, and policymakers need to engage in continuous dialogue and knowledge sharing. Academics can provide the latest research insights, policymakers can offer regulatory frameworks, and companies can share practical challenges and successes. Regular conferences, joint projects, and public-private partnerships can help facilitate this collaboration. It's about creating a shared understanding and developing solutions that are both innovative and ethically sound. This is the case already to a degree, with the AI act for example actually calling for gen-ai developers to participate in drawing up codes of conduct along with researchers to best regulate the system while ensuring competitiveness.

Also, establishing actual dedicated AI ethics committees that will also include representatives from all these groups can help guide the actual development and usage of AI technologies.

[Kate] (25:07 - 25:21)

That's very insightful. Last question—how do you foresee the role of AI evolving in business over the next five years? Do you think it's going to overtake everything?

[Douglas] (25:22 - 27:00)

Yeah, I like to apply Amara's law to this situation, which is basically that we tend to overestimate the effect of a technology in the short run and underestimate the effect in the long run. My feeling is that at the moment

everybody is really thinking about how we can integrate AI into everything, there is a lot of hope and interest in it. So, AI development will definitely progress, its use will expand, and it will be everywhere.

But in five years it probably will not be to the extent that we might believe today, take any sci-fi book trying to predict the future for example. Take for example crypto, it's still around, but not in the same way it was so hyped 5 years ago. But in ten years, I definitely think AI will be far more integrated as both its capabilities improve, and that we find the clear use cases where AI melds with humans, not like us becoming machines of course, but where it improves our lives. Also, I think we'll see more specialized AI applications becoming mainstream, particularly in areas like personalized medicine, autonomous vehicles, and advanced manufacturing. These applications will definitely give really big efficiency and innovation gains across industries.

[Kate] (27:01 - 27:33)

Yeah, it's an exciting time and will be very interesting over the next few years. Thank you so much for your time and insights today, Douglas. As mentioned earlier, you'll have the opportunity to review any quotes and approve them before we include them in our thesis. If you have any additional thoughts or questions after today's interview, you can always reach out to me. Thank you once again for your participation and support.

[Douglas] (27:33 - 27:39)

No problem, happy to help and good luck.

Appendix B.3 - Interview with Tang (Academia)

[Kate] (0:00 - 0:47)

So first of all, thank you for agreeing to participate in this interview. I am Kate, and I'm conducting this interview as part of my master's thesis in association with Skema Business School. And before we begin, I'd like to go over a few important points regarding consent and confidentiality.

First of all, your responses will be used solely for academic purposes and will remain confidential. You will have the right to review and approve any direct quotes before they're included in this in the thesis. Do you consent to this?

Okay. And this interview will be recorded and transcribed for accuracy. The recordings will be securely stored and accessible only to myself, Kate Fang, and my thesis partner, Thomas Baylis.

Do you consent to being recorded?

[Tang] (0:49 - 0:49)

Yes.

[Kate] (0:50 - 1:01)

Okay. And the third one is, may we have your consent to use your full name, job title, and company in the thesis, or do you prefer to remain anonymous?

[Tang] (1:04 - 1:06)

You can use my information.

[Kate] (1:06 - 1:14)

Okay, cool. And so this interview will cover four areas and should last about 30 minutes. Do you have any questions before we begin?

[Tang] (1:16 - 1:16)

Nope.

[Kate] (1:16 - 1:17)

Okay.

[Tang] (1:17 - 1:17)

No questions.

[Kate] (1:18 - 1:39)

So the first question I have for you comes from a survey we conducted before the qualitative interviews. Our survey data actually shows mixed feelings [from customers] about personalized ads. What, in your opinion, are the key benefits and drawbacks of personalized advertising for customers?

[Tang] (1:42 - 5:07)

I think on the pro side for consumers, they will have a better user experience and probably react more positively to something that's more personalized than non personalized. I think with personalization in, for example, take social media feeds, consumers will receive more relevant products and services, pushed into their feeds. And in a physical world, if you have physical ads, right, you'll be receiving more personalized marketing collaterals in your mailbox, or wherever you actually pass things might be digitalized now and customized as you interact with it on a day-to-day basis. So I think, with hyper-personalization, you'll have more consistency in information quality. And at the end of the day for the consumer, I think there'll be cost and time savings because you'll have more specific promotions or product launches that are pushed directly to you that are most relevant, that you most care about, or even like most attracted to, right? They may even know, for example, that you don't really purchase items with only 10 or 20% off on a promotion, but you'll only look at like 60 to 70% off on something. So even that specific data will allow for personalization. So I think that, again, better user experience is probably my top benefit on the consumer side. The cons, the real negative or drawbacks I see are the privacy issues.

I think that, the data collection is really going to come from your interactions on smart devices, your social media platforms, your conversations, unfortunately. I think there'll be data tracking on what we say on audio and video, no matter where those touch points are. Those push ads rely on data profiling.

So that could be really intrusive. I think that could be really, really intrusive if you don't know that people are doing that data capture. And in cases where a consumer doesn't have a perceived relationship with the brand, right?

If you don't really interact with the brand before, and all of a sudden you get these personalized ads from brands. To me, that comes off as inauthentic and kind of untrustworthy. It's almost like stalking, that feeling of, wait a second, how did you know so much about me? To give me such detailed information and that can make people

paranoid, I think. And companies and AI are prone to error. So sometimes I think people receive ads that are off the mark or out of touch or insensitive.

And that could be annoying for the consumer, especially if those data points are driven from you posting something that's really extremely intimate about your life, or it could be a birth, a death, a marriage, whatever it is, but it could be very visible on social media. And I think AI or companies can take advantage of those kinds of intimate situations and push ads where they might make mistakes and it. It just triggers, again, bad feelings or some emotion that's not necessarily positive for the user.

[Kate] (5:07 - 5:31)

I see. That's very interesting. And so the next question I have for you is, do you see the points of tension between how businesses and regulators and even academia view the adoption of personalized advertising? And what are the points of agreement that you possibly see occurring?

[Tang] (5:33 - 7:22)

I mean, there's definitely high tension between the three groups you mentioned, because there are three agendas. I think there's ensuring security from the regulatory admin point of view, from a company's point of view, maybe they want to make people feel special. That's the goal of the ad in terms of personalization, but they also want to increase profitability. So from a brand's perspective, they can connect better with their target audience. They can get insights in the relevant marketplace about needs and wants or basic demographics, information gets very, very deep. So they build trust with their consumers who are confident, that the brand understands their preferences, needs, so that for the brand, you're going to get higher customer loyalty or retention and lifetime value with that relevant messaging or product recommendations throughout the customer lifestyle touch points. So from a business point of view, they're going to maximize their marketing efforts and budget it, like seriously investing in AI, they're going to reduce wasteful advertising spend to get that customer conversion. However, it could be completely not against, but in conflict with ensuring security or compromising the marketplace in terms of data share and correct data information flows. So in the best case scenarios, companies will protect the consumer as they optimize marketing, but because it's business by definition, I think there is a chance they may compromise implementing correct data silos for the sake of that high performance and customer conversion and money making.

[Kate] (7:23 - 7:42)

That's very interesting. And do you think there is a way for the three parties to find sort of like common ground and sort of collaborate more in terms of finding a way to really to really solve this issue collectively?

[Tang] (7:43 - 10:28)

That goes into a question about the ethical and regulatory implications. Because you're going to have misuse of consumer data. Unfortunately, I think that no matter what regulations you put in, you're going to have people doing unethical practices selling or sharing personal information without consent. And AI can also limit people from making informed decisions, right?

I mean, basically, the personal info is used and people at a certain point, I think, will feel powerless or very vulnerable if you're using any touchpoint on internet or smart device. Even if you use your phone or your computer, you become more and more vulnerable as AI systems get put in place. And if there's no watchdog, per se it could be very dangerous for the user. The creation of bias, right?

When you create and start pushing ads, if AI is doing data profiling, they're pushing specific ads to specific people, you're going to, by definition, create these filter bubbles, or basically chambers where you're just

repeating the message, but it's very limited. You're creating the ecosystem for someone. So those marketing messages become tailored to individual behaviors or preferences.

And basically, consumers will only be exposed to info that align with their own existing beliefs and attitudes, which means, by default, you're limiting exposure to more diverse, right, diversity in perspective or insight. And that, unfortunately, can lead to maybe bias and stereotype. And so at the end of the day, for me, one of the real dangers of data collection and usage by AI is harmful and discriminatory directions. And that can, you know, and at the end of the day, I think that's just going to create unease and discomfort for everybody. People are not going to be trusting, or you're going to have negative brand perception, because people are just going to start becoming very paranoid and very kind of fearful and think, well, what's real, what's fake? And how are they using my data? And I don't know if they're going to tolerate it at a certain point, just for the sake of getting a deal on a certain product or service. So, in terms of ethical AI marketing, if you want to talk about how do we feel like there could be, not a solution, but better direction?

[Kate] (10:29 - 10:29)

Yeah.

[Tang] (10:30 - 12:39)

Because I think it's really critical that companies follow best practices that prioritize user privacy and security. So they're emphasizing or ensuring they really focus on transparency and explaining to users how they're using data. In order to minimize risk or bias and improve justice or fairness of all whoever's in that ecosystem. And basically to give, I wouldn't say give back the power, because I don't feel like AI is really taken over yet. It may, but you don't want to be manipulated. Nobody wants to be manipulated at the end of the day.

And I think users, the danger is for on a mass level that people can be manipulated and believe things that aren't necessarily the truth, or they're pushed like cattle. They're herded in a different direction, in a specific direction without clear consent. And without any unsubscribing or opting out. And what's scary is I've tried to unsubscribe. I've tried to opt out.

I've tried to wipe out information online. And even though there's this little thing, you know, a little link that says you can do it, it never, it never happens. I can't get out of it. So again, I feel like the individual respect for individual privacy and autonomy is key. And there'll be data breaches and usage without any consent. And until there's a global security standard with full adherence and accountability. I feel like users from a user level, at the end of the day, if you're feeling uncomfortable, you have to get off social media. Minimize your time on social media or minimize your digital footprint, disengage, don't respond to the spam or the push ads. Don't fall into the trap of being seduced by something that seems really personalized, but is just really just about data collection and filter.

[Kate] (12:40 - 12:55)

Yeah, I see. So on that note, do you think there are any sort of specific frameworks or guidelines that you see as valuable to really address these ethical concerns around AI and personalized advertising?

[Tang] (12:57 - 18:15)

Yeah, as I say, I think about transparency and I think they [ads] need to be very specific, very overt and clear. When you look at communications or websites, there are terms and conditions and how we work and

philosophies. And everybody usually posts these disclaimers or liability clauses and are very transparent. I think that watermarking is a good practice now to say maybe, there are these little tags that say made by AI, usually in a corner, even Hermes does it, it was on Instagram too, and I was surprised. And they were, I was actually shocked by the quality of the images created by AI, because they just look fantastic. And they look like they were done by a photographer or a videographer. And they're very creative collections that were put together and the backdrops, in if Hermes were to do it in real life, it would cost hundreds of thousands. But you're doing an AI generation, incredibly inexpensive, fast to the market, very convincing. And at the end of the day I showed it around to people, they didn't know it was AI generated. And they thought, wow who designed that? They're really positive about it. And then I showed them it was made by AI. You had to look in the fine print, but it said made by AI. And I noticed it. And I'm thinking did it really change the way we reacted to it? I don't really, I can still appreciate it for the actual image and the content. So I think the transparency is great, because then it'll at least allow the user to decide

how they want to engage with it [AI content]. And then, if it says made with AI, and then physically, there's this whole physigilization world now. So if there's this digital representation of something that's made by AI, and then converted to a physical product, it is my choice as a user to say, well, do I want something that I just saw that's designed and delivered by AI?

