UHASSELT

KNOWLEDGE IN ACTION

Faculty of Business Economics

Master of Management

Master's thesis

Bridging the Gap Between AI and Strategy. The Impact of Artificial Intelligence on Segmentation, Targeting and Positioning.

Thibeau Smit

Thesis presented in fulfillment of the requirements for the degree of Master of Management, specialization Strategy and Innovation Management

SUPERVISOR :

Prof. dr. Pieter PAUWELS

2022
2023

UHASSELT

KNOWLEDGE IN ACTION

www.uhasselt.be
Universiteit Hasselt
Campus Hasselt:
Martelarenlaan 42 | 3500 Hasselt
Campus Diepenbeek:
Agoralaan Gebouw D | 3590 Diepenbeek

UHASSELT

KNOWLEDGE IN ACTION

Faculty of Business Economics

Master of Management

Master's thesis

Bridging the Gap Between AI and Strategy. The Impact of Artificial Intelligence on Segmentation, Targeting and Positioning.

Thibeau Smit

Thesis presented in fulfillment of the requirements for the degree of Master of Management, specialization Strategy and Innovation Management

SUPERVISOR :

Prof. dr. Pieter PAUWELS

Preface

This dissertation aims to obtain the degree of Master of Management: Strategy and Innovation Management at Hasselt University.

As part of this research, I had the opportunity to explore two areas of interest, AI and strategic marketing. With this research, I sought to bridge this gap and examine AI's impact on STP and strategic marketing in general. Other essential factors are assessed, such as the marketing discipline implications, best practices and ethical considerations. While researching this topic, the findings can contribute to the growing body of literature regarding AI in marketing and facilitate the attainment of the technology's full potential. This way, I can address the relevance and significance of AI-based technologies as they become increasingly important to the marketing discipline, marketing professionals, and companies.

In addition, I would like to thank several people who helped me throughout this research. First of all, I would like to thank my supervisor Prof. Dr. Pieter Pauwels, for his excellent guidance, help and feedback during the writing of this study. Next, I would also like to thank the nine experts who participated in the study. Finally, I want to express my gratitude to my family, partner and fellow students for their support during my studies at Hasselt University.

Thibeau Smit

Dilsen-Stokkem, June 2023

Executive Summary

Artificial intelligence (AI) is omnipresent. The literature demonstrates that AI quickly becomes prevalent in everyday and professional life. These rapid advancements in AI have significantly impacted many industries, including marketing. Numerous organisations have already implemented AI to improve the effectiveness and efficiency of their marketing processes. This led to AI-based technologies becoming facilitators and innovators in most companies and industries. However, with the current AI's significant impact on marketing, there is still limited research on its impact on STP (Stone et al., 2020). This research aims to bridge the gap between AI and strategic marketing by exploring the impact of this technology on Segmentation, Targeting and Positioning (STP). In doing so, the implications for the discipline, best practices and considerations are assessed. To achieve this objective, the research question of this study is as follows: "What is the impact of AI-based technologies on STP?".

Nine semi-structured in-depth interviews were conducted with a heterogeneous group of marketing and AI experts to answer this research question. The content of these interviews, based on the manual coding of 81 transcribed pages, is analysed in this dissertation's findings and discussions section, which attempts to answer the stated research question. Several measures were taken to ensure the findings' reliability, accurate display, and internal validity.

Findings

The interviewed expert verified and expressed the significant impact of AI on daily life, but more importantly, marketing and the STP process. This study demonstrated that AI significantly affects STP's very nature, increasing the efficiency and accuracy of marketing efforts. Additionally, this profound AI-induced transformation will seriously alter the roles and responsibilities of marketing professionals. However, it is essential to recognise and address related challenges and limitations to effectively leverage AI's full potential ethically and lawfully.

AI's impact on the STP can be divided into different categories. First, this research demonstrates that AI significantly impacts the very nature of STP. The key impact here is dynamic marketing, where AI continuously collects and analyses vast amounts of behavioural and profile data to consider the STP a continuous process. This evolution means the STP process becomes self-learning and connects to real-time customer behaviour. This approach eliminates the gap between analytics and customer behaviour and allows for better understanding, segmentation, and targeting. This shift to a dynamic and automated approach to STP completely transforms its well-known traditional approach.

The impact of AI on STP can also be discussed in terms of increased efficiency and effectiveness. AI impacts STP and other marketing processes by increasing efficiency and effectiveness. As previously mentioned, AI-induced real-time dynamic marketing is able to increase efficiency and accuracy. This modern approach to STP enables marketing professionals to adapt their STP strategy continuously and create an enhanced customer-centricity.

Furthermore, implementing AI in the STP process leads to hyper-personalisation at a large scale. This results in an improved one-to-one marketing strategy in which every customer can be considered an individual and separate segment. Experts shared examples of churn prediction and reduction of the implementation of AI. AI can also process extensive data sets, making it well-suited for discovering patterns in large amounts of customer, behavioural or market data. This allows marketers to make better, faster, evidence-based decisions regarding the STP process.

Overall, this research demonstrates that Artificial Intelligence significantly impacts STP. It transforms its very nature, making it an optimised automatic, ongoing, and continuous process. It lets companies and marketing professionals create more with less effort, time, and resources. It generally enhances efficiency and accuracy. AI allows for an evidence-based approach to hyper-personal one-to-one and dynamic marketing. However, humans must still check and add empathy, experience, and the human touch in this process. According to the experts, positioning still requires considerable human touch or input.

This research demonstrates that AI's impact on STP exceeds these enhanced marketing approaches. AI additionally provides marketing tools and techniques, such as predictive analytics, recommendations, enhanced productivity, marketing automation and chatbots/virtual assistants. These advanced technologies leverage and optimise the STP process, resulting in an improved customer-centric and evidence-based STP process and increased efficiency in marketing activities in general.

These AI applications show the variety and scope in which these tools can enhance STP and marketing processes. AI impacts marketing by increasing efficiency, accuracy and customer understanding; it can even act as a decision facilitator. However, the basic marketing principles will remain the same, and how they are fulfilled will alter. AI is not a cure-all for every marketing context. Human touch, empathy and strategic decision-making are still required to make customers feel unique.

The ever-evolving technological advancements and the indisputable impact of AI on STP are apparent. Nevertheless, the profound transformation ushered in by AI extends beyond STP, significantly shaping the roles and responsibilities of marketing professionals. Despite the growing fear of job displacement, this research shows that human marketing professionals remain necessary in most marketing processes. AI will not completely replace or eliminate marketing professionals for several reasons. First, AI lacks creativity and empathy, essential qualities enabling marketing professionals to have a deep understanding and relationship with customers and develop effective strategies.

Moreover, since AI is not a legal entity, it cannot be held responsible for potentially harmful outcomes. Last, AI can act as a decision facilitator, not a decision-maker. As a decision facilitator, AI supports marketing professionals in making informed decisions. To conclude, the role of marketing professionals remains invaluable as it provides human qualities and strategic insight essential for successful marketing performances.

Although marketing professionals remain essential, their role and responsibility will evolve due to the implementation of AI-based technologies. Experts were not sure how this would unfold. However, except for a primary data and AI understanding, the experts discussed a potential separation of technical and creative/strategic marketing professionals. On the one hand, a technically skilled marketer with an exceptional understanding of AI and the ability to train, monitor and explain AI models. On the other hand, a creative and strategic-driven marketer is needed to leverage the benefits AI provides.

To provide a complete overview of AI's impact on STP and strategic marketing, it is crucial to explore the limitations and challenges. The first challenge is algorithmic or ethical bias. These biases often occur because of pre-existing human bias, unadjusted weights or outdated data sets. Data privacy issues are also critical, given the ethical and legal aspects of collecting and employing customer data. A third challenge is the responsibility issue. Since AI is not a legal entity, it is unclear who is responsible for the harmful consequences of AI-driven (marketing) decisions.

Moreover, the lack of transparency and explainability will hinder customers' trust and acceptance of AI in marketing processes. As mentioned above, AI lacks empathy, affecting customer interaction, engagement and marketing effectiveness. Lastly, limitations such as high costs, difficulties scaling, and complexity are further limitations worth considering. In conclusion, it is vital to acknowledge and address these challenges and limitations to exploit AI's full potential ethically and legally soundly.

Contributions to the marketing field

This research provides in-depth understanding into the impact of AI on STP and strategic marketing, including discipline implications, best practices and limitations. The dissertation additionally highlights the impact of AI on the marketing discipline, demonstrating how marketers face new challenges and responsibilities. Potential challenges, biases and limitations of this transformation are identified while addressing possible approaches to tackle them. This research adds to the existing body of knowledge on AI and marketing. However, it provides new valuable insights into AI's impact on STP for academics and marketing professionals. The findings provide a basis for further discussion and research on the evolving role of AI in strategic marketing and its disciplinary implications.

Critical considerations

Several limitations were identified during this study that may have affected the interpretation and generalisability of the results, such as selection or interpretation bias, time and budget constraints, focused scope and limitations regarding qualitative research. Additionally, several future research avenues can be explored to gain a more in-depth and overall understanding of the impact of AI on STP. These include a quantitative research approach to test the found theoretical concepts. Additionally, a more concentrated approach on individual AI technologies, STP strategies or different industries might be worth exploring. Lastly, Comprehensive legal, technical or practical studies regarding this topic might leverage the findings of this research.

Table of Contents

1. Introduction

Artificial Intelligence (AI) is omnipresent. In nearly every aspect of everyday life, AI facilitates or replaces humans. Imagining life without using search engines, social media, and streaming services seems impossible. From morning to night, AI supports humans in their daily routine, leisure or working activities. It demonstrates the power and importance of technologies such as and related to AI (Bye, 2022). Syam & Sharma (2018) define Artificial Intelligence as a technology that imitates the cognitive functions humans attribute to the mind, including the ability to solve problems and learn. This means that AI does certain activities that would typically require human intelligence. Accenture's AI definition states that multiple technologies enable computers to sense, comprehend, act, and learn, including machine learning, deep learning, knowledge representation and computational intelligence (Awalegaonkar, Berkey, Douglass & Reilly, 2019).

The rapid advancements in AI have significantly impacted many industries, including marketing. Many organisations have already leveraged AI to improve the effectiveness and efficiency of several aspects of their marketing processes. This research aims to explore the gap between AI and strategic marketing by examining the implications of this technology on Segmentation, Targeting and Positioning (STP), a fundamental aspect of strategic marketing. In doing so, the discipline implications, best practices and considerations are assessed.

Today's work culture and business environment are transforming with the implementation of innovations such as Artificial Intelligence. AI is successfully implemented in various companies, business models, and industries and is widely used in different stages of business operations (Shabbir & Anwer, 2018). Countless well-established companies, such as Amazon, Meta, and IBM, use AI in their core competencies, business models and processes. Additionally, AI is used in various industries, such as healthcare, finance, and retail (Colorado State University Global, 2021). AI-based technologies have become facilitators and innovators in most large companies and industries.

However, according to Stone et al. (2020), there is still little to no research into applying AI to strategic marketing or decision-making. The authors insist on the pressing necessity for extensive research, demonstrating AI's advantages and applications to strategic marketers and decision-makers while warning them of the potential implications and considerations. Additional experts continue by repeating the lack of research on AI in IMS and validating the potential of AI in strategic marketing. The authors believe in the potential of using AI in the STP process (Duan, Edwards, & Dwivedi, 2019; Verma, Sharma, Deb, & Maitra, 2021).

This research seeks to bridge this gap by exploring the impact of AI on the STP process and strategic marketing in general. The impact on the marketing discipline and the marketers will be examined. To ensure comprehensive and fair research, the potential biases, challenges, and limitations of this impact will be explored. This objective will be achieved through an extensive literature review and qualitative research structured as nine expert interviews.

The literature review provides an extensive overview of AI and its associated challenges. Subsequently, AI's role and impact will be demonstrated by applying a funnel-like approach, starting with AI's impact on business and going over to STP. Along this report, case studies and best practices are shared in the boxes. This literature review will follow a chapter on the methodology, a presentation, and a discussion of the findings.

To achieve the research objective, comprehensive qualitative research was conducted. This qualitative research design gathers insights and perspectives from AI and strategic marketing experts. Nine semi-structured expert interviews were conducted. A heterogeneous group of experts and semi-structured interviews enable the research to collect a broader range of perspectives focused on each industry to structure this into accurate findings. The experts were meticulously and precisely selected, while every interview entailed extensive preparation, analysis, and a tailored approach to benefit from the interview and this research thoroughly. Subsequently, a systematic coding process was used to analyse the data from the expert interviews. This coding process will help to structure the data. Multiple measures were taken to ensure this research's reliability, accuracy, and internal validity. The expert interviews will be precisely transcribed, coded and analysed. All these individual efforts resulted in a comprehensive and in-depth analysis of the qualitative research findings.

The following research question (and sub-questions) were established to complete this research:

- Research question: What is the impact of AI-based technologies on STP?
    - Sub-question 1: How are AI-based technologies transforming the marketing discipline and its principles?
    - Sub-question 2: How will AI-based technologies impact or eliminate the role of marketing professionals in the future?
    - Sub-question 3: How can Artificial Intelligence-induced biases and challenges be mitigated or prevented in developing and deploying AI-based technologies?

This report contributes to the expanding literature on the interplay between AI and strategic marketing. By examining the impact of AI on STP and exploring the discipline implications, best practices, and ethical considerations, this research attempts to provide theoretical and practical insights. These insights are addressed to marketing professionals and companies to leverage AI-based technologies to improve their marketing efforts while valuing the technology's responsibility and ethical use.

2. Literature review

In recent years, rapid advances in Artificial Intelligence (AI) have sparked significant changes in various aspects of business processes. This transformation has not only impacted traditional functions within management and marketing but has also profoundly changed strategic marketing processes. This literature review aims to explore the multifaceted impact of AI on the STP process using a systematic funnel approach. First, an overview of AI, highlighting its various technologies and applications is provided. Then, the impact of AI on management, marketing, strategic marketing, and ultimately STP is shared. Throughout this literature review, relevant case studies and best practices are integrated in the boxes below to provide a thorough breakdown of the topic.

2.1 AI Overview

Artificial Intelligence (AI) is ubiquitous as applications are employed in practically all industries, products, or services (Bye, 2022). AI is referred to as a computational model that uses several technologies to imitative human cognitive functions. AI algorithms and applications can execute specific tasks that typically required human intelligence, such as the ability to solve problems and self-learn, but also more general abilities like acting, sensing, and comprehending (Awalegaonkar et al., 2019; Syam & Sharma, 2018). Henceforward, a combination of these technologies will be referred to as AI or AI-based technologies. In conclusion, AI is an umbrella term for several technologies and applications, which will be discussed further in the next sections.

2.1.1 Machine learning

The first technique of AI is machine learning. This approach imitates human intelligence by learning from environmental elements. Machine learning algorithms learn from context and generalise it to unprecedented tasks. These algorithms have been successfully applied to diverse fields ranging from pattern recognition and computer vision to business intelligence (El Naqa & Murphy, 2015).

An example of machine learning is using a supervised learning algorithm to train a system to classify email messages as spam or non-spam based on a labelled dataset of email messages. The systems were trained on a dataset of email messages labelled either spam or non-spam and learned to identify patterns and features in the data indicative of spam emails. Once trained, the system could classify new, unseen email messages as spam or non-spam based on its learned patterns and features (Russell & Norvig, 2010).

2.1.2 Deep learning

Another approach to AI is called deep learning, which involves using neural networks to analyse and interpret data (Goodfellow, Bengio, & Courville, 2016). Neural networks are similar to the structure and functions of the human brain and consist of layers of interconnected nodes that process and transmit information. Deep learning algorithms use these neural networks to learn and adapt to new data, making them particularly effective for tasks such as image and speech recognition (Goodfellow et al., 2016).