And that's really a user choice. I think a company like Amazon can push it down your throat and even make it very personalized and say, they know exactly your colors, your site, you know, they can make it super, super personalized and then generate a physical product from it, because they have new 3D printing technologies. Then it's my choice at the end to say, well, do I want to buy that or not? How much do I want to engage in this? So, I think in terms of frameworks or guidelines, I think there are guidelines, and this goes into your regulations issue, who bears responsibility for the development of AI, the usage of AI, the accountability, and there are three, there are three parties, the developers, well, actually four in a way, developers, companies, regulatory, so your governments and institutions and any compliance bodies, and then for the users, and the users are all in those categories, the other three categories, they're all users, everybody's a user. So, but the users I'm talking about basically like conservers, okay?

So I think that when you're setting guidelines or building frameworks, there needs to be some global framework based on security, based on transparency and accountability, based on fairness, and again, unbiased data collection, and that's really hard, and that's really hard to provide clear consent. You can say it like the way you did now, do you consent? And I said, yes, and what prevents somebody from, again, this is not a, case of where there's super security, but still, if somebody want to manipulate it, eventually. For example, let's take a hypothetical, and you say something, and I say something, we agree, and then, 10 years down the road, somebody calls you out on something, like what they did with the Harvard professors. Or they said, 10 years ago, you plagiarized, and blah, blah, blah, blah, and there's no proof, or people think that they manipulated information, and so what prevents somebody from hacking the system and changing a voice, because they have your voice, they have my voice, and changing a yes to a no, I

mean, there's so many possible implications or risks involved, but again, I'm someone who doesn't really worry about that far into the future, that's not going to block me from today, but it is a consideration in terms of when you're dealing with anything digital, and definitely AI driven later, how much can information be manipulated to create bias, propaganda, paranoia, and even changing the way people change their behavior.

[Kate] (18:15 - 18:34)

Yeah, exactly. So on the note of regulations, would you say that the current set of regulations around AI and advertising are enough, or do you think they're too much, or not enough? What are your views on that?

[Tang] (18:35 - 18:50)

Great question. When I look at AI law and regulations, I divide it into three parts, right? There's governance of those systems, there's accountability or responsibility for it, and then privacy.

[Kate] (18:51 - 18:51)

Yeah.

[Tang] (18:51 - 25:02)

Right. And so, you know in 2023, Biden wrote an executive order called Safe, Secure, and Trustworthy Development and Use of AI. And the big companies like Google and Meta, OpenAI, even Salesforce, Amazon, IBM, they all committed to build or to go in the direction of creating safe, transparent, and secure AI systems. So there are governments that are trying to do so. There's enough push from the developers, these really intelligent guys and girls sitting in California who really understand AI systems. Everyone from Suleiman to Altman to Ilya Sutskever. The guy who runs Trust.ai now. And these two guys, there's almost like this concept of good versus bad, you know, one's doing it for profit, one's doing it for non-profit. But these men, they're really, really on top of what is happening and the dangers. I mean, people like Elon Musk and Gates, they all know the issues. And so, at a certain point, the general user, the mass population, I mean, people like me, I have no control. And so, you sort of have to trust, you have to trust the governments of working with the developers to really create governance. And they know that, each government is to hopefully, around the world, major developed nations, right? They understand more and more the risks of non-compliance because they see it in like the context of defense and war, you know, and the underground and dark web, for example. So, you have then the EUIA Act, I think, right? So, I think the EUAI Act is an example of a governance framework.

And that I think they're actually pretty, they're pretty strict because I think companies that don't comply will have a penalty of like 35 million euros or something like that, 40 million euros. So, there are, there are active guidelines being made on AI regulation. And I think the OECD and UN are, creating governance frameworks. And I think that's really important. So, again, I think between governments, businesses, developers, and individuals, all four of those components, governments need to have transparency, accountability. They need to really require that developers implement those steps to mitigate the risk, right?

And bias and error. Privacy and security, they need to require in a way that before it launched to market, before anything's launched into the market, there needs to be some understanding about what the safeguards are to protect data. And then fairness, you know, to minimize discrimination or injustice in a way or bias.

I think, again, and this is a real argument, like a debate issue is how much do you actually limit AI systems and, social media platforms and AI within social media platforms that create hate speech, engage with groups or individuals that are anti whatever, anti-anything. And there's this whole concept of free speech versus, right, all the way to a lot of, you know, autocracy and limit, right? We limit everything and we will stop.

I mean, you know, China versus US is just a clear example of, you know, how you can leave open systems open or really shut them down and then drive it, right, and then have just government drive whatever you hear. So, again, depends on which government, depends on which country. Businesses, same thing.

Businesses need to understand risk, right, and then try to prevent it before they happen. So they've got to really take care of how they digitally transform and how they implement AI systems and who is even designing those AI systems if they, it's basically to make garbage in, garbage out. So, you know, if someone doesn't know how to, for example, oversee failures in AI, like the AI is just going to do whatever they do, nobody's going to, you know, nobody's going to catch it, right?

So, again, it's, people have to be educated on how AI systems work and then ethical, you know, ethical behavior, how to use it, right? Yeah. And then users, right, users need to be fully aware of what they're getting into and how to use it and not rely on it because it's easy.

It's easy to rely on your chat GPTs and generate content by an AI. I mean, it's becoming more and more normalized to kind of just say, well, I'm going to tap in something before it was Google search and Wikipedia. And now for me, it's like chat GPT that's getting a lot more sophisticated.

[Kate] (25:04 - 25:04)

Yeah.

[Tang] (25:04 - 25:32)

Right. Because it's no longer just feeding you an answer.

It's actually interpreting. It's actually interpreting answers and driving the way you, in a way, pushing you in a certain direction on how to think. And there's the danger.

And if you're not hyper self-aware as a human, you'll become pretty dependent on AI. I think it's very, I think there's going to be a codependency with AI.

[Kate] (25:32 - 26:13)

That's very true. And so you mentioned the four main stakeholders and you sort of how they can each individually do more to implement more, let's say, regulations or for consumers, they can sort of have better education. But I do wonder how can they collaborate in order to create these better regulations and how can they collectively find a solution to address challenges instead of like working in their little silos?

[Tang] (26:19 - 28:17)

It's a great question. I think that, again, it goes into transparency and open sourcing concept of sharing data. It's hard because if you're a company, you're trying to protect your data and the data profiling, right?

So I think that companies need to make a decision on how much they want to integrate AI systems where it adds benefit but does not endanger the consumer, right? Or what's the opposite of empower? Disempower users.

I think it should be used as sort of like a supplemental, again, not a tool, but something to sort of amplify what you're doing. But it shouldn't really drive your business or, you know, take over. It shouldn't totally remove jobs.

Again, you may be in a job where things can be automated and I agree. It's like, let's automate those systems because it's boring for people. I think it limits the brainpower of people and it's tedious work that let's use that time and resource of a human for something else, right?

Which is maybe more strategic or maybe it's more face-to-face interaction or, you know, again, that goes into purpose of business. Why is a business even there? Is it purely just for money-making or is it really adding value to society?

And I think that's going to get into your next question about consumer perception of future trends. Where are we headed?

[Kate] (28:21 - 28:48)

Let's dive into the next sections. Let's talk about consumer education. How do you think we can better educate consumers around the use of AI?

Because you mentioned that certain users are not aware of certain things. So how can we sort of better educate them on the usage of AI?

[Tang] (28:50 - 33:54)

When you talk about consumers, you know me, so I'm segmenting populations, right? So there's an older generation and let's just take, you know, older and younger. Let's say you're really simple.

But older generations, right, as you get older, you're less tech-savvy or less tech, you're more tech-averse. If I think of my parents and they just, you know, they would not switch from their PC to a Mac, even though it's going to be wrong.

Nobody wants to touch a new device and don't understand it. They feel scared. Even people changing phone services, you know, they're like, ah, I don't want the downtime.

You know, I'm scared. I don't know how to use this new technology. So it's better I just stay put.

I'm very averse to change. So, you know, technology is all about change. So this older generation, from their perception, who are tech-averse, they're, you know, they're not going to really be that open to AI.

They might eventually use it because there's like, for example, a, you know, a robot in the kitchen that will help you. You're old and you, you know, you can't cook or something. That's great, right?

Maybe they'll adopt that because it's going to have a serious impact on their day-to-day living. But in general, you know, if you're talking about just advertising and something like a consumer transaction, they're not gonna care that much, right? Or they're not even gonna... they're not gonna like it.

Like, if you go to a Monoprix and older people, right, they're 80, 70, 80, and all of a sudden they have to use a robot or computer, they'll be scared of it. I think they'll be very scared of it. Younger generations will gamify it, in a way, right?

They'll say they're tech-savvy, they're open to AI, because actually they don't know anything else the younger you are. Like, you're born into it at a certain point. I mean, your generation, still, you're on the cusp.

24, yeah, my kids, and then 24, you know, 20, you're still kind of at, you know, you're on that cusp of, okay, AI's not yet integrated. It's there, but even digital, right? Smartphones, you came into it, it was robust, but not super robust like it is now.

Younger generations, even younger than you, are literally... I mean, I know families having babies right now, right? Young people having babies, and those babies are now, that's all they know.

They're gonna only know digital. They're gonna only know digital. They're gonna only know things like chatGPT when they get to grade school.

So, I think that general, right? So, from an age point of view, I think it really matters when you talk about

consumer perception in education, where in that category of age you fall. The level of AI acceptance, to me, is also based on socio-economic differences.

So, if you're living in a developed nation where you have all the digital tools, and you have internet connectivity, 5G, or whatever, you'll be used [to it], and that's great, because that means you're economically strong, so you'll have that power to subscribe to all of that, but you'll also have, usually, more freedom and more autonomy to decide on things. And you have the experience of living in [REDACTED], but you also have [REDACTED], so you know you have points of comparison. So, you know, you can see the levels of freedom, autonomy, economic power, it all makes a difference into how you understand and get educated on AI.

You, you know, somebody from a developed nation who's been born into it and is very comfortable using technology from a young age, they'll be able to easily to see what's fake or what's real, AI or human. Now, I think, though, when, imagine if you have children right now, and they're baby, imagine you have a baby right now, by the time they're your age, even when they're like 10, I don't think they're gonna even be able to detect whether something's AI or human, because I think that you have robots in Japan and China, I think they're developing like, from stem cell research, like skin cells that look, they're a human, like they can move, and they're putting it onto robots. And those humanoids are gonna have brain power like a human, if anything, they may be able to like to save [you] when you die, they may be able to take your whole neural network and replace it, just like in the movies, and replace it, right. So if you're poor, going back to that socioeconomic, if you're poor, you'll be more prone in a way to brainwashing, because in a way, you're less autonomous, you're dependent, you're desperate for survival. So you're going to be, you're listening to whatever comes towards you. And thinking that, yeah, this might help me.

[Kate] (33:15 - 33:15)

Yeah.

[Tang] (33:16 - 3:16)

Right.

[Kate] (33:17 - 33:18)

All right.

[Tang] (33:18 - 33:26)

So education, education for me starts at birth, it starts, you know, it starts at birth, and it's a responsibility of parents, companies and schools, governments

[Kate] (33:26 - 33:51)

Yeah. So yeah, as we're kind of running out of time, let me just quickly ask you the last question. So we can wrap it up.