An example of deep learning is using a convolutional neural network (CNN) to detect and classify objects instantaneously (LeCun, Bengio, & Hinton, 2015). Gu et al. (2018) clarify a CNN as a deep learning approach inspired by living creatures' natural visual perception techniques. It can be trained to detect and classify objects such as cars, pedestrians, and traffic signs in video streams from a self-driving car to identify them in real-time as the car drives around. This information could then guide the car's movements and make decisions about navigating its environment (LeCun et al., 2015).

2.1.3 Symbolic AI

Symbolic Artificial Intelligence (classical AI or good old-fashioned AI) is an approach to AI that involves using explicit, rule-based systems to represent and manipulate knowledge (Nilsson, 1986). In symbolic AI, knowledge is represented in symbols, such as words or numbers. The system uses rules and logical reasoning to manipulate and use this knowledge to solve problems or make decisions.

An example of symbolic AI is using a Decision Support System (DSS) to assist decision-making (Gorry & Scott Morton, 1971). A set of rules and knowledge about the decision-making process would first be compiled and encoded into the system to create a DSS for business decision-making. Once this is done, it can assist decision-making by providing relevant information and recommendations based on rules and knowledge about the decision-making process (Gorry & Scott Morton, 1971).

Deep learning, machine learning, and symbolic AI account for the three main Artificial Intelligence systems. However, they are not the only approaches. Several other approaches to AI include evolutionary computation, swarm intelligence, and fuzzy logic (Kennedy & Eberhart, 1995; Zhang, 2003). Each approach has strengths and limitations, and the specific task at hand determines the selection of which approach to employ. The next section demonstrates Natural Language Processing, an across-the-board and well-known application combining several AI-based technologies.

2.1.4 Natural Language Processing (NLP)

Natural language processing (NLP) is an AI application of several AI-based technologies (mentioned previously) that has generated significant interest due to the recent maturation of comprehensive and easy-to-use tools, such as ChatGPT. This evolution has sparked a wave of excitement and discussion concerning concrete AI applications. Chowdhary (2020) defined NLP as "a subfield of Artificial Intelligence that focuses on the interaction between humans and computers through natural language" (p. 603). NLP tools such as ChatGPT aim to facilitate communication and interaction between humans and AI by enabling it to understand, analyse and generate human language (Brown et al., 2020; Madotto et al., 2020). Well-known applications of NLP in marketing are chatbots and virtual assistants that use this technology to understand and generate text (Adamopoulou & Moussiades, 2020).

Natural language processing and other applications like chatbots are the only tip of the iceberg. There are several potential functions for AI, including in strategic marketing. However, the development of AI-based technologies raises biased and ethical considerations, such as algorithmic bias, privacy concerns or job displacement. The following part discusses these biases, challenges, and other risks.

2.2 Artificial Intelligence – Limitations

In the era of continuous technological advances, Artificial Intelligence (AI) offers promising opportunities for marketing and the STP process. However, it is important to be aware of the limitations, challenges, and biases of AI in these contexts. This section of the master thesis explores the various limitations and challenges associated with the use of AI, with specific attention to their potential impact on management decisions, marketing strategies and the STP process. Through critical analysis of the literature and integration of relevant empirical evidence, the complex nature of these issues is highlighted.

2.2.1 Biases

AI is progressively applied in marketing and business, yet it is pivotal to be conscious of the biases that these systems may compromise. Biases in Artificial Intelligence refer to the tendency of AI algorithms and systems to produce misleading or discriminatory results (Bolukbasi et al., 2016). The most common include algorithmic bias, which can result in ethical issues.

Algorithmic bias occurs, according to Panch, Mattie & Atun (2019), when an algorithm amplifies existing imbalances in socioeconomic position, ethnicity, religion, gender, or sexual orientation; and has a negative influence on the equity of results in industries such as healthcare. In layman's terms, Algorithmic bias occurs when an Artificial Intelligence system makes decisions or predictions that are unfairly biased against certain groups of people. This can happen if the data that the AI-based system is trained on is representative of only some of the population or if the system is programmed with certain assumptions that are not fair or accurate.

This bias can also be translated to marketing, as researchers Akter, Dwivedi, Sajib, Biswas, Bandara & Michael (2022) suggest that "in marketing practices, algorithmic bias may privilege or disadvantage a specific group of customers by considering personal characteristics such as gender, sexual orientation, religion or race" (p. 6). It could influence marketing models, data, and methods. Wan, Misra & McAuley (2020) demonstrate that the training and interactions between humans and AI can cause 'algorithmic marketing bias'. As mentioned, AI provides personalised product recommendations. AI algorithms can provide these recommendations by uncovering customer interaction patterns. However, the wrong selection of specific marketing models can cause a misrepresentation of particular customer groups. Next, a practical case study on this theoretical overview can be found in the box below.

Case Study: AI racial and gender inequality
(Kambria, 2019)

The facial recognition algorithms developed by Microsoft, IBM and Megvii all had biases when assessing people's gender. These AI algorithms could better recognise the gender of white men than the gender of men with darker skin. Similar to the previous example, Amazon's decision to stop using AI for the recruitment process showed that the technology could not be fair because the algorithm favoured male applicants over female ones. This was since Amazon's system was trained on data gathered over a 10-year period, most of which came from male candidates.

As mentioned, AI requires the input and collection of vast amounts of data. The internet, smartphones and surveillance cameras have made collecting personal and private data more accessible. By now, it is possible to track customers' every step, online and offline. Even though having access to users' personal (often private) data allows AI systems to function more effectively, there are significant ethical risks involved with this kind of data collection. Among the most serious issues is the use of data for unintended purposes. Users are commonly oblivious or ignorant of how and when their information is treated, used, and even sold (Bartneck, Lütge, Wagner, & Welsh, 2021).

2.2.2 Risks and Challenges

The first challenges that will be addressed are operational challenges during the employment of Artificial intelligence. According to Puntoni, Reczek, Giesler & Botti (2021), marketing professionals face three significant *operational challenges* when using Artificial Intelligence. These are *incomprehensibility, disconnection, and vulnerability*. First, the issue with incomprehensibility is that AI enables marketers to have unprecedented knowledge about large-scale hidden consumer patterns, but it also obscures fundamental insights about consumer behaviour (Puntoni et al., 2021). Rai (2020) adds that marketing professionals generally have little familiarity with AI algorithms and their decisions. Often AI based-technologies and their algorithms are inscrutable and hard to explain. This inhibits users' trust and can ultimately lead to the rejection of these promising systems. AI recognises patterns in massive amounts of customer data excellently and quickly, allowing a detailed strategy forecasting of user engagement, sales, or interaction. However, the insights provided by AI are fundamentally different from those that traditional marketing is based on or is used to. These solutions (including all taken actions) must be explainable and transparent to all parties involved.

Case Study: Netflix’s unexplainable one-hitter
(Puntoni et al., 2021)

Recently, one of Netflix's digital marketing chiefs addressed a group of professors and students at the University of Southern California. He described how Netflix had achieved unprecedented success in promoting one of its television shows by combining machine learning with rapid-fire A/B testing and programmatic advertising buys on Facebook. However, when he discussed it with his Facebook advertising contacts, he discovered they could not explain how the AI had accomplished these results. Furthermore, similar AI-based advertising buys for other television shows produced inconsistent results, none reaching the first. The AI's inability to accomplish similar results was not explicable.

The other two operational challenges are disconnection and vulnerability. Artificial intelligence tends to increase marketing effectiveness, automation, and the number of touchpoints. However, it reduces customer interaction, resulting in fewer opportunities to build relationships, communities, and loyalty. This can result in disconnection from stakeholders. Vulnerability is the third and last operational challenge. Marketers' growing use of AI creates power imbalances and puts them at risk of algorithm changes or errors, as explained in part 2.2.1. The more a business depends on platforms, AI, or algorithms, the more vulnerable it becomes to changes that may harm it (Puntoni et al., 2021).

Case Study: Little Things
(Puntoni et al., 2021)

In 2018, the women's lifestyle magazine Little Things was affected by a modification to Facebook's algorithm designed to prioritise content from friends and family. The changes reduced the company's paid and organic traffic by 75%. Little Things shut down after scapegoating the modification of the renewed algorithm.

The advancements in Artificial Intelligence entail several security and privacy concerns. These concerns are considered the second main challenge of AI in strategic marketing. AI relies on extensive big data, including personal or sensitive information. Tucker (2018) states that to use AI algorithms in strategy and decision-making, there is a significant necessity for transparency and oversight of ethical and privacy considerations. Individuals’ consent is required to prevent violating privacy rights. According to Ye & Li (2020), AI technologies such as chatbots and virtual assistants show vulnerabilities regarding security and privacy. These limitations and the lack of comprehensive legal standards must be addressed as these tools are considered increasingly important.

In industries such as Healthcare, where AI is increasingly employed and sensitive data is required, patient data and ethical boundaries must be protected. That is why Bartoletti (2019) stresses the importance of building a trustworthy relationship with AI. The author suggests measures such as clear roadmaps, impact assessments and governance.

Oseni, Moustafa, Janicke, Liu, Tari, & Vasilakos (2021) additionally point out the risk of adversarial cyberattacks on AI-based technologies, which can lead to data leaks or data abuse, among other things. Despite these profound ethical considerations, AI is often an enabler for improved privacy and security in industries such as banking or finance (Gupta, Tanwar, Al-Turjman, Italiya, Nauman, & Kim, 2020). However, the previously stated considerations indicate the lack (and subsequently the necessity) of a clear legal and governance framework.

The last challenge that will be touched upon is the concern of job displacement. The increasing importance of AI generates a trade-off between the jobs that will disappear and the creation of new jobs by AI. AI-based technologies can automate many industrial and other human labour-intensive industries leading to job displacement, according to Howard (2019). However, Wilson, Daugherty & Bianzino (2017) state that Artificial Intelligence will also generate new jobs. The authors referred to these new jobs as trainers, explainers, and sustainers. A skilled group of individuals who can train, explain, and sustain AI-based technologies to integrate into organisations successfully will be required. In part 3, the empirical research, the possible implication of this transformation in the marketing discipline and profession will be further examined.

2.2.3 How can these AI biases be mitigated?

The current view on bias and AI is primarily based on the concept that AI carries biases that may have negative repercussions. However, bias is a human construct that may be conveyed to AI-based technologies and magnified throughout systems (IAB, 2021). This suggests that training AI on accurate and representative data can prevent all potential biases. Since AI-based technologies are not biased at their core. According to Manyika, Silberg, & Brittany Presten (2019), retaining up with the current AI research and advances is fundamental. It is also encouraged to adopt responsible AI deployment processes, such as using technological tools and operational practices. Examples of responsible AI processes when using operational practices are internal "red teams'' or third-party audits to avoid bias. Conducting fact-based conversations about potential human biases, such as algorithmic or ethical biases, alongside human decision-makers, and utilising explainability approaches to understand why results may differ might be advantageous.

Apart from the bad data, human bias and preconceived perceptions additionally cause unfair usage of AI. Research from Wang, Wang, Bian, Islam, Keya, Foulds, & Pan (2022) on debiased AI algorithms showed that fair and de-biased AI Algorithms may be insufficient for achieving its intended objectives in the current society. Despite, the better performing and fairer algorithm, the majority of respondents preferred the traditional biased algorithm as it aligned more with their current biased perceptions. This demonstrates that fair and unbiased AI-models is not enough on its own, the users should adapt accordingly.

Furthermore, considering how humans and robots might collaborate to eliminate prejudice, such as through human-in-the-loop techniques, might be beneficial. This technique entails humans being in control and informed. Investing more in research on bias in AI, including the availability of additional data and a multidisciplinary approach while preserving privacy, is also critical. Finally, investing more

in diversifying the AI field can be advantageous since a more varied community is better suited to predict, review, and spot prejudice and engage affected populations (Manyika, Silberg, & Brittany Presten, 2019).

Lastly, integrating a clear and definite legal framework is required. The European Union tried to establish a regulatory environment when proposing a legal framework in early 2021[1]. The framework seeks to protect individuals from harmful or discriminatory AI applications while fostering trust and innovation. Although this framework showed promising improvement, it might not be sufficient as it entails several limitations. First, the intersection between AI and cybersecurity is not addressed adequately. It might benefit from more transparency and the profound connection concerning safeguarding personal data while encouraging the development of AI-based technologies. Additionally, the proposed compliance costs and other requirements may be excessively costly or challenging for SMEs. This can result in the lack of scalability and easy-to-use AI-based solutions for smaller companies, enabling large corporations to monopolise these technologies. Because of the large scope of this framework, it might cause issues for start-ups and SMEs, discouraging AI research, development, and competition. Lastly, individuals and companies might benefit from coherent global regulations. Despite these limitations, this framework shows promise and commitment and may set the benchmark for international regulation (Andraško, Mesarčík, & Hamuľák, 2021; Kazim, Kerrigan, & Koshiyama, 2021).

Henceforth, this research paper will explore the implementation and impact of Artificial intelligence in STP. To achieve this, a funnel approach is employed. It begins with a broader comprehensive analysis of Artificial Intelligence in business, gradually narrowing down to AI's impact on STP and concluding with future implications.

2.3 Artificial Intelligence in Business

Iansiti and Lakhani (2020) posit that Artificial Intelligence (AI) alters business rules and generates new company opportunities. They argue that AI encompasses a variety of technologies which enable companies to process and analyse large amounts of data, automate tasks, and make predictions. The authors contend that AI is transforming business by creating opportunities for innovation, growth, and efficiency, as well as changing the nature of competition by allowing companies to differentiate themselves through data, analytics, and automation. Companies that effectively leverage AI will possess a competitive advantage in the marketplace, and the authors suggest that companies must leverage AI effectively to remain competitive (Iansiti & Lakhani, 2020).

Human Intelligence and Artificial Intelligence complement and leverage each other with their distinct abilities and strengths, creating a cohesive team to tackle any challenge. That is why, according to De Cremer & Kasparov (2021), the pressing query lies in the synergy between human intellect and Artificial Intelligence, culminating in augmented intelligence. The authors provide an example that clarifies this statement. Renowned chess Grandmaster and co-author Garry Kasparov acquired

[1] European proposal for a Regulation laying down harmonised rules on artificial intelligence: https://digital-strategy.ec.europa.eu/en/library/proposal-regulation-laying-down-harmonised-rules-artificial-intelligence

unprecedented insights after losing to IBM's Deep Blue chess model. He experimented with computer assistance and discovered that having the best players or AI technologies was less predictive of success than having a well-defined process that complemented both parts. To ensure the successful integration of AI, companies should manage expectations, foster teamwork, and refine processes (De Cremer & Kasparov, 2021).

As mentioned, Artificial Intelligence enables companies to automate tasks or assist humans internally or externally (Enholm, Papagiannidis, Mikalef, & Krogstie, 2022). Internal purposes refer to using AI to enhance internal business processes, such as decision-making or streamlining business processes in which customers have no direct contact with the AI. Using AI for external purposes entails using it in products and services with direct customer contact.

Case Study: internal use of Artificial Intelligence at Kimberly-Clark
(Marr, 2019)

Kimberly-Clark manufactures well-known care product brands worldwide, such as Huggies, Kleenex, and Scott. AI interprets the data collected and accumulated from customers and operational processes. The gathered data is being used at Kimberly-Clark to create accurate customer segments. These segments helped the company determine when and what customers wanted to buy. A significant opportunity gained from using AI is that Kimberly-Clark was able to precisely determine when a potential customer is or will be pregnant. It was shown that the earlier companies can communicate with pregnant customers, the faster and more customers would be loyal to the company for an extended period - the entire pregnancy and even long after.

Davenport & Ronanki (2018) reinforce the previous paragraph and state that AI can help support a company with three different needs. These are automating business processes (internal), gaining insight through data analysis (internal), and engaging with customers and employees (external). These three needs can be separated into internal and external business processes. First, process automation is one of the most employed applications of AI. By using Robotic Process Automation (RPA) technologies, companies outsource tasks such as transferring data or reviewing legal and contractual documents. This application is possibly the most affordable and easiest to implement, as it contains the least smart- or human intelligence.

Second, AI can support companies in gaining insight into large amounts of data. It can detect patterns in these large amounts of data and interpret them. Some applications include the prediction and identification of customers' needs. However, it can also assist in automating the personalised targeting of digital ads. Last and according to Davenport & Ronanki (2018), the only external application is engaging with customers and employees. Companies often use this to optimise communication with employees, more rarely to communicate with (potential) customers. Companies often adopt a conservative attitude when employing AI in customer interactions, mainly due to immaturity. Bad-performing AI-based tools can result in the opposite negative outcome (Davenport & Ronanki, 2018).

In the next part, the focus will be further narrowed down to the impact of Artificial Intelligence on marketing. The section examines the deployment of AI applications in marketing and how it impacts the discipline and its principles.

2.4 Artificial Intelligence in Marketing

According to Marinchak, Forrest, & Hoanca (2018), the dynamics between the customer and seller have fundamentally changed as marketers and customers concurrently adopt and embrace Artificial Intelligence. Social media marked a significant initial shift in marketing a decade ago. It changed the communication and interaction with customers. The importance of recommendations from friends, family, and others has never been greater. marketing professionals can no longer purchase customer interest and loyalty; companies must earn them. Although this transition has been substantial and quick, simultaneously, experts claim that the arrival of AI has ushered (and will usher) a considerably more significant impact. As marketers and customers start to fully exploit the services and benefits that AI applications provide, the nature and mechanisms of marketing are structurally changing (Refaat, 2017).

From a marketing strategy point of view, Artificial Intelligence is gaining increasing importance. Google, Spotify, and Under Armour are some of the increasing companies that are reinforcing their marketing activities and performance by implementing AI-based technologies (such as Microsoft Cognitive Services, Amazon Lex, or Google Assistant). This strategy enhances market prediction and automation, increasing consumer engagement across marketing channels. Several studies have demonstrated AI's capability to understand vast amounts of complex data and find patterns and insights, thereby supporting marketing professionals in taking strategic decisions and lowering churn (Vlačić, Corbo, e Silva, & Dabić, 2021).

As previously mentioned, Artificial Intelligence can also improve several marketing processes. The needs and wants of customers can be better understood when using AI-based technologies. One approach to this is possibly gathering more and better behavioural data using digital footprints (an example is Amazon's *anticipatory* shipping). Implementing AI allows this data to be analysed and interpreted quickly and accurately. These methods enable companies to understand customers better (Vlačić, Corbo, e Silva, & Dabić, 2021). Which ultimately also leverages other marketing processes, such as STP.

Case Study: Uber
(Marr, 2019)

Uber has been using AI-based technologies to boost its marketing operations. They distinguish customer segments based on how inclined they are to respond to specific marketing communications or promotional advertising. They can even identify a correlation between the frequency with which customers open messages or interact with Uber and how likely they are to unsubscribe to marketing efforts.

Furthermore, according to Huang & Rust (2021), implementing AI in marketing has revolutionised how businesses interact with customers. AI allows businesses to collect real-time, first-hand customer feedback about products or pricing, which can be used as an adaptive loop to improve the product or service continuously. Additionally, AI can revise prices by instantly detecting customer reactions to the offered price. The real-time nature of digital marketing makes automation ideal for various repetitive, routine, and data-intensive promotion functions, such as social media, scheduling, and purchasing. AI's dynamic and automated capabilities in marketing greatly aid marketers' efforts in the labour-intensive and always-evolving digital marketing environment.

Integrating AI-powered chatbots and virtual assistants has emerged as a promising method to enhance customer interaction, engagement, and satisfaction. Adamopoulou & Moussiades (2020) defined chatbots as "A computer program designed to simulate conversation with human users, especially over the internet" (P. 389). Chatbots utilise Natural Language Processing (NLP) technology to understand and generate text messages.

Chatbots provide several benefits to businesses. Firstly, they are created to impersonate human service and provide this service very effectively to an extensive scope at any given time. The provided service is quick, accurate and personalised. Furthermore, chatbots are designed to gather information and data, which helps improve the company's and its own performance. These characteristics enable significant savings while improving customer service (Adamopoulou & Moussiades, 2020; Nair, Johnson & Sathya, 2018).

All these new AI-based applications have severe implications for the marketing discipline, principles, and the human-computer relationship. After all, technological progress has become the driving force for economic progress (Ivanova, Holionko, Tverdushka, Olejarz, & Yakymchuk, 2019). For marketing professionals and marketing scholars to remain at the vanguard of their field in the face of technological development, and this impact on the marketing discipline and principles, they must prioritise the development of their skills, knowledge and experience across various domains (Krafft, Sajtos, & Haenlein, 2020).

In the next step in this funnel approach, the master dissertation will focus on the impact and implications of Artificial Intelligence on the STP process. This research aims to understand better how AI can execute the STP process more effectively and efficiently. Additionally, the implications of the very essence of STP will be studied.

2.5 Artificial Intelligence in STP

Traditionally, STP is the marketing process - entailing segmentation, targeting and segmentation - that involves dividing a market into smaller segments, selecting one or more segments to target, and developing a marketing mix that appeals to the chosen target segment(s) (Kotler & Keller, 2016). Since "companies cannot connect with all customers in large, broad, or diverse markets […] identifying and uniquely satisfying the right market segments are often the key to marketing success" (Kotler & Keller, 2016, p. 267).

In the first step, the market is divided into well-defined segments. A market segment contains customer groups sharing similar characteristics and needs. Common ways to divide a customer population are geographic, demographic, psychographic, or behavioural segmentation. After the first step, segmentation, the company has to decide how many and which segments to target. This is done in the second step, targeting. In the final step, positioning, companies decide how to design or adapt the communication to the targeted segments (Kotler & Keller, 2016). Positioning connects product qualities and customer value by identifying a competitively advantageous place for the product in customers' minds (Huang & Rust, 2021).

2.5.1 Current and emerging applications of AI in the STP

According to Huang & Rust's (2021) research, Artificial Intelligence is already employed in marketing strategy and the STP process. The first stage of this process, segmentation, relies highly on the marketer's intuition and domain knowledge. These marketing professionals must frequently choose from limited variables to segment the market. Customers are viewed as a group rather than individuals in this segmentation. Artificial Intelligence has the potential to make aggregate segmentation more personal and relatable. marketing professionals no longer need to decide on segments when using data mining because machine learning tools can discover patterns and choose optimally. A nearly infinite number of variables can be used to slice the market in novel ways that frequently go beyond any pattern that human marketers can see.

Second, marketers frequently use subjective judgement when targeting. This decision is based on specific resources, the firm's competitive advantage, and the segment's value to the firm. This results in a trade-off between the size of the segment and its effectiveness. In contrast, AI-based technologies can assist businesses by recommending the best (cluster of) segment(s) to target. AI allows segments to be completely personalised and highly efficient. This means that the market can be segmented in infinite ways, with each segment comprising only one customer. Because targeting entails identifying the right segments and deciding which segments to pursue. AI can help with this decision by predicting whether or not a segment will be pursued (Huang & Rust, 2021).

Lastly, positioning is about creating the right image, values, or benefits in the mind of customers, often associated with the brand or advertising. Evidence from Daabes & Karbat (2017) shows that several data mining techniques are used to optimise customer-based perceptual maps. Other research from Gali, Camprubi & Donaire (2017) demonstrates that AI-based technologies can create advertising campaigns, as they can better analyse what resonates with customers (Huang & Rust, 2021).

Case Study: The launch of the iPhone by Apple Inc. in 2007
(Kotler & Keller, 2012; Solomon & Stuart, 2013)

Segmentation: Apple segmented the mobile phone market before the launch of the iPhone by identifying a specific group of consumers who were interested in technology and willing to pay a premium price for an elevated, feature-rich phone. This group was distinguished by high income, education, and a willingness to embrace or adopt new technology.
Targeting: Apple then focused its marketing efforts on this specific segment of consumers, aiming to create excitement and anticipation for the iPhone's release. Apple used a variety of marketing channels to accomplish this, including traditional media such as television and print, as well as online marketing via social media and targeted ads.

Positioning: To set the iPhone apart, Apple positioned it as an elevated, feature-rich phone that was simple to use and provided an exceptional user experience. Apple even positioned the iPhone as a fashion accessory, emphasising its sleek design, which appealed to customers who valued style and design.

Ultimately, the success of Apple's iPhone launch demonstrates the importance of segmentation, targeting, and positioning in the STP process. Apple effectively launched and established the iPhone as a leading brand in the mobile phone market by identifying and targeting specific segments of consumers and positioning the iPhone in a way that resonated with those consumers (Kotler & Keller, 2012; Solomon & Stuart, 2013).

How could AI assist in the case of the iPhone? Could the result have been even more successful? Artificial intelligence (AI) could have benefited this campaign and its STP approach in various ways. AI enables companies to easily analyse large amounts of consumer behaviour and preferences data, such as social media, reviews, and e-commerce transactions, to identify patterns and trends. This allows marketers to respond adequately and swiftly. This AI approach of constantly gathering and analysing vast amounts of behavioural and profiling data allows companies to consider STP a continuously ongoing process. This way, the STP process is self-learning and real-time connection to the customers' behaviour. This technique removes the gap between analysis and customer behaviour.

2.5.2 Future application of AI in the STP

The burgeoning topic of the impact of Artificial Intelligence on strategic marketing (specifically STP) necessitates further rigorous academic and industry inquiry. Prior research demonstrates that AI can effectively act in ambiguous and data-intensive settings (Jenkins, 2021). Nevertheless, this study will further examine the future potential of AI in the STP process.

According to Huang & Rust (2021), AI’s opportunity to allow marketing professionals to use a continuous stream of real-time data will greatly impact the segmentation, targeting, and positioning (STP) process. There are many implications that this evolution holds. First, this continuous stream

of real-time and dynamic data swifts the STP process to an ongoing process. This means that the process becomes self-learning and instantaneously self-adapting. Furthermore, the authors state that AI allows companies to target customers individually, which leads to a newly improved one-to-one marketing strategy.

Additionally, Davenport, Guha, Grewal & Bressgott (2020) state that the ability to predict customer behaviour will play a significant role in determining the future scope of AI. The researchers illustrate that AI can predict the customer's behavioural traits and needs. However, AI is also expected to help companies with pricing and advertising decisions. The predictive ability of AI, driven by machine learning, has the potential to be an overall helpful tool in decision-making (Agrawal, Gans & Goldfarb, 2019).

The AI's predictive abilities can potentially help companies determine what prices to set and whether pricing promotions should be considered. Deciding the right price for a product or service is a high data and calculation-supported process that requires the consideration of multiple factors. This task is further complicated by adjusting real-time prices in response to demand fluctuations (Misra et al., 2019; Wisetsri, 2021). AI and machine learning algorithms enable companies to streamline this process.

Furthermore, the allocation of advertising resources can be revised as AI can assist in creating customer awareness, generating/analysing customer information and similar advertising activities. AI's predictive ability can likewise extrapolate these benefits to marketing strategy and the STP process (Davenport, Guha, Grewal & Bressgott, 2020). According to Huang and Rust's (2020) research, Artificial Intelligence (AI) can facilitate message personalisation and customisation by leveraging customer profiles and preferences.

As outlined in Wisetsri's (2021) research, AI has several other possible advantages to help during the STP process. AI can analyse buyer behavioural characteristics such as patterns, habits, purchases, and preferences (Chatterjee, Ghosh, Chaudhuri & Nguyen, 2019). Promising segments can be identified by employing text mining and machine learning (Dekimpe, 2020; Netzer et al., 2019; Pitt et al., 2020). Additionally, Artificial Intelligence technologies such as data optimisation processes, machine learning and causal inference can potentially help to constrict customer segments (Chen et al., 2020; Simester et al., 2020). These are just a few of AI's many potential applications and solutions in the STP process, strategic marketing, and decision-making.

2.6 Conclusion

Artificial Intelligence (AI) is revolutionising marketing, providing powerful AI tools for facilitating, developing and executing strategies. With its ability to assist with STP and determine a company's strategic direction, AI is invaluable in the modern business landscape. Its advanced data analysis capabilities are crucial in almost every aspect of marketing, automating and optimising key processes such as data collection, insights gathering, and customer engagement. By capturing user data in real-time, AI has the potential to provide better assistance and improve marketing performance (Jabeen, 2022; Huang & Rust, 2018).

Concluding, Artificial Intelligence's impact has several advantages and implications in STP. The main evolution to STP is the possibility to collect and analyse data automatically and in real-time. This causes the STP process to totally transform. This strategic marketing process can become an ongoing process in which marketing professionals can adapt the strategy continuously and accurately in real-time. Other advantages such as marketing automation and chatbots will additionally impact the marketing discipline and professionals.

In the empirical research, this study delves deeper into the displayed topics. The literature review will be augmented based on primary qualitative research, namely expert interviews. This research will further determine the impact of Artificial Intelligence on Segmentation, Positioning and Targeting. Furthermore, the implications on the marketing discipline and principles will be discussed as we further explore AI's boundaries. The next section extensively outlines the research methodology to answer the research questions while ensuring the gathered data's validity, accuracy, and reliability.

3. Methodology

This part of the research describes the methodology used in this qualitative research, examining the impact of Artificial Intelligence on Segmentation, Targeting, and Positioning (STP) and to what extent it will transform the marketing discipline. Semi-structured in-depth interviews will be conducted with experts from various disciplines and backgrounds, all related to AI and marketing. This empirical research additionally intends to determine how AI transforms companies' approach to the STP process, the implications for the marketing discipline and explore the potential biases and considerations.

3.1 Research question and design

This research seeks to bridge the gap between AI and strategic marketing by exploring the impact of this technology on STP. In doing so, the implications for the discipline, best practices and considerations are assessed. In order to achieve these objectives, this research will address the following research- and sub questions:

- Research question: What is the impact of AI-based technologies on STP?
    - Sub-question 1: How are AI-based technologies transforming the marketing discipline and its principles?
    - Sub-question 2: How will Artificial Intelligence impact or eliminate the role of marketing professionals in the future?
    - Sub-question 3: How can Artificial Intelligence-induced biases and challenges be mitigated or prevented in developing and deploying AI-based technologies?

This research is based on a qualitative research design that collects insights and perspectives from AI and strategic marketing experts. Contrary to quantitative research, qualitative research methods allow for exploring and understanding complex phenomena and nuances in the interviewees' natural habitat (Denzin & Lincoln, 2011). Qualitative research, particularly interviews, enables in-depth analysis of the expert's insights, perspectives, and experiences. It allows them to delve deeper into personal or delicate matters (De Jonckheere, 2019). The data collection and analysis will be explained in the next sections to ensure the gathered qualitative data's reliability, validity, and accuracy.

3.2 Data collection

In this process, nine expert interviews were conducted. This research benefits from a heterogenous group of experts. It provides a wide range of perspectives which increases the external validity. The experts were meticulously selected. Multiple criteria have been employed when deciding which experts to be interviewed. First, this research is believed to benefit from a combination and diversity of experts active in academia and experts active in applied fields of work (e.g., marketers and consultants). Furthermore, experts were selected based on their backgrounds and experience in marketing and data sciences. Nevertheless, all experts needed sufficient knowledge and experience in AI and marketing to ensure that these experts' insights were relevant and accurate.