So what do you see as the future direction for personalization in the business world? Particularly in advertising and marketing? And are there any specific areas where human input might continue to outperform automated personalization?

[Tang] (33:54 - 36:31)

Well, definitely marketing, and comms, or is changing and has changed. It's no longer basic market research on demographics and psychographics. Yeah, you have AI powered customer sentiment analysis now, which you can really look at, you know, take your voice images and behavior to better to, you know, to better understand states of emotion. Right? Now bring that into everybody's now following an omni channel strategy across all devices, multi channel, one on one communication, that's the direction to get really personal, even hyper personalization on a one on one level, integration of augmented reality, virtual reality, chatbots, phygital, we talked about phygitalization. So digitalized personal assistance. And and, so imagine all of those like technologies with the customer sentiment analysis to heighten personalized, you will have very strong, it's no longer CRM, but something called CDPs. I don't know if you've heard about them, customer data platforms. So customer data platforms are the new CRM. Okay, so first party data is right, you're trying to get direct data from people and manage it.

So it's not just part of like a whole CRM system, this is it, like the customer data platform is the most going to be the most important. Security, of course, is going to be hyper important, because you're going to have, you know, hacks or breaches of the customer data platforms. So you will have to, right, you'll have to protect those somehow.

So I do think there's a human aspect, there's a human oversight, that needs to still be in place. Because as AI develops and evolves, we need to adjust and learn with that AI system. At a certain point, there's AI, right, there's super intelligence. And that's the point where if there's a danger, if humans do not regulate and oversee, there will be a point where all of a sudden AI will become super AI and nobody, well, maybe the guys like Altman and Sutskever, they'll see it, but it'll be too late in a way. And then there, I think what they're putting into place right now is like, systems to override super intelligence, just in case it goes bad, right. But as AI develops, people need to learn how to evolve with that and understand how to use it responsibly, right.

And I think there will always be a need for humanity to keep that human, real human connection and processing. I think AI is still not there to understand deep levels of emotion.

[Kate] (36:32 - 36:32)

Yeah.

[Tang] (36:32 - 36:39)

Or the way, you know, the way people make decisions or intuit, it's not yet intuitive. So it doesn't yet understand intuition.

[Kate] (36:40 - 36:40)

Yeah.

[Tang] (36:40 - 37:32)

And like gut feeling about something, right. And that goes into soul, like just personality, right. Deep, deep chemical thing.

But who knows? I don't know. Maybe I will one day be able to do that.

But before it does that, you know, to answer your question about marketing communications and the human, like

where it won't be able to replicate is really, I think it's, it goes into leadership and management of people. And it goes into great leadership and management of the systems that are AI or tech, you know, and, and the oversight, the oversight to make sure that people are using it responsibly, because I don't, the minute AI is deciding whether AI is responsible is where the danger is. So we have to prevent that.

And I think that humans have a real responsibility to be very responsible at all points to ensure that.

[Kate] (37:34 - 37:40)

That's really, that's a great point. Thank you so much for your time and insights!

Appendix C - Interview Thematic Table

Broad Themes	Specific Themes	Quotes - Noah	Time Stamp	Quotes - Remi	Time Stamp	Quotes - Victoria	Time Stamp
AI Implementation	Reasons for Implementing AI	...to keep up with the trend and avoid their FOMO .	2:06 - 4:05	I guess the first thought was curiosity for everybody . Saying, okay, we see that those possibilities in comparison to what you used to have in mind for AI are huge.	3:43 - 4:41		
				I mean, our job is to increase the number of conversions on websites.	9:36 - 11:30	So from a business point of view, they're going to Maximize their marketing efforts [through using AI]	5:33 - 7:22
	Areas of AI Implementation			[our] first thought[s] were about how to integrate AI giving new features for clients. But at the end, we realized that the main usage is essentially concerning internal productivity .	1:16 - 3:23		
				We have tried to use it [AI] as well [in] analyzing the data , but we are still not mature on that.	1:16 - 3:23		
				What interests people using AI is not necessarily one single person [s data point] It's more about those groups where we will be able to work on those	9:36 - 11:30		

				groups. But using data at an individual level is not the purpose of the topic.			
		It appears that all areas of operations are seeing AI approaches being developed, from hiring to workflow to the actual business propositions themselves.	2:06 - 4:06	A productivity project - I can share one for the client . [...] Our promise [to] our client is [for them] to be able to modify their website without technical skills. And so we have integrated within our platform what we call copilot, [a software that is] able to code for the client	1:16 - 3:23		
						I was actually shocked by the quality of the images created by AI , because they just look fantastic.	12:57 - 18:15
						And then, if it [the image] says made with AI, and then physically [it is made], there's this whole physigilization world now.	12:57 - 18:15
	Benefit seen from Implementing AI			[Our areas of interest developed to concern that] work nobody wants to do, like writing documentation, like answering basic questions to clients, like basic things, time-consuming. So [our] second thought was about how can we save time to people using those technologies.	3:43 - 4:41	Let's automate those systems [repetative jobs] because it's boring for people. I think those jobs limits the brainpower of people and are tedious work, so let's use that time and resource of a human for something else.	26:19 - 28:17
						if Hermes were to do it [the advertisement] in real life, it would cost hundreds of thousands [As opposed to through AI image generation]	12:57 - 18:15
	Current state of AI Implementatio	...the widespread development of this technology [AI] is so new and evolving so rapidly	12:53 - 15:27	For the moment, we don't [have clear measurements for the success of our AI initiatives]. I mean, we still are in a phase of trying to understand where we can push those possibilities, but we are still not clear about measuring the impact .	4:53 - 6:15		

n

...due to the <u>sudden leap</u> forward in generative AI, it has only just really come into focus as a field of major importance,	15:43 - 19:05	We used to work with machine learning, but the <u>generative AI</u> , which is the ability to write something understandable by a human, I would say is a <u>new</u> thing happening.	3:43 - 4:41		
...instead it's a bit of a <u>free-for-all</u> where everyone wants a piece of "the AI shaped Pie".	2:06 - 4:07				
It seems like there's a <u>rush</u> , kind of similar to the dot-com bubble in the two thousands at the moment where every company is trying to become AI-ified.	2:06 - 4:05				
...to be rushing to develop the next big use case of AI, and companies also need to be the first ones there in order to not lose out, and that is, in my mind, a complete <u>recipe for disaster</u> .	4:46 - 7:00				
		So there's something to discuss with everybody about [this], there's <u>no real KPIs</u> for the moment. It's more perception.	4:53 - 6:15		
		For the [question around] increasing productivity, it will be always a mix between <u>KPI and [the] feeling of the people</u> .	6:22 - 6:35		
		We have tried to use it [AI] as well [in] analyzing the data, but we are still not <u>mature</u> on that. It means that the kind of analyzer the AI is able to provide at the present time is more what an intern could do, I would say, [but] not [at the level of] a senior analyst, so we still have to work on it.	1:16 - 3:23	... First party data is key, [businesses are going to] try to get [more] direct data from people and manage it.	33:54 - 36:31

AI Advertising/ Personalization	Use Cases of AI personalization					Now everybody's now following an omni-channel strategy across all devices, multi channel, one on one communication, that's the direction to get really personal, even hyper personalization on a one on one level, integration of augmented reality, virtual reality, chatbots, phygital, we talked about phygitalization. So digitalized personal assistance. And imagine all of those technologies with the customer sentiment analysis to heighten personalizing. It's no longer CRM, but something called CDPs. I don't know if you've heard about them, customer data platforms. So customer data platforms are the new CRM .	33:54 - 36:31
						Marketing and communications is changing and has changed. It's no longer basic market research on demographics and psychographics. You have AI powered customer sentiment analysis now, which you can really look at, you know, take your voice images and behavior to better better understand states of emotion.	33:54 - 36:31
						They [business] may even know , for example, that you don't really purchase items with only 10 or 20% off on a promotion , but you'll only look at like 60 to 70% off on something.	1:42 - 5:07
						[There is] Personalization in social media feeds	1:42 - 5:07
	Benefits of Personalization			We all use Instagram, so they suggest some posts at some point which are not necessarily related with what we are used to see, but not so far, which is a	20:33 - 21:08	They're [businesses] going to reduce wasteful advertising spend to get that customer conversion.	5:33 - 7:22

				clever way to use AI to make us discover new things, which for me, it's a good usage of AI.			
				I mean, if you are on Facebook, being able to say, okay guys, don't choose an algorithm, just send all notifications in time lapse or in timestamp, I don't know how to say that, would be something that some people want to do sometimes. But I don't know, I mean, if you take the billion people using Facebook, how many of them will really think about, I don't want to be retargeted to read only the article that interests me. Or the side effect of that would be if Facebook does not personalize the article you see, <u>you will not come back</u> on Facebook.	18:38 - 20:29	For the brand, you're going to get higher customer loyalty or retention and lifetime value with that relevant messaging or product recommendations throughout the customer lifestyle touch points.	5:33 - 7:22
						I think on the pro side for consumers, they will have a better user experience and probably react more positively to something that's more personalized than non-personalized.	1:42 - 5:07
						So I think, with hyper-personalization, you'll have more consistency in information quality .	1:42 - 5:07
						And at the end of the day for the consumer, I think there'll be cost and time savings because you'll have more specific promotions or product launches that are pushed directly to you that are most relevant, that you most care about, or even like most attracted to.	1:42 - 5:07
Ethical Consideration	Area of Ethical Concern - Misinformation /	So take the issues with fake news and magnify them by ten fold, maybe more and you'll see some serious concerns to be had in something as important as elections, and in the longer term, apologies for the philosophical tangent, but the very	4:46 - 7:00			So what prevents somebody from hacking the system and changing a voice, because they have your voice , they have my voice, and changing a yes to a no, there's so many possible implications or risks involved.	12:57 - 18:15

	Manipulation	notion of truth may become absolutely impossible to <u>distinguish</u>				
		AI technologies have developed so rapidly that it's becoming very very <u>hard to distinguish</u> between real and AI-generated content, even for videos.	4:46 - 7:00		But you're doing an AI generation, incredibly inexpensive, fast to the market, very convincing. And at the end of the day I showed it around to people, they didn't know it was AI generated . And they thought, wow who designed that? They're really positive about it. And then I showed them it was made by AI.	12:57 - 18:15
		From the actual use case side, the key issue is that AI systems can create content that <u>manipulates information</u> and produces very convincing <u>fakes</u>	4:46 - 7:00		And I think users, the danger is for on a mass level that people can be manipulated and believe things that aren't necessarily the truth, or they're pushed like cattle. They're herded in a different direction	10:30 - 12:39
					How much can information be manipulated to create bias, propaganda, paranoia , and even changing the way people behave?	12:57 - 18:15
	Area of Ethical Concern - Transparency of AI Systems	Then there's the black box issue. It's difficult to understand exactly how an AI system <u>arrives at its conclusions</u> or predictions.	4:46 - 7:00			
	Area of Ethical Concern - Privacy				And I think AI or companies can take advantage of those kinds of intimate situations [funerals, birthdays ect] and push ads ...	1:42 - 5:07
	Area of Ethical Concern - Bias			To be honest, I don't have any ethical concern [around bias]. Due to the fact that we don't work with personal data.	7:04 - 7:20	