Semi-structured interviews allow the researcher to collect open-ended and qualitative data required to answer the research questions in a versatile and accurate manner. It, furthermore, empowers reciprocity between the interviewer and interviewee. It enables the interviewer to devise relevant follow-up questions on the spot while at the same time giving the interviewee the flexibility and space to share their insights and experiences freely and exactly.

Every interview entailed extensive preparation, analysis, and a tailored approach to fully benefit from this interview style and the heterogeneous group of experts. Every interview was analysed individually before the next interview to see whether modifications were needed. The information received from the interviews will be systematically employed in the next steps of this research to find answers to the research questions (Kallio, Pietilä, Johnson, & Kangasniemi, 2016).

Prior to the interviews, the interviewees gave informed consent to conduct the interview and use the gathered data for predefined purposes. It was made clear that the interviews and responses were treated as highly confidential and anonymous. The names of the interviewees will be pseudonymised to maintain anonymity. At all times, vigilance will also be taken to ensure that no conflicts of interest, abuse or other issues occur during this study.

Table 1. *Selected Respondents*

Interviewee **1**	Strategic Advisor, Entrepreneur and Lecturer. Field of expertise in strategy, decision-making and management.
Interviewee **2**	Data strategist, consultant, and Lecturer. Field of expertise in AI, data-driven management, and digital transformation.
Interviewee **3**	Digital marketing author, lecturer, and influencer. Field of expertise in digital marketing and digital business, and digital culture.
Interviewee **4**	PhD and lecturer. Field of expertise in digital marketing, strategic marketing, and data-driven communication.
Interviewee **5**	Director Competence Centre BI, AI, Data and Analytics.
Interviewee **6**	Professor at Hasselt University, UGent and Warwick University. Field of expertise in AI, data science, Mathematics, and statistics.
Interviewee **7**	Professor at Hasselt University. Field of expertise in strategy and marketing.
Interviewee **8**	Professor at Hasselt University. Field of expertise in data mining, statistics, knowledge engineering and modelling. Extensive research conducted related to marketing.
Interviewee **9**	MSc In Digital Marketing and Entrepreneurship from Hasselt University. Founder of a marketing advisory and content creation start-up.

Table 2. *Overview Data Collection*

#	*Initials*	*Field of expertise*	*Date*
1	BDP	Innovation and Strategic Management	06/03/2023
2	JM	Data Strategist	16/03/2023
3	CW	Digital and Strategic Marketing	20/03/2023
4	GA	Digital and Strategic Marketing	31/03/2023
5	JJ	AI and Computer Science	03/04/2023
6	SRR	AI, Computer Science, and Math	03/04/2023
7	SLW	Digital and Strategic Marketing	03/04/2023
8	KV	AI and Computer Science	04/04/2023
9	LL	Digital and Strategic Marketing	28/05/2023

3.3 Data analysis

Data analysis of the interviews will be conducted using a systematic coding procedure that will help to structure the data, to subsequently result in a comprehensive and in-depth analysis of the experts' responses. The nine interviews collected 81 pages of transcripts and lasted 45 minutes on average. These transcripts can be found in the appendix. Charmaz (2008) argues that a reciprocal relationship is required between data collection, analysis, and theory building. This study achieved this by manually coding the data using three sequential strategies: open, axial, and selective coding. This created a constant data loop in which the researcher had to constantly compare data, reduce the data, and apply consolidation techniques. The employed coding procedures are further clarified in the following two sections.

This procedure will begin with an initial open coding of the data to identify key themes and concepts. The transcripts are scanned for similar words, phrases, and concept indicators to find initial recurring themes (Strauss, 1998). Next, these themes and concepts will be grouped into subcategories, which can be further coded and analysed. This will use an inductive approach to ensure that the analysis is based on the experts' responses rather than on predetermined categories and concepts. Following this procedure will ensure thorough data analysis and provide essential insights into the impact and role of AI on the STP stage in the marketing discipline. Finally, several selected core concepts from the previous phase will be integrated into coherent and indicative solutions to the research questions in the selective coding phase.

This last step is crucial as it is seen as an extension of axial coding, the previous step. It entails identifying shared patterns or themes across interviews, contributing to developing a theory and

answers to the predefined research questions. By employing selective coding, researchers can progressively enhance the specificity of the concepts, facilitating theory building. This method allows for synthesising and interpreting data from multifarious interviews or data points, leading to a more comprehensive understanding of the research findings (Flick, 2009; Williams & Moser, 2019).

Several measures will be taken to ensure the reliability, accurate display, and internal validity of the gathered data. The expert interviews will be precisely transcribed, coded and analysed. This enables a transparent evaluation of the consistency of the experts' responses and ensures the results' validity. In order to alleviate the subjectivity of the response, the semi-structured interviews were conducted in a neutral setting, and open questions without intent or bias were asked. The findings exhibited in the following section were coordinated with previous research to enhance the applicability of the results for further research and practical purposes. The findings are the factual results from the interviews and are divided per research question, and best practices are displayed in boxes.

Table 3. *Example of Open Coding*

Except 1. *Marketing expert talks about the impact of AI on STP.*	
AI needs data Big companies already and often use AI. Personalisation → one-to-one segmentation Consider every customer as a segment. AI can automatically collect and analysis data	"I think that AI needs data. And let's look at a lot of especially the bigger companies like Starbucks and Netflix. They have lots of data, and they already use this data to segment their markets, especially also regarding personalisation, which is actually segmenting, or one-to-one segmenting, so that you actually consider every customer as a separate segment. And this is also possible with data and AI. And also, how you collect this data can also be automatically done with AI. So I think that there are also possibilities to go even beyond just an automatic collection of data but also automatically analysing the data."
Human touch needed in targeting and positioning. Human Intelligence needed. No sign of this changing	"With regard to the other parts of STP, I think related to targeting and positioning, there's still more of a human touch needed. I think that especially strategically thinking about which segments to target and how to position your company or your brand is still, yes, human intelligence at the moment. And I think that that will be for quite some time.

Table 4. *Example of Selective Coding*

Except 1. *Marketing expert talks about the impact of AI on Segmentation.*	
One-to-one marketing	"You have, even in terms of the one-to-one marketing, that it can support marketers in choosing the right customers or the right segments to target."
Dynamic marketing *Data in real-time*	"dynamic segmentation means actually that you continuously gather data as supposed, maybe an example. Starbucks, for instance, it has data from customers using its app. So it can actually track how much people buy? What do they buy? how many times a week? what's the frequency? And actually, they can gather this data in real-time." "..."
Personalisation (at large scale)	"I think that it allows for personalisation at large scale."
One-to-one marketing *Personalisation*	"I think especially regarding like one-to-one, marketing, personalisation, a lot of things are happening. Especially larger companies are using it like Nike or what I said before, like Starbucks, Netflix, they use it in many ways."

4. Findings

This research seeks to explore the impact of AI-based technologies on the Segmentation, Targeting and Positioning (STP) process and, more generally, strategic marketing. This section, findings, discusses the factual results of nine expert interviews. The experts specialised in marketing and computer science, and the interviews focused on AI's implementation and transformative effect in STP. In addition, potential biases and challenges are discussed, and solutions are provided. The findings suggest that AI can contribute to more efficient and dynamic STP execution and can also help improve customer experience and pricing strategy development. However, it is essential to consider potential challenges, and human expertise remains necessary.

4.1 What is the impact of AI-based technologies on STP?

This dissertation explores the impact of AI on STP. In this context, two approaches are applied to answer the research question accurately. First, the implications of AI on the very nature of STP will be examined, looking at how the integration of AI can affect the fundamental essence of STP. Second, this research shifts to whether and how AI positively influences STP's effectiveness and efficiency. This focus on optimising STP processes using AI will help improve evidence-based and customer-centric strategic decision-making. This comprehensive exploration will provide insight into the potential shifts, challenges and opportunities associated with the rise of AI in the domain of STP.

4.1.1 How AI affects the very nature of STP?

The emergence of Artificial Intelligence (AI) significantly impacts the nature of segmentation, targeting and positioning (STP) within the field of strategic marketing. The key impact in this is dynamic segmentation, where AI continuously collects and analyses vast amounts of behavioural and profile data to consider the STP a continuous process. This evolution means the STP process becomes self-learning and connects to real-time customer behaviour. This approach eliminates the gap between analytics and customer behaviour and allows for better understanding and targeting. This shift to a more dynamic and automated approach to STP has implications for marketers planning and executing their campaigns. It also presents opportunities to improve the customer experience and create personalised marketing strategies. After that, the experts clarify how AI will perform the STP more efficiently and effectively. However, several benefits are related to this transformation of the essence of STP.

> *"Because this allows you to adapt in real-time. So your strategy would not be decided once a year or every four years even. And then slightly adapted once a year. It can now be adapted in theory, in real-time."* (3)

> *"It also allows for dynamic segmentation because by having new data, you can actually automatically change the segmentation or the profile you have from this specific customer and also adapt your communication to a set of customers."* (7)

"Dynamic segmentation means actually that you continuously gather data, maybe an example. Starbucks, for instance, it has data from customers using its app. So it can actually track how much people buy? What do they buy? how many times a week? what's the frequency? And actually, they can gather this data in real-time. And Starbucks can use it for dynamic segmentation and targeting, which actually means that because they have real-time data, they can actually dynamically adjust their segmentation and targeting." (7)

4.1.2 How can STP be executed more effectively and efficiently through AI?

According to experts, AI will significantly impact the very nature of the STP process, making it more efficient. An increase in effectivity was not generally agreed on. The specific context of companies and the need for more accurate documentation to train AI models might hinder increased overall effectiveness. The impact can be divided into increased efficiency and a real-time data and feedback loop, allowing STP to become dynamic and up-to-date. However, AI's impact will not be as significant on each step of the STP process. The structured data showed that the impact would be the most significant on segmentation and targeting and less on positioning. In that last step, human intelligence and (gut) feeling are still required and the primary resources. This section will begin to describe all three steps and end with the overall impact.

Generally, AI needs vast amounts of data. AI helps to automatically collect and analyse data for companies to optimise this process. This benefit benefits all three stages in the STP and marketing in general. However, the difference between regular data science and Artificial Intelligence is fundamental in these processes. Contrary to data science, AI is about smart representation, reasoning, and learning. It involves creating algorithms, models, and systems to understand, analyse and manipulate data. This ability allows AI to learn from past experiences and even make predictions for marketing decisions.

"There are differences. It is about representation, reasoning, and learning." (8)

In STP, data is crucial. It usually takes much effort to understand and identify the customer's behaviour and to know all the different types of customers. This process is long and tedious. Even though this process can be done based on manual human labour through experience and expertise, all experts agree that Artificial Intelligence is better equipped to execute this accurately and efficiently. It learns hidden patterns, gains insights, and maps out the profiles of customers in no time. It simply allows companies and marketing professionals to create more with less effort.

"The biggest benefit of AI on marketing is to create more with less effort. What do I mean by creating more as a marketeer? It takes a lot of effort to understand your customers and to know all the different types of customers. You can do it manually; you can have an idea about it. But face it, or not. Artificial Intelligence is better at that." (2)

"I guess the main advantage of AI could be that they actually recognise hidden patterns that marketers cannot see." (4)

In the next section, the impact of AI on each step of STP is reconsidered separately. The occurring biases and additional considerations concerning this development are demonstrated in section 4.4.

Segmentation

In this first step, the impact of AI is the most prominent, according to all experts. During segmentation, marketers split the market into segments with common needs and behaviour (Kotler & Keller, 2016). AI allows companies to personalise at a large scale. This improved personalisation establishes a new way of segmentation, i.e. dynamic segmentation. The segmentation can automatically and continuously adjust by leveraging the constantly updated and analysed data. AI enables the profiling of customers or assessing what phase of the customer journey the customer is in. This way, companies can personalise their content. Additionally, this empowered personalisation allows companies to target individual customers instead of segments. This results in an improved and renewed one-to-one segmentation.

> *"I think that it allows for personalisation at large scale."* (7)

> *"On what the AI is able to assess, from what phase in the customer journey they are in, for example, or what type of profile there is. So this is dynamic, personalised content and marketing on the fly."* (3)

Dynamic segmentation provides a continuous data and feedback loop that allows marketing professionals to understand customer behaviour and the customer journey better. Marketers can use these behavioural data to create dynamic, adjustable, and relevant segments while switching customers between different segments. Additionally, customer behaviour in previous campaigns can be leveraged to train AI models to predict customer behaviour in future campaigns. Dynamic segmentation enables marketers to adjust, for instance, segments, communication, or pricing in real-time and based on validated facts.

Additionally, AI can translate the traditional segments into numerous distinctive sub-segments or clusters. It creates hyper-personalisation at a large scale. This results in an improved and AI-powered one-to-one segmentation or marketing strategy in which every customer can be considered an individual and separate segment. Although scaling AI is complicated, the effects of accomplishing scalability are likewise a significant advantage in this segmentation approach. However, experts warned for over-personalisation. The challenge refers to the balance between personalisation and privacy, as excessive knowledge and AI-driven personalisation can cause potential discomfort and invasion of privacy.

> *"That is the hardest part, scaling it. So scaling AI should be part of your strategy. And you should have the right technologies to do that."* (2)

> *"It is very scalable, as well, if you use AI for segmentation. If you have data, your machine is learning a lot, and Artificial Intelligence is doing well, then you can also create more personalised offers and optimally use the machine."* (4)

> *"I think a big challenge here is over-personalisation. The issue here refers to the question, "How personalised can AI and companies become? If they know everything about you, it can become too personalised. It can be embarrassing, or you feel that it invades your privacy. That can become an issue."* (9)

AI provides an evidence-based foundation to determine segmentation decisions. Due to AI, the marketer's gut feeling, experience, and other typical criteria, such as the collection of basic customer data, will be less influential when deciding on, for instance, segment size, relevance, or accuracy. The experts warned that segmentation (as well as the other steps) should not be decided on assumptions about buying behaviour based on static data like age, gender, and place. This is an old-fashioned way of conducting this strategy. AI allows companies and marketing professionals to use real-time dynamics data, facts, preferences, and previous behaviour. An important consideration companies must make is that this approach requires vast amounts of accurate data. Without sufficient accurate data, this is not achievable.

> *"In the past, marketing was more about the gut feeling and what you think about being the best segment and now, with data and also with AI, it is more evidence-based."* (7)

Overall, the impact of AI on segmentation is significant. AI creates a more efficient customer-centric yet evidence-based approach in which small segments or clusters of individual customers can be modified continuously and in real-time. These hyper-personalised, adaptable, and relevant segments can be targeted with a hyper-personalised offering. This will be further demonstrated in the next sections.

> *"It's more customer centricity, as opposed to product centricity. And I actually think that marketing is already changed completely."* (6)

Targeting

In the second step of the STP process, marketers select the most attractive segments and develop a tailored marketing strategy to target this segment (Kotler & Keller, 2016). According to the questioned experts, AI can partially impact targeting to make the process more effective and efficient. Real-time dynamic targeting and AI's predictive abilities are some of the features that will assist marketing professionals in accurately targeting the right segments. AI additionally gives marketers an accurate analysis of the segment's relevance and size rather than relying on traditional criteria. Despite the advancements in the field of Artificial Intelligence, some degree of the marketer's gut feeling, experience and expertise is still required.

> *"Based on all the insights you have, the profiles of customers you have, even in terms of one-to-one marketing, it supports marketers in choosing the right customers or the right segments to target. But still, I think that it is a human decision."* (7)

Generally, AI is capable of processing extensive data sets, making it well-suited for discovering patterns in large amounts of customer, behavioural or market data. This allows marketers to make better evidence-based decisions regarding targeting. Moreover, AI can help connect the content of promotions and messages to specific segments, making targeting even more effective.

> *"AI is generally ever since the 1970s, very good is to work with very large data sets. So if you look at, for example, customer data or market data, very large data sets. AI is a lot better at humans seeing patterns in this sea of data and then also making recommendations based on these patterns."* (8)

Firstly, AI-powered dynamic segmentation from the previous section results accordingly in real-time and dynamic targeting. This approach allows marketing professionals to adapt their targeting strategy in real-time based on the continuous loop of data and feedback on, for instance, the attractivity of segments or customer profiles and behaviour. This suggests that the strategy is not decided once a year but can be continuously adapted in real-time. As mentioned, AI allows the development of hyper-personalised strategies as part of one-to-one marketing. This makes it possible to target everyone individually rather than as a group.

Additionally, AI's predictive abilities can help to analyse this customer behavioural data and identify patterns and trends. This can help marketing professionals to identify the most promising customer segments to target and develop targeted marketing campaigns that are more likely to succeed. AI has the potential to impact the strategy regarding re-targeting customers positively. However, the considerable and advantageous impact of these features, the ethical and legal consideration should be addressed to fully enable AI's potential.

> *"You can build models that will predict your behaviour. This is behavioural targeting."* (6)

> *"I think marketing should be careful in terms of legal standards. How are these behavioural targeting, affecting or biasing people towards buying more or buying less? To what extent it is actually ethical. So I think ethics are very important in marketing as well."* (6)

The combination of dynamic targeting and AI's predictive abilities allows companies to predict very accurately when the frequency of customers decreases. This allows marketers to re-think and re-target these customers with specific offerings or campaigns to restore the loyalty of these customers. Additional applications and implications of AI's predictive capabilities will be addressed section, 4.2.

> *"You can retarget this customer with specific offerings, like Starbucks or whatever, to get him back into a loyal customer."* (7)

All the experts agree that AI can play an important role in enhancing targeting efficiency and effectiveness. However, retaining the human factor at this stage is nevertheless vital. Besides a regular human check, human strategic gut feeling and experience are needed to decide what information should and should not be used in targeting. This implies that decisions are made by augmented intelligence, combining human and AI capabilities, rather than decisions being made completely and automatically by AI.

> *"I think it is more like augmented intelligence. So the fact that it will augment the decision and not be an automatic decision taken by AI. So I think there are some possibilities to have insight from AI that helps in the targeting phase. But it is more a combination of humans and computers."* (7)

Positioning

The last step in the STP process, positioning deals with creating a unique perception of a brand relative to its competitors. Marketing professionals employ the insights from the previously mentioned steps to create and communicate a clear and consistent brand message to the right targeted segments (Kotler & Keller, 2016). The experts all agree that Artificial Intelligence currently has little impact on positioning. It was unanimously acknowledged that this last step requires the most human input out of the three.

In positioning, human intelligence, ability and empathy remain the most essential resources, according to the experts. Positioning is recognised as the most strategy-intensive process, so it requires a higher level of strategic experience and proficiency, which AI currently lacks. As positioning requires direct customer communication and interaction, a high level of empathetic intelligence and soft skills are required. At a minimum, the experts believe that humans should consistently be in the loop to monitor and check outcomes. Finally, the experts doubt that AI will ever play a major role in positioning.

> "*I still believe that is the most human of the three steps. Because positioning is towards customers. So more empathy or empathic intelligence is important in that stage. At the moment, I do not really see a role for AI in that step.*" (7)

However, AI's wide pool of general benefits can still marginally benefit positioning as modern marketing requires data input. The ability to collect and analyse data provides marketing professionals with major support continuously and automatically. Additionally, AI's possibility to generate content and strategic suggestions offers marketing professionals benefits, although not as significant as in segmentation or targeting.

> *"On the level of content creation, as we see now happening since the past half year, months. A lot of content can be created as personalised, but even for target groups, much faster than it was in the past."* (5)

Overall impact

The experts all agree that Artificial Intelligence significantly impacts STP. It transforms its very nature, making it an optimised automatic, ongoing, and continuous process. It lets companies and marketing professionals create more with less effort, time, and resources. It generally enhances the efficiency and accuracy of this continuing strategic process. AI allows for an evidence-based approach to hyper-personal one-to-one and dynamic marketing. However, humans are still required to check and add empathy, experience, and the human touch in this process.

4.2 How are AI-based technologies transforming the marketing discipline and its principles?

As mentioned, Artificial Intelligence (AI) has significantly impacted several STP processes. This section will discuss the qualitative research findings concerning additional AI applications in strategic marketing related to STP. The future impact, role and considerations for marketing professionals will be examined in 4.2.1.

4.2.1 AI's predictive abilities

Artificial Intelligence (AI) in marketing is transforming the industry landscape. In particular, according to multiple experts, AI's predictive capabilities have a major impact on optimising marketing campaigns that lead to a higher return on investment (ROI). These predictive capabilities refer to AI analysing past experiences or historical data to apply it to new data and predict new behaviour or future events (Ngarambe, Yun & Santamouris, 2020).

> *"If I go to the domain of predictive analytics, I think also there, AI will make it easier for marketers to make better decisions to optimise marketing campaigns. So I think it will have a very good impact on the ROI of marketing campaigns."* (5)

Predicting customer behaviour is common practice in commercial settings. AI allows to segment and target customers based on their (previous) behaviour, preferences, and other characteristics. This enables personalised retention offers, hence countering churn. Moreover, AI-assisted predictive analytics can help with pricing strategies such as upselling and cross-selling in all areas, including marketing, finance, and health insurance. The qualitative data demonstrated some applications of AI's predictive capabilities discussed below.

> *"Predictive analytics can help to up-sell and cross-sell."* (5)

According to four experts, a major application of AI's predictive analytics is predicting churn, consequently increasing the retention rate. It can predict near perfectly if and when individual customers churn. AI can detect signals from customers that they might leave the company, triggering marketers to adjust their interactions with these customers. However, when the employed tools to decrease churn are not performing optimally, the data is inaccurate, or the customer service is unsatisfactory, this could, in turn, increase the churn significantly. The four experts cited that it

occasionally might not be bad if they leave as their return on investment may not be equivalent to other customers or expectations, for instance.

> *"I think AI is very powerful. On the other hand, it can also detect signals from your customer, for example, when will a customer leave your company? That is what we call churn prediction, detecting who will churn and who will not churn."* (2)

> *"With a probability of 98%, we can predict the churn. Then we can create personalised retention offers for customers to stay."* (5)
> *"If you use AI in the front line, like in the form of a robot, or chatbot, or whatever, and it is not performing well, it can actually increase churn."* (7)

Additionally, another useful application of AI's predictive capabilities demonstrated by three experts is precisely predicting the right price at certain times. Similarly to the STP process, AI allows companies to create a continuous automatic process that predicts and adjusts the price in real-time. Many of AI's potential benefits originate from gathering and analysing data in various ways or approaches. One of the approaches to gathering data online for predicting pricing strategies is web scraping. This procedure entails coding software such as Python to automatically 'scrape' or extract information from the web in real-time (Khder, 2021). This can be used to monitor customer or competitor behaviour and key trends. Combined with AI, this approach results in a continuous loop of real-time analysed data, which profits many business processes.

> *"You could do Web Scraping via programs such as Python, which actually gets information on competitors or trends from the web "..." Then also make use of AI to predict what could be the best pricing for you next week, and maybe in comparison to what could be the best pricing strategy within one month. Because with scraping, you can just get information in real-time from the web."* (4)

4.2.2 Recommendations

Tantamount to the predictive capabilities, AI's capacity for recommendations is widely recognised and an already employed advantage, potentially revolutionising marketing, and various other industries. The experts agreed on the significance of recommendations in marketing processes, such as STP. Recommendations refer to noticing patterns in data, such as preferences and choices, to generate personal recommendations and feedback for that customer or others with similar behaviour (Verma & Sharma, 2020). These AI models aim to make recommendations with a very high probability of success. These models use unstructured data from, for instance, digital cookies, social media, or buyer behaviour from e-commerce platforms to recommend customers. Further examples of applications are demonstrated in part 5, discussion.

"For instance, Spotify, where you have your discovery list that's also based on AI. It's mainly based on segmentation and targeting because they do not only use your data but maybe also people that have a similar profile as you and then suggest songs of people who are similar to you." (4)

"They compute certain probabilities for a certain event, and then they can recommend you a solution based on probabilities." (6)

"*The simplest or one simple recommender system that Amazon uses is when you buy one product, then at the bottom, before you pay, they tell you people who also bought this, and it recommends you two or three items. People that bought what you are buying also bought these items.*" (6)

4.2.3 Efficiency and Productivity

Furthermore, the experts separately described AI-based instruments to improve the efficiency and productivity of marketing departments. As mentioned, AI allows marketing professionals to create more with less effort, time, and resources. Multiple tools and applications have been mentioned, such as chatbots and virtual assistants aimed to enhance customer satisfaction, Natural Language Processing (NLP) tools and marketing automation applications. These applications will be further elaborated in the subsequent sections.

"I think as a marketing professional; all of these applications are mainly tools to increase productivity." (3)

"Marketers will work more efficiently. They will make the work more efficient and less costly for the company." (8)

Chatbots & virtual assistants

The experts unanimously agreed that chatbots and virtual assistants could significantly impact the marketing discipline. As stated in the literature review, Adamopoulou & Moussiades (2020) refer to chatbots as a program that generates conversation and personalised help with human users. Chatbots provide several benefits to businesses. The distinction between a chatbot and a virtual assistant is that chatbots are often limited to answering questions. The objective of virtual assistants is to assist customers related to every task, for instance, changing account numbers, transferring money, or buying stocks.

"*The goal was not to create a chatbot, which is a kind of question-and-answer machine. The goal is to create a virtual assistant where we assist customers in the actions related to whatever they need.*" (5)

Incorporating chatbots and virtual assistants is interesting for many companies or industries because many inquiries, requests or actions are often fairly similar. Before launching these tools, companies must train these models with sufficient scenarios, cases, and data. Then, due to AI, these tools can

single-handedly learn from past situations and apply them to future circumstances. The experts agree that improving customer interactions and satisfaction is a great method. When the robot does not deliver the desired result, it can always redirect the customer to the person in charge who can personally help in the traditional old-fashioned way. According to the experts in this field, a virtual assistant's end goal is that virtual assistants provide an advanced user experience that these digital tools suffice for interaction with companies.

> *"It might be interesting because most questions are quite similar. Then they can just learn from the past and make the AI systems smarter. That is also one of the advantages of a chatbot, I guess that people can be helped very soon. And if it is not the answer they need, they can still get in touch with someone real."* (4)

However, the undisputed advantages of chatbots and virtual assistants, implementing these technologies entail limitations and considerations, according to the questioned experts. First, these tools require accurate and sufficient data to be trained on and, later, extensive testing and checking. While some experts expect that the willingness to adopt is the biggest limitation of these tools. It generates frustration if it does not work optimally. When customers want to complain or have negative experiences, the poor performance of these can exacerbate these feelings. As mentioned, these digital tools' poor performance can also increase churn rather than tackle potential churners. Overall, context, empathy and human touch are still essential elements of customer interaction. In specific industries, such as healthcare, this is essential. However, even in these industries, experts believe these tools have a role.

> *"I think you need to be sure that the data that you use to train an AI model is like I said about context and giving the right context to an AI model."* (5)

> "The fact is that the context is really important, so it's not applicable or not usable in every context from a customer point of view. Because in some cases, customers just want to speak to a human with having human touch and empathy." (7)

<u>Natural Language Processing (NLP)</u>

As mentioned in the literature review, chatbots and virtual assistants operate on NLP technology to understand and generate output (Adamopoulou & Moussiades, 2020). The experts confirmed this but mentioned that this prevalent technology has several other applications in marketing. NLP is an AI domain that centres on the interplay of human-machine interaction. NLP tools such as ChatGPT seek to foster communication and interaction by understanding, evaluating, and generating natural language (Brown et al., 2020; Chowdhary, 2020; Madotto et al., 2020). NLP is an adequate illustration of AI's representation, reasoning, and learning.

In practice, NLP tools assist companies and marketing professionals with basic activities such as analysing sentiment or feedback, generating natural language for chatbots and creating dashboards. Additionally, these tools generate basic strategic output such as recommendations, objectives, and

business plans. It will, in general, facilitate marketers and middle managers to operate more efficiently. However, multiple experts doubted whether NLP tools could increase functional effectiveness and speed. This is largely due to AI's requirement for context to perform optimally in ambiguous and competitive corporate environments. AI requires unmistakable, descriptive textual documentation that trains the model on the company's specific context. Regardless, several experts believe significant advancements in NLP technologies can be expected.

> *"In my opinion, there will be a still bigger advanced step forward in time series analysis. And also in this natural language processing and ChatGPT."* (8)

> *"It can be used to analyse data. It can be used to analyse sentiment analysis. It can be used to make a dashboard for your sales figures, make a prediction of your sales figures, or make a prediction model. So it can help, let's say, the middle management, people who are marketing and with data to become much faster, less costly, and more efficient. More effectively, I do not believe in it. that is more difficult. Because the context of every company is different."* (8)

At some point, ChatGPT or equivalent NLP tools were mentioned during every expert interview. ChatGPT operates on a limited database of events after 2021. It gathers and analyses the daily interactions with the users to further expand its knowledge. Prominent search engines, such as Google and Bing, have currently also assembled their NPL tools, utilising a database and the internet. The possibilities with these tools are limitless. Unlike widespread tools like ChatGPT, marketing-specific tools use NLP to generate text, images, or designs. The experts declared several examples and concerns, such as bad data, hallucination, and ethical issues, which will be illustrated in section 4.3 biases and challenges.

> *"There are very specific tools for marketers as well."* (2)

An expert provided the example of employing AI-based technologies such as NLP as a strategic partner for affordable Guerrilla marketing strategies for start-ups or SMEs. Yüksekbilgili (2014) defined guerrilla marketing as "an advertising strategy, in which low-cost unconventional means are used, employs various techniques which keep costs at a minimum and is often adopted by small companies" (p1). The expert advised this strategy for smaller data-intensive businesses but low funds. AI helps by suggesting strategies, communication and concepts.

> *"I think the machine will be able to find a way to deduct a kind of new guerrilla strategy. You are a small scale-up. You do not have the money to go full force in the market. You need a guerrilla strategy. I think AI will also help in suggesting a kind of new guerrilla."* (1)

Marketing Automation

Artificial Intelligence (AI) significantly impacts the marketing discipline. Another advantage is the improvement of productivity and efficiency through AI-powered marketing automation. By incorporating AI, for instance, marketing professionals can implement tactics on the website and e-mail automation models. Experts exhibited visible results within three months, which can be used to evaluate the effectiveness of marketing strategies. Marketing automation also improved efficiency in sales support through lead scoring and better social media management. AI-powered marketing automation predominantly impacts routine, standard and repeatable activities (Rahman, Fauzi, Husain, Hassan, Kamaruzaman & Aziz, 2020). Previously illustrated chatbots are furthermore an application of marketing automation.