		On the bias side, it specifically relates to the actual training data —How it is sourced? What data is chosen? How is it cleaned and categorized?	4:46 - 7:00			
		...using an AI system in a hiring process would raise concerns about biases within the algorithms and a lack of explainability of the outputs.	2:06 - 4:06			
		One example I remember reading about was how ChatGPT would give different career suggestions based on a hypothetical child's affluence. If both children said they were interested in history and French, ChatGPT would suggest the richer child consider being a diplomat, while the poorer child might be recommended to be a translator.	4:46 - 7:00		And so at the end of the day, for me, one of the real dangers of data collection and usage by AI is harmful and discriminatory directions. And that can, at the end of the day, I think that's just going to create unease and discomfort for everybody.	7:43 - 10:28
	Area of Ethical Concern - Data		I just thought about the fact that it's a bit too late for everybody to think about ethic[s]. I would say the problem is not the AI and the ethic[s]. The problem is in collecting and storing the data . And [it has been the case for] more than 20 years that companies like Google, Apple, et cetera, they collect data, store data. I mean, we all have a phone in the pocket that get our geolocation every minute.	7:21 - 8:29	I think that, the data collection is really going to come from your interactions on smart devices , your social media platforms, your conversations, unfortunately. I think there'll be data tracking on what we say on audio and video , no matter where those touch points are. Those push ads rely on data profiling.	1:42 - 5:07
			And that's nearly not a problem for 99% of the people. And I would say that the ethical [concern is around the data], not necessarily in the AI that will use this data. So AI is not the [cause] that there is some [issue] around data or around ethic, but it comes from something [prior to] that.	7:21 - 8:29	I think that [companies collecting data] could be really, really intrusive if you don't know that people are doing that data capture.	1:42 - 5:07
			For me, as long as it's not personal [data], I don't think [the use of AI in the AB Tasty solution is a concern].	9:36 - 11:30		

				So as long as we don't tend to <u>link those individual data</u> with [a person's] personal data, I don't think that it's a problem for clients.	9:36 - 11:30		
				I can see that in other topics where they store personal data, where it can be used by intelligence [agencies] or where it can be used against people...Trying to create more, to <u>generate more sales</u> , it's not really used against people.	9:36 - 11:30	And I don't know if they're [customers] going to tolerate it [the usage of their personal data for being served ads] at a certain point, just for the sake of getting a deal on a certain product or service.	7:43 - 10:28
				We want to treat [analyse] those millions of information at once [to find trends]. So that's why I'm <u>not so [sure people need to be concerned]</u> .	9:36 - 11:30		
	Other Areas of Ethical Concerns	There's also major concern within the industry itself about the development of specifically <u>general-purpose</u> or strong AI systems...	2:06 - 4:07				
						And companies and AI are prone to error . So sometimes I think people receive ads that are off the mark or out of touch or insensitive.	1:42 - 5:07
				if you take your Facebook or if you take Google News, you always have the impression to see the same kind of news. We never know if it's <u>egg or chicken...</u>	18:13 - 18:34	When you create and start pushing ads, if AI is doing data profiling , they're pushing specific ads to specific people, you're going to, by definition, create these filter bubbles, or basically chambers where you're just repeating the message, but it's very limited.	7:43 - 10:28
				The thing is, if they <u>algorithms</u> do that, essentially it's because you <u>consume</u> more articles or you interact more if you stay in your comfort zone in terms of topics. Being able to unplug the algorithm would be something cool for people to have in the hand.	18:38 - 20:29	And basically, consumers will only be exposed to information that aligns with their own existing beliefs and attitudes , which means, by default, you're limiting exposure to more diverse, right, diversity in perspective or insight. And that, unfortunately, can lead to maybe bias and stereotypes .	7:43 - 10:28

						It [AI] shouldn't totally remove jobs.	26:19 - 28:17
						And AI can also limit people from making informed decisions .	7:43 - 10:28
	Reasons behind Poor Ethical Approaches					So in the best case scenarios, companies will protect the consumer as they optimize marketing, but because it's business by definition, I think there is a chance they may compromise implementing correct data silos for the sake of that high performance and customer conversion and money making.	5:33 - 7:22
	Consequences of Poor Ethical Approaches	...which [misinformation] would be a huge issue in scientific research for example.	4:46 - 7:00				
		...that can lead to some really poorly thought-out applications that don't necessarily bring the value they promise, instead they actually can lead to a lot of further risks if improperly managed.	4:21 - 4:30				
		Issues here [bias] can lead to major big discrepancies in the outputs since the systems are only as good as the data they're trained on, and issues here will lead to lots of problems downstream.	4:46 - 7:00				
		...imagine the same issue [bias] in hiring or healthcare—suddenly it becomes a lot more concerning .	4:46 - 7:00				
		...when [lack of transparency is] combined with bias, especially for generative AI systems, we may not even know why harmful outputs are developed.	4:46 - 7:00				

					if you [the consumer] don't really interact with the brand before, and all of a sudden you get these personalized ads from brands. To me, that comes off as inauthentic and kind of untrustworthy .	1:42 - 5:07
					To give me such detailed information [in ads] can make people paranoid , I think.	1:42 - 5:07
					People are not going to be trusting [of companies] , or you're going to have negative brand perception , because people are just going to start becoming very paranoid and very kind of fearful and think, well, what's real, what's fake?	7:43 - 10:28
					It [being served ads based of private events] just triggers, again, bad feelings or some emotion that's not necessarily positive for the user.	1:42 - 5:07
					... Personal info is used and people at a certain point, I think, will feel powerless or very vulnerable if you're using any touchpoint on internet or smart device.	7:43 - 10:28
					Even if you use your phone or your computer, you become more and more vulnerable as AI systems get put in place.	7:43 - 10:28
Regulation	Views on the Current State of Regulations				When I look at AI law and regulations, I divide it into three parts. There's governance of those systems, there's accountability or responsibility for it, and then privacy .	18:35 - 18:50
		...right now, I don't actually see much hope in regulators being able to keep pace with AI advancements.	15:43 - 19:05	I think that they should [slow down as] the legislation is a bit too early . I mean, we still don't know all the possibilities [of AI]. So we [European	16:17 - 17:33	

				regulators] are [taking an approach] that we first have to create [the] regulation[s] and then we [will] see			
		Another point is the enforcement of these regulations. It's one thing to have laws in place, but ensuring they are actually followed is another challenge altogether, I can say from experience with the Digital Services Act, even with being in the pipeline for years and also being in the second year of actual implementation and review by the European Commission, there are still a lot lot lot of companies who are not fully prepared .	9:44 - 12:33	By design, what [product] you have to create, you need to respect some guidelines...So there's two kind of people, people that know that they cross the line [and do so anyway], others that by design will create something which is legal.	14:19 - 16:06	I think that no matter what regulations you [governments] put in, you're going to have people doing unethical practices selling or sharing personal information without consent	7:43 - 10:28
				And on the legal way, you can't [control personal data more then already] as well. So at the end, if people want to abuse [personal data] using AI, in any case, they do it out of the law. And even if they vote this new AI Act for Europe, part of this AI Act is using those old legislative tools that they used to have to avoid the same kind of side effect for AI .	14:19 - 16:06		
				But my feeling is that essentially in Europe, we will lose time or limit our R&D or possibilities of using AI based on stress, not based on reality, [instead the] effective reality of side effects.	16:17 - 17:33		
		...we don't yet have any real actual guardrails around how to effectively ...develop and implement these AI technologies while also mitigating the risks that may arise.	2:06 - 4:06	My personal point of view is more about we try [exploring] what we can try with this kind of technology and, if there is side effect[s] , then we use the legislation to limit them .	16:17 - 17:33	... Each government around the world in major developed nations. They understand more and more the risks of non-compliance because they see it in the context of defense and war, and the underground and dark web , for example.	18:51 - 25:02
	Important Regulations	Regulations such as the DSA - the Digital Services Act or the GDPR have specific provisions requiring companies to offer users the option to opt out of	7:16 - 9:30	Yeah, but it's [concerns around personal data] already the case. I mean, they're not waiting [for] AI to use it the right way. That's why we have the GDPR	8:44 - 9:07		

		personalization based on profiling and to have strong data security practices, at least for EU citizens.		in Europe, there's a California law concerning data storage as well.			
		...the EU AI Act will come into force in around 18 months...	9:44 - 12:33	... This new AI Act for Europe	14:19 - 16:06	So, you have then the EU AI Act which is an example of a governance framework. And that I think they're actually pretty strict because I think companies that don't comply will have a penalty of like 35 million euros or 40 million euros.	18:51 - 25:02
						In 2023, Biden wrote an executive order called Safe, Secure, and Trustworthy Development and Use of AI . And the big companies like Google and Meta, OpenAI, even Salesforce, Amazon, IBM, they all committed to build or to go in the direction of creating safe, transparent, and secure AI systems.	18:51 - 25:02
						So, there are active guidelines being made on AI regulation. And I think the OECD and UN are, creating governance frameworks . And I think that's really important.	18:51 - 25:02
	Recommendations for Companies Developing AI	More could probably be done by companies to <u>get consent</u> from users around their data	7:16 - 9:30			Because I think it's really critical that companies follow best practices that prioritize user privacy and security . So they're emphasizing or ensuring they really focus on transparency and explaining to users how they're using data . In order to minimize risk or bias and improve justice or fairness of all whoever's in that ecosystem. And basically to give, I wouldn't say give back the power, because I don't feel like AI is really taken over yet. It may, but you don't want to be manipulated. Nobody wants to be manipulated at the end of the day.	10:30 - 12:39

	... user privacy and data security should already be a priority for companies.	7:16 - 9:30		So again, I feel like the respect for individual privacy and autonomy [by companies] is key.	10:30 - 12:39
	This means organizations using personalized advertising would need to be transparent about it and provide opt-out options to users...if more subliminal approaches are used, those would not be allowed and would lead to serious repercussions	9:44 - 12:33		So I think the transparency is great, because then it'll at least allow the user to decide how they want to engage with it [AI content].	12:57 - 18:15
	...companies should already...deal with concerns about user privacy and data, and what they can do to improve customer trust is to better inform users about their data practices and provide easy-to-use solutions for customers to control what data companies can use.	7:16 - 9:30			
				Businesses need to understand risk, and then try to prevent it before they happen. So they've got to really take care of how they digitally transform and how they implement AI systems and who is even designing those AI systems. If they put garbage in, they'll get garbage out.	18:51 - 25:02
				So I think that companies need to make a decision on how much they want to integrate AI systems where it adds benefit but does not endanger the consumer. Or where it does not what's the opposite of empower? Disempower users.	26:19 - 28:17