> *"On the level of marketing automation, scoring of leads, which will become easier, better social media management, which becomes easier, these kinds of things. The silver bullet to use AI, but it creates new opportunities, and it creates some speed, I think."* (5)

> *"I also use many technology examples in my class about customer experience, like, for instance, the use of robots and ultimate marketing automation in the front line."* (7)

While AI creates new opportunities and enables quicker more-efficient execution of tasks, it is not a cure-all for every marketing context. There is still a need for human touch and strategic decision-making to make customers feel special and unique. Applications such as AI-powered prediction, marketing automation, and chatbots will help to efficiently understand customer behaviour and act as decision facilitators. However, The basic marketing principles will remain the same, but how they are fulfilled will alter. There will be more focus on the technical and evidence-based aspects of marketing. The following section will discuss the impact of this evolution on the professionals in the marketing field.

> *"The basic marketing principles will stay the same, but the content will change."* (7)

4.3 How will AI impact or eliminate the role of marketing professionals in the future?

Sections 4.1 and 4.2 examined the significant impact of AI on STP and strategic marketing. These findings revealed several major advantages, such as processing large amounts of data, shifting segmentation and targeting into continuously adaptable and self-learning processes, and generating predictions and suggestions. This impact has evident repercussions for the marketer's future role and proficiencies. In this section, this impact will be discussed, as well as the implications of this transformation.

> *"You can segment customers in your lab environment and inspect whether those segments make sense or not. Then you use them in your real environment where it segments all your customers. But then you still have to have something that validates it. It's a human that validates it."* (2)

It was unanimously agreed that humans marketing professionals remain necessary in most marketing processes. The experts shared a variety of reasons for this statement. The primary reasons concern the responsibility for decision-making and harmful outcomes. AI is not a legal entity, and hence it is impossible to sue or hold AI accountable. As mentioned, AI can be a decision facilitator in most strategic marketing processes; however, it is not (yet) a decision-maker. AI-based tools and applications can generate suggestions or predictions, but marketing professionals must take responsibility and act on them.

> *"Because an AI is not a legal entity. You cannot sue an AI."* (3)

Humans are creative and emphatic, AI mimics it. If marketers were redundant, every company would operate and look similarly. AI-powered creativity tools can provide suggestions where the marketing professionals decides which to implement or provide prototypes marketers could refine. Additionally, AI lacks emotions, empathy and feelings. As mentioned, these affective phenomena are still required in certain situations, such as customer interactions. Overall, the experts agree that the job responsibilities and the human-computer relationship will evolve despite the apparent demand for marketing professionals in the future.

> *"AI mimics creativity, and a human is creative."* (2)

The experts disagreed with the potential implications of how this impact would unfold in practice. First, the experts were unsure if AI would result in direct job loss or displacement, as AI will create new jobs and change the content of the current marketer's positions. Additionally, The majority of experts agreed that as the marketing landscape continues to evolve, future marketing professionals will need to be well-versed in data, AI and related risks. They should additionally be able to incorporate specific AI-powered tools to achieve objectives.

> *"At least a basic understanding of AI and also about the risks related to AI, I think that is really important."* (5)

A common trend among most experts is that apart from a basic data understanding, there will be a separation in the specialisation of marketers. On the one hand, technically skilled marketing professionals with an outstanding understanding of AI and the ability to train, monitor and explain AI models with accurate and unbiased data. On the other hand, creative and strategic-driven marketing professionals are needed to leverage AI's advantages.

> *"I think a marketer can then work on the nicest part of creativity, how to create our brands, how to think about how we can make a difference with our competitors."* (2)

> *"I guess that most of the strategic work still will be done by a marketer, but the more technical things about data and having an overview of insights, creating reports, et cetera, that is for the AI."* (4)

"I think both have to be there. Maybe some need to go more to the strategic creativity part also there to feed, for instance, a model and to create very targeted content. But on the other hand, as you have to make the bridge to data as well, I think there need to be some marketers specialised in the data as well. And having both can help. I can imagine that discussion. Does it need to be a choice? Not sure. Multidisciplinary teams." (5)

"The technical roles of marketing will become more apparent in the next few years, and even decades" (7)

One expert suggested that marketers should evolve into AI whisperers. These are marketing professionals with technical, strategic and creative capabilities. They can adequately train AI models and fine-tune the weights to the current priorities and values later on. However, AI whisperers can also ask the right questions and incorporate suggestions. They should be able to evolve at the same rate as these technologies do.

"I think that colleges and universities should train their students to become AI whispers. That the people who are now marketing professionals should train themselves to become AI whispers." (3)

"AI whispers are professionals that are able to use AI-driven tools in order to increase productivity, but in the specific circumstances that I just described, these limits them have to work with less than they used to." (3)

4.4 How can AI-induced biases and challenges be mitigated or prevented in developing and deploying AI-based technologies?

Artificial Intelligence (AI) already significantly impacts the marketing discipline. It enables companies to change the very nature of the STP process, crunch vast amounts of data and make suggestions that can assist strategic marketing processes. However, the experts warn of AI-induced challenges, such as ethical and privacy considerations, explainability and transparency issues and scalability problems. This section will discuss the findings of the qualitative research regarding these implications. The experts agreed that assessing this technology's advantages and disadvantages is crucial to ensure that AI is used responsibly and effectively.

<u>Ethical bias</u>

The development and implementation of AI-based technologies have been shown to enhance efficiency and accuracy. However, the potential for these systems to unknowingly perpetuate and even exacerbate existing ethical biases emphasise the importance of addressing this issue, according to the experts. Multiple examples of ethical biases were discussed, such as the rejection of insurance or loan because of skin colour. The presence of ethnic bias in Artificial Intelligence and marketing is not just a technical concern but an ingrained societal challenge that requires thoughtful consideration of the process of how we design and employ AI in marketing.

> *"I think the most actual bias for me is a bit on the edge of ethics with AI or ethics in AI. For example, which group is over or under-represented in your data?"* (2)

AI does not cause biases; ethical bias is caused by training on unrepresentative, biased or outdated data. Humans play an essential role in this. First of all, these models require accurate input of accurate data. However, it is crucial to be aware that training these AI models is an ongoing process, and they may require frequent updates or even real-time adjustments. Later on, people involved should continuously monitor and surveil the processes and outcomes of these models. Implementing ethical experts could be beneficial in preventing these biases. Several experts stressed the importance of adding context and adjusting the weights within AI models and algorithms to the priorities and values of society. Additionally, the use of sufficient and authentic scenarios is crucial to prevent unethical outcomes.

> *"You train it on wrong and biased data. In practice, you see errors and costs caused by this biased data. Seeing whether your data presents what's actually happening in reality is extremely important."* (2)

> *"AI systems have weights in them, and weight can correct the way it prioritises some of the potential outputs."* (3)

> *"A first step that a company should take is, first of all, to have enough scenarios."* (4)

> *"We involve here as well ethical experts that feed the model."* (5)

> *"AI will only work if the data is correct. Otherwise, it will never work because there is no human or ethical check if something is wrong."* (7)

Additional ethical issues surface in communication, such as personal and sensitive information. AI tools delivering news regarding discreet matters such as job loss, bankruptcy or severe illness may still be a challenge for many people, who may not be emotionally prepared for such difficult conversations with machines. Further ethical concerns, such as data privacy and responsibility, are discussed in the next sections.

<u>Data privacy</u>

Guarding people's privacy is fundamental to the further growth of AI in marketing. As mentioned in the literature review and acknowledged by the experts, transparency, oversight, and consent are crucial to comply with ethical and privacy rights (Tucker, 2018). In Europe, a strict legal framework and GDPR regulations are already introduced. However, the experts agree this legal structure should be further sharpened and expanded. They additionally warned against AI freely using pictures without consent to generate deep fakes.

> *"We have to guard that we are not focusing too much on personalisation and less on privacy."* (7)

In order to execute several of AI's advantageous features, such as personalisation, prediction, and recommendation, continuous data gathering is required, often in the form of cookies. Aziz & Telang (2016) define a digital cookie as a small piece of code embedded in a website that places a unique identifier in a user's browser whenever they visit a particular advertiser's website (P. 6). These cookies track the individual's internet usage, providing information to give marketing related predictions or recommendations. The European legal framework implements several measures on how cookies are used and continuously forces companies to request consent. However, multiple experts cited that this might not be sufficient, as this still yields questionable practices, such as enforced cookies or difficult-to-reject consent statements.

> *"In Europe, there is a very good framework of data privacy, probably the most advanced in the world, and how cookies are being used and how they force people to accept cookies every time they want to go to a website because if you accept the usage of these cookies, they are basically tracking your use and your usage of the internet."* (6)

> *"It is not about the use of cookies. It is about the communication."* (8)

Experts shared that the ideal situation to counter these privacy constraints is that individuals manage their own data. This would demand considerable effort in hosting and managing this data. For this purpose, A futuristic concept was conveyed to introduce an AI-powered digital twin in a Minecraft-like world or a metaverse. Mystakidis (2022) referred to a metaverse as a virtual world that combines real and digital elements, creating a space for multiple users outside reality. It is equivalent to talking into a mirror where this digital twin, managed by its human counterpart, takes care of personal data. It has conversations on who gets access to the personal data. After all, the decisions remain with the human.

> *"The digital twin takes care of your data, and it crunches these data and makes recommendations. And then I would have a conversation with my twin every week."* (3)

<u>Responsibility issues</u>

Another ethical concern of AI's evolution is the responsibility and with whom it rests. "Who is responsible?" This a crucial consideration to analyse as AI is not a legal entity. AI-based technologies do not account for their ethical or juridical consequences. It is impossible to sue an AI when mistakes or illegal offences are made. It is unclear who has to pay the price whenever AI-based tools conduct or lead to harmful or illegal actions. Other ethical questions were discussed: "May AI be allowed to make decisions autonomously?", "What happens if AI goes Rogue?" and "Is AI allowed to kill?".

> *"Because AI is not a legal entity. You cannot sue AI. It is not a legal entity. Whenever something harmful happens because of what AI did, who's going to go to jail for that?"* (3)

Explainability and Transparency

Explainability and transparency are key in further progressing the significance of AI. The experts mentioned several marketing processes, such as predictive analytics or output generation, where it is often difficult to re-trace data or explain how it constructed the output. Understanding how AI algorithms devise decisions or what parameters determine, for instance, whether to provide someone with a loan, is often challenging. This can lead to distrust of AI. Lack of explainability and transparency can, according to the experts, result in the mentioned responsibility, legal or ethical issues. It can be difficult to re-trace the reason for the error or accountability if incorrect, unfair or discriminatory decisions are executed in an AI model.

> *"So good data is one part, interpreting what your model is doing with the data and the reasoning behind the model, the explainability, that is also still important."* (2)

> *"I think transparency is key."* (5)

> *"Data transparency about what you do, which data that you use, how it is used. It is very important."* (5)

Due to the development of easy-to-use NLP tools such as ChatGPT, a new issue regarding explainability and transparency has emerged, i.e. hallucination. This concern arises when AI-based tools generate output that is inaccurate or consistent with the truth but imagine presume or *hallucinate* output with misplaced confidence. Even when the generated output is factually correct, it exhibits 100% confidence. In order to continue developing, understanding how and why AI generates output is fundamental. According to the experts, even the creators of these tools, such as OpenAI, do not know where this specific information or inspiration originates. Currently, NLP tools like Bing provide solutions to this problem.

> *"The hallucination is still an issue. On the one hand, I have to admire creativity. But on the other hand, today, it might change, you know, in a year or so. AI's creative output always has 100% confidence. That is something that should change."* (3)

> *"I would like to add a parameter where it would say, how confident do you want me to be? How creative can I get? I already see this at Bing. So Bing has three modes, and you as a user have to define which mode you pick. So the responsibility is with you."* (3)

The experts provided several solutions to improve the transparency and explainability of AI's output. Firstly, it is essential to utilise unbiased and relevant data that can be traced back. The decision-making process must be contextually documented and communicated to all stakeholders. Lastly, AI developers and users must take accountability for the actions and consequences of the model. Understanding, explaining and evaluating the reason behind decisions is crucial for this. Several tools were mentioned in the desk and field research, such as audits, AB-testing, and visual dashboards, which can boost these solutions.

"Our models are audited very frequently." (5)

Additional Limitations

In addition to the challenges mentioned, like ethical biases and privacy, the lack of empathy, the high costs, and the scalability represented significant limitations for the questioned experts. Firstly, although AI is proficient at analysing data and performing specific tasks, they do not possess the ability to feel or show genuine empathy. This can be problematic when implementing AI tools in fields such as marketing and healthcare, where the ability to be emphatic when communicating with customers or patients is vital. Although, the recent launches of free and easy-to-use AI tools, made it possible for nearly everyone to AI's power, comprehensive AI models often are expensive to develop, implement and maintain. This limitation can be especially challenging for smaller companies that do not own the resources to make such investments. This could result in even higher entry costs or a larger gap between smaller and larger companies. It's still not sure whether the costs of these AI models will go down in the next couple of years as seen with other ground-breaking technological advancements. Lastly, scaling AI-based technologies will usually yield the full potential. However, it is often difficult to scale. This means that it can be difficult to scale the AI applications to different or more teams, tasks or industries, lacking unity between them.

"I think the biggest challenge that I see is that people start using AI, and it goes very fast in the early days. But scaling AI is difficult." (2)

"Because it is simply too expensive for smaller businesses." (4)

"Other limitations will also be on costs, for instance. Costs are increasing, we already see that with robotics in the hospitals at the moment." (5)

"The human is in the loop in the sense that we train the computers, they can come up with, let's say, better decisions. But the computer is not an entity with emotions and feelings like a human being. So many people try to compare human intelligence with Artificial Intelligence. They differ very much from each other." (6)

"I think the cost of AI will significantly, significantly go down in the future, and tools will be very accessible to small players as for big companies." (9)

5. Discussion

Researching AI's impact on STP, strategic marketing, and the discipline as a whole is a highly relevant and current topic. The literature review and qualitative research demonstrated that the emergence of AI transforms the nature of STP, increases overall efficiency, and changes the way marketing professionals operate. However, it is essential to understand and acknowledge the limits and challenges of AI to maximise its potential ethically. In this discussion section, the findings of this research are interpreted by providing context and meaning.

5.1 AI's Impact on STP

According to the literature review and the experts, the most significant impact of Artificial Intelligence (AI) on the Segmentation, Targeting, and Positioning (STP) process is creating a seamless, real-time, and automated data loop that automatically gathers and analyses the data. This data feedback loop enables companies to segment and target customers based on up-to-date information continuously and individually, establishing improved and hyper-personalised one-to-one marketing. Because of this evolution changes the nature of the traditional AI approach to a modern AI-powered dynamic STP. However, this AI-powered revolution requires accurate data, planning and technical proficiency to incorporate it into the STP process successfully. The following case study regarding dynamic STP was shared during interview 7.

Many large companies already collect and possess vast amounts of customer data. Starbucks, for instance, collects data from customers via its app. It can continuously track when, how, and what customer purchase and with what frequency. Starbucks can use this ongoing data loop to establish a dynamic and hyper-personalised STP process to adjust the strategy dynamically. Starbucks can switch users between segments, re-target leaving customers, or send specific individual offerings.

> *"It also allows for dynamic segmentation because by having new data, you can actually automatically change the segmentation or the profile you have from this specific customer and also adapt your communication to a set of customers."* (7)

AI additionally provides several benefits that can contribute to the STP process. It enables marketers to create more with less effort, time and cost. AI's predictive, data-analysis and recommendation capabilities, combined with AI applications such as NLP or virtual assistants, can help marketers leverage this technology. Generally, it enhances the efficiency of how marketing professionals utilise the provided resources. This newly increased efficiency of employed resources can tackle the recurring trend of low marketing budgets. Gartner's report, The State of Marketing Budgets and Strategy 2022 demonstrated that the marketing budgets have increased slightly for the first time in multiple years to 9.5% of total company revenue[2]. However, these numbers are still significantly lower than pre-pandemic (Paton, 2023). AI-powered marketing might be the solution to generate similar output or ROI with fewer resources, despite its current high initial and maintenance costs.

[2] Gartner's report, The State of Marketing Budgets and Strategy 2022: https://www.gartner.com/en/marketing/research/annual-cmo-spend-survey-research

"Marketing budgets usually are about 10% of the revenue of a company, this has been going on for 10-15 years, ever since I started measuring it. In October 2021, when the budgets were being decided for 2022. For the first time, this sunk to 6-8% globally in all industries. Then it happened again the year after, the budgets were cut." (3)

"I think AI will become cheaper as well because it can be built on already existing models. So, I think the costs will go down eventually. There will be a very high return on investment for businesses that implement AI right, even now with the high initial and maintenance costs." (9)

Despite the benefits and AI's significant impact on the first two stages of STP, positioning still requires mostly human attributes, according to experts. This was particularly new information that was not backed in the literature review or existing research. This demonstrates that apart from tasks regarding AI, strategising and decision-making, the marketer's social and human skills are still essential during the STP process.

"*I still believe that is the most human of the three steps. Because positioning is towards customers. So, more empathy or empathic intelligence is important in that stage. At the moment, I do not really see a role for AI in that step.*" (7)

During the interviews, multiple practical examples concerning (combinations of) AI applications were provided. One example was addressed regarding a combination of AI's predictive capabilities, web scraping and pricing strategy. Web scraping tools can be used to examine customers' behaviour and other related information online to establish an advanced predictive model. This AI model can predict the best pricing strategies for a specific day or time in the future. Furthermore, the customer behaviour from previous campaigns can be added to predict if the customer clicks a particular call-to-action button, orders or churns. These models can predict these objectives with an accuracy rate approaching 100%.

"… with a probability of 98%, we can predict the churn." (5)

In the qualitative research, multiple AI-powered tools and applications were provided which could assist marketing professionals. Firstly, Natural language processing (NLP) was mentioned several times. Tools such as ChatGPT, Dall E and Bing AI are commonly used and well-known among the general public. These tools have various purposes, such as engaging in conversations, analysing data, or providing suggestions. However, NLP technology is also employed in other tools like chatbots or virtual assistants. The technology is used to understand, analyse, and generate text. Lastly, Brandwatch and Social Listings were some other tools mentioned that could enhance strategic marketing processes.

> *"It ('NLP') can be used to analyse data. It can be used to analyse sentiment analysis. It can be used to make a dashboard for your sales figures, make a prediction of your sales figures, or make a prediction model. So, it can help, let's say, the middle management, people who are marketing and with data to become much faster, less costly, and more efficient."* (8)

> *"That allows you to use AI-powered social listening tools and monitor to see the content that competitors publish, for example, and the content you publish yourself."* (9)

The field of marketing is constantly transforming and adjusting. However, AI's profound impact and growing presence will influence every facet of the marketing discipline. Apart from the changes to the processes and implementation of AI-powered tools, the job content for marketing professionals will change. The literature demonstrated deep-rooted fear of job displacement and increasing layoffs. Nevertheless, all the experts reassured that marketing professionals are still demanded in the future. The experience and expertise combined with social and empathic skills are a requirement for the effective implementation of AI and marketing performance overall.

However, these marketers' job contents, capabilities and daily activities will change according to AI. Marketing professionals will need a basic understanding of AI and more technical capabilities. Understanding and explaining AI algorithms, solutions, or suggestions are required. Apart from these technical skills, strategic, creative, and social skills remain crucial in every marketing process. This transformation requires rethinking the educational tracks to provide either an improved understanding of data or a clear separation between technical and strategic, creative, and socially educated marketing professionals.

> *"I believe the marketers of the future will be the marketers that can implement AI efficiently in their strategies and make the process as seamless as possible. They have an in-depth understanding of the AI models and are able to explain the outcomes."* (9)

Conversely, this transformation might be more challenging for smaller companies with fewer resources or data. Selecting the right technical or marketing partners can prove critical for these companies. Similar considerations may hold for more experienced marketing professionals that are accustomed to traditional marketing techniques. This may also apply to less-technical adept marketers struggling with the analytical data requirements. However, technological evolution is not new and has driven economic progress (Ivanova, Holionko, Tverdushka, Olejarz, & Yakymchuk, 2019). people have adapted. Additionally, as mentioned, marketing still demands traditional strategic, creative, and social skills.

> *"That's my biggest advice. Make sure your technical partners are correct, because no company can handle this. You need a good partner."* (1)

5.2 AI-induced challenges

As discussed earlier, the integration of Artificial Intelligence (AI) in the field of marketing has revolutionised the way companies' approach STP and comparable strategic marketing processes. However, the increasing use of AI tools also generates challenges and limitations that must be addressed. This part of the discussion provides context to the fundamental limitations and challenges of AI that were discussed during the literature review and qualitative research. This covers bias, limitations and ethical considerations such as responsibility, privacy and discrimination. Companies and marketers need to be able to identify, prevent or resolve these challenges. This ensures that, eventually, effective strategies can be developed to maximise the benefits of AI and minimise its potential adverse effects.

This research confirms that ethical and discriminatory biases in AI are a severe concern. These problems must be addressed to ensure the integrity and fairness of AI systems. A fundamental challenge here is that many of these biases have their origins in human preconceived perceptions and biases. Multiple experts partially verified the research of Wang et al. (2022). To address this issue, the use of high-quality and unbiased data while training these AI models is crucial.

In addition, AI models must be continuously trained in real-time to ensure they continue delivering current and relevant results. In doing so, priorities should be adapted to the changing needs of society. In doing so, these models must be constantly monitored, possibly by an ethical expert or third party, to ensure an independent perspective. Moreover, there should always be human checks to verify the results of the AI model before they are released to the public. These measures can significantly reduce the likelihood of discriminatory and ethical biases in AI systems and increase trust in them.

Just recently, an esteemed member of Google's AI team, dubbed "the godfather of AI", resigned from his senior position to warn of AI's ethical dangers, stating that AI has profound risks to society and humanity (Metz, 2023). According to Geoffrey Hinton, significant issues include launching AI applications at dangerous speeds, unnecessary job displacement, and spreading misinformation or only the tip of the iceberg. Even Sam Altman, the founder of OpenAI and ChatGPT, was open regarding AI's dangers and responsibility issues (Ordonez, Dunn, & Noll, 2023).

> *"I think that makes, for example, Sam Altman, the CEO of open AI, very nervous because in our old regular legal system, it would be him because he's the CEO."* (3)

Nevertheless, when harm or negative consequences occur due to biases or limitations in AI models, it is crucial that those responsible take responsibility and take the necessary steps to resolve or prevent this from happening in the future. Only through accountability and responsibility can AI systems free of discriminatory and ethical biases be developed.

The Belgian newspaper La Libre recently shared an article which communicated that a Belgian individual committed suicide after an AI-based tool had strengthened his negative and suicidal thoughts. The chatbot allegedly went along with his negative thought patterns and even reinforced them. Additional immoral suggestions about suicide, heaven and sacrificing to save the planet and humanity were made. According to the founder, the chatbot had a problem, and they are trying to fix it in order to protect its other users better (Lovens, 2023). These narratives are morbid, avoidable, and immoral. However, this generates questions about who is responsible for the behaviour of this specific tool and the consequences. How do we make sure that this never happens again?

Similar to accountability, the importance of explainability, transparency and data privacy in AI cannot be overemphasised. As AI-based technologies become more dominant in society, trusting, and understanding their processes is essential. Lack of transparency and explainability can result in mistrust and suspicion, ultimately undermining AI's advantages. An expert shared an example of this. During loan negotiations, the employed AI algorithm showed limitations for certain cities or potential loanees. In this case, they were able to explain why the AI output was different as they used valid data, understood, and monitored every step closely. Although all these preventative measures, explaining AI decisions can still be challenging to individuals that are unfamiliar with these AI models. Lastly, the protection of data privacy is fundamental in acquiring trust and enabling further sustainable development. As mentioned in the literature review and acknowledged by the experts, explainability, transparency and privacy are crucial to comply with ethical and privacy rights.

A related issue is hallucination. This surfaces when Natural Language Processing (NLP) tools generate inaccurate output or misinformation. It hallucinates output with 100% confidence even though the output is incorrect. Misplaced confidence. According to the experts, a solution to tackle AI hallucination is adding an optional parameter to AI applications such as NLP tools. This way, users can determine how much the technologies are allowed to hallucinate. The responsibility is now with the users instead of the technology or its owner. The user authorises the technology the freedom to hallucinate. This feature is already available on the NLP tool of Bing.com. On Bing, there are three modes. One where the NLP is allowed to be very creative, overly confident, and hallucinate. The second is similar to a generic regular option. The last option is super fact and evidence-based and allows no hallucination. Nowadays, this last option also provides clickable sources and references used to generate the output. This way, users can check and modify the output accordingly.

Concluding, the combination of the resources and expertise required to create and monitor AI-based technologies, the high costs, difficulties scaling and additional costs to cope with all the mentioned challenges might obstruct start-ups and SMEs. This evolution allocates total power to multinationals and broadens the gap to (innovative) start-ups and smaller SMEs. Limiting the incentive for potential technological evolution steered by innovators and entrepreneurs. Overall, all these individual challenges demand thorough consideration and a further sharpened legal worldwide framework, providing guidelines on all levels, and dealing with all challenges. This might be the only obstacle to achieving AI’s full potential, via ethical and sustainable growth.

6. Conclusion

This master's dissertation explores the impact of Artificial Intelligence (AI) on strategic marketing and specifically on the Segmentation, Targeting and Positioning (STP) process. The literature review and empirical research findings provide important insights regarding AI's impact on the STP process. Challenges, limitations, discipline implications and best practices were added to provide a complete picture of the current and potential situation.

The study demonstrates that AI has a significant impact on the STP process. First and foremost, this research shows that the most profound impact is that AI facilitates a real-time data loop that automatically gathers and analyses data. This data feedback loop enables companies to segment and target customers based on up-to-date information continuously and individually, establishing AI-powered and hyper-personalised one-to-one marketing at a large scale. Additionally, AI provides new opportunities and improved efficiency in collecting and analysing behavioural data, identifying relevant market segments, and creating personalised marketing strategies. AI-driven technologies, such as machine learning and Natural Language Processing (NLP), enable companies to gain deeper insight into customer behaviour. This results in AI-induced techniques and tools such as predictions, recommendations, marketing automation, chatbots or virtual assistants.

However, despite AI's many benefits, using AI in the STP process also hold challenges and limitations. It is crucial to consider the algorithmic and ethical bias as AI-based technologies unknowingly perpetuate and even exacerbate existing biases or unadjusted weights. Responsibility, data privacy, explainability, and transparency are vital challenges that need to be monitored in order to progress the adoption of AI further. Due to the development of easy-to-use AI tools such as ChatGPT, new issues regarding these challenges have emerged, such as job displacement, harmful or ethical dangers and misinformation or hallucination. Despite that, the rise of affordable and easy-to-use technology has been a significant factor in the development of AI for the big public. However, the comprehensive adoption of AI tools still entails a large investment, additional costs, scaling challenges and technical expertise.

Practical Implications for marketing professionals

This research identified several practical implications for marketing professionals. AI provides significant benefits, such as increased efficiency and enhanced marketing processes resulting in this recent evolution. However, for marketing professionals to cope with this evolution and maximise AI's impact, investing in corresponding technical skills is essential. These technical and data skills are fundamental in training, monitoring, and explaining AI models. This way, marketers can leverage AI's benefits and prevent potential risks and biases. One expert referred to this phenomenon as marketers becoming AI Whisperers. Although, the marketer's creativity, strategic skills, experience, and gut feeling will remain undeniably crucial in AI-powered marketing strategies.

Contributions to the marketing field

This research provides in-depth understanding into the impact of AI on STP and strategic marketing, including discipline implications, best practices and limitations. The dissertation additionally highlights the impact of AI on the marketing discipline, demonstrating how marketers face new challenges and responsibilities. Potential challenges, biases and limitations of this transformation are identified while addressing possible approaches to tackle them. This research adds to the existing body of knowledge on AI and marketing. However, it provides new valuable insights into AI's impact on STP for academics and marketing professionals. The findings provide a basis for further discussion and research on the evolving role of AI in strategic marketing and its disciplinary implications.

Limitations

Several limitations were identified during this study that may affect the interpretation and generalisability of the results. First, there may be selection and interpretation bias. Selection bias refers to inaccurate research findings due to the potentially biased and non-random selection of interviewees. Additionally, interpretation biases refer to possible subjective interpretations and analyses of the gathered data, resulting in inaccurate findings. However, as mentioned in part 3, methodology, numerous measures were taken to ensure the data's reliability, validity, and accuracy. Secondly, time and budget constraints may have affected the scope and depth of the study. Moreover, limited generalisability may be a factor due to the focused scope of this particular research. Finally, qualitative research entails certain limitations, such as the need for more representative findings and the researcher's influence on the data collection and analysis.

Future research avenues

To gain a more in-depth and overall understanding of the impact of Artificial Intelligence on Segmentation, Targeting and positioning, several future research avenues can be explored. First, follow-up quantitative research might be very interesting to test the theoretical concepts found on a large scale. Hence, a more profound and statistically representative insight can be obtained into the impact of AI on the STP process. In addition, technical and legal studies may be essential to understand AI's technological and legal aspects in the STP process. This could further leverage the results of this research. Furthermore, the researcher believes that additional studies regarding the practical implications could be informative for marketing professionals. Researching the long-term effects of AI implementation and its impact on end users is also essential. Finally, other relevant research subjects may need to be explored that deserve further attention.

Finally, this research provides a deeper understanding of the impact of AI on the STP process and highlights the opportunities and challenges associated with its implementation. It is critical for companies to embrace the potential of AI while paying attention to its limitations and ethical implications. By building on these findings and potentially exploring proposed future research opportunities, a solid foundation is developed to further develop and innovate the marketing profession in the age of AI.

Literature List

Adamopoulou, E., & Moussiades, L. (2020). An overview of chatbot technology. In Artificial Intelligence Applications and Innovations: 16th IFIP WG 12.5 International Conference, AIAI 2020, Neos Marmaras, Greece, June 5–7, 2020, Proceedings, Part II 16 (pp. 373-383). Springer International Publishing.

Agrawal, A., Gans, J. S., & Goldfarb, A. (2019). Artificial intelligence: the ambiguous labor market impact of automating prediction. Journal of Economic Perspectives, 33(2), 31-50.

Akter, S., Dwivedi, Y. K., Sajib, S., Biswas, K., Bandara, R. J., & Michael, K. (2022). Algorithmic bias in machine learning-based marketing models. Journal of Business Research, 144, 201-216.

Andraško, J., Mesarčík, M., & Hamuľák, O. (2021). The regulatory intersections between artificial intelligence, data protection and cyber security: challenges and opportunities for the EU legal framework. AI & SOCIETY, 1-14.

Awalegaonkar, K., Berkey, R., Douglass, G. & Reilly, A. (2019), "AI: built to scale", Accenture, available at: www.accenture.com/gb-en/insights/artificial-intelligence/ai-investments.

Aziz, A., & Telang, R. (2016). What is a digital cookie worth?. Available at SSRN 2757325.

Bartoletti, I. (2019). AI in healthcare: Ethical and privacy challenges. In Artificial Intelligence in Medicine: 17th Conference on Artificial Intelligence in Medicine, AIME 2019, Poznan, Poland, June 26–29, 2019, Proceedings 17 (pp. 7-10). Springer International Publishing.