	Regulations around Personalized Ads	Regulations such as the DSA - the Digital Services Act or the GDPR have specific provisions requiring companies to offer users the option to opt out of personalization based on profiling and to have strong data security practices, at least for EU citizens.	7:16 - 9:30	Concerning customer, the thing is, I guess this concern has already been addressed essentially on ads, essentially with the retargeting business 10 years ago. I mean, when Criteo, Google, Meta used to generalize retargeting, those concerns have raised saying: "Guys, you are not allowed." So then we vote some laws saying that you are not allowed to follow user from a website to another, which was all the third party cookie that browser at the end deleted from the technical way, I mean. Then they've been one step further saying that you are not able to reconcile those visits based on single user ID . So that's why cookies have reduced in time.	12:22 - 14:08		
		... personalized advertising would probably, most likely fall into the limited risk category since such a system likely doesn't pose any major risks to fundamental rights, safety, or critical infrastructure in the EU, which is a characteristic of a high-risk system. This means organizations using personalized advertising would need to be transparent about it and provide opt-out options to users... if more subliminal approaches are used, those would not be allowed and would lead to serious repercussions	9:44 - 12:33				
	Gaps Identified in the Current Regulations	...ensuring that AI systems are designed from the start with privacy in mind from the start. This would include incorporating things like data minimization and anonymization techniques into the workflow.	7:16 - 9:30			Governments need to [push for] transparency [and] accountability. They need to really require that developers implement those steps to mitigate the risk. And bias and error, Privacy and security, they need to require [these risks are checked] in a way before it launched to market. Before anything's launched into the market, there needs to	18:51 - 25:02

					be some understanding about what the safeguards are to protect data. And then fairness to minimize discrimination or injustice in a way or bias.	
		A big area of public debate around AI is copyright laws . Current regulations seem to have gaps in this area as they focus more on safety, but there are adjacent regulations that cover copyright law, so I imagine this will be adapted. However, areas like biases and fake content require much more attention.	12:53 - 15:27			
		...one area that needs more attention is the actual training data companies collect. If I comment on a forum, can that data be sold to train a program without my permission ? What about my information on Facebook?	7:16 - 9:30			
		While there are discussions and some frameworks in place, there's a lack of universally accepted ethical standards that all AI developers and users can adhere to, if ethics ever can be fully agreed on.	12:53 - 15:27	And I guess we are in this " in between " with the AI about what we have to create as a norm, but what will be in reality something acceptable. We are still not mature on that, even on those legal aspects. And by the way, on those educational aspects, because we still don't know how to differentiate right from wrong on this usage. Some usage are obviously wrong. The rest is still a blur.	22:49 - 24:00	So I think that when you're setting guidelines or building frameworks, there needs to be some global framework based on security, based on transparency and accountability, based on fairness, and again, unbiased data collection
		...in the training data transparency . There's a need for clearer guidelines on how data is collected, processed, and used in AI training. I mean, without these standards, we really run a big risk around having inequalities and biases in our systems, which is a huge ethical concern.	12:53 - 15:27			12:57 - 18:15

					I think about transparency and I think they [ads] need to be very specific , very overt and clear.	12:57 - 18:15
					And until there's a global security standard with full adherence and accountability [there will continue being large data breaches and other risks]	10:30 - 12:39
					I think that watermarking is a good practice now to say maybe, there are these little tags that say made by AI, usually in a corner	12:57 - 18:15
Multistakeholder Interest	Areas of Disagreement Amongst Stakeholders	...while there is some degree of guidance and agreement, researchers and governments haven't yet been able to agree on conclusive solutions yet, although there have been some strides...	4:46 - 7:00		... There's definitely high tension between the three groups [governments, academia, and businesses] you mentioned, because there are three agendas.	5:33 - 7:22
					I think there's ensuring security from the regulatory admin point of view , from a company's point of view, maybe they want to make people feel special. That's the goal of the ad in terms of personalization, but they also want to increase profitability . So from a brand's perspective, they can connect better with their target audience	5:33 - 7:22
					I think that, again, it goes into transparency and open sourcing concept of sharing data . It's hard because if you're a company, you're trying to protect your data and the data profiling .	26:19 - 28:17
					However, it [marketing efforts] could be completely not against, but in conflict with ensuring security or compromising the marketplace in terms of data share and correct data information flows.	5:33 - 7:22
					I think, again, [...] how much do you actually limit AI systems and, social media platforms and AI	18:51 - 25:02

					within social media platforms that create hate speech, engage with groups or individuals that are anti-whatever, anti-anything.	
Calls for a Multistakeholder Approach		A collaborative approach is in my mind, ideal. Industry self-regulation should complement formal regulations, filling gaps where government oversight might be lacking and offering expertise that policymakers may not possess. This partnership would be great in leading to a more adaptive and comprehensive regulatory framework, where industry insights inform policy decisions, and governmental oversight ensures compliance.	21:44 - 23:11		There's enough push from the developers , these really intelligent guys and girls sitting in California who really understand AI systems. Everyone from Suleiman to Altman to Ilya Sutskever. The guy who runs Trust.ai now. [...] But these men, they're really, really on top of what is happening and the dangers . I mean, people like Elon Musk and Gates, they all know the issues	18:51 - 25:02
		This [academics, companies, policy makers collaboration] is the case already to a degree, with the AI act for example actually calling for gen-ai developers to participate in drawing up codes of conduct along with researchers to best regulate the system while ensuring competitiveness.	23:23 - 25:06		And so, at a certain point, the general user, the mass population, I mean, people like me, I have no control. And so, you sort of have to trust, you have to trust the governments of working with the developers to really create governance .	18:51 - 25:02
		it's not a job regulators can do alone , and a big positive is that we are already seeing many big players like Google and IBM developing their own sets of core principles to that very end. There is a lot of very public discussion around them. This is super cool and beneficial in allowing for feedback from diverse stakeholders, including technologists, ethicists, and the public too	15:43 - 19:05		I think in terms of frameworks or guidelines, I think there are guidelines, and this goes into your regulations issue, who bears responsibility for the development of AI, the usage of AI, the accountability, and there are three, there are four parties developers, companies, regulatory, so your governments and institutions and any compliance bodies, and then for the users, and the users are all in those categories , the other three categories, they're all users, everybody's a user. So, but the users I'm talking about basically like conservers , okay?	12:57 - 18:15

		The best way to actually keep up with these advancements, and what can be done, is likely going to be through collaboration between industry, experts, and regulators to find some degree of agreement on core ethical practices. From there, they can engage in best practices until the regulations can catch up.	15:43 - 19:05				
	Building a Multistakeholder Approach	Industries should one hundred percent have a key voice in the public debate around AI governance, especially since lots of the actual technology is being developed by them, hence they may understand it better than the regulators and can pinpoint technical inefficiencies in regards to what the regulations may be asking to do.	21:44 - 23:11				
		Self-regulation also allows for far more flexibility and a more rapid adaptation to new developments, while formal regulations can provide the necessary framework to ensure ethical standards are maintained.	21:44 - 23:11				
		However, self-regulation is definitely not enough... there is a bit of concern about asking an industry to regulate itself as there would be major concerns around possible abuses and the protection of public interest, especially in areas with a very serious societal impact like healthcare, finance, or criminal justice.	21:44 - 23:11				

		Collaboration is key. Companies, academics, and policymakers need to engage in continuous dialogue and knowledge sharing. Academics can provide the latest research insights, policymakers can offer regulatory frameworks, and companies can share practical challenges and successes. Regular conferences, joint projects, and public-private partnerships can help facilitate this collaboration. It's about creating a shared understanding and developing solutions that are both innovative and ethically sound.	23:23 - 25:06				
Consumer Education	Issues around a Lack of Education			I'm not sure that this pop-up [to accept cookie usage] was made to educate people, but at the end, people don't read them anymore. So does it work? Not sure.	21:32 - 22:20		
				But those cookie topics does not interest 98% of the users that go on the website.	22:21 - 22:48		
				If I take the education we [legislators] try to do since six, seven years on the website[s], we don't do it the right way. I mean, we always have those pop-ups coming on the website saying, do you agree, don't agree. Nobody reads those pop-ups, you only click yes or no mechanical way.	21:32 - 22:20		
						So, again, people have to be educated on how AI systems work and then on ethical behavior , on how to use it. And then users need to be fully aware of what they're getting into and how to use it[AI systems] and not rely on [them just] because it's easy.	18:51 - 25:02

					It's [the AI system] no longer just feeding you an answer. It's actually interpreting . It's actually interpreting answers and driving the way you think. And there's the danger if you're not hyper self-aware as a human, you'll become pretty dependent on AI . I think it's very, I think there's going to be a codependency with AI.	25:04 - 25:32
					So education, education for me starts at birth, and it's a responsibility of parents, companies and schools, governments	28:50 - 33:15
	Recommendations to Consumers				On a user level , at the end of the day, if you're feeling uncomfortable, you have to get off social media. Minimize your time on social media or minimize your digital footprint, disengage , don't respond to the spam or the push ads. Don't fall into the trap of being seduced by something that seems really personalized, but is just really just about data collection and filter.	10:30 - 12:39
					Then it's my choice at the end to say, well, do I want to buy that or not? How much do I want to engage in this?	12:57 - 18:15
Future Trends	Future Directions of Regulations	but we have to assume that once a few countries have something solid in place, then companies will probably find it easier to just adapt their systems globally since otherwise, they don't want to miss out on major markets such as the EU or India or or China.	9:44 - 12:33			
		...and there is a lot of knowledge that still needs to be created.	15:43 - 19:05			

		...there will inevitably be lots of gaps as policymakers themselves are learning about new risks and best practices...so expect many more gaps to need plugging in the near future.	12:53 - 15:27			
	Future of AI in Business	Not every problem will be solved with AI, and I predict that lots of these 'AI hype' companies will likely realize that what they are offering doesn't actually fit the intended purpose very well and will go down. In the next few years, we will really be seeing where AI works and where it doesn't, and I can see, in the long run, the landscape being dominated by a few big players .	19:31 - 21:25			
		My feeling is that at the moment everybody is really thinking about how we can integrate AI into everything, there is a lot of hope and interest in it. So, AI development will definitely progress , its use will expand, and it will be everywhere .	25:22 - 27:00	Everybody at the present time are thinking about how can we integrate AI within everything. So for sure, AI will progress , usage will progress, and it will be everywhere, for sure. In five years, probably not. In 10 years, for sure.	24:16 - 24:51	
		...we'll see more specialized AI applications becoming mainstream, particularly in areas like personalized medicine, autonomous vehicles, and advanced manufacturing. These applications will definitely give really big efficiency and innovation gains across industries.	25:22 - 27:00			
		But in five years it probably will not be to the extent that we might believe today...But in ten years, I definitely think AI will be far more integrated as both its capabilities improve, and that we find the clear use cases where AI melds with humans, not like us becoming machines of course, but where it improves our lives.	25:22 - 27:00	I have a Tesla, for example. The promise is the car can drive by itself. The thing is, it's still not true. But if one day I can sit in my car and don't touch anything and go to the end point, I would wait for that. Only AI can do that.	24:53 - 25:20	

		I like to apply Amara's law to this situation, which is basically that we tend to overestimate the effect of a technology in the short run and underestimate the effect in the long run	25:22 - 27:00	We usually overestimate the change in the next two years and underestimate in the 10 years	24:16 - 24:51		
						But before it does that [is able to intuit], to answer your question about marketing communications and the human, where it [AI] won't be able to replicate is really in the leadership and management of people .	36:40 - 37:32
						... the way people make decisions or intuit , it's [AI] not yet intuitive.	36:32 - 36:39
	Future Risks					So I do think there's a human aspect, human oversight, that needs to still be in place . Because as AI develops and evolves, we need to adjust and learn with that AI system. At a certain point, [...] there's super intelligence. And that's the point where if there's a danger, if humans do not regulate and oversee, there will be a point where all of a sudden AI will become super AI and [...] it'll be too late in a way. And then there, I think what they're putting into place right now is systems to override super intelligence, just in case it goes bad.	33:54 - 36:31
						The oversight to make sure that people are using it [AI] responsibly , because I think that the minute AI is deciding whether AI is responsible is where the danger is. So we have to prevent that.	36:40 - 37:32
						Security , of course, is going to be hyper important, because you're going to have hacks or breaches of the customer data platforms. So you will have to protect those somehow.	33:54 - 36:31

Appendix D - Survey Responses

Timestamp	What is your Age?	What is your Gender	What country do you currently live in?	What is your occupation?	Occupation category (B = Business, C = Consumer)	1. How do you feel about the use of AI in advertising ?	2. How concerned are you about the ethical implications of using AI in personalised advertising?	3. Do you think the regulations in place are sufficient to address your concerns?	4. To what extent do you trust companies to use your data ethically?	5. How comfortable are you with companies using your various types of data to provide more personalised advertising? [Purchase history]	6. How comfortable are you with companies using your various types of data to provide more personalised advertising? [Browsing history]	7. How comfortable are you with companies using your various types of data to provide more personalised advertising? [Social media activity]	8. How comfortable are you with companies using your various types of data to provide more personalised advertising? [Personal Information]	9. How effective do you believe personalised advertising is compared to non-personalised ones?	10. Do you believe that every company needs to adopt an ethical AI framework in their advertising ? (Binary)
6/2/2024 13:46:55	40	Male	US	Software developer	B	4	5	Unsure	3	Comfortable	Neutral	Uncomfortable	Very uncomfortable	4	Yes
6/3/2024 14:54:02	47	Male	UK	Consultant	B	4	2	Yes	4	Neutral	Neutral	Neutral	Neutral	4	Yes
6/4/2024 15:07:28	42	Male	Luxembourg	Financial Analyst	B	3	4	Unsure	3	Comfortable	Uncomfortable	Uncomfortable	Very uncomfortable	4	Yes
6/5/2024 8:56:45	22	Male	Netherlands	Student	C	1	5	Unsure	1	Comfortable	Very uncomfortable	Very uncomfortable	Very uncomfortable	2	Yes
6/5/2024 15:48:17	22	Male	Spain	Unemployed	C	5	5	No	1	Very uncomfortable	Very uncomfortable	Very uncomfortable	Very uncomfortable	2	Yes
6/5/2024 15:49:11	27	Female	UK	Senior Media Executive	B	3	4	No	2	I don't care	Uncomfortable	Comfortable	Very uncomfortable	2	Yes
6/5/2024 15:49:26	20	Male	Spain	Student/Part time job	C	3	5	No	4	Uncomfortable	Very uncomfortable	Comfortable	Very uncomfortable	5	Yes
6/5/2024 15:50:24	33	Male	Serbia	Business owner	B	5	2	Yes	4	Comfortable	Comfortable	Neutral	Uncomfortable	5	No
6/5/2024 16:07:56	21	Male	Spain	Student	C	3	4	Yes	2	Comfortable	Very uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
6/5/2024 16:08:41	25	Male	France	Business owner	B	4	2	Yes	4	Comfortable	Comfortable	Comfortable	Neutral	4	No

6/5/2024 16:15:26	27	Female	Canada	Accountant	B	3	3	Unsure	3	I don't care	Uncomfortable	I don't care	Uncomfortable	4	Yes
6/5/2024 16:24:32	26	Female	UK	Media Manager - marketing	B	4	3	Unsure	3	Comfortable	Uncomfortable	Uncomfortable	Uncomfortable	4	Yes
6/5/2024 16:34:19	23	Female	Canada	Student	C	3	4	Unsure	3	Very uncomfortable	Uncomfortable	Uncomfortable	Uncomfortable	5	Yes
6/5/2024 16:39:40	16	Female	Italy	Student	C	3	1	Unsure	3	I don't care	Uncomfortable	I don't care	Uncomfortable	3	Yes
6/5/2024 16:47:56	23	Male	Spain	Student	C	2	3	Unsure	2	Uncomfortable	Very uncomfortable	Uncomfortable	Very uncomfortable	5	Yes
6/5/2024 17:08:51	27	Male	US	SEO specialist	B	4	3	Unsure	3	I don't care	I don't care	Uncomfortable	I don't care	4	Yes
6/5/2024 17:23:25	21	Male	Spain	Student	C	3	4	Unsure	1	Very uncomfortable	Very uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
6/5/2024 17:42:32	28	Female	France	Business Analyst	B	4	2	Yes	4	Comfortable	Comfortable	Comfortable	Neutral	5	No
6/5/2024 18:03:37	25	Female	UK	Finance & Admin Officer	B	3	1	Unsure	3	Comfortable	Uncomfortable	Uncomfortable	I don't care	5	Yes
6/5/2024 18:04:27	25	Female	Italy	Student	C	2	1	No	1	Comfortable	Comfortable	Uncomfortable	Very uncomfortable	4	Yes
6/5/2024 18:15:07	24	Female	France	Marketer	B	3	4	No	2	Neutral	Uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
6/5/2024 18:15:07	24	Male	Canada	Policy Consultant	C	1	3	No	1	Neutral	Very uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
6/5/2024 18:18:21	26	Female	France	Sales Rep	B	3	2	Yes	4	Comfortable	Comfortable	Comfortable	Very uncomfortable	4	No
6/5/2024 18:33:36	24	Female	US	Student	C	2	5	Unsure	2	Very uncomfortable	Very uncomfortable	Uncomfortable	Very uncomfortable	5	Yes
6/5/2024 19:37:20	27	Female	UK	M&A tax manager	B	4	4	Unsure	2	Very comfortable	Comfortable	Comfortable	Comfortable	5	Yes
6/5/2024 20:19:19	26	Female	France	Business unit Manager Sports Retail	B	2	5	Unsure	2	Very uncomfortable	Very uncomfortable	Uncomfortable	Very uncomfortable	5	Yes
6/5/2024 20:25:23	23	Female	France	Student in dentistry	C	1	5	Unsure	1	Very uncomfortable	Very uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
6/5/2024 20:35:17	27	Female	Germany	Sales	B	4	1	Yes	4	Neutral	Uncomfortable	Neutral	Neutral	4	No
6/5/2024 20:42:20	30	Female	Switzerland	Brand Manager	B	2	4	Unsure	2	Neutral	Uncomfortable	Neutral	Very uncomfortable	2	Yes

6/5/2024 20:43:51	24	Male	Germany	Student	C	1	5	Unsure	2	Very uncomfortable	Uncomfortable	Uncomfortable	Very comfortable	5	Yes
6/5/2024 20:57:54	22	Male	US	Business developer	B	4	1	No	2	Comfortable	Comfortable	Comfortable	Very comfortable	4	Yes
6/5/2024 21:20:30	24	Male	UK	Strategy Consultant	B	4	2	Yes	4	Neutral	Uncomfortable	Neutral	Uncomfortable	4	No
6/5/2024 21:29:43	23	Female	France	Student	C	4	4	Unsure	1	Comfortable	Neutral	Very uncomfortable	Uncomfortable	5	Yes
6/5/2024 21:44:40	20	Female	Italy	Student	C	2	3	Unsure	2	Neutral	Uncomfortable	Uncomfortable	Uncomfortable	4	Yes
6/5/2024 21:45:18	22	Female	Spain	Student	C	2	5	Unsure	3	Neutral	Uncomfortable	Uncomfortable	Very uncomfortable	5	Yes
6/5/2024 21:58:43	24	Female	US	Consultant	B	4	2	Yes	3	Comfortable	Uncomfortable	Comfortable	Uncomfortable	5	Yes
6/5/2024 23:16:11	22	Female	Australia	Primary Teacher	C	2	3	Unsure	2	Comfortable	Uncomfortable	Uncomfortable	Uncomfortable	4	Yes
6/5/2024 23:45:24	23	Female	France	Working student	C	2	5	No	2	Comfortable	Very uncomfortable	Very uncomfortable	Very uncomfortable	4	Yes
6/6/2024 7:19:59	53	Female	Luxembourg	Teacher	C	1	5	No	1	Uncomfortable	Uncomfortable	Uncomfortable	Uncomfortable	4	Yes
6/6/2024 9:19:39	26	Female	France	Student	C	2	5	No	2	Very uncomfortable	Very uncomfortable	Uncomfortable	Very uncomfortable	5	Yes
6/6/2024 15:40:22	23	Female	Spain	Student	C	3	4	No	5	Comfortable	Uncomfortable	Neutral	Neutral	5	Yes
6/6/2024 17:49:42	27	Male	Canada	Sales	B	4	2	No	1	Neutral	Uncomfortable	Uncomfortable	Uncomfortable	4	No
6/7/2024 12:32:18	45	Male	Spain	Finance Professor	B	4	3	No	2	Comfortable	Neutral	Neutral	Very uncomfortable	4	No
6/7/2024 17:02:46	26	Male	Spain	Student	C	3	4	No	2	Uncomfortable	Very uncomfortable	Very uncomfortable	Very uncomfortable	4	Yes
6/7/2024 18:23:59	23	Female	France	Student	C	5	1	No	1	Neutral	Very uncomfortable	Comfortable	Very uncomfortable	5	Yes
6/8/2024 0:24:47	20	Non-binary	US	Student	C	1	5	No	1	Very uncomfortable	Very uncomfortable	Neutral	Very uncomfortable	5	Yes
6/8/2024 8:21:36	19	Male	US	Worker	C	2	3	No	2	Comfortable	Neutral	Neutral	Very comfortable	4	No
6/8/2024 13:19:51	50	Female	Canada	Professor, Business Owner	B	4	5	No	1	Comfortable	Comfortable	Comfortable	Very uncomfortable	5	Yes
6/8/2024 13:34:23	24	Female	Pakistan	Marketing Director	B	5	4	Yes	4	Comfortable	Comfortable	Comfortable	Uncomfortable	4	No

6/8/2024 13:48:24	31	Male	US	Sales	B	3	3	Yes	3	Comfortable	Neutral	Comfortable	Neutral	4	Yes
6/8/2024 14:05:08	27	Male	Netherlands	Student	C	2	5	Unsure	1	Comfortable	Uncomfortable	Uncomfortable	Neutral	5	Yes
6/8/2024 14:15:16	20	Female	India	student	C	2	4	Unsure	1	Comfortable	Uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
6/8/2024 14:30:34	27	Female	US	Worker	B	5	4	Yes	5	Very comfortable	Comfortable	Neutral	Uncomfortable	5	Yes
6/8/2024 14:32:00	19	Female	China	student	C	2	5	No	4	Uncomfortable	Neutral	Very uncomfortable	Very uncomfortable	5	Unsure
6/8/2024 17:15:45	22	Female	Netherlands	Student	C	5	1	Unsure	3	Comfortable	Neutral	Neutral	Uncomfortable	3	Yes
6/8/2024 17:19:50	36	Male	Mali	Banking manager	B	4	4	Unsure	3	Very uncomfortable	Very uncomfortable	Very uncomfortable	Very uncomfortable	4	Yes
6/8/2024 17:44:00	39	Male	Germany	Data scientist	B	4	1	No	2	Comfortable	Neutral	Uncomfortable	Very uncomfortable	5	Yes
6/8/2024 18:35:41	28	Male	Germany	Mechanical Engineer	C	3	4	No	2	Neutral	Uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
6/8/2024 18:49:10	39	Male	Brazil	M&A Consultant	B	4	2	Yes	4	Neutral	Neutral	Uncomfortable	Uncomfortable	4	NO
6/8/2024 22:53:31	19	Male	France	Student	C	3	2	Unsure	1	Very uncomfortable	Neutral	Uncomfortable	Very uncomfortable	3	Yes
6/8/2024 23:57:18	24	Female	Italy	Student	C	3	3	Yes	2	Uncomfortable	Uncomfortable	Uncomfortable	Uncomfortable	4	Yes
6/9/2024 0:07:24	24	Male	UK	student	C	4	2	No	1	Uncomfortable	Uncomfortable	Uncomfortable	Uncomfortable	3	No
6/9/2024 0:28:16	25	Female	China	designer	C	2	2	Unsure	1	Uncomfortable	Neutral	Very uncomfortable	Very uncomfortable	5	Yes
6/9/2024 10:17:33	17	Female	Malaysia	Student	C	3	4	Unsure	3	Neutral	Neutral	Neutral	Neutral	3	Yes
6/9/2024 12:17:48	26	Female	China	Marketer	B	4	2	Yes	2	Neutral	Neutral	Comfortable	Very uncomfortable	5	No
6/9/2024 13:02:01	39	Male	Australia	Machine Learning Engineer	B	4	1	Unsure	4	Comfortable	Neutral	Uncomfortable	Very uncomfortable	3	Yes
6/9/2024 13:23:37	38	Male	UK	Marketing Manager	B	3	5	No	2	Neutral	Uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
6/9/2024 17:40:43	41	Male	Canada	Financial Analyst	B	2	4	No	2	Neutral	Uncomfortable	Very comfortable	Very comfortable	5	Yes
09/06/2024 21:18:36	22	Female	France	Student	C	2	4	Unsure	2	Uncomfortable	Uncomfortable	Uncomfortable	Uncomfortable	4	Yes