Bartneck, C., Lütge, C., Wagner, A., & Welsh, S. (2021). Privacy issues of AI. In An introduction to ethics in robotics and AI (pp. 61-70). Springer, Cham.

Bolukbasi, T., Chang, K. W., Zou, J. Y., Saligrama, V., & Kalai, A. T. (2016). Man is to computer programmer as woman is to homemaker? Debiasing word embeddings. arXiv preprint arXiv:1607.06520.

Brown, T. B., Mann, B., Ryder, N., Subbiah, M., Kaplan, J., Dhariwal, P., ... & Amodei, D. (2020). Language models are few-shot learners. arXiv 2020. arXiv preprint arXiv:2005.14165, 4.

Bye, S. (2022). Artificial intelligence and its impact on everyday life. The University of York. https://online.york.ac.uk/artificial-intelligence-and-its-impact-on-everyday-life/.

Daabes, A. S. A., & Kharbat, F. F. (2017). Customer-based perceptual map as a marketing intelligence source. International Journal of Economics and Business Research, 13(4), 360–379.

Chen, Y., Lee, J. Y., Sridhar, S., Mittal, V., McCallister, K., & Singal, A. G. (2020). Improving cancer outreach effectiveness through targeting and economic assessments: Insights from a randomised field experiment. Journal of Marketing, 84(3), 1–27.

Chatterjee, S., Ghosh, S. K., Chaudhuri, R., & Nguyen, B. (2019). Are CRM systems ready for AI integration? A conceptual framework of organizational readiness for effective AI - CRM integration. The Bottom Line, 32, 144–157.

Charmaz, K. (2008). Constructionism and the grounded theory. In: Holstein JA, Gubrium JF, eds. Handbook of constructionist research. New York: The Gilford Press, 397-412.

Chowdhary, K. R. (2020). Natural language processing. Fundamentals of artificial intelligence, 603-649.

Colorado State University Global. (2021). How Does AI Actually Work? https://csuglobal.edu/blog/how-does-ai-actually-work.

Davenport, T. H., & Ronanki, R. (2018). 3 Things AI Can Already Do for Your Company. Harvard Business Review. https://hbr.org/2018/01/artificial-intelligence-for-the-real-world.

Davenport, T., Guha, A., Grewal, D., & Bressgott, T. (2020). How artificial intelligence will change the future of marketing. Journal of the Academy of Marketing Science, 48(1), 24–42. https://doi-org.bib-proxy.uhasselt.be/10.1007/s11747-019-00696-0.

De Cremer, D., Kasparov, T. (2021). AI Should Augment Human Intelligence, Not Replace It. Harvard Business Review. https://hbr.org/2021/03/ai-should-augment-human-intelligence-not-replace-it.

De Jonckheere, M. (2019). Semistructured interviewing in primary care research: a balance of relationship and rigour. Family Medicine and Community Health.

Dekimpe, M. (2020). Retailing and retailing research in the age of big data analytics. International Journal of Research in Marketing, 37, 3–14.

Denzin, N. K., & Lincoln, Y. S. (Eds.). (2011). The Sage handbook of qualitative research. Sage.

Duan, Y., Edwards, J. S., & Dwivedi, Y. K. (2019). Artificial intelligence for decision making in the era of Big Data–evolution, challenges and research agenda. International journal of information management, 48, 63-71.

Eberhart, R., & Kennedy, J. (1995). Particle swarm optimization. In Proceedings of the IEEE international conference on neural networks (Vol. 4, pp. 1942-1948).

El Naqa, I., & Murphy, M. J. (2015). What is machine learning?. In machine learning in radiation oncology (pp. 3-11). Springer, Cham.

Enholm, I. M., Papagiannidis, E., Mikalef, P., & Krogstie, J. (2022). Artificial intelligence and business value: A literature review. Information Systems Frontiers, 24(5), 1709-1734.

Flick, O. (2009). An Introduction to Qualitative Research: Sage Publications.

Gali, N., Camprubi, R., & Donaire, J. A. (2017). Analyzing tourism slogans in top tourism destinations. Journal of Destination Marketing & Management, 6(3), 243–251.

Gupta, R., Tanwar, S., Al-Turjman, F., Italiya, P., Nauman, A., & Kim, S. W. (2020). Smart contract privacy protection using AI in cyber-physical systems: tools, techniques and challenges. IEEE access, 8, 24746-24772.

Goodfellow, I., Bengio, Y., & Courville, A. (2016). Deep learning. Cambridge, MA: MIT Press.

Gorry, G. A., & Scott Morton, M. S. (1971). A framework for management information systems.

Gu, J., Wang, Z., Kuen, J., Ma, L., Shahroudy, A., Shuai, B., ... & Chen, T. (2018). Recent advances in convolutional neural networks. Pattern recognition, 77, 354-377.

Howard, J. (2019). Artificial intelligence: Implications for the future of work. American journal of industrial medicine, 62(11), 917-926.

Huang, M. H., & Rust, R. T. (2018). Artificial intelligence in service. Journal of Service Research, 21(2), 155–172.

Huang, M. H., & Rust, R. T. (2020). A strategic framework for artificial intelligence in marketing. Journal of the Academy of Marketing Science, 49, 1–21.

Huang, M. H., & Rust, R. T. (2021). A strategic framework for artificial intelligence in marketing. Journal of the Academy of Marketing Science, 49(1), 30-50.

IAB. (2021). Understanding Bias in AI for Marketing.

Iansiti, M. and Lakhani, K. (2020). Competing in the age of AI: How machine intelligence changes the rules of business, Harvard Business Review, January-February.

Ivanova, A. S., Holionko, N. G., Tverdushka, T. B., Olejarz, T., & Yakymchuk, A. Y. (2019). The strategic management in terms of an enterprise's technological development. Journal of Competitiveness, 11(4), 40.

Jabeen, M. (2022). The use of AI in marketing: Its impact and future.

Jenkins, L. (2021). Artificial Intelligence in Marketing: Past, Present and Future. Proceedings for the Northeast Region Decision Sciences Institute (NEDSI), 949.

Kallio, H., Pietilä, A. M., Johnson, M., & Kangasniemi, M. (2016). Systematic methodological review: developing a framework for a qualitative semi-structured interview guide. Journal of advanced nursing, 72(12), 2954-2965.

Kambria. (2019). The 7 Most Pressing Ethical Issues in Artificial Intelligence. Kambria. https://blog.kambria.io/the-7-most-pressing-ethical-issues-in-artificial-intelligence/.

Kazim, E., Kerrigan, C., & Koshiyama, A. (2021). EU proposed AI legal framework. Available at SSRN 3846898.

Khder, M. A. (2021). Web Scraping or Web Crawling: State of Art, Techniques, Approaches and Application. International Journal of Advances in Soft Computing & Its Applications, 13(3).

Kotler, P., & Keller, K. L. (2012). Marketing management (14th ed.). Upper Saddle River, NJ: Pearson Education.

Kotler, P., & Keller, K. L. (2016). Marketing management (15th ed.). Pearson.

Krafft, M., Sajtos, L., & Haenlein, M. (2020). Challenges and opportunities for marketing scholars in times of the fourth industrial revolution. Journal of Interactive Marketing, 51(1), 1-8.

LeCun, Y., Bengio, Y., & Hinton, G. (2015). Deep learning. Nature, 521(7553), 436-444.

Lovens, P. (2023). "Sans ces conversations avec le chatbot Eliza, mon mari serait toujours là." La Libre.be. https://www.lalibre.be/belgique/societe/2023/03/28/sans-ces-conversations-avec-le-chatbot-eliza-mon-mari-serait-toujours-la-LVSLWPC5WRDX7J2RCHNWPDST24/.

Madotto, A., Liu, Z., Lin, Z., & Fung, P. (2020). Language models as few-shot learner for task-oriented dialogue systems. arXiv preprint arXiv:2008.06239.

Manyika, J., Silberg, J., & Presten, B. (2019). What Do We Do About the Biases in AI? Harvard Business Review. https://hbr.org/2019/10/what-do-we-do-about-the-biases-in-ai.

Marinchak, C. M., Forrest, E., & Hoanca, B. (2018). Artificial intelligence: Redefining marketing management and the customer experience. International Journal of E-Entrepreneurship and Innovation (IJEEI), 8(2), 14-24.

Marr, B. (2019). Artificial intelligence in practice: how 50 successful companies used AI and machine learning to solve problems. John Wiley & Sons.

Marr, B. (2019). The 10 Best Examples Of How AI Is Already Used In Our Everyday Life. Forbes. https://www.forbes.com/sites/bernardmarr/2019/12/16/the-10-best-examples-of-how-ai-is-already-used-in-our-everyday-life/?sh=6a73f4c21171.

Metz, C. (2023). 'The Godfather of AI' Quits Google and Warns of Danger Ahead. The New York Times. https://www.nytimes.com/2023/05/01/technology/ai-google-chatbot-engineer-quits-hinton.html.

Misra, K., Schwartz, E. M., & Abernethy, J. (2019). Dynamic online pricing with incomplete information using multiarmed bandit experiments. Marketing Science, 38(2), 226–252.

Mystakidis, S. (2022). Metaverse. Encyclopedia, 2(1), 486-497.

Nair, G., Johnson, S., & Sathya, V. (2018). Chatbot as a personal assistant. International Journal of Applied Engineering Research, 13(20), 14644-14649.

Netzer, O., Lemaire, A., & Herzenstein, M. (2019). When words sweat: Identifying signals for loan default in the text of loan applications. Journal of Marketing Research, 56(6), 960–980.

Ngarambe, J., Yun, G. Y., & Santamouris, M. (2020). The use of artificial intelligence (AI) methods in the prediction of thermal comfort in buildings: Energy implications of AI-based thermal comfort controls. Energy and Buildings, 211, 109807.

Nilsson, N. J. (1986). The nature of artificial intelligence. In N. J. Nilsson (Ed.), The nature of artificial intelligence (pp. 1-19). San Mateo, CA: Morgan Kaufmann.

Ordonez, V., Dunn, T., & Noll, E. (2023). OpenAI CEO Sam Altman says AI will reshape society, acknowledges risks: "A little bit scared of this." ABC News. https://abcnews.go.com/Technology/openai-ceo-sam-altman-ai-reshape-society-acknowledges/story?id=97897122.

Oseni, A., Moustafa, N., Janicke, H., Liu, P., Tari, Z., & Vasilakos, A. (2021). Security and privacy for artificial intelligence: Opportunities and challenges. arXiv preprint arXiv:2102.04661.

Panch, T., Mattie, H., & Atun, R. (2019). Artificial intelligence and algorithmic bias: implications for health systems. Journal of global health, 9(2).

Paton, J. (2023). Marketing budgets: how to do more with less | Dotdigital. Dotdigital. https://dotdigital.com/blog/marketing-budgets-how-to-do-more-with-less/.

Pitt, C. S., Bal, A. S., & Plangger, K. (2020). New approaches to psychographic consumer segmentation: Exploring fine art collectors using artificial intelligence, automated text analysis and correspondence analysis. European Journal of Marketing. 10.1108/EJM-01-2019-0083.

Puntoni, S., Reczek, R. W., Giesler, M., & Botti, S. (2021). Consumers and artificial intelligence: An experiential perspective. Journal of Marketing, 85(1), 131-151.

Rahman, W. F. W. A., Fauzi, A. A. C., Husain, W. S. W., Hassan, S. H. C., Kamaruzaman, N. N. N., & Aziz, W. A. H. W. (2020). The Usage of artificial intelligence in marketing automation: potentials and pitfalls. Journal of Mathematics & Computing Science, 6(2), 1-8.

Rai, A. (2020). Explainable AI: From black box to glass box. Journal of the Academy of Marketing Science, 48, 137-141.

Refaat, M. (2017. Artificial intelligence AI, machine learning ML, data mining DM, predictive analytics PA, and data science DS? Angoss. http://www.angoss.com/what-is-the-difference-between-artificial-intelligence-ai-machine-learning-ml-data-mining-dm-predictive-analytics-pa-and-data-science-ds/.

Russell, S., & Norvig, P. (2010). Artificial intelligence: A modern approach (3rd ed.). Upper Saddle River, NJ: Pearson Education.

Shabbir, J., & Anwer, T. (2018). Artificial Intelligence and its Role in Near Future. http://arxiv.org/abs/1804.01396.

Shapiro, D., Friedler, S. A., Scheidegger, C., & Venkatasubramanian, S. (2020). Quality and diversity in machine learning: An empirical study of bias in product recommendation. Marketing Science, 39(3), 366-383. https://doi.org/10.1287/mksc.2019.1198.

Simester, D., Timoshenko, A., & Zoumpoulis, S. I. (2020). Targeting prospective customers: Robustness of machine-learning methods to typical data challenges. Management Science, 66(6), 2495-2522.

Solomon, M. R., & Stuart, E. W. (2013). Marketing: Real people, real choices (7th ed.). Upper Saddle River, NJ: Pearson Education.

Stone, M., Aravopoulou, E., Ekinci, Y., Evans, G., Hobbs, M., Labib, A., ... & Machtynger, L. (2020). Artificial intelligence (AI) in strategic marketing decision-making: a research agenda. The Bottom Line, 33(2), 183-200.

Strauss, A. (1998). Qualitative analysis for social scientists. New York: Cambridge University Press.

Syam, N., & Sharma, A. (2018). Waiting for a sales renaissance in the fourth industrial revolution: Machine learning and artificial intelligence in sales research and practice. Industrial marketing management, 69, 135-146.

Tucker, C. (2018). Privacy, algorithms, and artificial intelligence. In The economics of artificial intelligence: An agenda (pp. 423-437). University of Chicago Press.

Verma, P., & Sharma, S. (2020). Artificial Intelligence based Recommendation System. In 2020 2nd International Conference on Advances in Computing, Communication Control and Networking (ICACCCN) (pp. 669-673). IEEE.

Verma, S., Sharma, R., Deb, S., & Maitra, D. (2021). Artificial intelligence in marketing: Systematic review and future research direction. International Journal of Information Management Data Insights, 1(1), 100002.

Vlačić, B., Corbo, L., e Silva, S. C., & Dabić, M. (2021). The evolving role of artificial intelligence in marketing: A review and research agenda. Journal of Business Research, 128, 187-203.

Wan, M., Ni, J., Misra, R., & McAuley, J. (2020, January). Addressing marketing bias in product recommendations. In Proceedings of the 13th international conference on web search and data mining (pp. 618-626).

Wang, C., Wang, K., Bian, A., Islam, R., Keya, K. N., Foulds, J., & Pan, S. (2022). Do Humans Prefer Debiased AI Algorithms? A Case Study in Career Recommendation. In 27th International Conference on Intelligent User Interfaces (pp. 134-147).

Williams, M., & Moser, T. (2019). The Art of Coding and Thematic Exploration in Qualitative Research (Nr. 1). International Management Review.

Wilson, H. J., Daugherty, P., & Bianzino, N. (2017). The jobs that artificial intelligence will create. MIT Sloan Management Review, 58(4), 14.

Wisetsri, W. (2021). Systematic analysis and future research directions in artificial intelligence for marketing. Turkish Journal of Computer and Mathematics Education (TURCOMAT), 12(11), 43-55.

Ye, W., & Li, Q. (2020). Chatbot security and privacy in the age of personal assistants. In 2020 IEEE/ACM Symposium on Edge Computing (SEC) (pp. 388-393). IEEE.

Yüksekbilgili, Z. (2014). The use of guerilla marketing in SMEs. International Journal of Advanced Multidisciplinary Research and Review (IJAMRR), 2(2), 2-7.

Zhang, C. (2003). Swarm intelligence. San Francisco, CA: Morgan Kaufmann.