6/9/2024 22:11:45	24	Female	UK	Product Design student	C	3	5	No	1	Comfortable	Comfortable	Very uncomfortable	Uncomfortable	5	Yes
6/10/2024 9:31:51	52	Male	Luxembourg	Unemployed	C	1	4	No	1	Uncomfortable	Very uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
6/10/2024 9:53:47	26	Female	France	Event manager	B	4	5	No	2	Neutral	Very uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
6/10/2024 11:57:31	31	Female	Germany	Marketing manager	B	4	2	Unsure	4	Comfortable	Comfortable	Neutral	Uncomfortable	5	Yes
6/10/2024 12:59:50	55	Female	France	Student	C	1	5	No	1	Uncomfortable	Very uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
6/10/2024 13:31:32	41	Male	India	Strategy Consultant	B	4	2	Unsure	4	Comfortable	Neutral	Comfortable	Very uncomfortable	4	No
6/10/2024 13:50:10	26	Female	France	Student	C	4	2	No	2	Very comfortable	Very comfortable	Comfortable	Uncomfortable	5	Yes
6/10/2024 14:08:40	26	Male	France	Project Manager	B	4	3	Yes	4	Neutral	Neutral	Comfortable	Neutral	4	No
6/10/2024 17:33:36	20	Female	Norway	Barista	C	3	5	Unsure	3	Neutral	Neutral	Uncomfortable	Uncomfortable	5	Yes
6/10/2024 17:38:33	37	Male	Australia	Software Engineer	B	3	2	Unsure	2	Neutral	Uncomfortable	Uncomfortable	Very uncomfortable	3	Yes
6/10/2024 18:28:47	48	Male	Australia	Sales developper	B	5	2	Yes	4	Neutral	Uncomfortable	Uncomfortable	Uncomfortable	5	No
6/10/2024 19:25:39	16	Male	India	Student	C	3	2	Unsure	4	Neutral	Neutral	Comfortable	Comfortable	3	Yes
6/10/2024 20:24:35	22	Female	Netherlands	Student and intern	C	1	4	Unsure	3	Comfortable	Neutral	Very uncomfortable	Very uncomfortable	5	Yes
6/10/2024 20:26:31	35	Female	Finland	Sales director	B	5	2	Unsure	4	Neutral	Very uncomfortable	Uncomfortable	Very uncomfortable	5	Unsure
6/10/2024 21:12:13	24	Male	Canada	Unemployed	C	3	1	No	1	Comfortable	Very uncomfortable	Very uncomfortable	Very uncomfortable	4	Yes
6/10/2024 21:12:27	34	Female	US	Lecturer (university)	C	1	4	No	1	Very uncomfortable	Very uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
6/10/2024 21:37:47	24	Female	UK	Unemployed	C	4	3	Unsure	2	Comfortable	Uncomfortable	Comfortable	Very uncomfortable	5	Yes
6/10/2024 22:00:31	25	Female	Spain	Finance	B	3	3	Unsure	3	Very uncomfortable	Uncomfortable	Very uncomfortable	Uncomfortable	3	Unsure

6/10/2024 23:47:02	23	Female	France	Senior Product Manager	B	3	3	Unsure	3	Neutral	Neutral	Neutral	Uncomfortable	3	Yes
6/11/2024 0:18:29	20	Female	Serbia	HR Manager	B	4	1	Unsure	2	Comfortable	Comfortable	Neutral	Neutral	4	Yes
6/11/2024 3:44:32	24	Male	US	Unemployed	C	3	4	Yes	3	Neutral	Uncomfortable	Uncomfortable	Very uncomfortable	5	Unsure
6/11/2024 5:24:40	16	Female	US	Student	C	4	3	Yes	3	Comfortable	Very uncomfortable	Comfortable	Very uncomfortable	5	Yes
6/11/2024 8:48:38	27	Male	US	Tax Accountant	B	4	2	Yes	4	Uncomfortable	Comfortable	Neutral	Neutral	4	No
6/11/2024 15:04:25	29	Male	UK	Business Analyst	B	4	2	No	3	Neutral	Comfortable	Uncomfortable	Very uncomfortable	5	Yes
6/11/2024 17:31:58	22	Female	France	Student	C	2	3	No	1	Very uncomfortable	Very uncomfortable	Comfortable	Very uncomfortable	4	Yes
6/11/2024 18:45:53	41	Male	Japan	Manager	B	3	2	Unsure	4	Comfortable	Neutral	Comfortable	Very uncomfortable	5	No
6/11/2024 20:53:38	16	Non-binary	US	Student	C	4	5	No	1	Comfortable	Uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
6/12/2024 3:14:33	23	Female	India	Student	C	2	2	Unsure	2	Comfortable	Uncomfortable	Uncomfortable	Very uncomfortable	3	Yes
6/12/2024 9:21:53	29	Female	China	Consultant	B	4	2	Yes	4	Comfortable	Comfortable	Neutral	Comfortable	5	No
6/12/2024 11:32:38	42	Prefer not to say	US	Engineer	B	3	2	No	3	Comfortable	Very uncomfortable	Comfortable	Very uncomfortable	5	Yes
6/12/2024 11:52:20	20	Female	Spain	Student	C	3	2	No	3	Neutral	Uncomfortable	Very uncomfortable	Very uncomfortable	3	Yes
6/12/2024 13:19:45	38	Female	Canada	Head of Digital Experience	B	5	2	Yes	2	Comfortable	Neutral	Comfortable	Uncomfortable	4	No
6/12/2024 13:42:05	23	Female	France	Student	C	3	4	Unsure	3	Comfortable	Neutral	Uncomfortable	Neutral	4	Yes
12/06/2024 13:50:31	39	Female	UK	Front stack developer	B	4	2	Yes	4	Neutral	Neutral	Comfortable	Comfortable	5	No
6/12/2024 14:50:27	42	Female	US	Digital Marketing Specialist	B	5	1	Yes	4	Neutral	Uncomfortable	Neutral	Very uncomfortable	4	No
6/12/2024 14:50:57	33	Male	UK	Strategy Consultant	B	3	4	No	2	Neutral	Uncomfortable	Uncomfortable	Very uncomfortable	5	Yes
6/12/2024 14:54:55	43	Male	Italy	Health Administrator	C	3	5	Unsure	3	Comfortable	Neutral	Uncomfortable	Very uncomfortable	5	Yes
6/12/2024 15:08:40	38	Male	UK	Teacher	C	2	4	No	2	Comfortable	Comfortable	Neutral	Uncomfortable	4	Yes

6/12/2024 15:10:22	44	Male	Australia	Public transportation planner	C	2	5	No	2	Neutral	Uncomfortable	Very uncomfortable	Very uncomfortable	4	Yes
6/12/2024 15:13:15	31	Male	Italy	Waitor	C	3	3	Unsure	3	Very comfortable	Neutral	Comfortable	Uncomfortable	4	Yes
6/12/2024 17:26:58	25	Prefer not to say	China	Business Developer	B	3	1	Yes	3	Comfortable	Comfortable	Comfortable	Neutral	4	No
6/13/2024 13:45:21	44	Male	Germany	Website Designer	B	5	2	Unsure	3	Comfortable	Neutral	Uncomfortable	Very uncomfortable	5	Yes
13/06/2024 13:49:02	41	Male	Canada	Consultant	B	3	3	Yes	1	Neutral	Neutral	Very uncomfortable	Very uncomfortable	5	Yes
6/13/2024 13:54:13	39	Male	Canada	Public Health Official	C	2	5	No	2	Neutral	Uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
6/13/2024 14:47:35	42	Male	Canada	Manager	B	4	2	Yes	4	Neutral	Neutral	Neutral	Uncomfortable	5	No
6/13/2024 15:07:09	44	Male	US	Manager	B	3	5	Unsure	3	Comfortable	Neutral	Uncomfortable	Very uncomfortable	5	Yes
6/14/2024 0:23:48	23	Female	Canada	Student	C	1	5	No	1	Very uncomfortable	Very uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
14/06/2024 10:04:45	22	Female	France	Student	C	2	5	No	2	Very uncomfortable	Very uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
6/14/2024 12:35:48	23	Female	Denmark	Student	C	3	3	Unsure	1	Neutral	Uncomfortable	Comfortable	Very uncomfortable	3	Yes
6/14/2024 12:57:54	40	Male	India	Healthcare administrator	C	2	5	No	2	Comfortable	Neutral	Uncomfortable	Very uncomfortable	5	Yes
6/14/2024 13:33:09	41	Male	Italy	Consultant	B	2	5	No	2	Neutral	Neutral	Very uncomfortable	Very uncomfortable	5	Yes
6/14/2024 13:34:39	42	Male	Australia	IT professional	B	4	1	Yes	3	Comfortable	Neutral	Uncomfortable	Very uncomfortable	4	Yes
6/14/2024 13:42:23	39	Male	Brazil	Marketing Specialist	B	4	5	Unsure	3	Comfortable	Neutral	Uncomfortable	Very uncomfortable	5	Yes
6/14/2024 15:01:05	33	Male	Sweden	Front stack developer	B	5	2	Unsure	3	Neutral	Neutral	Uncomfortable	Very uncomfortable	5	Yes
6/14/2024 15:40:59	40	Female	Canada	Graphic designer	C	2	5	No	2	Neutral	Uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
6/15/2024 7:42:30	23	Female	France	Student	C	4	4	No	3	Neutral	Uncomfortable	Very uncomfortable	Very uncomfortable	5	No
15/06/2024 10:30:33	25	Female	Canada	Civil engineer	C	2	5	Unsure	3	Comfortable	Neutral	Uncomfortable	Very uncomfortable	5	Yes

6/15/2024 12:53:07	39	Male	Brazil	Digital Marketing Specialist	B	3	5	Unsure	3	Comfortable	Neutral	Uncomfortable	Very uncomfortable	5	Yes
6/15/2024 15:00:17	41	Female	Australia	Police	C	2	3	Unsure	3	Uncomfortable	Uncomfortable	Very uncomfortable	Very uncomfortable	3	Yes
6/15/2024 17:54:04	22	Male	France	Project Manager	B	2	3	Yes	3	Very uncomfortable	Uncomfortable	Uncomfortable	Uncomfortable	2	Yes
6/15/2024 17:57:08	45	Male	Brazil	Civil Engineer	C	3	3	Unsure	3	Comfortable	Neutral	Uncomfortable	Very uncomfortable	5	Yes
6/15/2024 18:26:03	39	Female	UK	Healthcare Administrator	C	2	5	No	2	Neutral	Uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
6/15/2024 19:34:21	29	Male	Canada	HR Manager	B	2	5	Unsure	2	Comfortable	Neutral	Uncomfortable	Very uncomfortable	5	Yes
6/16/2024 1:35:21	23	Female	France	Dog Groomer	C	2	4	No	2	Neutral	Uncomfortable	Uncomfortable	Very uncomfortable	5	Yes
6/16/2024 3:42:30	22	Female	France	Student	C	2	2	No	1	Neutral	Neutral	Neutral	Very uncomfortable	3	Yes
6/16/2024 4:00:37	43	Female	US	Consultant	B	3	5	Unsure	3	Comfortable	Neutral	Uncomfortable	Very uncomfortable	5	Yes
6/16/2024 4:55:54	38	Female	Japan	Sales director	B	4	3	Unsure	4	Comfortable	Neutral	Neutral	Uncomfortable	5	Yes
6/16/2024 6:57:36	46	Male	Spain	Marketing Director	B	3	4	Unsure	3	Comfortable	Neutral	Uncomfortable	Very uncomfortable	5	Yes
6/16/2024 7:45:35	22	Female	France	Student	C	1	5	No	1	Uncomfortable	Very uncomfortable	Neutral	Very uncomfortable	5	Yes
6/16/2024 8:39:46	38	Male	Italy	IT Consultant	B	4	3	Yes	4	Comfortable	Neutral	Comfortable	Neutral	4	No
6/16/2024 11:03:06	42	Male	UK	Senior marketing manager	B	4	3	No	4	Comfortable	Neutral	Uncomfortable	Uncomfortable	4	No
6/16/2024 11:03:06	21	Female	France	Student	C	1	4	No	1	Uncomfortable	Uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
6/16/2024 13:21:16	39	Male	Germany	Software Developer	B	4	2	Yes	4	Comfortable	Neutral	Neutral	Uncomfortable	5	No
6/16/2024 14:24:34	35	Male	US	Software Developer	B	4	2	Unsure	4	Comfortable	Neutral	Neutral	Neutral	5	Yes
6/16/2024 16:38:59	24	Female	France	Student	C	3	1	No	1	Neutral	Uncomfortable	Uncomfortable	Very uncomfortable	5	Yes
6/16/2024 17:20:06	33	Male	Germany	Fiancial Analyst	B	4	1	Unsure	4	Uncomfortable	Very uncomfortable	Uncomfortable	Very uncomfortable	4	No
6/16/2024 17:55:37	31	Female	France	Teacher	C	2	5	No	3	Neutral	Neutral	Neutral	Uncomfortable	5	Yes

6/16/2024 17:57:36	23	Female	China	Unemployed	C	3	5	No	2	Neutral	Neutral	Uncomfortable	Very uncomfortable	5	Yes
6/16/2024 18:14:08	22	Female	Sweden	Student	C	3	4	Unsure	1	Very uncomfortable	Very uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
6/16/2024 18:38:31	38	Male	Spain	Financial Analyst	B	3	5	Unsure	3	Comfortable	Neutral	Uncomfortable	Very uncomfortable	5	Yes
6/16/2024 18:59:04	36	Non-binary	India	Marketing Consultant	B	2	5	No	2	Neutral	Uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
6/16/2024 19:35:17	45	Male	Canada	Risk Analyst	B	5	1	No	4	Comfortable	Comfortable	Neutral	Uncomfortable	4	No
6/16/2024 20:23:06	21	Female	Malaysia	Student	C	2	3	No	3	Neutral	Uncomfortable	Uncomfortable	Very uncomfortable	3	Yes
6/16/2024 20:50:40	45	Male	South Africa	Journalist	C	3	5	Unsure	2	Comfortable	Neutral	Uncomfortable	Very uncomfortable	5	Yes
6/16/2024 21:59:09	25	Male	France	Student	C	4	3	Yes	4	Neutral	Uncomfortable	Uncomfortable	Uncomfortable	3	No
6/16/2024 22:31:06	24	Female	Spain	Student	C	3	4	Unsure	1	Uncomfortable	Uncomfortable	Uncomfortable	Uncomfortable	4	Yes
6/16/2024 23:02:21	22	Male	France	Student	C	4	4	No	1	Uncomfortable	Uncomfortable	Uncomfortable	Uncomfortable	3	Yes
6/17/2024 12:27:35	39	Male	UK	Data analyst	B	4	3	Yes	4	Comfortable	Neutral	Neutral	Neutral	5	No
6/17/2024 12:38:26	25	Female	France	student	C	3	4	No	2	Comfortable	Uncomfortable	Uncomfortable	Very uncomfortable	5	Yes
6/17/2024 13:03:23	38	Male	India	HR Manager	B	3	5	No	2	Comfortable	Neutral	Uncomfortable	Very uncomfortable	5	Yes
6/17/2024 13:59:42	26	Female	UK	Student	C	1	5	No	2	Comfortable	Uncomfortable	Uncomfortable	Very uncomfortable	5	Unsure
6/17/2024 15:10:33	31	Female	France	Intern in advertising	B	2	5	Unsure	1	Comfortable	Very uncomfortable	Neutral	Very uncomfortable	5	Yes
6/17/2024 15:36:06	29	Female	Australia	Teacher	C	3	5	No	1	Comfortable	Comfortable	Comfortable	Very comfortable	5	Yes
6/17/2024 17:33:24	38	Male	Canada	Software Engineer	B	3	2	Unsure	3	Comfortable	Neutral	Uncomfortable	Very uncomfortable	5	No
6/17/2024 17:38:44	31	Male	US	Architect	C	2	4	No	2	Neutral	Uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
6/17/2024 17:47:42	24	Female	France	Student	C	3	4	No	1	Uncomfortable	Very uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
6/17/2024 19:03:24	26	Male	UK	Product Marketing	B	3	4	No	1	Uncomfortable	Very uncomfortable	Uncomfortable	Uncomfortable	1	No
6/18/2024 8:43:55	26	Female	France	Student	C	3	2	No	3	Uncomfortable	Uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes

6/18/2024 11:29:06	43	Male	Japan	Software Developer	B	4	2	Yes	4	Comfortable	Neutral	Uncomfortable	Uncomfortable	5	No
6/18/2024 13:03:49	16	Female	France	Unemployed	C	2	2	No	3	Uncomfortable	Uncomfortable	Uncomfortable	Uncomfortable	2	Yes
6/18/2024 13:32:45	31	Male	US	GENERAL MANAGER	B	4	3	Yes	3	Comfortable	Very comfortable	Comfortable	Very uncomfortable	4	Yes
6/18/2024 13:45:39	40	Male	US	Teacher	C	3	4	Unsure	2	Comfortable	Neutral	Uncomfortable	Very uncomfortable	5	Yes
6/18/2024 13:52:38	38	Male	US	COO at a startup	B	5	2	No	3	Very comfortable	Comfortable	Neutral	Uncomfortable	5	No
6/18/2024 15:02:03	28	Male	US	Marketer	B	2	5	No	1	Neutral	Uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
18/06/2024 17:37:17	29	Female	UK	Product Manager	B	3	4	No	2	Neutral	Uncomfortable	Uncomfortable	Uncomfortable	4	Yes
6/18/2024 21:14:43	23	Female	US	Student	C	3	3	Unsure	2	Neutral	Neutral	Neutral	Neutral	3	Unsure
6/18/2024 21:42:18	25	Female	Canada	Student	C	1	2	No	1	Uncomfortable	Uncomfortable	Uncomfortable	Neutral	3	Yes
6/19/2024 7:05:58	27	Female	US	Business Analyst	B	4	3	Unsure	4	Neutral	Neutral	Uncomfortable	Uncomfortable	5	Yes
6/19/2024 17:29:58	24	Male	UK	Student	C	3	4	No	1	Very uncomfortable	Very uncomfortable	Very uncomfortable	Very uncomfortable	3	Unsure
6/20/2024 11:31:56	39	Male	UK	Financial analyst	B	3	5	Unsure	2	Comfortable	Neutral	Uncomfortable	Very uncomfortable	5	Yes
6/20/2024 13:07:29	25	Female	France	Student	C	4	3	Yes	2	Uncomfortable	Neutral	Comfortable	Very uncomfortable	5	Yes
6/20/2024 13:30:01	38	Male	US	HR	B	4	3	No	2	Neutral	Neutral	Neutral	Very uncomfortable	5	Yes
6/21/2024 12:29:39	40	Male	US	Marketing Director	B	3	5	Unsure	3	Comfortable	Neutral	Uncomfortable	Very uncomfortable	4	Yes
6/21/2024 13:13:15	39	Male	UK	Financial Analyst	B	3	5	Unsure	3	Neutral	Uncomfortable	Very uncomfortable	Very uncomfortable	4	Yes
6/21/2024 14:35:41	41	Male	Canada	Software engineer	B	3	2	Unsure	3	Comfortable	Neutral	Uncomfortable	Very uncomfortable	5	Unsure
6/21/2024 14:57:32	38	Male	Canada	Public transportation supervisor	C	2	5	No	2	Comfortable	Neutral	Uncomfortable	Very uncomfortable	5	Unsure
6/21/2024 15:11:21	27	Female	Italy	Journalist	C	2	5	No	1	Uncomfortable	Very uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
6/22/2024 11:25:52	44	Male	Canada	Lawyer	C	2	4	No	2	Neutral	Uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
6/22/2024 11:27:07	41	Male	Germany	Marketing Manager	B	3	5	Unsure	3	Comfortable	Neutral	Uncomfortable	Very uncomfortable	5	Yes

6/22/2024 11:30:40	42	Male	US	Graphic designer	C	2	5	No	2	Neutral	Uncomfortable	Very uncomfortable	Very uncomfortable	5	Unsure
6/22/2024 11:33:39	40	Male	Australia	HR Manager	B	3	4	No	3	Neutral	Uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
6/22/2024 12:59:15	39	Male	Japan	Software engineer	B	4	2	Unsure	4	Comfortable	Neutral	Uncomfortable	Very uncomfortable	5	Yes
6/22/2024 13:00:44	39	Male	US	Marketer	B	2	5	No	2	Neutral	Uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
6/22/2024 13:28:45	40	Male	Spain	Data scientist	B	5	2	No	4	Neutral	Neutral	Uncomfortable	Very uncomfortable	4	Yes
6/22/2024 13:43:55	39	Male	China	Small business owner	B	4	2	Yes	4	Comfortable	Comfortable	Neutral	Neutral	2	No
6/22/2024 14:45:50	38	Female	Australia	Librarian	C	2	5	No	2	Neutral	Uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
6/22/2024 14:49:05	40	Female	UK	Police officer	C	2	5	No	2	Neutral	Uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
6/22/2024 14:51:53	41	Male	Germany	Business Development	B	4	3	No	4	Neutral	Uncomfortable	Uncomfortable	Very uncomfortable	4	Yes
6/22/2024 14:56:06	38	Female	Japan	Teacher	C	2	5	No	2	Neutral	Uncomfortable	Very uncomfortable	Very uncomfortable	5	Yes
6/22/2024 15:03:52	42	Male	Germany	Credit Analyst	B	3	2	Unsure	3	Comfortable	Neutral	Uncomfortable	Very uncomfortable	5	Yes
6/22/2024 15:11:50	40	Female	US	Project Manager	B	5	2	No	4	Neutral	Neutral	Uncomfortable	Very uncomfortable	5	Yes